

EXPANDING THE HORIZONS OF AI GOVERNANCE: AN INTERDISCIPLINARY ANALYSIS OF REGULATORY MODELS IN THE EU, BRAZIL, AND JAPAN

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ABSTRACT:

The global governance of artificial intelligence is emerging as a contested yet increasingly convergent regulatory field, in which states compete for normative leadership while contributing to the formation of shared standards. Against intensified “digital rivalry” and deregulatory pressures, this article examines AI regulatory frameworks beyond the traditional triad of digital powers. Building on Bradford’s “Digital Empires,” it adopts an interdisciplinary comparative law approach informed by law, ethics, political science, and psychology, focusing on the European Union, Brazil, and Japan.

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It argues that AI governance is better understood not as a zero-sum “battlefield,” but as a process of imitation, diffusion, and institutional adaptation shaped by path dependences and socio-cultural variables, including public trust. AI regulation is conceptualized as collaborative governance distributing public policy functions across actors: multidimensional in the EU, state-centered in Brazil, and nonformal and supportive in Japan.

Keywords: *AI governance; comparative law; digital regulation; collaborative governance; interdisciplinary approach*

2026] *EXPANDING THE HORIZONS OF AI GOVERNANCE* 297

TABLE OF CONTENTS

I.INTRODUCTION	299
II.METHOD	307
A. Comparative approach.....	307
B. Interdisciplinary approach	309
C. Disruption, path dependence, and adaptiveness.....	313
III.GOING IN: THE EU'S 2024 AI ACT	315
A. Disruption	316
a. Legislating amidst disruptive innovation	316
b. Addressing product risks and emerging societal risks ..	318
B. Path dependence.....	320
a. The role of ethics in the making of the EU AI Act	320
b. Institutional power struggles and lobbying in the EU's	
tripolar legislature	322
c. Product safety law.....	324
C. Adaptiveness	327
a. Multidimensional collaborative AI governance	328
b. Future developments	331
IV.GOING OUT (1): AI REGULATION IN BRAZIL	333
A. Disruption	333
a. Legislating amidst (de)regulatory trends and pressure for	
innovation.....	333
b. Projeto de Lei No. 2338/2023: between the “Brussels	
effect” and a distinct AI regulation language	338
B. Path dependence.....	341
a. Rights: from data protection and copyright to the	
Brazilian Constitution	341
b. Ethics shaped by law.....	343
C. Adaptiveness.....	345
a. State-centered collaborative AI governance.....	345
b. Future developments	349
V.GOING OUT (2): AI REGULATION IN JAPAN	350
A. Disruption	351
a. Legislating technological uptake through soft law	351
b. Hybridity in Japanese AI governance	356
c. Changing geoeconomic landscape	358
B. Path dependence.....	359
a. Ethical traditions: global and domestic	359
b. Nonformal governmental guidance and corporate interests	
361	
C. Adaptiveness.....	363

298	<i>CARDOZO J. OF INT'L & COMP. LAW</i>	[Vol. 9:2
	a. Supportive nonformal collaborative AI governance	363
	b. Future developments	367
	VI.CONCLUSION: EXPANDED MAP OF AI GOVERNANCE	367
	VII.OUTLOOK	373

I. INTRODUCTION

Digital governance has become a central arena of global regulatory contestation, with jurisdictions advancing competing legal frameworks for artificial intelligence. Recent scholarship portrays this emerging regulatory landscape as a strategic battleground on which states vie for primacy in a market set to define the future. This battleground is shaped by the competing ambitions of three prominent “Digital Empires” – the United States, China, and the European Union – as well as by shifting power dynamics between governments and private actors, with Big Tech occupying a central position.¹ These struggles also extend into the discursive domain, where competing visions of innovation-oriented deregulation and precautionary risk regulation form a central battleground in debates over AI governance.² However, viewing global digital governance through the metaphor of battle does not capture its full complexity. Alongside these competitive dynamics, important countervailing forces are driving regulatory convergence and the development of shared standards at the global level. This dynamic has been explored most prominently in the field of data protection through the concept of the “Brussels effect” – the fact that companies and governments outside the European Single Market apply European regulation.³ While early scholarship emphasized the global diffusion of European regulatory standards, more recent work has highlighted the phenomenon’s limits and ongoing evolution.⁴ These developments raise broader questions about whether similar dynamics can be observed in emerging fields of digital governance.

¹ See generally ANU BRADFORD, *DIGITAL EMPIRES. THE GLOBAL BATTLE TO REGULATE TECHNOLOGY* (OUP 2023).

² Anu Bradford, *The False Choice Between Digital Regulation and Innovation*, 19 NW. U. L. REV. 377, 415 (2024).

³ ANU BRADFORD, *THE BRUSSELS EFFECT: HOW THE EUROPEAN UNION RULES THE WORLD* (OUP 2020). Bradford identifies two key variants of the “Brussels effect:” *de facto* (companies voluntarily adopting EU standards globally) and *de jure* (other countries formally adopting EU-style regulations), BRADFORD, *supra* note 1, at 363.

⁴ See for a discussion of the Brussels effect of the EU AI Act: Anna-Julia Saiger, *Brussels Mirage: The EU AI Act’s Subtle Shine Across International Borders*, EJIL:TALK! (June 26, 2025), <https://www.ejiltalk.org/brussels-mirage-the-eu-ai-acts-subtle-shine-across-international-borders/> [<https://perma.cc/X2R2-5FB4>] (last visited, Jan. 19, 2026).

AI regulation offers a particularly timely illustration of these complexities. Here, competing political visions, economic interests, and normative commitments intersect in ways that challenge simple narratives of dominance and competition, and instead suggest a more multifaceted process of imitation, diffusion, and contestation. While these processes are neither peaceful nor coherent,⁵ a contextualized analysis shows that the conflicts surrounding AI governance are not only battles against one another or against regulation at all. They are also efforts to shape a shared common ground – often pursued in arenas that receive limited attention and that are shaped by domestic path dependencies rooted in ethics, politics, psychology, and, not least, the law.

AI regulation is spreading worldwide, inviting comparative research.⁶ While the United States faces internal challenges, including an unsuccessful attempt to introduce a ten-year moratorium on federal AI regulation,⁷ legislative initiatives in other regions, such as Europe,⁸ Brazil,⁹ and Japan,¹⁰ are of particular interest in shaping the emerging

⁵ Therefore, the metaphor of regulatory learning – while methodologically fruitful – falls short of capturing the current global state of AI regulation, see Urs Gasser & Victor Mayer-Schönberger, *On the Shoulders of Others. The Importance of Regulatory Learning in the Age of AI*, 28 VA. J. L. & TECH. 1, 10 (2024).

⁶ See Nestor Maslej, Loredana Fattorini, Raymond Perrault, Yolanda Gil, Vanessa Parli, Njenga Kariuki, Emily Capstick, Anka Reuel, Erik Brynjolfsson, John Etchemendy, Katrina Ligett, Terah Lyons, James Manyika, Juan Carlos Niebles, Yoav Shoham, Russell Wald, Toby Walsh, Armin Hamrah, Lapo Santarlasci, Julia Betts Lotufo, Alexandra Rome, Andrew Shi, & Sukrut Oak, *The AI Index 2025 Annual Report*, AI INDEX STEERING COMM., INST. FOR HUMAN-CENTERED AI, STANFORD UNIV. (Apr. 2025), <https://arxiv.org/pdf/2504.07139> [<https://perma.cc/4S3Z-6KVP>]. Bradford later explicitly extended her argument to include AI regulation as well, Anu Bradford, *The Race to Regulate Artificial Intelligence: Why Europe Has an Edge Over America and China*, FOREIGN AFFS. (June 27, 2023), <https://www.foreignaffairs.com/united-states/race-regulate-artificial-intelligence-sam-altman-anu-bradford> [<https://perma.cc/24KS-C3WX>] (last visited, Jan. 19, 2026).

⁷ *One Big Beautiful Bill Act*, H.R. 1, 119th Cong. (2025), which became Law No. 119-21 (July 7, 2025). Note that in the 2024 legislative session, at least 40 U.S. states have introduced AI bills, covering a broad range of application areas and a wide variety of perceived risks, Gasser & Mayer-Schönberger, *supra* note 5, at 2. As a reaction, the Trump Administration has issued Exec. Order 14,365, *Ensuring a National Policy Framework for Artificial Intelligence* (Dec. 11, 2025), <https://www.whitehouse.gov/presidential-actions/2025/12/eliminating-state-law-obstruction-of-national-artificial-intelligence-policy/> [<https://perma.cc/CXC6-P9YL>] (last visited, Jan. 19, 2026). More recent developments indicate a turn toward a national security-oriented approach, while continuing to rely on voluntary measures, see Exec. Order, *Promoting Advanced Artificial Intelligence Innovation and Security* (June 2, 2026).

⁸ Regulation 2024/1689, 2024 O.J. (L 1689) 1, 42 (EU) [hereinafter EU AI Act].

⁹ Projeto de Lei No. 2,338/2023 (Braz.) (AI Bill).

¹⁰ *Act on the Promotion of Research, Development, and Use of Artificial Intelligence-Related Technologies* (人工知能関連技術の研究開発及び活用の推進に関する法) 律, Act No. 53/2025 (Japanese AI Act); Ministry of Economy, Trade and Industry (METI), *AI Guidelines for Business* ver. 1.1 (Mar. 28, 2025), https://www.meti.go.jp/shingikai/mono_info_service/ai_shakai

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 301

global regulatory landscape. The EU's 2024 AI Act stands out as the world's first comprehensive AI legislation, although its implementation has recently been the subject of amendments under the Digital Omnibus package, including the postponement of certain compliance deadlines.¹¹

In Brazil, an AI Bill is pending in Congress.¹² Originally proposed by the Chamber of Deputies in 2020 as a principle-based regulation,¹³ Brazil's AI Bill was reshaped by a Senate draft in May 2023,¹⁴ closely mirroring the EU AI Act and strengthening rights provisions. Following significant Senate revisions, a new version – retaining a European-style risk-based approach – was approved in December 2024. The Bill is currently under review by the Chamber of Deputies, which has established a special committee and conducted a series of public hearings throughout 2025, with particular attention to risk classification and copyright issues related to generative AI.¹⁵

_jisso/pdf/20250328_1.pdf [https://perma.cc/2SG2-BY7R] (last visited, Jan. 19, 2026) [hereinafter AI Guidelines for Business]; *Guidelines for the Japanese Governments' Procurements and Utilizations of Generative AI for the sake of Evolution and Innovation of Public Administration* 3.1, COUNCIL FOR THE PROMOTION OF A DIGITAL SOC'Y (May 27, 2025), [https://www.digital.go.jp/assets/contents/node/basic_page/field_ref_resources/e2a06143-ed29-4f1d-9c31-](https://www.digital.go.jp/assets/contents/node/basic_page/field_ref_resources/e2a06143-ed29-4f1d-9c31-0f06fca67afc/6e45a64f/20250527_resources_standard_guidelines_guideline_04.pdf)

0f06fca67afc/6e45a64f/20250527_resources_standard_guidelines_guideline_04.pdf [https://perma.cc/9RUU-WE2J] (last visited, Jan. 19, 2026) [hereinafter Guidelines for Japanese Governments' Procurements].

¹¹ Regulation (EU) 2026/1744 of the European Parliament and of the Council of 8 July 2026 amending Regulations (EU) 2024/1689, (EU) 2018/1139 and (EU) 2023/1230 as regards the simplification of the implementation of harmonised rules on artificial intelligence (Digital Omnibus on AI), O.J. (L 1/41). COM(2025) 836 final; 2025/0359 (COD); *see infra* Part III.

¹² Projeto de Lei No. 2338/2023, de 17 de Março 2023, CÂMARA DOS DEPUTADOS (Braz.), available at <https://www.camara.leg.br/proposicoesWeb/fichadetramitacao?idProposicao=2487262> [https://perma.cc/Z2R7-U25U] (last visited, Jan. 19, 2026).

¹³ Brazilian Chamber of Deputies, PL 21/2020, <https://www.camara.leg.br/proposicoesWeb/fichadetramitacao?idProposicao=2236340> [https://perma.cc/UV7P-ZV62] (last visited, Jan. 19, 2026).

¹⁴ Brazilian Federal Senate, Bill no. 2,338/2023, available at <https://legis.senado.leg.br/sdleg-getter/documento?dm=9347593&disposition=inline> [https://perma.cc/5CGY-6J73] (last visited, Jan 19, 2026).

¹⁵ According to information released by the Special Committee on Artificial Intelligence, the Committee held more than thirty meetings and heard testimony from over 150 invited participants. The discussions covered a broad range of topics, including the use of AI in the public sector and critical infrastructure, generative AI and copyright, AI infrastructure, the AI ecosystem and national competitiveness, governance structures and emerging technologies, and regulatory models, among others. Further information is available on the Committee's official webpage: Brazilian Chamber of Deputies, Special Committee on Artificial Intelligence (PL 2338/23), available at <https://www2.camara.leg.br/atividade-legislativa/comissoes/comissoes-temporarias/especiais/57a-legislatura/comissao-especial-sobre-inteligencia-artificial-pl-2338-23> [https://perma.cc/9Y3W-SBXE] (last visited, Jan. 19, 2026).

Japan is advancing its AI regulatory strategy through soft law, notably governance guidelines, combined with an executive-centered regulatory approach reinforced by the “Act on the Promotion of Research, Development, and Use of Artificial Intelligence Related Technologies”¹⁶ and the Artificial Intelligence Basic Plan.¹⁷ Sector-specific (hard) regulation complements this approach. At first glance, this strategy appears to contrast with the legislative regulatory pathways of both Europe and Brazil. However, our analysis suggests that Brazil is converging toward a middle-ground governance model between the Japanese and European frameworks.¹⁸ This is set against significant cultural differences; Japan is among the countries with the lowest willingness to trust and accept AI systems, contrary to Brazil, where public trust and acceptance are notably high.¹⁹

While a universally agreed standard for AI development and use remains on the horizon, the expanding global landscape of AI regulation invites comparison: What AI-related regulatory tools have parliaments and governments around the world recently enacted or proposed, and what legal mechanisms do these tools rely on?

To address these questions from a comparative perspective, interdisciplinary insights are particularly valuable. With the rise of general-purpose AI and its expanding range of applications, AI regulation raises a series of critical issues concerning governance structures, enforcement mechanisms, the protection of fundamental rights, the allocation of regulatory competences, and the shifting balance of power among legislative actors – all of which are grounded in domestic contexts. These dynamics unfold both within the state and in relation to a private sector that plays an increasingly influential role in shaping regulatory outcomes through lobbying and other forms of political engagement. Recent debates on the risks posed by mis- and disinformation further underscore the urgency and importance of effective AI regulation. Therefore, this article situates its comparative analysis within the following questions:

¹⁶ *Act on Promotion of Research, Development, and Utilization of Artificial Intelligence-Related Technologies* 人工知能関連技術の研究開発及び活用の推進に関する法律, Act No. 53 of 2025 (Japan), available at <https://laws.e-gov.go.jp/law/507AC0000000053> [<https://perma.cc/Z7FY-FW23>] (last visited, Jan. 19, 2026).

¹⁷ Cabinet Decision, *Artificial Intelligence Basic Plan, Japan Rebooted through Trustworthy AI*, (Dec. 23, 2025), available at https://www8.cao.go.jp/cstp/ai/ai_plan/aipplan_eng_20260116.pdf [<https://perma.cc/J9LQ-ELK7>] (last visited, Jan. 19, 2026) [hereinafter Artificial Intelligence Basic Plan].

¹⁸ See *infra* Part IV.

¹⁹ Maslej et al., *supra* note 6, at 401.

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 303

From which political systems does AI regulation emerge, and what political implications follow from these different institutional contexts?

To what extent does AI regulation reflect underlying ethical traditions, and how can philosophical theories account for divergent approaches to AI governance?

Finally, to what extent do recent regulatory developments reflect public perceptions of the risks posed by artificial intelligence?

Anu Bradford's "Digital Empires" (2023) provides the analytical framework for this article's comparative approach to AI regulation. The work emphasizes the role of regulatory design in shaping global digital markets and describes an emerging "imperial battle" in the global digital economy among three distinct regulatory models.²⁰ A *market-driven* approach in the United States has largely governed the economic activities of major technology companies; a *rights-driven* European model stands in contrast to this form of digital liberalism, reflecting Europe's coordinated market economy; a *state-driven* approach in China constitutes the third model, which Bradford characterizes as an example of an autocratic approach to the digital economy, closely linked to state surveillance and control.²¹ In her 2023 account, Bradford describes the global digital landscape as consisting of "American companies, Chinese infrastructure, and European law".²² However, these models do not coexist peacefully; rather, they are engaged in a horizontal battle that tests democracies' capacity to build consensus with swing states such as Brazil and India.²³ Simultaneously, a vertical power struggle is unfolding between governments and tech companies, the outcomes of which remain uncertain.²⁴ These imperial rivalries are constitutive of the evolving global digital order.²⁵

²⁰ BRADFORD, *supra* note 1.

²¹ *Id.*

²² *Id.* at 20.

²³ *Id.* at 390.

²⁴ Removing Barriers to American Leadership in Artificial Intelligence, 90 Fed. Reg. 8741 (Jan. 23, 2025). THE WHITE HOUSE, *Winning the AI Race: America's AI Action Plan*, (July 23, 2025), <https://www.whitehouse.gov/articles/2025/07/white-house-unveils-americas-ai-action-plan/> [<https://perma.cc/DDZ8-Q48Z>] (last visited, Jan. 19, 2026). See also Paul Smith-Goodson, *The Stargate Project: Trump Touts \$500 Billion Bid for AI Dominance*, FORBES (Jan. 30, 2025), <https://www.forbes.com/sites/moorinsights/2025/01/30/the-stargate-project-trump-touts-500-billion-bid-for-ai-dominance/> [<https://perma.cc/E3ZD-D677>].

²⁵ According to Bradford, the USA ought to join efforts with the EU to rein in the adverse effects of unregulated economic activities in the digital sphere and to advance a technodemocratic order grounded in liberal democratic principles and values, Bradford, *supra* note 1, at 388. "As Bradford argues [...], it is perhaps more accurate to describe not a tripartite war but instead an emerging twoway conflict, in which China vies for supremacy against a somewhat united West. She terms this a struggle between 'technodemocracies and technoaocracies.'" Kal

We interpret Bradford's work as an invitation to conduct a comparative inquiry into AI regulation through four disciplinary perspectives – law, ethics, political science, and psychology. This endeavor builds on Bradford's framework in three ways: by going in, going out, and going around.

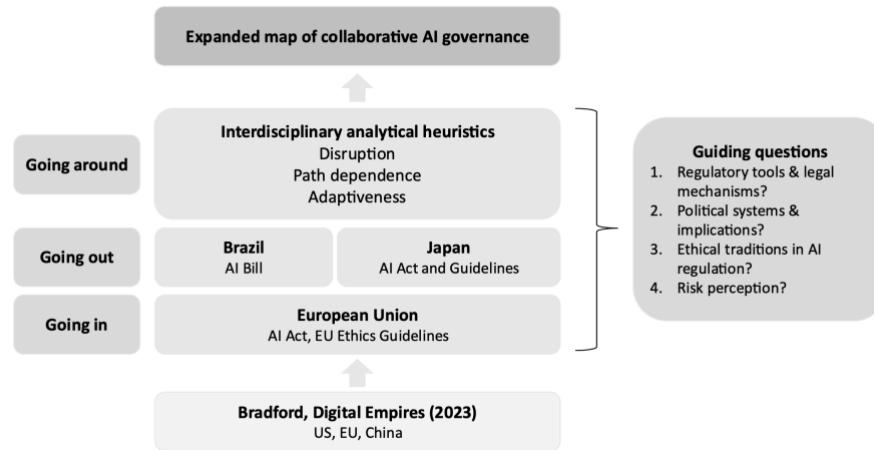


Figure: *Research Design*

As illustrated in the Figure, and building on Bradford's tripartite framework as a conceptual backdrop, this paper first examines the European perspective in greater depths ("going in"). It focuses on the EU AI Act, which had not yet been enacted at the time of Bradford's analysis,²⁶ situating it within its broader regulatory genesis. In particular, it analyzes the EU Ethics Guidelines for Trustworthy AI,²⁷ in order to assess how this ethical pre-framing has shaped what we conceptualize as a *values-based* governance approach in the EU AI Act, thereby refining Bradford's claim that EU digital regulation is primarily *rights-driven*.

In a second step, we build on Bradford by "going out" and introducing Brazil and Japan as influential jurisdictions in AI regulation, particularly in the context of growing deregulatory pressures worldwide. While Bradford expands the traditional U.S.-China dichotomy by adding

Raustiala, 118 AM. J. INT'L L. 592, 597 (2024) (reviewing ANU BRADFORD DIGITAL EMPIRES: THE GLOBAL BATTLE TO REGULATE TECHNOLOGY (2023)).

²⁶ But see Bradford, *supra* note 2 and note 6.

²⁷ A group of experts appointed by the European Commission published these guidelines in 2019, see *infra* Part III B a.

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 305

the European perspective,²⁸ we further develop this framework by demonstrating how the Brazilian and Japanese perspectives enrich the comparative picture.²⁹

Third, a close reading of Bradford reinforces the case for adopting interdisciplinary approaches to AI regulation. Although her analysis focuses on digital market regulation, her portrayal of the EU as a rights-driven regulatory model – invoking “rights as ethos”³⁰ – naturally extends into ethical and political questions. As Bradford observes, the core of transatlantic tensions lies in divergent views on the respective roles of markets and government in shaping the digital world.³¹ Each of the three dominant digital powers, she argues, is characterized by a distinct governance model with its own ideological foundations.³² She further notes a shift in U.S. public perceptions of Big Tech, engaging with notions like risk and trust that resonate with key concerns in psychology.³³ Against this backdrop, we situate legal developments within broader ethical, political, and psychological contexts, thereby advancing an interdisciplinary approach to the comparison of AI regulation (“going around”). This study thus proposes a methodological framework for global AI governance that is attentive to the diverse domestic contexts in which it is embedded.

28 Anu Bradford, *Europe's Digital Constitution*, 64 VA. J. INT'L L. 1 (2023) (Trained and experienced in Europe, Bradford addresses a U.S. audience, arguing that European regulation – unlike China's authoritarian model – is not digital protectionism, but a pursuit of democracy, rights, and fairness, which she elsewhere calls “Europe's digital constitution”); see also Paul Nemitz, *Constitutional Democracy and Technology in the Age of Artificial Intelligence*, 376 PHIL. TRANSACTIONS ROYAL SOC'Y. A 1, 2 (2018) (“trinitarian formula”).

29 Neha Mishra, *Review of Anu Bradford, Digital Empires: The Global Battle to Regulate Technology* (Oxford University Press, 2023), 4 J. L. POL. ECON. 4 (2024); Erik Tuchtfield, *It's Worth to Look Beyond the Empires – It's Also Less Disappointing*, 85 ZaöRV 931, 935 (2025) (reviewing ANU BRADFORD, *DIGITAL EMPIRES: THE GLOBAL BATTLE TO REGULATE TECHNOLOGY* (2023)); Patrick Leblond, *Anu Bradford, Digital Empires: The Global Battle to Regulate Technology Oxford University Press, 2023, 599 pages, 23 WORLD TRADE REV. 548* (2024).

30 See Bradford, *supra* note 2, at 379 (“The U.S. regulatory regime, with its deeply embedded techno-libertarian ethos [...]”).

31 BRADFORD, *supra* note 1, at 233.

32 *Id.* at 13.

33 *Id.* at 382. See Bradford, *supra* note 2, at 380 (“[P]ublic sentiment in the United States is now shifting. American citizens increasingly recognize the societal harms caused by tech companies”). Louisa Estadieu, Karl Christopher Klauer, Andreas Voßkuhle, & Roland Thomaschke, *Institutional Trust in Crisis? Conceptual and Methodological Challenges in Measuring Institutional Trust*, 19 SOC'Y COMPASS (May 28, 2025), <https://compass.onlinelibrary.wiley.com/doi/10.1111/soc4.70073> [https://perma.cc/3F6E-BL5E].

The article is structured as follows: Section II presents the research design and outlines the methodological premises of interdisciplinary comparison. Section III examines the European AI Act from an interdisciplinary perspective (“going in”). The following two sections explore the Brazilian (IV) and Japanese (V) approaches to AI regulation respectively, each informed by interdisciplinary insights (“going out” (1) and (2)). Section VI proposes an expanded map of AI governance, and Section VII concludes. Across Sections III–V, the analysis follows a common structure: each jurisdiction is examined through the lenses of disruption, path dependence, and adaptiveness. These concepts serve as an interdisciplinary heuristic for comparative analysis. We adopt them as analytical “sensitizing concepts,”³⁴ while recognizing that each has distinct theoretical foundations and is applied differently across contexts.

In conclusion, we contend that all three jurisdictions have been – and continue to be – disrupted by the emergence of AI-driven innovation, and that each has responded through regulation. The resulting regulatory models in the European Union, Brazil, and Japan are shaped by distinct domestic path dependences and institutional origins: legislative leadership in the EU, judicially informed rights-based development in Brazil, and executive-led governance in Japan.³⁵ Each jurisdiction integrates private actors into its governance architecture, giving rise to forms of collaborative governance that distribute public policy functions across a wide range of public and private actors. However, these models reflect distinct configurations of *collaborative AI governance*. The EU approach is best characterized as *multidimensional*; Brazil advances a more *state-centered* model of collaborative AI governance; and Japan relies on a predominantly *nonformal and supportive* governance approach. Substantively, the three systems also diverge in their normative orientation: EU AI regulation is values-based; Brazilian AI regulation is rights-based approach (though still subject to ongoing legislative development), and Japanese AI regulation is primarily technology-oriented.

Rivalry, regulatory innovation, and imitation proceed in parallel as states move toward a global AI standard that has yet to be defined. Against a backdrop of increasing deregulatory pressures, the legal arena plays a central role in this process, while remaining shaped by political, ethical, and psychological dimensions of AI governance. A global AI standard must therefore serve a dual purpose: providing a common

³⁴ See Herbert Blumer, *What is Wrong with Social Theory?* 19 AM. SOCIO. REV. 3, 7 (1954).

³⁵ See *infra* Part VI.

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 307

framework to guide technological development while accommodating the domestic path dependences that shape its formation.

II. METHOD

This article offers a comparative analysis of three AI regulatory regimes. Informed by an interdisciplinary dialogue spanning law, ethics, political science, and psychology, it examines the emerging frameworks governing artificial intelligence in the European Union, Japan, and Brazil.

A. Comparative approach

Although AI regulation's global impact and the race for regulatory leadership have spurred comparative research,³⁶ most studies focus on the European Union, the United States, and China.³⁷ As a result,

³⁶ AI ethics includes growing literature comparing regional cultural ethical traditions. See Urbano Reviglio & Rogers Alunge, "I Am Datafied Because We Are Datafied": An Ubuntu Perspective on (Relational) Privacy, 33 PHIL. & TECH. 595 (2020); Nicolas Berberich, Toyooki Nishida, & Shoko Suzuki, *Harmonizing Artificial Intelligence for Social Good*, 33 PHIL. & TECH. 613 (2020); PAK-HANG WONG & TOM XIAOWEI WANG, *HARMONIOUS TECHNOLOGY: A CONFUCIAN ETHICS OF TECHNOLOGY* (2021); Yousif Hassan, *Governing Algorithms from the South: A Case Study of AI Development in Africa*, 38 AI & SOC'Y 1429 (2023); Sábêlo Mhlambi & Simona Tiribelli, *Decolonizing AI Ethics: Relational Autonomy as a Means to Counter AI Harms*, 42 TOPOI 867 (2023); Katleho K. Mokoena, *A Holistic Ubuntu Artificial Intelligence Ethics Approach in South Africa*, 45 VERBUM ET ECCLESIA 371 (2024); James Wright, *The Development of AI Ethics in Japan: Ethics-Washing Society 5.0?*, 18 E. ASIAN SCI., TECH. SOC'Y: INT'L J. 117 (2024); Levi Checketts et al., *Ethical and Social Concerns of Artificial Intelligence in Asia*, 19 NANOETHICS 12 (2025). For comparative governance approaches, see Christian Djeflal et al., *Role of the State and Responsibility in Governing Artificial Intelligence: A Comparative Analysis of AI Strategies*, 29 J. EUR. PUB. POL'Y 1799 (2022); MARTA ZIOSI, HUW ROBERTS, PAULA GUEDES, ORI FREIMAN, FILIPE MEDON, YONG LIM, LARISSA LIM, JOSHUA MELTZER, ANDREA RENDA, EDWARD TEATHER, & ROSE WOOLHOUSE, *A COMPARATIVE FRAMEWORK FOR AI REGULATORY POLICY: PHASE 2* (CEIMIA 2024), https://ceimia.org/wp-content/uploads/2024/06/a-comparative-framework-for-ai-regulatory-policy_phase-2-report.pdf [<https://perma.cc/83XN-TEPG>].

³⁷ See NOHA LEA HALIM & URS GASSER, *VECTORS OF AI GOVERNANCE – JUXTAPOSING THE U.S. ALGORITHMIC ACCOUNTABILITY ACT OF 2022 WITH THE EU ARTIFICIAL INTELLIGENCE ACT* (Berkman Klein Ctr. 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4476167 [<https://perma.cc/QEH7-VWPT>]; Huw Roberts, Emmie Hine, Mariarosaria Taddeo, & Luciano Floridi, *Global AI Governance: Barriers and Pathways Forward*, 100 INT'L AFFS. 1275 (2024); Scott Shackelford et al., *Should We Trust a Black Box to Safeguard Human Rights? A Comparative Analysis of AI Governance*, 26 UCLA J. INT'L L. & FOR. AFFAIRS 35 (2022); JON CHUN, CHRISTIAN SCHROEDER DE WITT, & KATHERINE ELKINS, *COMPARATIVE GLOBAL AI REGULATION: POLICY PERSPECTIVES FROM THE EU, CHINA, AND THE US* (2024), <https://arxiv.org/html/2410.21279v1> [<https://perma.cc/3AR7-JNAC>]; Jakob Mökander, Pratham Juneja, David Watson, & Luciano Floridi, *The US Algorithmic Accountability Act of 2022 vs. The EU Artificial Intelligence Act: What Can They Learn from Each Other?*, 32 MINDS & MACHS. 751 (2022). But see Paul Kimani, *Shaping the Future of AI Governance in Kenya: Comparative Perspectives from the EU AI Act*, 1 J. AI L. & REGUL. 212 (2024); Beatriz Kira & Laura Schertel

comparatively less attention has been paid to regulatory developments in other jurisdictions, despite their growing relevance and potential contributions to debates on AI governance.

Brazil and Japan were selected to broaden the comparative perspective beyond the canonical trio of “Digital Empires” and to incorporate additional democratic approaches to AI governance. Brazil, often classified as part of the “Global South,” has emerged as an increasingly important actor in AI policy and regulation.³⁸ In 2024, the government of Luiz Inácio Lula da Silva reaffirmed its commitment to AI development by launching the Brazilian Artificial Intelligence Plan 2024–2028, which envisages approximately R\$23 billion in investment through 2028.³⁹ As a regional leader in AI governance,⁴⁰ Brazil initially drew heavily on European regulatory models. The Senate’s Commission of Jurists, tasked with drafting the AI Bill (PL No. 2338/2023), consisted largely of legal scholars and practitioners with academic ties to Europe.⁴¹ At the same time, Brazil has developed a distinct regulatory approach through sustained dialogue among legislators, government agencies, industry actors, and civil society. This approach emphasizes sustainable development, technological investment, and sector-specific co-regulation. The AI Bill approved by the Senate in December 2024 reflects a middle-ground model that combines binding legal obligations with mechanisms for sectoral co-regulation and innovation promotion, positioning Brazil between the comprehensive regulatory framework of

Mendes, *Brazil’s Distinct Path in AI Regulation*, 1 J. AI L. & REGUL. 240 (2024). See also Sangchul Park, *Bridging the Global Divide in AI Regulation: A Proposal for a Contextual, Coherent, and Commensurable Framework*, 33 WASH. INT’L L. J. 216 (2024) (mapping AI governance models around the world).

³⁸ See *Country Composition of WEO Groups*, INTERNATIONAL MONETARY FUND (Apr. 2023), <https://www.imf.org/en/Publications/WEO/weo-database/2023/April/groups-and-aggregates> [<https://perma.cc/F53M-JZRJ>] (last visited, Jan. 19, 2026). See also Marie-Therese Png, *At the Tensions of South and North: Critical Roles of Global South Stakeholders in AI Governance*, in PROCEEDINGS OF THE 2022 ACM CONFERENCE ON FAIRNESS, ACCOUNTABILITY, AND TRANSPARENCY 1443 (2022) (arguing for a different approach to AI governance in the Global South).

³⁹ *Brazil Launches the Brazilian Artificial Intelligence Plan 2024–2028*, UNCTAD (July 30, 2024), <https://investmentpolicy.unctad.org/investment-policy-monitor/measures/4930/launches-the-brazilian-artificial-intelligence-plan-2024-2028> [<https://perma.cc/E6QP-8JKR>] (“AI for the Good of All.”).

⁴⁰ Juliano Maranhão, Bernardo Fico, & Beatriz Sousa, *Artificial Intelligence Regulation in Latin America and Brazil’s Leadership in the Region*, in LE RÈGLEMENT EUROPÉEN SUR L’IA ET AU-DELÀ: QUEL ENCADREMENT DE L’IA ? [AI ACT AND BEYOND: WHAT KIND OF REGULATION OF AI?] 333 (Olivia Tambou & Morgan Sweeney ed., 2025).

⁴¹ See The Brazilian Bill of Law on Artificial Intelligence, PRIV. & SEC. ACAD. 1 (2023), https://www.privacysecurityacademy.com/wp-content/uploads/2023/11/1.-Memo_AI-Bill-in-Brazil.pdf [<https://perma.cc/XB2E-SL2W>].

the EU AI Act and Japan's sectoral, context-sensitive, and predominantly non-binding approach to AI governance.⁴²

Japan presents an important case for AI governance as a mature democracy with a stable constitutional monarchy and parliamentary system, as well as a technological leader and early adopter of AI governance frameworks.⁴³ Since 2016, Japan has favored a soft law approach to AI governance, relying primarily on formally non-binding guidelines.⁴⁴ This orientation has continued under the recent Japanese AI Act, which emphasizes innovation and economic growth in line with the Liberal Democratic Party's pro-technology stance. Japan's nonformal approach to AI regulation stands in marked contrast to the more formalized regulatory model adopted by the European Union and the framework currently emerging in Brazil. At the same time, this approach must be understood in the context of Japan's legal culture of compliance and prevailing public perceptions of the risks and opportunities associated with AI.⁴⁵ The role of international governance – an area in which Japan has assumed a particularly active role – ultimately links all three jurisdictions and adds a further dimension to contemporary developments in AI regulation.

B. Interdisciplinary approach

Taking account of the diverse contexts in which laws are made and applied has become a central tenet of contemporary comparative legal methodology.⁴⁶ Consistent with this methodological development, interdisciplinary approaches are essential to the study of AI regulation. In recent years, calls for interdisciplinary research on AI governance have become increasingly prominent across academic and policy debates.⁴⁷

⁴² See *infra* Part V.

⁴³ ENRICO D'AMBROGIO, JAPAN'S PARLIAMENT & OTHER POLITICAL INSTITUTIONS, EU BRIEFING (Feb. 2025) *Japan*, FREEDOM HOUSE (2026), <https://freedomhouse.org/country/japan/freedom-world/2024> [https://perma.cc/2LDJ-ZWAE] (last visited, Jan. 19, 2026).

⁴⁴ See *infra* Part V A a.

⁴⁵ *Id.*

⁴⁶ JAAKKO HUSA, INTRODUCTION TO COMPARATIVE LAW 2, 8 (Hart 2nd ed. 2023); UWE KISCHEL, COMPARATIVE LAW, at 10 (OUP 2019); Jaakko HUSA, *Interdisciplinary Comparative Law. Between Scylla and Charybdis?*, 9 J. COMP. L. 28, 28 (2014).

⁴⁷ Huixin Zhong, Thao Do, Ynagliu, Rostam J. Neuwirth, & Hong Shen, *Global AI Governance: Where the Challenge Is the Solution. An Interdisciplinary, Multilateral, and Vertically Coordinated Approach*, arXiv:2503.04766v1 (Feb. 12, 2025); Jonas Tallberg, Eva Erman, Markus Furendal, Johannes Geith, Mark Klamberg, & Magnus Lundgren, *The Global Governance of Artificial Intelligence: Next Steps for Empirical and Normative Research*, 25 INT. STUD. REV. 2, 3 (2023), with further references. Johann Laux & Hannah Ruschemeier, *Automation*

Against this backdrop, the research design developed and applied in this article brings together four disciplines to address a common set of questions. Whereas comparative law has traditionally drawn on disciplines such as economics, linguistics, history, and sociology, this study integrates insights from ethics, political science, and psychology. These perspectives were selected because they illuminate distinct dimensions of AI regulation that are central to the comparative analysis undertaken here.

AI regulation both draws on and shapes ethical traditions and public perceptions. As with earlier technological developments, such as molecular biology, the transformative potential of AI has prompted efforts to articulate ethical principles and normative boundaries in advance of, and alongside, formal regulation. This dynamic has contributed to a proliferation of ethics guidelines at the corporate, national, and international levels.⁴⁸ In many cases, these frameworks are grounded in fundamental rights and related normative commitments.⁴⁹

For comparative AI law, insights from psychological research are indispensable because public perceptions influence both the legitimacy and effectiveness of regulatory interventions. Attitudes toward AI are shaped by a range of individual and societal factors, including broader narratives about technological change. Some narratives, such as the “technology and growth enthusiast” perspective, reflect strong confidence in technological progress and its capacity to address social and economic challenges.⁵⁰ Others portray technological development as a form of Pandora’s Box – initially promising but ultimately associated with significant and potentially unforeseen risks.⁵¹ Empirical studies show that, alongside expectations of substantial benefits, individuals express concerns about privacy violations, security risks, discriminatory outcomes, automation bias, the erosion of human decision-making, and

Bias in the AI Act on the Legal Implications of Attempting to De-Bias Human Oversight of AI, 16 EUR. J. RISK REG. 1519 (2025), point toward “technical, psychological, social, and normative factors” that may lead to automation bias.

⁴⁸ For an overview see Anna Jobin, Marcello Ienca, & Effy Vayena, *The Global Landscape of AI Ethics Guidelines*, 1 NATURE MACHINE INTELLIGENCE 389 (2019). At global level see UNESCO, RECOMMENDATION ON THE ETHICS OF ARTIFICIAL INTELLIGENCE (Nov. 23, 2021). On the ‘first mover’ Japan, see *infra* Part V.

⁴⁹ See *infra* IV B b (Brazilian discussion).

⁵⁰ HERMAN KAHN, WILLIAM BROWN, & LEON MARTEL, *THE NEXT 200 YEARS: A SCENARIO FOR AMERICA AND THE WORLD* (Morrow 1976); RAYMOND KURZWEIL, *THE SINGULARITY IS NEARER: WHEN WE MERGE WITH AI* (Penguin 2024).

⁵¹ Jean-Pierre Dupuy, *The Narratology of Lay Ethics*, 4 NANOETHICS, 153 (2010); Philip Macnaghten et al., *Understanding Public Responses to Emerging Technologies: A Narrative Approach*, 21 J. ENV'T. POL'Y & PLANNING, 504 (2019).

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 311

diminished social interaction.⁵² These perceptions vary across cultural contexts⁵³ and evolve over time,⁵⁴ making them difficult to capture through traditional survey instruments and other top-down methods. As a result, effective AI regulation requires sensitivity to social context and mechanisms for incorporating public perspectives into regulatory design at an early stage.⁵⁵ Although research on public perceptions of the EU AI Act remains limited, studies examining Japan's AI governance framework suggest that regulatory initiatives can increase public acceptance and trust by encouraging adoption while simultaneously addressing concerns about AI use.⁵⁶ Innovative methods, including scenario-based approaches and Cognitive-Affective Mapping (CAM), may further assist policymakers in identifying and engaging with public concerns relating to privacy, fairness, accountability, and other issues relevant to AI governance.⁵⁷

⁵² Babak Rahimi Ardabili, Armin Danesh Pazho, Ghazal Alinezhad Noghre, Vinit Katariya, Gordon Hull, Shannon Reid, & Hamed Tabkhi, *Exploring Public's Perception of Safety and Video Surveillance Technology: A Survey Approach*, 78 TECH. SOC'Y 102641 (2024); Wendy Li-Yun Chang, Shiang-Yao Liu, Ying-Kai Liao, & Tony Szu-Hsien Lee, *Ethical Concerns With Regards to Artificial Intelligence: A National Public Poll in Taiwan*, 12 IEEE ACCESS, 133595 (2024); Helena Machado, Susana Silva, & Laura Neiva, *Publics' Views on Ethical Challenges of Artificial Intelligence: A Scoping Review*, 5 AI ETHICS, 139 (2023); Omar Musbahi, Labib Syed, Peter Le Feuvre, Justin Cobb, & Gareth Jones, *Public Patient Views of Artificial Intelligence in Healthcare: A Nominal Group Technique Study*, 7 DIGITAL HEALTH, 1 (2021).

⁵³ Yuko Ikkatai, Tilman Hartwig, Naohiro Takanashi, & Hiromi M. Yokoyama, *Segmentation of Ethics, Legal, and Social Issues (ELSI) Related to AI in Japan, the United States, and Germany*, 3 AI ETHICS, 827 (2023); OKeiko Uemura, Akio Kozato, Takahiro Shiga, & Keiichiro Hayakawa, *The Comparison of AI Ethics Guidelines Among Japan, the US, and Europe, Focusing on Issues Related to National Character (日米欧の地域特性に着目したAI倫理ガイドラインの比較)* THE 32ND ANNUAL CONFERENCE OF THE JAPANESE SOC'Y FOR ARTIFICIAL INTELLIGENCE (2018).

⁵⁴ Jeroen K.G. Hopster, Chirag Arora, Charlie Blunden, Cecilie Erikson, Lily E. Frank, Julia S. Hermann, Michael B.O.T. Klenk, Elizabeth R.H. O'Neill, & Steffen Steinert, *Pistols, Pills, Pork and Ploughs: The Structure of Technomoral Revolutions*, 68 INQUIRY, 264 (2022).

⁵⁵ Fabian Walke, Lars Bennek, & Till J. Winkler, *Artificial Intelligence Explainability Requirements of the AI Act and Metrics for Measuring Compliance*, WIRTSCHAFTSINFORMATIK 2023 PROCEEDINGS, 77 (2023).

⁵⁶ See generally Uemura et al., *supra* note 53; Ikkatai et al., *supra* note 53.

⁵⁷ Keith Wiebe, Monika Zurek, Steven Lord, Natalia Brzezina, Gnel Gabrielyan, Jessica Libertini, Adam Loch, Resham Thapa-Parajuli, Joost Vervoort, & Henk Westhoek, *Scenario Development and Foresight Analysis: Exploring Options to Inform Choices*, 43 ANN. REV. ENV'T & RES. 545, 558 (2018); see generally David Wright, Rachel Finn, Raphael Gellert, Serge Gutwirth, Philip Schütz, Michael Friedewald, Silvia Venier, & Emilio Mordini, *Ethical Dilemma Scenarios and Emerging Technologies*, 87 TECH. FORECASTING & SOC. CHANGE 325 (2014); see generally Julius Fenn, Florian Gouret, Michael Gorki, Lisa Reuter, Wilhelm Gros, Paul Hüttner, & Andrea Kiesel, *Cognitive-Affective Maps Extended Logic: Proposing Tools to Collect and Analyze Attitudes and Belief Systems*, 57 BEHAV. RSCH. METHODS 174 (2025).

Finally, AI regulation is deeply embedded in, and shaped by, institutional settings and practices that require an interdisciplinary approach drawing on political science.⁵⁸ This necessitates an analytical perspective capable of integrating insights across disciplines and providing a coherent conceptual foundation. The central concept employed in this article is *AI governance*. We adopt a broad conception of governance that encompasses, but is not limited to, formal legal norms.⁵⁹ This perspective permits analysis of the processes through which norms are created, interpreted, and implemented – including soft law instruments⁶⁰ – as well as the roles of public and private actors and the influence of public perceptions on regulatory development.⁶¹ It further accommodates jurisdiction-specific understandings of governance and engages with recent debates on the governance of things.⁶²

We characterize all three jurisdictions as distinct forms of *collaborative AI governance*.⁶³ Collaborative governance refers to a regulatory model in which “the regulator relies on the capabilities of the regulated entities and monitors their compliance.”⁶⁴ The concept captures a spectrum of governance arrangements ranging from self-regulation and co-regulation to more complex forms of hybrid governance involving public and private actors and, potentially, interactions with AI systems themselves.⁶⁵ Having recently been refined in scholarship on digital

⁵⁸ See Mathias Siems, *New Directions in Comparative Law*, in *THE OXFORD HANDBOOK OF COMPARATIVE LAW* 852, 874 (Mathias Reimann & Reinhard Zimmermann eds., 2d ed. 2019).

⁵⁹ Lewis A. Kornhauser, *Law as an Achievement of Governance*, 47 J. LEGAL PHIL. 1, 3-8 (2022). For early accounts in institutional economics, see Oliver E. Williamson, *Transaction-Cost Economics: The Governance of Contractual Relations*, 22 J. L. & ECON. 233 (1979).

⁶⁰ This entails ethical codes or guidelines as well as standards and international agreements. See Michael Veale, Kira Matus, & Robert Gorwa, *AI and Global Governance: Modalities, Rationales, Tensions*, 19 ANN. REV. L. & SOC. SCI. 255, 258 (2023).

⁶¹ GUNNAR FOLKE SCHUPPERT, GOVERNANCE UND RECHTSETZUNG (2011).

⁶² Aurelia Colombi Ciacchi & Dietmar von der Pfordten, *Exploring the Relationship Between Law and Governance: A Proposal*, 11 THEORY & PRAC. LEGIS. 151, 155 (2023).

⁶³ See *infra* Part VI, Table.

⁶⁴ Jens-Peter Schneider, Kester Siegrist, & Simon Oles, *Collaborative Governance of the EU Digital Single Market Established by the Digital Services Act*, in GOVERNANCE OF AUTOMATED DECISION-MAKING AND EU LAW 78, 84 (Herwig Hofmann & Felix Pflücke eds., 2024).

⁶⁵ Margot E. Kaminski, *Binary Governance: Lessons from the GDPR's Approach to Algorithmic Accountability*, 92 S. CAL. L. REV. 1529, 1559 (2019). See also Dennis D. Hirsch, *The Law and Policy of Online Privacy: Regulation, Self-Regulation, or Co-Regulation?*, 34 SEATTLE U. L. REV. 439 (2011).

services, it offers a productive framework for integrating legal, political, ethical, and psychological perspectives on AI regulation.⁶⁶

C. Disruption, path dependence, and adaptiveness

The concepts of disruption, path dependence, and adaptiveness provide a heuristic framework for interdisciplinary comparative analysis. Disruption refers here to the perception of AI as a force capable of destabilizing markets, societies, and institutional arrangements. Contemporary debates frequently emphasize the disruptive nature of AI technologies,⁶⁷ a framing that has also been used to justify regulatory intervention.⁶⁸ At the same time, disruption is invoked as an argument against regulation, underpinning an antiregulatory stance based on the claim that technological innovation evolves too rapidly to be effectively governed.⁶⁹ The market introduction of systems such as ChatGPT has been widely associated with social and institutional disruption, while the emergence of models such as DeepSeek has intensified competition and challenged existing economic configurations. These developments resonate with Clayton M. Christensen's original formulation of disruption in innovation management theory in the 1990s.⁷⁰ In its initial use, the concept described how certain innovations could displace the capabilities and market positions of established firms.⁷¹ Subsequently, Silicon Valley discourse reframed disruption as a desirable and strategically pursued outcome, drawing on Schumpeter's notion of creative destruction while shifting emphasis from ex post explanation to ex ante ambition.⁷² Over time, the concept has diffused beyond its

⁶⁶ Schneider et al., *supra* note 64, at 91. For more on collaborative AI governance, see Teemu Birkstedt, Matti Minkinen, Anushree Tandon, & Matti Mäntymäki, *AI Governance: Themes, Knowledge Gaps and Future Agendas*, 33 INTERNET RSCH. 133, 157 (2023).

⁶⁷ Jeroen K.G. Hopster & Matthijs M. Maas, *The Technology Triad: Disruptive AI, Regulatory Gaps and Value Change*, 4 AI & ETHICS 1051 (2023); H.-Y. Liu et al., *Artificial Intelligence and Legal Disruption: A New Model for Analysis*, 12 L., INNOVATION & TECH. 205 (2020).

⁶⁸ See Recital 177 EU AI Act.

⁶⁹ This has been prominently challenged from a scholarly perspective. Margot E. Kaminski & Meg Leta Jones, *Constructing AI Speech*, 133 YALE L.J.F. 1212, 1216 (2024)9 ("Technology does not disrupt the law"); See also Margot E. Kaminski, *Technological "Disruption" of the Law's Imagined Scene: Some Lessons from Lex Informatica*, 36 BERKELEY TECH. L. J. 883, 893 (2021).

⁷⁰ CLAYTON M. CHRISTENSEN, *THE INNOVATOR'S DILEMMA: WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL* (1st ed. 1997).

⁷¹ Michael L. Tushman & Philip Anderson, *Technological Discontinuities and Organizational Environments*, 31 ADMIN. SCI. Q. 439 (1986).

⁷² ADRIAN DAUB, *WHAT TECH CALLS THINKING* (2020).

original analytical context and become a widely employed term.⁷³ In contemporary debates, disruption is no longer limited to firms and markets but also extends to the capacity of legislatures and regulatory institutions to respond to technological change, with artificial intelligence as a central example.⁷⁴ As such, disruption provides a useful lens for capturing the transformative effects of AI on legal and social systems, while also enabling comparison of differing regulatory responses and degrees of institutional adaptation across jurisdictions.

We contrast the perception of AI as a disruptive innovation by highlighting the persistence of existing regulatory frameworks, institutions, ethical traditions, and societal structures, while also incorporating an actor-centered perspective into the analysis of AI regulation. Even if discourses surrounding AI, as well as new products introduced into digital markets such as ChatGPT or DeepSeek, are shaped by increasingly global dynamics, regulatory responses to AI remain significantly differentiated, as they are embedded in distinct domestic contexts. We seek to capture this tension through an analytical focus on the interplay between disruption and domestic path dependence.⁷⁵ The concept of path dependence originates in economics but has since been developed across the social sciences in a variety of forms. This article does not engage with the broader theoretical debate on path dependence. For present purposes, path dependence is understood as the persistence of institutional trajectories shaped by earlier decisions.⁷⁶ Such trajectories may be embedded in legal frameworks, administrative expertise, and networks of relevant actors, among other structural factors.⁷⁷

Finally, we synthesize the interplay between disruption and path dependence through the concept of adaptiveness. Our analysis examines how different regulatory approaches facilitate timely responses to AI-

⁷³ Disruption has also an ethical dimension. Ulrich Bröckling, *Disruption*, in GLOSSAR DER GEGENWART 2.0 127, 130 (Ulrich Bröcklin et al. eds., 2024) (“Disrupt or be disrupted!”).

⁷⁴ Anna-Julia Saiger, *Navigating Disruption: The Case of the European AI Act*, in DATA PROTECTION, PRIVACY AND ARTIFICIAL INTELLIGENCE VOLUME 18: THE WORLD IS WATCHING 29, 32 (Jonas Breuer, Dara Hallinan, Paul De Hert & Manos Roussos eds., 2026).

⁷⁵ See for a similar approach “exploring the theme of continuity and disruption,” SHIN-YI PENG, CHING-FU LIN, & THOMAS STREINZ, ARTIFICIAL INTELLIGENCE AND INTERNATIONAL ECONOMIC LAW: DISRUPTION, REGULATION, AND RECONFIGURATION 2. See also Jörg Sydow, Georg Schreyögg, & Jochen Koch *Organizational Path Dependence: Opening the Black Box*, 34 ACAD. MGMT. REV. 689 (2009).

⁷⁶ NICO SCHRÖTER, PFADABHÄNGIGKEIT UND RECHT [PATH DEPENDENCY AND LAW] 19 (2024). See Chloé Bérut, *Anu Bradford, Digital Empires. The Global Battle to Regulate Technology*, 83 POLITIQUE EUROPÉENNE 130, 133 (2024) (book review) (“le numérique, comme tout objet, se soumet à des normes, des valeurs et des façons de faire qui lui préexistent”) (“digital technology, like any object, is subject to norms, values, and ways of operating that preexist it”).

⁷⁷ See Kaminski & Jones, *supra* note 69, at 1218.

driven innovation and, more importantly, how societies develop the capacity to address systemic challenges, including issues of trust in AI as well as processes of knowledge creation and exchange.⁷⁸ This perspective builds on earlier debates, as the pursuit of more inclusive approaches to assessing the risks and benefits of emerging technologies has long been a central concern of parliamentary and institutional Technology Assessment (TA).⁷⁹ Scholarship on TA has sought to derive lessons from societal debates on nuclear, biotechnological, and nanotechnological developments, with the aim of fostering informed public deliberation and improving regulatory design.⁸⁰ More recent research on AI has developed similar systematic approaches for identifying relevant stakeholders and has proposed mechanisms to support international coordination of regulatory frameworks.⁸¹ Given the rapid pace of AI development, the challenge of designing regulatory frameworks that are both stable and capable of adapting to unforeseen developments has become increasingly pressing.⁸² Against this background, this study comparatively evaluates AI governance in the three jurisdictions through the lens of adaptiveness.

III. GOING IN: THE EU'S 2024 AI ACT

Bradford characterizes the EU's digital economic model as rights-driven.⁸³ In the field of AI regulation, however, the picture is more complex. The EU AI Act is best understood as a *values-based* instrument,

⁷⁸ See Anka Reuel & Trond Arne Undheim, *Generative AI Needs Adaptive Governance*, CORN. U. ARXIV (June 6, 2024) ("Adaptive governance is—ideally—fast, flexible, responsive, and iterative"). Adaptiveness is closely connected to the so-called pacing problem; see THE GROWING GAP BETWEEN EMERGING TECHNOLOGIES AND LEGAL-ETHICAL OVERSIGHT: THE PACING PROBLEM (Gary E. Merchange, Braden R. Allenby, & Joseph R. Herkert eds., 2011).

⁷⁹ Arie Rip, Thomas J. Misa, & Johan Schot, *Constructive Technology Assessment: A New Paradigm for Managing Technology in Society*, in MANAGING TECHNOLOGY IN SOCIETY. THE APPROACH OF CONSTRUCTIVE TECHNOLOGY ASSESSMENT 1 (Arie Rip, Thomas J. Misa, & Johan Schot eds. 1995).

⁸⁰ See generally ARIE RIP, FUTURES OF SCIENCE AND TECHNOLOGY IN SOCIETY (2018); Emmie Hine & Luciano Floridi, *Artificial Intelligence with American Values and Chinese Characteristics: A Comparative Analysis of American and Chinese Governmental AI Policies*, 39 AI & SOC'Y 257 (2024) (the authors adopt an interesting linguistic approach, primarily aimed at identifying the differing ethical foundations of technology-related conflicts).

⁸¹ Lei Huang & Walter Peissl, *Artificial Intelligence—A New Knowledge and Decision-Making Paradigm?*, in TECHNOLOGY ASSESSMENT IN A GLOBALIZED WORLD 175, 175 (Leonard Hennan, Julia Hahn, Miltos Ladikas, Ralf Linder, Walter Peissl, & Rinie van Est eds., 2023) (Characterizing technology assessment as an inherently interdisciplinary approach to providing policy advice).

⁸² Robert G. Lee & Judith Petts, *Adaptive Governance for Responsible Innovation*, in RESPONSIBLE INNOVATION: MANAGING THE RESPONSIBLE EMERGENCE OF SCIENCE AND INNOVATION IN SOCIETY 143 (Richard Owen, John Bessant, & Maggy Heintz eds., 2013).

⁸³ BRADFORD, *supra* note 1, at 9, 105.

shaped by ethical considerations and largely driven by the European Union's tripartite legislative process. Throughout the legislative negotiations, this normative orientation came into tension with the European Commission's preference for a product-safety framework, reflecting both reliance on the existing regulatory acquis and pressures from industry stakeholders. The resulting legislation constitutes a hybrid regulatory framework.⁸⁴ It conceptualizes AI systems as products while simultaneously subjecting them to requirements derived from fundamental rights and other European values. This hybridity has complicated the translation of the Act's objectives into technical standards and implementation mechanisms, a process that remains incomplete. The European Commission's Digital Omnibus on AI exemplifies the EU's response to these challenges in a changing geoeconomic environment, combining the postponement of compliance obligations with a partial centralization of enforcement through an expanded role for the AI Office and a reconfiguration of sectoral integration, coupled with strengthened reliance on Commission delegated acts.⁸⁵

A. Disruption

a. Legislating amidst disruptive innovation

The EU AI Act was adopted on 13 June 2024 and entered into force on 1 August 2024. Some of its provisions are applicable at the time of writing; others will come into force in stages.⁸⁶ While the regulation's recitals explicitly refer to the avoidance of a "disruption of the market,"⁸⁷ a potentially disruptive event shaped the legal text in the making: the public release of ChatGPT version 3.5 by OpenAI in November 2022. As one of the first jurisdictions to pursue comprehensive AI regulation, the EU had to adapt its legislative approach to rapid advances in AI

⁸⁴ Marco Almada & Anca Radu, *The Brussels Side-Effect: How the AI Act Can Reduce the Global Reach of EU Policy*, 25 GERMAN L.J. 646, 648 (2024); see also Oskar J. Gstrein, Noman Haleem, & Andrej Zwitter, *General-Purpose AI Regulation and the European Union AI Act*, 13 INTERNET POL'Y REV. 2, 7, 9 (2024); Michael Veale & Frederik Zuiderveen Borgesius, *Demystifying the Draft EU Artificial Intelligence Act*, 22 COMPUT. L. REV. INT'L 97, 112 (2021).

⁸⁵ Regulation (EU) 2026/1744 of the European Parliament and of the Council of 8 July 2026 amending Regulations (EU) 2024/1689, (EU) 2018/1139 and (EU) 2023/1230 as regards the simplification of the implementation of harmonised rules on artificial intelligence (Digital Omnibus on AI), O.J. (L 1/41); see Council of the European Union, Interinstitutional File 2025/0359 (COD), Council Doc. 9247/26 (May 13, 2026).

⁸⁶ Article 113 EU AI Act.

⁸⁷ Recital 177 EU AI Act.

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 317

capabilities that emerged while the Act was being negotiated.⁸⁸ The release of ChatGPT intensified public and political debate about the risks posed by general-purpose AI (GPAI) systems and prompted renewed scrutiny of the Commission's proposal.⁸⁹ In response, the European Parliament adopted a more fundamental rights-oriented approach to AI on 14 June 2023 and amended the proposed regulation accordingly.⁹⁰ Although member states such as Germany, Italy, and France challenged these changes during the trilogue negotiations,⁹¹ they remain a defining feature of the final AI Act.⁹² As a result, the regulation continues to center on the protection of fundamental rights as the normative foundation of EU AI governance, notwithstanding its implementation through a product safety law approach.⁹³

Disruption, however, continues to shape European AI regulation even after the adoption of the EU AI Act. Under the Digital Omnibus package and in light of technological developments, including reported

⁸⁸ Commission White Paper on Artificial Intelligence—A European Approach to Excellence and Trust, at 1, COM(2020) 65 final (Feb 19, 2020) (“Artificial Intelligence is developing fast”). The first EU AI Act proposal, generative AI was only mentioned in connection to “chatbots” and deepfakes. Martin Coulter and Supantha Mukherjee, *Exclusive: Behind EU Lawmakers’ Challenge to Rein in ChatGPT and Generative AI*, REUTERS (May 1, 2023), <https://www.reuters.com/technology/behind-eu-lawmakers-challenge-rein-chatgpt-generative-ai-2023-04-28/> [<https://perma.cc/WAR4-VGFJ>]; see also Gian Volpicelli, *ChatGPT Broke the EU Plan to Regulate AI*, POLITICO (Mar. 3, 2023), <https://www.politico.eu/article/eu-plan-regulate-chatgpt-openai-artificial-intelligence-act/> [<https://perma.cc/B3MA-PJYR>].

⁸⁹ Bradford, *supra* note 6. Microsoft and Google persistently lobbied against the inclusion of general-purpose AI from a high-risk listing. See Volpicelli, *supra* note 88. According to the lobby watch organization Corporate Europe Observatory, big tech companies have received privileged and disproportionate access to senior European policymakers during the final stages of negotiating the EU AI Act, altering the outcome to their favors. CORPORATE EUROPE OBSERVATORY, ANNUAL REVIEW 2023 (2023).

⁹⁰ Ceyhun Necati Pehlivan, *The EU Artificial Intelligence Act: An Introduction*, 5 GLOB. PRIV. L. REV. 31, 32 (2024).

⁹¹ In its final form, the EU AI Act adopts the OECD definition of AI, OECD LEGAL INSTRUMENTS, *Recommendation of the Council on Artificial Intelligence* (May 22, 2019), <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449> [<https://perma.cc/8N3U-J4GB>], and eases the initially proposed moratorium on facial recognition, see Veale & Zuiderveen Borgesius, *supra* note 84, at 97-8.

⁹² See Gstrein et al., *supra* note 84, at 2, 4; see also *Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts*, COM(2021) 206 final (Apr. 21, 2021).

⁹³ Marco Almada & Giovanni De Gregorio, *The Mixed Nature of the AI Act: Product Safety and Fundamental Rights Regulation*, in THE ARTIFICIAL INTELLIGENCE ACT – A THEMATIC COMMENTARY 61, 63-4 (Gianclaudio Malgieri et al., eds., 2026).

incidents involving generative AI systems such as Grok,⁹⁴ and broader societal developments evidenced by the documented use of such applications,⁹⁵ so-called “nudification applications” (AI systems facilitating the generation of non-consensual intimate imagery) are expected to be included in the list of prohibited AI systems.

b. Addressing product risks and emerging societal risks

Disruptive events have impacted the EU AI Act, as the previous section has shown. Even more fundamentally, the perception of AI as a disruptive technology has shaped the European regulatory approach – AI has thus led to regulatory disruption.⁹⁶ This is reflected in the EU AI Act’s dual objective of promoting the functioning of the internal market while protecting health, safety, fundamental rights, democracy, the rule of law, and the environment from the risks associated with AI systems.⁹⁷ The structure of this provision places fundamental rights alongside democracy, the rule of law, and environmental protection as values that the Union seeks to preserve. The Act therefore appears to conceive of fundamental rights primarily in their systemic dimension, as part of the broader set of values enshrined in Article 2 of the Treaty on the European Union.⁹⁸ By contrast, the regulation grants individual rights and remedies only to a limited extent, most notably in Articles 85 and 86 EU AI Act.⁹⁹

⁹⁴ Foo Yun Chee, *EU Lawmakers Support Ban on AI Apps Generating Explicit Images*, Reuters (Mar. 18, 2026), <https://www.reuters.com/legal/litigation/eu-lawmakers-support-ban-ai-apps-generating-explicit-images-2026-03-18/> [<https://perma.cc/DS25-86T8>].

⁹⁵ See Cassidy Gibson et al., *Analyzing the AI Nudification Application Ecosystem*, in Proc. 34th USENIX Security Symposium (2025), <https://www.usenix.org/conference/usenixsecurity25/presentation/gibson> [<https://perma.cc/G5N8-DF5B>].

⁹⁶ On regulatory disruption see Roger Brownsword, Eloise Scotford, & Karen Yeung, *Law, Regulation, and Technology: The Field, Frame, and Focal Questions*, in THE OXFORD HANDBOOK OF LAW, REGULATION, AND TECHNOLOGY 3, 8 (Roger Brownsword, Eloise Scotford, & Karen Yeung eds., 2017); see also Kaminski, *supra* note 69, at 886 (quoting an expert about how AI has “changed the law’s ‘imagined regulatory scene’”).

⁹⁷ Article 1(1) EU AI Act. See Saiger, *supra* note 74, at 34.

⁹⁸ Christiane Wendehorst, *Artikel 1 EU AI Act*, in KI-VO: VERORDNUNG ÜBER KÜNSTLICHE INTELLIGENZ: KOMMENTAR 67, 85 (Mario Martini & Christiane Wendehorst eds., 2024).

⁹⁹ The latter provision gives affected individuals the right to obtain from the deployer clear and meaningful explanations of the role of a (high-risk) AI system in a decision-making procedure. Margot E. Kaminski, *The Right to Explanation, Explained*, 34 BERKELEY TECH. L.J. 189 (2019). See pmbl. 171 EU AI Act; see also Marco Almada & Nicolas Petit, *The EU AI Act: Between the Rock of Product Safety and the Hard Place of Fundamental Rights*, 62 COMMON MKT. L. REV. 85, 97 (2025) (on the right to lodge a complaint with a market surveillance authority under Article 85 EU AI Act).

The EU AI Act primarily conceptualizes AI systems as products.¹⁰⁰ Yet, its hybrid character¹⁰¹ emerges from the Act's simultaneous regulation of two distinct categories of risk: product risks and societal risks.

Product risks are closely linked to the use of a product. They reflect the traditional logic of product safety regulation, which assumes that products possess a relatively stable physical form throughout their lifecycle.¹⁰² Accordingly, product risks concern the potential harm that a specific product may cause to health and safety when used in a particular context by a defined group of users. This approach is reflected in the AI Act's integration with existing product safety legislation governing, for example, motor vehicles, medical devices, and toys (Annex I EU AI Act).

Societal risks follow a different logic. Rather than focusing on the physical characteristics of a product, they arise from the purpose, context, and circumstances in which AI systems are deployed. Such risks may be novel or emerging and often intersect with more traditional forms of harm. They relate to the protection of fundamental rights and other European values, including democracy, the rule of law, and environmental protection. Unlike conventional product risks, these interests are difficult to quantify and may evolve over time.¹⁰³ The AI Act addresses such concerns through its regulation of AI systems used in areas such as biometrics, critical infrastructure, and law enforcement.¹⁰⁴ Similarly, the prohibition of certain AI practices, including the use of subliminal techniques, seeks to protect psychological integrity and vulnerable persons.¹⁰⁵

The EU AI Act does not fully reconcile these two dimensions of risk. Rather, their coexistence generates tensions within the regulatory framework, supporting accounts in the literature that characterize the Act as an uneasy marriage between product safety regulation and the protection of fundamental rights.¹⁰⁶ This is illustrated by the Digital Omnibus on AI, which reclassifies machinery-related legislation from Annex I, Section A to Section B, thereby attenuating the horizontal,

¹⁰⁰ Article 6(1) EU AI Act.

¹⁰¹ See *supra* note 84.

¹⁰² Almada & Petit, *supra* note 99, at 106–7.

¹⁰³ Almada & De Gregorio, *supra* note 93, at 62.

¹⁰⁴ Article 6(2) and Annex III EU AI Act.

¹⁰⁵ EU AI Act pmb1 29, EU AI Act Article 5(1)(a).

¹⁰⁶ Almada & De Gregorio, *supra* note 93, at 65.

fundamental-rights-oriented logic of the high-risk framework in favor of a more sectorally differentiated approach.¹⁰⁷

The following section (B) examines the path dependences that contributed to this regulatory choice before Section C assesses its implications in greater detail.

B. Path dependence

a. The role of ethics in the making of the EU AI Act

Ethical path dependences have influenced the development of the EU AI Act, reinforcing its focus on European values and strengthening the European Parliament's role in the legislative process. A key milestone was the establishment of the High-Level Expert Group on Artificial Intelligence by the European Commission in 2018. Composed of representatives from industry, academia, and civil society, the Group was tasked with developing Ethics Guidelines for Trustworthy AI (EU Ethics Guidelines) and accompanying Policy and Investment Recommendations.¹⁰⁸

Published in 2019, the EU Ethics Guidelines covered the same geographical and material scope later addressed by the EU AI Act and therefore provide a useful case study for examining the relationship between ethics and law in EU AI governance. Several elements of the Guidelines reappear in the AI Act. Most notably, both instruments seek to promote a human-centric and trustworthy approach to AI¹⁰⁹ and explicitly ground AI governance in European values, particularly the Charter of Fundamental Rights of the European Union and international human rights law. The continuity between the two documents is reflected in the AI Act's justification for prohibiting certain AI practices that are considered incompatible with the Union's foundational values:

"Aside from the many beneficial uses of AI, it can also be misused and provide novel and powerful tools for manipulative, exploitative and social control practices. Such practices [...] should be prohibited because they contradict Union values of respect for human dignity, freedom,

¹⁰⁷ Note that Article 2(2) EU AI Act states that "for AI systems classified as high-risk AI systems in accordance with Article 6(1) related to products covered by the Union harmonisation legislation listed in Section B of Annex I, only Article 6(1), Articles 102 to 109 and Article 112 apply. Article 57 applies only in so far as the requirements for high-risk AI systems under this Regulation have been integrated in that Union harmonisation legislation".

¹⁰⁸ EUR. COMM'N, ETHICS GUIDELINES FOR TRUSTWORTHY AI (2019), <https://www.europarl.europa.eu/cmsdata/ethics-guidelines-AI> [https://perma.cc/2K8S-2J93] [hereinafter EU Ethics Guidelines].

¹⁰⁹ EU AI Act pmb1 1.

2026] *EXPANDING THE HORIZONS OF AI GOVERNANCE* 321

equality, democracy and the rule of law and fundamental rights enshrined in the Charter [...].”¹¹⁰

The EU Ethics Guidelines articulate their normative vision through four principles for the development and deployment of AI: respect for human autonomy, prevention of harm, fairness, and explicability. These principles are further operationalized through seven requirements for trustworthy AI. Although the Guidelines are not legally binding, their influence on the EU AI Act is expressly acknowledged in Recital 27 and is particularly evident in the Act’s treatment of harmful AI practices.

The Guidelines identify several categories of AI systems that may cause particularly serious harm to individuals, including systems used for identification and tracking, involuntary biometric identification and mass surveillance, covert AI systems that may be mistaken for humans, citizen scoring, and lethal autonomous weapons.¹¹¹ While these practices are not mapped directly onto the AI Act’s risk taxonomy, there is considerable overlap between the two frameworks. Military applications, including lethal autonomous weapons, fall outside the scope of the AI Act.¹¹² By contrast, social scoring and certain forms of real-time biometric identification in publicly accessible spaces are classified as prohibited practices, subject to limited exceptions.¹¹³

The AI Act’s blacklisting of specific AI practices thus reflects a degree of continuity with the EU Ethics Guidelines. This finding contrasts with early concerns that the EU Ethics Guidelines would hinder or delay the drafting of the EU AI Act. Published amid a broader proliferation of non-binding AI ethics frameworks,¹¹⁴ the Guidelines were criticized for contributing to “ethics washing”, understood as the strategic use of ethical codes to defer binding regulation and increase public acceptance of emerging technologies.¹¹⁵

However, such critiques understate the Guidelines’ normative function in linking ethical principles to legal compliance. In particular, they conceptualize adherence to existing law as a constitutive element of trustworthy AI, alongside ethical alignment and technical robustness. As the Guidelines state:

¹¹⁰ EU AI Act pmbl. 28; *see also* EU Ethics Guidelines, at 6.

¹¹¹ EU Ethics Guidelines, at 33.

¹¹² *See* Recital 24 and Article 2(3)(ii) EU AI Act.

¹¹³ Article 5 EU AI Act.

¹¹⁴ For an overview *see* Jobin et al., *supra* note 48.

¹¹⁵ Luciano Floridi, *Translating Principles into Practices of Digital Ethics: Five Risks of Being Unethical*, 32 PHIL. TECH. 185 (2019).

“Trustworthy AI has *three components*, which should be met throughout the system’s entire life cycle:

1. it should be *lawful*, complying with all applicable laws and regulations;
2. it should be *ethical*, ensuring adherence to ethical principles and values; and
3. it should be *robust*, both from a technical and social perspective, since, even with good intentions, AI systems can cause unintentional harm.

Each of these three components is necessary but not sufficient in itself to achieve Trustworthy AI.”¹¹⁶

The EU Ethics Guidelines are intended to complement, rather than replace, existing law.¹¹⁷ There is no evidence that they delayed the EU AI Act. Instead of hindering regulation, they provided interim guidance for AI governance, although they advocated a sector-specific approach that diverged from the more horizontal regulatory model ultimately proposed by the European Commission.¹¹⁸ Nonetheless, the Guidelines’ emphasis on fundamental rights and other European values remained an important reference point in the development of AI law and contributed to strengthening the role of the European Parliament in the legislative process.

b. Institutional power struggles and lobbying in the EU’s tripolar legislature

Alongside this ethical path dependence, the EU AI Act was shaped by ongoing power struggles among the European Parliament, the Commission, and the Council, understood here as constituting a tripolar European legislature, as well as by pressure from actors outside the formal institutional framework. Together, these dynamics reinforced a regulatory trajectory that drew heavily on existing EU product safety law as a foundation for AI regulation.

Since 2017, the European Parliament – the only directly elected institution at the EU level – had repeatedly called for AI-specific legislation. However, the Parliament does not possess a general right of legislative initiative.¹¹⁹ Legislative initiative rests primarily with the European Commission, which may draw on the expertise of expert

¹¹⁶ EU Ethics Guidelines, at 5 (emphasis as in the original).

¹¹⁷ *Id.* at 6.

¹¹⁸ Almada & De Gregorio, *supra* note 93, at 63.

¹¹⁹ TAMBIAA MADIEGA, ARTIFICIAL INTELLIGENCE ACT, EU BRIEFING (Sept. 2024). Article 225 Treaty on the Functioning of the European Union (TFEU), Oct. 26, 2012 O.J. (C 326/47).

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 323

networks in preparing legislative proposals.¹²⁰ As a result, progress toward AI regulation depended largely on the Commission, which initially favored a voluntary governance approach. When the Commission eventually presented its proposal for AI regulation in 2021, it adopted a comprehensive regulatory framework that reflected institutional and legal path dependences rooted in EU product safety law.¹²¹ In doing so, it laid the foundation for the hybrid character of the AI Act.¹²²

During the legislative process, the EU institutions diverged significantly on questions relating to fundamental rights. The European Parliament advocated stricter safeguards, including mandatory Fundamental Rights Impact Assessments, whereas both the Commission and the Council – the latter acting as the co-legislator representing the governments of the Member States – favored a lighter regulatory approach and a narrower definition of high-risk AI, particularly in areas such as biometrics, security, and defense.¹²³ Despite support from the Parliament and civil society organizations for more robust protections, the final text contains significant exemptions and filtering mechanisms that limit the scope of the high-risk regime, prompting concerns about the adequacy of consumer and fundamental rights protection.¹²⁴ Nevertheless, as the previous section has shown, the EU AI Act remains a values-based regulatory instrument in which the protection of European values occupies a central position. One manifestation of this orientation is the Fundamental Rights Impact Assessment, which certain public-sector deployers must conduct before putting designated high-risk AI systems into use.¹²⁵

Beyond the institutional landscape, the automotive industry has long occupied a central position in European industrial policy and regulatory frameworks, particularly through the type-approval regime established by Regulation (EU) 2018/858. As AI increasingly shapes both driving functions and in-vehicle applications, the automotive sector has become

¹²⁰ Article 17 TFEU. Kübra Dilek Azman, *The Problem of “Democratic Deficit” in the European Union*, 1 (5) INT’L J. HUMAN. & SOC. SCI. 245, 246 (2011).

¹²¹ COM(2021) 206 final.

¹²² See *supra* II A b.

¹²³ Francesca Palmiotto, *The AI Act Roller Coaster: The Evolution of Fundamental Rights Protection in the Legislative Process and the Future of Regulation*, EUR. J. RISK REG. 1, 7 (2025); CORPORATE EUROPE OBSERVATORY, *supra* note 89.

¹²⁴ *Id.*

¹²⁵ Article 27 EU AI Act. Note that private entities providing public services, as well as deployers of high-risk AI systems referred to in points 5(b) and (c) of Annex III EU AI Act are also subject to this requirement.

an important stakeholder in the development of AI regulation.¹²⁶ Accordingly, industry actors, most notably the European Automobile Manufacturers' Association, sought to influence the drafting of the EU AI Act and advocated a "sectoral and light-touch approach" to AI governance before the Commission presented its proposal.¹²⁷ Although the automotive industry has not been at the forefront of AI development to the same extent as major technology companies, it has successfully ensured that AI governance within the sector remains closely linked to existing product safety frameworks.¹²⁸ Under the EU AI Act, AI systems covered by the automotive type-approval framework – including Regulations (EU) 2018/858 and 2019/2144 – are classified as high-risk AI systems.¹²⁹ At the same time, Article 2(2) preserves the primacy of sector-specific legislation, ensuring that automotive AI continues to be regulated principally through the established type-approval framework. This arrangement enables continued sectoral involvement in the implementation of AI regulation while reinforcing the path dependence of EU product safety law. Nevertheless, Recital 49 of the EU AI Act calls for the alignment of Union harmonization legislation, including the Type-Approval Framework Regulation and the General Product Safety Regulation, with the requirements applicable to high-risk AI systems.¹³⁰ The automotive sector therefore illustrates both the persistence of established regulatory trajectories and their gradual adaptation to the challenges posed by AI.¹³¹

c. Product safety law

The influence of the automotive industry points to the broader landscape of European product safety law and, more generally, to the

¹²⁶ *Id.*

¹²⁷ Nils Löfing, *Impact of the EU's AI Act Proposal on Automated and Autonomous Vehicles*, BIRD & BIRD (Apr. 12, 2023), <https://www.twobirds.com/en/insights/2023/global/impact-of-the-eu-ai-act-proposal-on-automated-and-autonomous-vehicles> [<https://perma.cc/QF38-HQSQ>].

¹²⁸ Thomas Kahl, *The AI Act and the Automotive Industry. Where Does the Road Lead?* (Mar. 27, 2024), <https://www.taylorwessing.com/de/insights-and-events/insights/2025/03/ai-act-and-the-automotive-industry> [<https://perma.cc/8UQM-M5X2>]. See also ELAINE FAHEY, BIG TECH AND EU LAW. TRANSATLANTIC LAWYERING, LOBBYING AND LITIGATING (Celtenham: Edward Elgar Publishing, 2025).

¹²⁹ Article 6(1) in conjunction with Annex I.

¹³⁰ See Article 107 and Article 109 EU AI Act.

¹³¹ Significant industry pressure has been reported in relation to proposals to loosen obligations applicable to machinery, see Adam Leon Smith, *Auf den Omnibus wird jahrelange Rechtsunsicherheit folgen*, TAGESSPIEGEL BACKGROUND (May 15, 2026), <https://background.tagesspiegel.de/digitalisierung-und-ki/briefing/auf-den-omnibus-wird-jahrelange-rechtsunsicherheit-folgen> [<https://perma.cc/A6UT-CH7F>].

legal path dependences and competence constraints shaping EU regulation. Under the principle of conferral, “the Union shall act only within the limits of the competences conferred upon it by the Member States in the Treaties to attain the objectives set out therein.”¹³² In the case of the EU AI Act, Article 114 TFEU serves as the principal legal basis.¹³³ As this provision empowers the EU legislator to establish and ensure the functioning of the internal market, it frames the AI Act primarily as an internal-market instrument and encourages the regulation of AI through categories familiar to market regulation, such as products.¹³⁴ This choice is consistent with broader developments in European product safety law, where regulatory frameworks have increasingly been extended to software-based systems.¹³⁵ In this respect, the regulation of medical devices is widely regarded as an important model for the AI Act.¹³⁶ The reliance on Article 114 TFEU and existing product safety frameworks therefore illustrates how legal path dependences and competence structures have shaped the EU’s approach to AI governance. The regulatory consequences of this choice become particularly visible in the role assigned to standardization.

European product safety law is deeply rooted in standardization. As a regulatory technique, standardization was introduced in 1985 through the so-called New Approach to technical harmonization and standards – later developed into what is now commonly referred to as the New Legislative Framework (NLF) – in order to address the limitations of earlier, more top-down forms of product regulation.¹³⁷ The resulting accumulation of expertise, institutional practices, and stakeholder networks created a path-dependent foundation on which the EU AI Act was ultimately constructed.¹³⁸

¹³² Article 5(2) TEU.

¹³³ *But see* Article 16 TFEU.

¹³⁴ COM(2020) 65 final, at 15. Gstrein et al., *supra* note 84, at 7; Hans-W. Micklitz, *AI Standards, EU Digital Policy Legislation and Stakeholder Participation*, 6 J. EUR. CONSUMER & MARKET L. 212 (2023).

¹³⁵ Marco Almada & Nicolas Petit, *The EU AI Act: A Medley of Product Safety and Fundamental Rights?*, Robert Schuman Centre for Advanced Studies Research Paper No. 2023/59 (2023).

¹³⁶ Gabriele Mazzini & Salvatore Scalzo, *The Proposal for the Artificial Intelligence Act: Considerations around Some Key Concepts*, in *LA VIA EUROPEA PER L’INTELLIGENZA ARTIFICIALE* (CARMELITA CAMARDI ED., 2022).

¹³⁷ Decision (EC) 786/2008 of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products, O.J. (L 218/82); Regulation (EU) 2019/1020 of the European Parliament and of the Council of 20 June 2019 on market surveillance and compliance of products and amending Directive and Regulations (2019) O.J. (L 169/1).

¹³⁸ Almada & Radu, *supra* note 84, at 7; with focus on the Market Surveillance Authorities *see* Veale & Zuiderveen Borgesius, *supra* note 84, at 98.

Recent developments in EU law point to an expansion of standardization beyond purely technical specifications to encompass normative considerations, as illustrated by the Eco-design Regulation.¹³⁹ This is the foundation upon which the EU AI Act builds. The European Commission has requested two of the European Standardization Organisations (ESOs)¹⁴⁰ to develop harmonized European standards (“hENS”) specifying the obligations of providers and deployers under the AI Act.¹⁴¹ These standards are linked to EU secondary legislation through the mechanism of a presumption of conformity, whereby compliance with the standards is presumed to satisfy the more general requirements laid down in the regulation.¹⁴² Although adherence to harmonized standards is formally voluntary, private actors have strong incentives to adopt them, as doing so reduces compliance costs and facilitates access to the European market.¹⁴³

Access to the European single market under the EU AI Act is structured around a three-step procedure: risk classification, conformity assessment, and CE marking. First, providers¹⁴⁴ are responsible for classifying their systems and determining whether their product qualifies as an AI system¹⁴⁵ and, if so, into which risk category it falls.¹⁴⁶ Where, by way of exception, Annex-III AI systems are considered not high-risk, providers shall document their assessment before the system is placed on the market or put into service. Upon request of national competent authorities, they shall provide the documentation of the assessment.¹⁴⁷ In the case of GPAI models, providers are additionally required to notify the European Commission.¹⁴⁸ Second, conformity assessment is carried out either by the provider itself – under the procedures set out in Annex VI, which draw on instruments developed under the NLF – or by third-party

¹³⁹ Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 establishing a framework for the setting of eco-design requirements for sustainable products, O.J. (L 1/89).

¹⁴⁰ Regulation (EU) 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation, O.J. (L 316), Nov. 14, 2012, at 12.

¹⁴¹ C(2023) 3215 final.

¹⁴² Article 40 EU AI Act.

¹⁴³ Simon Gerdemann & Maren K. Wöbbeking, *Article 40 EU AI Act*, in MARTINI & WENDEHORST (EDS.), *supra* note 98, at 622, 627.

¹⁴⁴ Article 3(3) EU AI Act.

¹⁴⁵ Article 3(1) EU AI Act.

¹⁴⁶ See Hannah Ruschemeier, *Article 6 EU AI Act*, in MARTINI & WENDEHORST (EDS.), *supra* note 98, at 287, 298, 310.

¹⁴⁷ This obligation would be eased with the recently proposed Omnibus Package, COM(2025) 836 final, 2025/0359 (COD): Article 6(4) EU AI Act.

¹⁴⁸ Article 52(1) EU AI Act.

conformity assessment bodies, as specified in Annex VII.¹⁴⁹ These so-called notified bodies occupy a hybrid position: they are formally independent private entities, yet they operate within a regulatory framework designed to ensure independence from providers of high-risk AI systems.¹⁵⁰ Where harmonized standards are complied with, the notified body issues a certificate, typically valid for four to five years.¹⁵¹ Finally, once conformity has been established, providers must draw up an EU declaration of conformity and affix the CE marking to the system.¹⁵² This procedure functions as the gateway to the EU single market.

C. Adaptiveness

The previous sections have outlined the key characteristics of the EU AI Act and traced their institutional and legal origins. In this final section, the Act's regulatory approach is assessed in light of future developments.

One reason for relying on a standardization-based regulatory mechanism is its potential for adaptiveness. Because harmonized standards do not constitute formal legislation, they can be revised and updated through comparatively streamlined procedures, allowing for greater responsiveness to technological change. This flexibility is further reinforced by the incorporation of industry expertise, as European Standardization Organizations (ESOs) bring together experts from private companies, research institutions, and public authorities, with industry actors forming the largest group.¹⁵³ In this sense, the EU AI Act is designed to facilitate timely and effective adaptation to technological developments and to accommodate the pace of innovation.¹⁵⁴ However, its hybrid structure also gives rise to challenges in translating abstract

¹⁴⁹ See Article 43(1), (2) EU AI Act.

¹⁵⁰ Article 3(22) EU AI Act. Notified bodies are designated and monitored in accordance with the procedure outlined in Articles 29 et seq. EU AI Act by the notifying authority of the Member State (Article 28 EU AI Act). In some limited cases (AI systems to be put into service by law enforcement, immigration, or asylum authorities or by Union institutions), national market surveillance authorities (i.e. data protection authorities, see Article 75(8) EU AI Act) have the role of notified bodies (Article 43(1) EU AI Act).

¹⁵¹ Article 44(2) EU AI Act.

¹⁵² Article 16 EU AI Act.

¹⁵³ JONATHAN DOLLINGER, FOLGENABSCHÄTZUNGEN FÜR VERWALTUNGS-ALGORITHMEN 68 (Mohr Siebeck 2023).

¹⁵⁴ Marta Cantero Gamito & Christopher T Marsden, *Artificial Intelligence Co-Regulation? The Role of Standards in the EU AI Act*, 32 INT'L J. OF L. AND INFORMATION TECH. 1 (2024). Pointing both toward the advantages and disadvantages of this approach: Nadja Braun Binder & Catherine Egli, *Artikel 8 EU AI Act*, in MARTINI & WENDEHORST (EDS.), *supra* note 98, at 331, 343.

European values into operational standards and ensuring consistent implementation across governance levels. Against the backdrop of broader deregulatory pressures, this may also contribute to a gradual shift in regulatory authority toward the European Commission in the issuance of guidance, as well as toward national competent authorities and private standard-setting actors in practical decision-making.

a. Multidimensional collaborative AI governance

What makes the EU AI Act particularly distinctive is that it binds both public and private actors involved in the development and deployment of AI systems. These actors interact in complex and differentiated ways, reflecting the Act's nature as a comprehensive regulatory framework applicable across a broad spectrum of AI systems.

We refer to this regulatory configuration as *multidimensional collaborative AI governance*. It is *collaborative* insofar as it relies on the interaction of public and private actors in both rule-making and implementation. It is *multidimensional* in that it allocates regulatory functions across actors according to different dimensions of risk, including both societal impacts and product-related safety risks.¹⁵⁵ At its core, the EU AI Act integrates public and private actors across multiple governance levels, including the Member State and EU levels, while also interacting with evolving international legal norms and technical standards. Whether this framework will realize its potential as a mechanism for knowledge creation and exchange, as well as for trust-building, remains an open question, particularly given the structural tensions inherent in the hybrid design on which it is based.

Collaborative governance is understood here as a governance model that distributes core public policy functions across a diverse set of public and private actors.¹⁵⁶ While such models have already informed earlier digital regulatory frameworks, the EU AI Act develops this logic into a more explicitly multidimensional configuration. In this framework, different governance functions are allocated across actors in accordance with distinct dimensions of risk, including risk classification and

¹⁵⁵ See *infra* Part III A b.

¹⁵⁶ Schneider et al., *supra* note 64, at 91. See Celso Cancela-Outeda, *The EU's AI Act: A Framework for Collaborative Governance* 27 INTERNET OF THINGS 101291 (2024), drawing "on a collaborative governance notion, characterized by an ongoing exchange of knowledge between public institutions or agencies and diverse stakeholders in policymaking" with reference to Carmine Bianchi et al., *Implementing Collaborative Governance: Models, Experiences, and Challenges*, 23/11 PUBLIC MANAGEMENT REV. 1581 (2021). Others have used the term co-regulation in this regard see Cantero Gamito & Marsden, *supra* note 154.

assessment, enforcement through private actors, and the translation of normative requirements into technical standards.

Risk classification conducted by providers highlights the significant role of private actors under the EU AI Act, whose activities are only partially subject to public oversight. With regard to the conformity assessment procedure for high-risk AI systems, the New Legislative Framework (NLF) allows for different institutional configurations;¹⁵⁷ however, the EU AI Act establishes a hybrid model combining internal assessments with external conformity procedures involving private actors, including notified bodies. The European Commission also retains significant regulatory influence in this area through delegated acts. First, it may amend Annexes VI and VII, thereby modifying the tasks assigned to providers and notified bodies within the conformity assessment procedure. Second, it may revise Annex III, which defines the high-risk AI systems referred to in Article 6(2). Since this classification determines the applicable conformity assessment pathway, changes to Annex III have direct implications for the regulatory regime. By contrast, ex post market surveillance is primarily entrusted to public authorities, including national competent authorities,¹⁵⁸ the AI Office,¹⁵⁹ and the European Data Protection Supervisor.¹⁶⁰

With regard to private enforcement, the EU AI Act does not explicitly establish individual rights in relation to AI systems. While the general remedies and enforcement mechanisms under EU and national law remain applicable,¹⁶¹ and certain provisions (notably Articles 85 and 86) introduce limited procedural safeguards, the Act does not create a comprehensive set of specific individual rights comparable to instruments such as the General Data Protection Regulation (GDPR). Instead, it adopts a risk-based regulatory approach directed at AI systems and practices, justified by the potential threats these may pose to fundamental values such as human dignity, autonomy, and fundamental rights.¹⁶² This reflects a discernible path dependence from the EU Ethics

¹⁵⁷ Obligation of the manufacturer alone, or by authorities, as seen with pharmaceutical products, see Veale & Zuiderveen Borgesius, *supra* note 84, at 112.

¹⁵⁸ Article 70 EU AI Act; Robert Kilian, *Nationale Spielräume bei der Umsetzung des Europäischen AI Acts*, ZPR 130, 130 (2024).

¹⁵⁹ Article 3(47), Article 64 EU AI Act; Gstrein et al., *supra* note 84, at 14. The Digital Omnibus on AI further strengthens the role of the AI Office, see Council of the European Union, Interinstitutional File 2025/0359 (COD), Council Doc. 9247/26 (May 13, 2026).

¹⁶⁰ See Claudio Novelli et al., *A Robust Governance for the AI Act: AI Office, AI Board, Scientific Panel, and National Authorities*, 16 EUR. J. OF RISK REG. 556 (2024).

¹⁶¹ See Recital 170 of the EU AI Act.

¹⁶² In addition to these reasons, some AI systems are classified as high-risk for the potential harm on health and safety, see *infra* Part III A b.

Guidelines on trustworthy AI to the EU AI Act, which may be characterized as values-based rather than rights-driven.¹⁶³ This orientation is reinforced by the Act's emphasis on ex ante risk assessment of fundamental rights impacts, based on the context of AI use, rather than a predominantly ex post, individual complaint-based enforcement model. Protection of rights is thus primarily conceived as a systemic regulatory objective rather than an individual legal entitlement.

Translating systemic rights-based considerations into technical standards presents significant challenges. This is illustrated by the fact that, at the time of writing, the European Standardization Organisations (ESOs) have not yet delivered the requested harmonized standards. The European Commission's standardization request to CEN and CENELEC, issued in May 2023, emphasises the protection of fundamental rights and European values, stating that, in order to ensure alignment with Union law on fundamental rights and data protection, CEN and CENELEC should gather relevant expertise in these areas.¹⁶⁴ To date, this mandate has not been fully implemented. Critiques have emerged at a conceptual level, highlighting that socio-technical standards require distinct forms of law-making and governance, particularly with regard to expertise requirements and democratic legitimacy.¹⁶⁵ Questions of public access and stakeholder participation also become more salient in this context.¹⁶⁶ At the same time, the delay in the delivery of harmonized standards primarily reflects practical and operational difficulties. The standardization request itself leaves significant interpretative discretion, for example with respect to concepts such as "representativeness" in data governance and "appropriate oversight measures" in relation to human oversight.¹⁶⁷ As a result, standards developed by CEN and CENELEC are likely to exhibit an inherently socio-technical character.¹⁶⁸ This raises particular challenges given the EU AI Act's application to AI systems

¹⁶³ See *infra* Part III B a. See also Mehmet Unver, *AI Governance: Compromising Democracy or Democratising AI?*, PROCEEDINGS OF THE TPRC2024 THE RESEARCH CONFERENCE ON COMMUNICATIONS, INFORMATION AND INTERNET POLICY (2025).

¹⁶⁴ See C(2023) 3215 final, Recitals 14 and 15 and Annex 2(1).

¹⁶⁵ Veale & Zuiderveen Borgesius, *supra* note 84, at 102; Johann Laux et al., *Three Pathways for Standardisation and Ethical Disclosure by Default under the European Union Artificial Intelligence Act*, 53 CLSR 105957 (2024), at 3; Almada & Petit, *supra* note 99, at 114; Cantero Gamito & Marsden, *supra* note 154.

¹⁶⁶ But see the provisions for stakeholder inclusion in Regulation 1025/2012 and in C(2023) 3215 final, Recital 15 and Article 2(1)(a); see the recent case law: ECLI:EU:C:2016:821 (James Elliott), and ECLI:EU:C:2024:201 (Public.Resources).

¹⁶⁷ C(2023) 3215 final, Annex 2, at 2.2 and 2.5.

¹⁶⁸ Laux et al., *supra* note 165, at 2, framing standards as "powerful regulatory tool".

2026] *EXPANDING THE HORIZONS OF AI GOVERNANCE* 331

used or deployed by public authorities.¹⁶⁹ While these issues remain partly unresolved, more fundamental concerns have been raised as to whether AI – given its rapidly evolving nature and broad range of applications – can be adequately governed within the framework of product regulation.¹⁷⁰

b. Future developments

The international level plays a prominent role in AI standard-setting. The European approach to standardization, however, is a double-edged sword: it serves both as a means of promoting European values and advancing a resilient, green, and digital single market through standards – thereby counterbalancing external regulatory influence – and as a strategy for building alliances in the international arena.¹⁷¹ In this regard, ISO and IEC provide important platforms for cooperation with non-EU states. At the same time, their influence on European standard-setting must be carefully managed.¹⁷²

International standardization organisations (ISO/IEC¹⁷³) have already developed a range of standards on AI.¹⁷⁴ The Commission's standardization request appears closely aligned with existing international standards, such as ISO/IEC 42001.¹⁷⁵ Given the institutional arrangements between European and international standardization

¹⁶⁹ Oriol Mir, *The AI Act from the Perspective of Administrative Law: Much Ado About Nothing?*, 16 EUR. J. RISK REG. 63 (2025). See for the regulation of the judiciary under the EU AI Act Irina Carnat, *Addressing the Risks of Generative AI for the Judiciary: The Accountability Framework(s) Under the EU AI Act*, 55 COMP. L. & SEC. REV. 106067 (2024).

¹⁷⁰ Almada & Petit, *supra* note 99; Almada & De Gregorio, *supra* note 93.

¹⁷¹ COM(2022) 31 final; see on the cooperation with the U.S. TTC JOINT ROADMAP ON EVALUATION AND MEASUREMENT (Dec. 1, 2022), <https://digital-strategy.ec.europa.eu/en/library/ttc-joint-roadmap-trustworthy-ai-and-risk-management> [<https://perma.cc/34DM-TMWQ>].

¹⁷² Note that the UK (and other non-EU member states) are involved in CEN/CENELEC, <https://standards.cenelec.eu/dyn/www/f?p=CEN:5> [<https://perma.cc/S6JU-LQM5>] (last visited, Jan. 19, 2026).

¹⁷³ The International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).

¹⁷⁴ Work began as early as 2017, prior to any official governmental AI strategy at the EU level, see ISO, *Enabling an AI-Ready Culture* (Nov. 22, 2021), <https://www.iso.org/news/ref2763.html> [<https://perma.cc/NF5M-29W9>]; note that the U.S. American Standardization Body (ANSI) has exercised major influence in ISO/IEC drafting, Adrien Pougiet, *What Will the Role of Standards Be in AI Governance?*, ADA LOVELACE INSTITUTE (Apr. 3, 2023), <https://www.adalovelaceinstitute.org/blog/role-of-standards-in-ai-governance/> [<https://perma.cc/RVV2-EBDT>].

¹⁷⁵ ISO/IEC, Information Technology, Artificial Intelligence, Management System' 42001:2023(en), <https://www.iso.org/committee/6794475/x/catalogue/p/1/u/1/w/0/d/0> [<https://perma.cc/K9GN-S6WD>] (last visited, Jan. 19, 2026).

organisations, these standards may be replicated within the European system, as existing agreements explicitly aim to facilitate exchange and avoid duplication of work.¹⁷⁶ This objective is also reflected in the current work programme of CEN and CENELEC.¹⁷⁷ However, international standards do not fully address fundamental rights considerations. This gap may require the European Commission to adopt additional implementing acts establishing common specifications under Article 41(1)(a)(iii) of the EU AI Act.¹⁷⁸ This provision empowers the Commission to assess whether harmonized standards adequately take fundamental rights into account. Notably, such a mechanism has no equivalent in earlier NLF instruments, underscoring the significance of proactive, systemic fundamental rights protection within AI standardization.¹⁷⁹ This suggests that the Commission is ultimately positioned as a key actor in ensuring that standards reflect fundamental rights requirements, potentially more so than the European Standardization Organisations themselves.¹⁸⁰ While the EU AI Act will be further operationalized through delegated and implementing acts, including the Code of Practice for general-purpose AI,¹⁸¹ the Commission has also announced a range of additional guidance instruments – such as templates for Fundamental Rights Impact Assessments – in its recent Digital Omnibus package to facilitate implementation and address practical challenges.¹⁸²

Moreover, because international standards typically operate through “soft normative thresholds,”¹⁸³ their relatively high level of abstraction must be operationalized in order to enable certification and practical compliance.¹⁸⁴ This process of specification is likely to shift regulatory

¹⁷⁶ See Laux et al., *supra* note 165, at 5. The cooperation is facilitated by the Agreement on Technical Cooperation between ISO and CEN (Vienna Agreement) and the IEC-CENELEC Frankfurt Agreement. See also Recital 3 of Regulation (EU) No. 1025/2012.

¹⁷⁷ See *Work Programme 2024*, CEN & CENELEC, <https://wp2024.cencenelec.eu/> [<https://perma.cc/XE8Q-6W85>] (last visited, Jan. 19, 2026).

¹⁷⁸ On possible pathways for standard drafting see Laux et al., *supra* note 165, at 4.

¹⁷⁹ See comparison to Article 20(3–8) Regulation (EU) 2023/1230 of the European Parliament and of the Council of 14 June 2023 on machinery, O.J. (L 165/1): Gerdemann & Wöbbeking, *supra* note 143, at 643, 646.

¹⁸⁰ Veale & Zuiderveen Borgesius, *supra* note 84, at 112. It is debatable whether the European Commission’s power under the EU AI Act can truly be regarded as “an exceptional fallback solution” (Recital 122), particularly in light of Article 291(3) TFEU and the availability of full judicial review of the Commission’s implementing acts.

¹⁸¹ C(2025) 5045 final.

¹⁸² COM(2025) 836 final, 2025/0359 (COD).

¹⁸³ Laux et al., *supra* note 165, at 7, 9.

¹⁸⁴ Articles 44 and 49 EU AI Act. It is noteworthy that the technical reports by ISO/IEC trace these questions back to ethics, law, governance studies, and psychology, in order to find a

influence toward national authorities and private actors involved in standard-setting and conformity assessment.¹⁸⁵

IV. GOING OUT (1): AI REGULATION IN BRAZIL

Brazil is currently drafting a comprehensive federal AI Act (PL No. 2338/2023).¹⁸⁶ Although the legislative process is formally conducted by the Chamber of Deputies and the Federal Senate through their standing committees and commissions, the judiciary initially played a significant agenda-setting role. Its influence remains discernible in the Bill's pronounced emphasis on fundamental rights. Against the backdrop of global regulatory and deregulatory trends, the legislative process has oscillated among competing models of AI governance, including principles-based approaches, comprehensive state-centered regulation, and sector-specific frameworks.

A. Disruption

AI regulation in Brazil faces similar challenges to those encountered in the EU.¹⁸⁷ Yet, in response to rapid technological developments, the Brazilian debate has placed particular emphasis on rights protection, especially through its intersections with data protection and copyright law.¹⁸⁸ As originally proposed by the Senate in 2023, PL No. 2338/2023 combined extensive governance obligations for AI developers and deployers with a broad catalogue of individual rights. However, this rights-based model underwent substantial revision during the legislative process. The Senate's December 2024 version curtailed several individual-rights provisions, expanded references to collective rights and sustainable development, and shifted key enforcement responsibilities to sectoral regulators.

a. Legislating amidst (de)regulatory trends and pressure for

consensus, Laux et al., *supra* note 165, at 6, supporting our claim for interdisciplinary research in these fields.

¹⁸⁵ Almada & De Gregorio, *supra* note 93, at 65; COM(2025) 836 final, 2025/0359 (COD).

¹⁸⁶

Brazilian Federal Senate, Projeto de Lei nº 2338, de 2023, <https://www25.senado.leg.br/web/atividade/materias/-/materia/157233> [<https://perma.cc/2N3P-J7CD>] (last visited, Jan. 19, 2026).

¹⁸⁷ For example, the Brazilian AI Bill explicitly addresses generative AI models (Article 29 PL No. 2338/2023), although initial regulatory efforts began in 2020 without consideration of GPAI. This parallels the EU (*see infra* Part III A a).

¹⁸⁸ Tito Rendas & Ivar Hartmann, *From Brussels to Brasília: How the EU AI Act Could Inspire Brazil's Generative AI Copyright Policy*, 73 (6) GRUR INT'L 495 (2024).

innovation

Principles-based approaches to AI regulation have featured prominently in Brazilian legislative debates since 2020, including PL No. 5051/2019, PL No. 21/2020, and PL No. 872/2021. Over time, however, the legislative discussion shifted toward a more comprehensive regulatory framework, culminating in PL No. 2338/2023. Yet this trajectory remains unsettled. Following the reopening of public hearings before the Special Committee of the Chamber of Deputies in 2025, the Bill is once again under review.¹⁸⁹

The original PL No. 21/2020, approved by the Chamber of Deputies through an emergency fast-track process, comprised only ten articles and focused primarily on abstract ethical principles.¹⁹⁰ Another proposal adopted a similar approach, with a particular focus on the public sector, but failed to produce meaningful results.¹⁹¹ These proposals were criticized for creating legal uncertainty by granting excessive discretion to the judiciary,¹⁹² a critique that later resurfaced in debates concerning the conferral of rights under PL No. 2338/2023.¹⁹³ The Federal Senate considered the principles-based approach of these earlier regulatory efforts insufficient to address the risks arising from the rapid development of AI. An expert committee (the Commission of Jurists for the Drafting of the Brazilian AI Bill) was therefore tasked with preparing a substitute Bill that would establish not only general principles but also concrete obligations aimed at mitigating risks and protecting citizens from AI-related harms.¹⁹⁴ The committee's draft, formally introduced by the

¹⁸⁹ Brazilian Chamber of Deputies, PL 2338/233, <https://www.camara.leg.br/proposicoesWeb/fichadetramitacao?idProposicao=2487262> [<https://perma.cc/P6MT-H693>] (last visited, Jan 19, 2026).

¹⁹⁰ Luca Belli et al., *AI Regulation in Brazil: Advancements, Flows, and Need to Learn from the Data Protection Experience*, 48 COMPUT. L. & SEC. REV. 2 (2023), at 9.

¹⁹¹ *Id.* at 10; PL No. 5051/2019.

¹⁹² Virgílio Almeida et al., *On the Development of AI Governance Frameworks*, INTERNET GOVERNANCE 70, 72 (Feb. 3, 2023); Paulo Argôlo dos Santos & Joao Almeida Santos, *Os Desafios da Regulamentação da Inteligência Artificial (IA) no Brasil em Relação a Alguns Países Desenvolvidos*, 21 (6) REV. FSA 41 (2024). See on mistrust in the Brazilian judiciary: Tatiana Paula da Cruz, *Trusting the Courts: Exploring the Link Between Populism, Trust in Courts, and Democracy in Brazil*, SAGE JOURNALS (Nov. 20, 2024) <https://journals.sagepub.com/doi/full/10.1177/1866802X241295784> [<https://perma.cc/X8BN-5J25>]; José Álvaro Moisés, *Political Discontent in New Democracies: The Case of Brazil and Latin America*, TAYLOR & FRANCIS ONLINE (Jul. 26, 2011). Juliano Maranhão, *Marco Civil da IA: Colocando as Cartas na Mesa*, JOTA (Oct. 10, 2021), <https://www.jota.info/opiniao-e-analise/artigos/marco-civil-da-ia-colocando-as-cartas-na-mesa> [<https://perma.cc/4RKR-RP7M>].

¹⁹³ See *infra* Part IV B a.

¹⁹⁴ Brazilian Federal Senate, <https://legis.senado.leg.br/atividade/comissoes/comissao/2504/> [<https://perma.cc/KKA6-YBME>] (last visited, Jan. 19, 2026).

2026] *EXPANDING THE HORIZONS OF AI GOVERNANCE* 335

President of the Senate in May 2023,¹⁹⁵ was approved on 10 December 2024 following extensive debate and significant revisions.

The Bill, drafted by a Commission composed exclusively of legal professionals and scholars, was released only after public hearings and an international seminar had already taken place, thereby limiting stakeholder participation. In response, industry actors called for additional public hearings, prompting the Senate to establish a Transitory Commission of Senators to facilitate a multisectoral debate. As discussions progressed, preliminary drafts were gradually revised to accommodate both government demands for stronger provisions on sustainable development (consistent with the Brazilian AI Plan) and industry concerns¹⁹⁶ regarding excessive rights-based obligations and the need for greater reliance on sectoral regulatory agencies and self-regulation.¹⁹⁷

This process culminated in a final draft approved by the Senate in December 2024, which introduced several significant changes. These included the dilution of individual rights provisions, a shift toward sectoral enforcement and regulatory norm-setting, the introduction of a chapter on self-regulation and voluntary certification programs validated by sectoral agencies, a new chapter on sustainable development containing non-mandatory measures on environmental protection and employment, and a chapter on copyright establishing obligations for developers to identify, manage consent for, and remunerate protected works in AI training. The revised Bill establishes a complex enforcement framework involving both sectoral agencies and the National Data Protection Authority, which retains residual powers and a coordination role. While the chapter on rights was substantially softened, rights protection remains a central component of Brazil's AI governance model.

¹⁹⁵ Brazilian Senate, <https://www.stj.jus.br/sites/portalp/Paginas/Comunicacao/Noticias/2023/04052023-Projeto-que-regula-IA-e-apresentado-ao-Senado-apos-trabalho-da-comissao-liderada-pelo-ministro-Cueva.aspx> [https://perma.cc/JBU8-2FW3] (last visited, Jan. 19, 2026). Federal

¹⁹⁶ Christina Aires Correa Lima de Siqueira Dias, *A Visão da CNI Sobre Projeto de Lei PL 2.338/2023, in* INTELIGÊNCIA ARTIFICIAL E A INDÚSTRIA: EXTRATO DA REUNIÃO PRESENCIAL DO COMITÊ DE LÍDERES DA MEI A RESPEITO DO PROJETO DE LEI 2.338/2023 EM TRAMITAÇÃO NO CONGRESSO (CONFEDERAÇÃO NACIONAL DA INDÚSTRIA, EDS., Brasília, DF CNI, 2024). See also Juliano Maranhão, *Regulação da Inteligência Artificial: Uma Terceira Via, Valor* (Jan. 3, 2024), <https://www.lawgorithm.org.br/publicacoes/regulao-da-inteligencia-artificial-uma-terceira-via> [https://perma.cc/5RXA-7EXY].

¹⁹⁷ Juliano Maranhão, *Como Concretizar a Conciliação Almejada Pelo Novo PL de IA? JOTA* (May 8, 2024), <https://www.jota.info/opiniao-e-analise/artigos/como-concretizar-a-conciliacao-almejada-pelo-novo-pl-de-ia> [https://perma.cc/JR5G-XMDN].

The Bill is currently under final scrutiny by the Chamber of Deputies, which had pledged to vote on it in December 2025.¹⁹⁸

This development unfolds against a shifting global geoeconomic landscape that is reshaping AI regulation. Debates surrounding PL No. 2338/2023 in both the Federal Senate and the Chamber of Deputies have closely tracked the EU's ongoing reassessment of the AI Act, particularly concerns that overly prescriptive obligations may impede innovation and competitiveness.¹⁹⁹ They have also engaged with the contrasting U.S. approach under the Trump administration, which favored a more *laissez-faire*, market-driven model. As a result, Brazilian debates increasingly frame AI regulation not only as a matter of rights protection and risk mitigation, but also as a strategic instrument in global economic competition.

During the legislative process, industry actors pushed to dilute substantive regulatory obligations, particularly those relating to governance, risk management, and compliance. Although some of these concerns were taken into account, the legislative approach did not shift toward wholesale deregulation. Instead, the executive branch recalibrated the Bill by supplementing its rights- and risk-based framework with measures aimed at fostering innovation and technological development. In July 2024, the executive branch presented the Brazilian AI Plan, providing for R\$23 billion in investments between 2024 and 2028, directed toward critical infrastructure, private-sector incentives, and AI applications in public services. A central element of the plan is the recognition of Brazil's comparative advantage in clean and renewable energy, positioning the country as a potential hub for sustainable, high-capacity data centers.²⁰⁰ This energy dimension is framed not as ancillary but as a strategic lever for attracting AI-related investment while aligning technological development with climate and sustainability objectives – an increasingly salient concern in global AI governance.²⁰¹

¹⁹⁸ Brazilian Chamber of Deputies, *Comissão Especial sobre Inteligência Artificial (PL 2338/23). Plano de Trabalho*, (May 27, 2025), <https://www2.camara.leg.br/atividade-legislativa/comissoes/comissoes-temporarias/especiais/57a-legislatura/comissao-especial-sobre-inteligencia-artificial-pl-2338-23/outros-documentos/plano-de-trabalho-apresentado-em-27-05-25> [<https://perma.cc/BL26-6QZB>].

¹⁹⁹ See *supra* III C b.

²⁰⁰ MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E INOVAÇÃO (MCTI), *PLANO BRASILEIRO DE INTELIGÊNCIA ARTIFICIAL* (2024), <https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/transformacaodigital/plano-brasileiro-de-inteligencia-artificial> [<https://perma.cc/5HDH-RNJH>].

²⁰¹ G20 Digital Economy Ministers, *G20 Maceió Ministerial Declaration on Digital Inclusion, Digital Government and Sustainable Digital Transformation* (2024); Kate Crawford, *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence* (Yale Univ. Press 2021).

2026] *EXPANDING THE HORIZONS OF AI GOVERNANCE* 337

Parallel to these developments, PL No. 2338/2023 incorporated a dedicated chapter on innovation and development, establishing guidelines for public investment, incentive programs, and public-private partnerships, with explicit references to environmental sustainability. This legislative shift was reinforced by Provisional Measure No. 1318/2025, which established the Special Tax Regime for Data Center Services (REDATA)²⁰² and grants tax incentives for the installation and operation of environmentally sustainable data centers in Brazil.²⁰³ In exchange, the regime imposes sustainability requirements – such as environmental efficiency standards and the use of clean or renewable energy – thereby supporting the national energy matrix and aligning with the Brazilian AI Plan and the sustainability provisions of PL No. 2338/2023. Political disagreements between the Federal Government and the Senate leadership, unrelated to AI policy, prevented a timely Senate vote on the REDATA Provisional Measure, causing it to expire.²⁰⁴ This setback undermined the Government's efforts to secure the rapid approval of PL No. 2338/23 as part of its broader strategy to promote AI infrastructure and investment.²⁰⁵ As a result, the debate on AI regulation entered a period of uncertainty, and approval of the Bill is likely to be delayed until late 2026 or 2027 due to the 2026 electoral cycle.

Overall, within the tension between responsibility and innovation, Brazil's emphasis on innovation has not resulted in regulatory retreat. Instead, it has produced a proposed model of "regulation with promotion," in which binding rules coexist with subsidies, incentives, and coordinated industrial policy. Notably, Brazil's earlier leadership in digital and AI-adjacent sectors has similarly relied on state-supported

²⁰² Presidency of the Republic, Medida Provisória nº 1.318 (Sept. 17, 2025), https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2025/mpv/mpv1318.htm [https://perma.cc/9FF3-TYXJ].

²⁰³ Ministry of Finance, Medida provisória cria o REDATA e estimula investimentos em data centers no Brasil. Brasília, <https://www.gov.br/fazenda/pt-br/assuntos/noticias/2025/setembro/medida-provisoria-cria-o-redata-que-estimula-datacenters-e-impulsiona-economia-digital-no-brasil> [https://perma.cc/88TQ-SEXJ] (last visited, Jan. 19, 2026).

²⁰⁴ MP do Redata Perde Validade e Incentivos Dependem de Projeto de Lei, Senado Notícias (Feb. 27, 2026), <https://www12.senado.leg.br/noticias/materias/2026/02/27/mp-do-redata-perde-validade-e-incentivos-dependem-de-projeto-de-lei> [https://perma.cc/BZF2-CMF2] (last visited, June 11, 2026).

²⁰⁵ Alcolumbre Frustra Governo, Senadores e Mercado; Não Vota Redata e Enterra Incentivos para Data Centers, Convergência Digital (Feb. 25, 2026), <https://convergenciadigital.com.br/governo/alcolumbre-frustra-governo-senadores-e-mercado-nao-vota-redata-e-enterra-incentivo-para-data-centers/> [https://perma.cc/AA5E-6GJV] (last visited, June 11, 2026).

strategies, suggesting continuity rather than rupture in its approach to technological governance.²⁰⁶

b. Projeto de Lei No. 2338/2023: between the “Brussels effect” and a distinct AI regulation language

It has been suggested that the EU AI Act will represent the next phase in the global “Brussels effect.”²⁰⁷ Indeed, key features of the EU AI Act’s regulatory design, such as risk classification and the ban of certain AI systems, are reflected in the Brazilian AI Bill. While the two regimes continue to interact, Brazil has increasingly developed its own distinct AI regulatory language, suggesting that the “Brussels effect” may be gradually vanishing into a “Brussels mirage.”²⁰⁸ Recent proposals in the EU Digital Omnibus package appear to reinforce this trend by moving the European framework closer to the Brazilian model, particularly with respect to the sectoral dimensions of AI regulation and the role of a central coordinating enforcement authority.²⁰⁹

When Bradford theorized the “Brussels effect” in 2012, she examined its applicability across areas such as in antitrust law, privacy regulation, health and environmental protection, and food safety.²¹⁰ She identified the strongest manifestation of the “Brussels effect” in privacy law, where, following the EU’s adoption of the General Data Protection Regulation (GDPR) in 2016, nearly 150 countries adopted similar regulatory frameworks.²¹¹ One such example is the Brazilian General Data Protection Law (LGPD),²¹² which entered into force in 2021 and substantially reflects the European model.²¹³ Concomitantly, debates on AI regulation in Brazil have been significantly shaped by references to

²⁰⁶ Juliano Maranhão et al., *Fomento Público, Contratação de Inovação e Formação Avançada de Profissionais em Inteligência Artificial: Contribuições ao PL 2338/23*, LEGAL WINGS INST. (2023), https://df689d80-f22c-42c5-bf12-4e5a84982274.usrfiles.com/ugd/df689d_e36e259c51064a998eb8d1c02eed7073.pdf [<https://perma.cc/7MYE-E7GZ>].

²⁰⁷ Charlotte Siegmann & Markus Anderljung, *The Brussels Effect and Artificial Intelligence: How EU Regulation Will Impact the Global AI Market*, arXiv:2208.12645 (Aug. 23, 2022); see also Bradford, *supra* note 6.

²⁰⁸ Saiger, *supra* note 4.

²⁰⁹ See *supra* Part III A a, and b.

²¹⁰ Anu Bradford, *The Brussels Effect*, 107 NW. U. L. REV. 1, 19 (2012).

²¹¹ BRADFORD, *supra* note 1, at 371.

²¹² Presidency of the Republic, *At G7, Lula Defends Global AI Governance, Super-rich Taxation*, PLANALTO (Jun. 17, 2024), <https://www.gov.br/planalto/en/latest-news/2024/06/at-g7-lula-defends-global-ai-governance-super-rich-taxation-1> [<https://perma.cc/739N-YN5C>].

²¹³ Rendas & Hartmann, *supra* note 188, at 496.

the LGPD: calls for its integration into existing legal frameworks have predominantly centered on data protection law.²¹⁴

A comparison between the Brazilian AI Bill and the EU AI Act highlights several instances in which the latter served as a key point of reference.²¹⁵ Similar to the EU AI Act, PL No. 2338/2023 classifies AI systems according to the level of risk they pose. Unacceptable risk systems are prohibited.²¹⁶ These include systems that employ subliminal techniques, exploit vulnerabilities, are used for predictive policing, or are integrated into autonomous weapons. Biometric identification systems are subject to restrictions, although they are not entirely prohibited: Article 13(4) of PL No. 2338/2023 permits considerably broader exceptions than those provided under the EU AI Act. High-risk AI systems are defined in Article 14 of the Bill.²¹⁷ While the list is exhaustive, it may be amended or expanded by the competent authority, in accordance with the principles set out in Articles 15 and 16, including requirements for public participation.²¹⁸ Across the framework, the classification of AI systems as high-risk is guided by their potential adverse impacts on individuals or groups. The Brazilian AI Bill also includes a dedicated chapter on GPAI systems.²¹⁹ This chapter is set apart from the risk-tiering structure and incorporates the systemic dimension of risk.²²⁰ Finally, the general data protection framework, as well as sector-specific regulation, applies to AI systems that fall outside these categories or present residual risks. In line with the EU AI Act, the Brazilian AI Bill addresses both product safety and societal risks and is thus similarly hybrid in nature. Article 1 of PL No. 2338/2023 identifies the protection of fundamental rights and the promotion of responsible innovation and competitiveness as key objectives. The Bill seeks to ensure the development of safe and reliable AI systems for the benefit of humanity, democracy, and social, scientific, technological, and economic development.

²¹⁴ Belli et al., *supra* note 190, at 10; Godoy Bernardo de Oliveira, *Desafios Da Regulação Do Digital e Da Inteligência Artificial No Brasil*, 147.

²¹⁵ Maranhão et al., *supra* note 40, at 347.

²¹⁶ Article 13 of PL No. 2338/2023. *See* for entry into force: Article 80 PL No. 2338/2023.

²¹⁷ Examples include AI systems employed in recruitment processes, judicial administration, autonomous vehicles in public areas where there is a substantial risk to physical safety, and healthcare applications. It is worth noting that the banking sector was excluded from the scope, reportedly as a result of strong lobbying efforts.

²¹⁸ *See* Article 13(4) PL No. 2338/2023.

²¹⁹ Articles 29 et seq. PL No. 2338/2023.

²²⁰ Article 4(XXX), PL No. 2338/2023 (defining “potential adverse effects arising from a system with a significant impact on individual and social fundamental rights”).

Unlike the EU AI Act, these objectives are primarily operationalized through a broad conferral of rights.²²¹ Nearly all governance obligations imposed on AI developers and operators correspond to enforceable rights, framing compliance not only as a duty owed to the authority but also as a set of entitlements that can be asserted by individuals before courts.²²² Although the rights chapter originally proposed by the Commission of Jurists was subsequently significantly curtailed during the debates in the Federal Senate, it remains centered on transparency, accuracy, and human oversight, thereby distinguishing Brazilian regulation from comparable frameworks.

Regarding enforcement design, the 2023 Brazilian AI Bill initially resembled the EU AI Act, providing for a central AI authority empowered to enforce the framework. However, the Senate-approved 2024 text adopts a different model: the System of AI Regulation and Governance (SIA). Unlike the EU AI Act, the SIA establishes a coordinated regulatory structure under the supervision of a competent authority, aimed at fostering cooperation and harmonization among sectoral agencies and regulatory bodies.²²³ The National Data Protection Authority assumes this coordination role, while sectoral agencies are responsible for enforcement and for developing domain-specific AI governance standards, either independently or in cooperation with sectoral private associations, including through the validation of sectoral codes of conduct or certification programs.²²⁴

While the EU has been praised for its rights-driven approach, the proposed Brazilian regulation – even after having been relaxed in this respect – continues to adopt a more nuanced stance on the conferral of rights, both to individuals and groups. That said, the future direction of the Brazilian AI Bill may diverge significantly from this model. Current discussions center on a sectoral approach that departs from the previously envisaged “multi-tiered governance system,”²²⁵ namely the SIA, by assigning sectoral agencies responsibility for operationalizing the Bill’s general provisions. The emphasis would therefore shift toward self-regulatory mechanisms – such as certification schemes and codes of conduct – rather than the conferral of enforceable rights.

²²¹ See *infra* Part IV B a.

²²² *Id.*

²²³ Article 4(10) PL No. 2338/2023.

²²⁴ Article 45(1)(i) PL No. 2338/2023.

²²⁵ Kira & Schertel Mendes, *supra* note 37, at 248.

B. Path dependence

As demonstrated in the previous section, the Brazilian AI Bill has, at various points, reflected the EU AI Act while placing particular emphasis on the protection of fundamental rights. This section examines the path dependences underlying the rights-focused approach, and highlights the increasing pressure it faces.

a. Rights: from data protection and copyright to the Brazilian Constitution

The focus on rights in Brazilian AI regulation is rooted in a broader Latin American tradition, and in Brazil in particular, in which individual and collective rights function as instruments of governance. Title II of the Brazilian Constitution enshrines a broad spectrum of individual and collective rights, including social rights. This tradition is further reflected in the Brazilian Consumer Protection Code, the Brazilian Civil Rights Framework for the Internet, and the rights-based Brazilian Data Protection Law, all of which establish robust protections for consumers and individuals.

The first draft of PL No. 2338/2023 conferred a comprehensive Bill of rights on all individuals and groups affected by any AI system, including remedial entitlements. This approach has not gone unchallenged.²²⁶ What can be described as a *metamorphosis* has since occurred: the Brazilian AI Bill has undergone substantial revision during the Senate deliberations and may be further amended in the Chamber of Deputies, particularly with respect to copyright provisions, according to recent public statements by the Bill's Rapporteur in the Lower House.²²⁷ The text approved by the Federal Senate in 2024 narrows the centrality of rights while maintaining a differentiated structure: it distinguishes between rights granted to individuals and groups affected by any AI system, regardless of risk level,²²⁸ and rights afforded to those affected by high-risk AI systems.²²⁹ These include the right to an explanation of decisions, recommendations, or forecasts made by the AI system, the

²²⁶ See Kaminski, *supra* note 65, at 1558 for a general discussion of the rights-as-governance turn in the digital age with further references.

²²⁷ Relator Enxuga Texto do Senado e Propõe Passar a Agências Reguladoras Definição de Nível de Risco de IA, Folha de S. Paulo (May 28, 2026), <https://www1.folha.uol.com.br/mercado/2026/05/relator-enxuga-texto-do-senado-e-propoe-passar-a-agencias-reguladoras-definicao-de-nivel-de-risco-de-ia.shtml> [https://perma.cc/SL24-L8PR] (last visited, June 11, 2026).

²²⁸ Article 5 PL No. 2338/2023.

²²⁹ Articles 6 et seq. PL No. 2338/2023.

right to challenge and request a review of AI-driven decisions, and the right to human oversight of such decisions.²³⁰ A dedicated subchapter addresses copyright and related rights, granting authors the right to have their works publicly listed when used in AI training, the right to opt out, and the right to remuneration.²³¹ The Bill also includes non-mandatory provisions recognizing collective interests such as labor rights and environmental protection. The explicit conferral in the AI Bill, together with the Brazilian Civil Rights Framework for the Internet (2014), reinforces these protections and adapts them to the digital age.²³² These rights are complemented by the principles set out in Article 2 of PL No. 2338/2023, which reaffirm civil, social, environmental, and cultural rights enshrined in the Brazilian legal order, particularly as reflected in data protection frameworks.

In the AI Bill as approved by the Federal Senate in December 2024, the rights-based approach is also reflected in the enforcement architecture. The institutional design was initially adjusted to fit the Brazilian administrative framework, with the aim of strengthening the National Data Protection Authority. This adjustment sought to address the limited effectiveness of the authority in enforcing the LGPD to date, while reinforcing its focus on the protection of individual rights.²³³ Correspondingly, the Bill mandates that the National Data Protection Authority develops guidelines on rights enforcement.

A closer reading of the text reveals that both governance obligations and rights provisions remain broadly framed, suggesting that effective implementation will depend on sectoral regulation by federal agencies in collaboration with private actors, including through codes of conduct and voluntary certification schemes. This flexible, self-regulatory model is closer to the Japanese approach than to the EU's more prescriptive framework.²³⁴ Nevertheless, the Brazilian Bill still requires state

²³⁰ Article 6 PL No. 2338/2023. Note that the Brazilian LGPD does not provide for such a right.

²³¹ Articles 62 et seq. PL No. 2338/2023. See Maranhão et al., *supra* note 40, at 352 (“Developers are mandated to disclose the utilization of copyrighted works in training their AI models, ensuring transparency in the use of protected content. Furthermore, the bill stipulates that creators whose works are employed in AI development are entitled to remuneration. [...] Creators are also entitled to negotiate the licensing of their data in groups”).

²³² Presidency of the Republic, *supra* note 202.

²³³ Leonardo Fabri de Oliveira, *Regulação da IA no Brasil: Quais São os Desafios Éticos e Impactos Sociais*, EXAME (Oct. 9, 2024), <https://exame.com/hub-faculdade-exame/regulacao-ia-brasil/> [<https://perma.cc/ZC7P-6M8B>].

²³⁴ ABPI, NEWSLETTER (March 2025, ed. 67), <https://abpi.org.br/en/newsletter/bill-2338-23-approved-by-the-senate-may-stifle-brazilian-innovation/> [<https://perma.cc/ZDH9-YBGX>]. See *infra* Part V (on Japan).

oversight, as regulatory agencies must to approve private self-regulatory mechanisms, thereby reflecting a stronger continuing role for the state.

b. Ethics shaped by law

Although ethical traditions might be expected to shape the rights-based emphasis in Brazilian AI regulation, the evidence suggests a stronger path dependence from law to ethics in Brazil, alongside an attempt to reconcile responsible AI with technological development and innovation through regulatory design rather than deregulation.

The Brazilian government presented the Brazilian Artificial Intelligence Strategy (EBIA) in 2021.²³⁵ It sets out transversal and sector-specific measures intended to guide action across different domains, drawing on the OECD AI principles.²³⁶ The EBIA dedicates the first of its three horizontal thematic axes to “legislation, regulation and ethical use” of AI systems.²³⁷ Two aspects are particularly noteworthy. First, legal and ethical considerations are not clearly separated but are addressed jointly, drawing on both legal and ethical sources and moving fluidly between them. Second, the strategy exhibits a strong reliance on the OECD Recommendation on AI adopted in 2019.²³⁸ Despite its emphasis on human dignity, societal well-being, and an ethics-by-design approach, the EBIA does not establish an autonomous ethical framework for AI. Indeed, it envisages the creation of forums to develop ethical principles as a strategic action, suggesting that it is conceived as an initial framework rather than a definitive articulation of AI ethics.²³⁹ This view is echoed by several Brazilian commentators, who have criticized the EBIA for its vagueness and lack of clear strategic direction.²⁴⁰

²³⁵ Luis Claudio Kubota & Mauricio Benedeti Rosa, *Artificial Intelligence in Brazil: Adoption, Scientific Production and Regulation*, INST. FOR APPLIED ECON. RSCH. (Jan. 2024).

²³⁶ Cristina Akemi Shimoda Uechi & Thiago Guimarães Moraes, *Brazil's Path to Responsible AI*, OECD.AI POL'Y OBSERVATORY (Jul. 27, 2023), <https://oecd.ai/en/wonk/brazils-path-to-responsible-ai> [<https://perma.cc/Y32E-YX37>].

²³⁷ Ministry of Science, Technology & Innovation, *Summary of the Brazilian Artificial Intelligence Strategy*, (May, 2021), https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/transformacaodigital/arquivos/inteligenciaartificial/ebia-summary_brazilian_4-979_2021.pdf [<https://perma.cc/NBD3-QQF4>] [hereinafter EBIA], at 7.

²³⁸ *Id.* at 3. Organization for Economic Co-operation and Development [OECD], *Recommendation of the Council on Artificial Intelligence*, OECD/LEGAL/0449 (last visited, Jan. 19, 2026).

²³⁹ EBIA, at 11.

²⁴⁰ Fabio Correa Xavier, *A Estratégia Brasileira de Inteligência Artificial*, MIT TECH. REV. (Apr. 23, 2021), <https://mittechreview.com.br/a-estrategia-brasileira-de-inteligencia-artificial/> [<https://perma.cc/RX6J-TZPL>]; WALTER B. GASPAR & YASMIN CURZI, ARTIFICIAL INTELLIGENCE IN BRAZIL STILL LACKS A STRATEGY (2026); Belli et al., *supra* note 190.

The view expressed in the EBIA that it is advisable to avoid “regulatory actions (in a broad sense) that may unnecessarily limit AI innovation, adoption and development,”²⁴¹ together with the pronounced vagueness of PL No. 21/2020, containing only broad ethical principles and abstract values, suggests that in the period around 2020–2021 the prevailing political stance was to avoid strict AI regulation. The Brazilian approach has been criticized as amounting to “ethics washing,” with concerns reinforced by the weak normativity of PL No. 21/2020, which has been interpreted by some as a mechanism to defer binding legislation²⁴² in line with preferences expressed by software industry and digital platforms.²⁴³

As shown above, PL No. 2338/2023, in its original version, articulated a comprehensive and nuanced framework of rights and regulatory tools. Articles 2 and 3 enumerate the guiding principles intended to govern the development and use of AI systems in Brazil.²⁴⁴ Overall, these principles appear only loosely connected to earlier Brazilian ethical texts, and existing scholarship suggests that Brazil’s broader philosophical tradition has exerted limited influence on the development of AI ethics.²⁴⁵ While a detailed discussion of these principles lies beyond the scope of this article, a comparison between the values outlined in the Brazilian AI Bill and those in the EU Guidelines for Trustworthy AI reveals three key aspects. First, the Brazilian Bill

²⁴¹ EBIA, at 5.

²⁴² Paula Guedes Fernandes da Silva & Marina Gonçalves Garrot, *Insuficiência dos princípios éticos para normatização da Inteligência Artificial: o antirracismo e a anti-discriminação como vetores da regulação de IA no Brasil*, <https://www.dataprivacybr.org/documentos/insuficiencia-dos-principios-eticos-para-normatizacao-da-inteligencia-artificial-o-antirracismo-e-a-anti-discriminacao-como-vetores-da-regulacao-de-ia-no-brasil/> [<https://perma.cc/5HHQ-4XGL>] (last visited, Jan. 19, 2026).

²⁴³ During public hearings in the legislative debate, proposals and claims by the software industry and digital platforms consistently opposed the European model grounded in hard-law governance obligations, Federal Senate, Relatório Final, (Final Report, available at <https://www.stj.jus.br/sites/porta/p/SiteAssets/documentos/noticias/Relato%CC%81rio%20final%20CJSUBIA.pdf> [<https://perma.cc/23X9-V9N9>], 121, 339–83, 438, 605–81 (Brasília 2022)).

²⁴⁴ Centrality of the human person, respect for human rights and democratic values, free development of personality and freedom of expression, environmental protection and sustainable development, equality, non-discrimination, plurality and diversity, respect for labor rights, especially the valorization of human labor, privacy, data protection, and informational self-determination, strengthening the democratic process and political pluralism, and protection and promotion of the rights of vulnerable groups. Beyond these human-centered values, Article 2 also mentions values of different matrix, such as market-oriented ones.

²⁴⁵ For notable exceptions, see Da Silva & Garrot, *supra* note 242; Bianca Kremer Nogueira Correa, *Direito e Tecnologia em Perspectiva Amefricana: Autonomia, Algoritmos e Vieses Raciais*, COLEÇÃO DIGITAL (Mar. 31, 2020) (PhD dissertation, PUC Rio) (On file with the PUC Rio digital collection database), (last visited, Jan. 19, 2026), focusing on issues of racial justice.

places greater emphasis on non-discrimination and equality. While these issues are treated as a single consolidated principle in the EU Guidelines, they are more extensively elaborated in the Brazilian draft. This sensitivity to gender and racial equality emerged partly in response to criticism that the drafting Commission lacked diversity, as it was composed entirely of white members.²⁴⁶ The Commission subsequently addressed these concerns by launching a public consultation and engaging a broader range of external experts. These developments resonate with wider critiques rooted in Brazil's colonial legacy, highlighting structural racial and economic inequalities.²⁴⁷ Second, the Brazilian Bill demonstrates a stronger commitment to sustainability, addressing both environmental protection and socially inclusive development – issues that are only briefly addressed in the EU Guidelines. Third, it places greater emphasis on workers' rights, human labor, and collective rights, which are largely absent from the EU framework. While this emphasis is often associated with Marxist and post-Marxist thought, the Bill does not make explicit reference to broader philosophical or ethical traditions.

C. *Adaptiveness*

Brazil has yet to settle on a definitive regulatory approach to AI, as ongoing debates surrounding PL No. 2338/2023 illustrate. The previous sections have outlined the range of governance models proposed, their origins, and the deregulatory pressures which they have been subject. As will be further developed below, the concept of adaptiveness provides a useful analytical lens through which to assess these evolving dynamics.

a. *State-centered collaborative AI governance*

Like in the EU, the underlying structure of AI governance in Brazil is built on a complex interaction between public and private actors and is, in that sense, inherently collaborative. On closer inspection, however, this collaboration is structured through a clearer institutional separation between public and private responsibilities. For example, Articles 22 et seq. of PL No. 2338/2023 (as approved in 2024) establish distinct

²⁴⁶ Da Silva & Garrot, *supra* note 242.

²⁴⁷ *Id.*; Correa, *supra* note 245, drawing on Adilson José Moreira et al., PENSANDO COMO UM NEGRO: ENSAIO DE HERMENÊUTICA JURÍDICA (Camila Almeida Janela Valim et al. Eds., 2019); Anita L. Allen, *Dismantling the "Black Opticon": Privacy, Race Equity, and Online Data-Protection Reform*, (Feb. 8, 2022); Lélia Gonzalez, *La categoría político-cultural*, in POR UM FEMINISMO AFRO-LATINO-AMERICANO (Flavia Rios & Márcia Lima eds., 2020).

obligations for public authorities and private entities acting on their behalf.²⁴⁸ Beyond the AI Bill itself, sectoral regulations addressing the societal risks posed by AI – issued, inter alia, by the judiciary – further illustrate the prominent role of state actors. Taken together, these elements support the characterization of Brazilian AI governance as a form of *state-centered collaborative AI governance*.

Under PL No. 2338/2023, the system of AI regulation and governance – comprising the competent authority (the National Data Protection Authority) and sectoral authorities – is responsible for amending, updating, and revising the list of high-risk AI systems.²⁴⁹ Sectoral agencies may establish domain-specific standards, validate private codes of conduct, and accredit private conformity assessment bodies and sectoral certification entities.²⁵⁰ The National Data Protection Authority, by contrast, retains residual enforcement powers over non-regulated sectors, performs a coordination role among sectoral agencies, and may issue binding rules on information disclosure formats requirements.²⁵¹ It also establishes general criteria for algorithmic impact assessments, including their periodicity, which are further specified by sectoral authorities.²⁵² Both the National Data Protection Authority and the sectoral agencies are empowered to sanction breaches of the Bill.²⁵³ In contrast to the EU AI Act's reliance on an ex ante presumption of conformity,²⁵⁴ the Brazilian AI Bill as approved by the Senate in 2024 places greater emphasis on ex post enforcement by public authorities.²⁵⁵

Private actors are required to conduct preliminary assessments to enable risk classification.²⁵⁶ The AI Bill further mandates that developers of high-risk AI systems prepare algorithmic impact assessments, evaluating potential effects on fundamental rights. These reports must be kept up to date throughout the system's lifecycle, made publicly available, and submitted to the competent authorities.²⁵⁷ In addition, all AI actors are required to report serious incidents that may harm

²⁴⁸ Article 24 PL No. 2338/2023; it is up to the executive on the federal level to specify transparency obligations and standards in this regard.

²⁴⁹ Article 16 PL No. 2338/2023.

²⁵⁰ Article 16(4) PL No. 2338/2023.

²⁵¹ Article 46 PL No. 2338/2023.

²⁵² Article 25(5), (6) PL No. 2338/2023.

²⁵³ Articles 47, 48, and 50 PL No. 2338/2023.

²⁵⁴ See *supra* III B c.

²⁵⁵ See Article 34 PL No. 2338/2023 (allowing the National Data Protection Authority to accredit (national or international) conformity assessment bodies tasked with overseeing and supporting the implementation of national and international standards).

²⁵⁶ This is similar to the EU AI Act, see *supra* III B c.

²⁵⁷ Articles 25 and 26 PL No. 2338/2023.

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 347

fundamental rights, compromise critical infrastructure, or affect individuals.²⁵⁸ While the provisions of the AI Bill, as approved by the Senate in 2024, remain as broadly framed as those in the EU AI Act, their specification is not primarily entrusted to standardization bodies. Instead, it falls mainly to the administrative branch – namely, the sectoral and coordinating authorities within the SIA – to clarify their operational meaning. The private sector is therefore not formally assigned interpretative or standard-setting authority in this regard.²⁵⁹

All of this is subject to ongoing debates favoring a more sectoral approach over the SIA model. However, state-centered elements are also evident in Brazil's broader efforts to address emerging societal risks posed by AI beyond the scope of the AI Bill. The misuse of AI raises concerns about the potential exacerbation of democratic backsliding, in particular through disinformation and generative AI systems capable of producing falsified information and synthetic content – such as deepfakes and chatbots – used to manipulate voting behavior and influence public opinion. These practices have been associated with forms of electoral manipulation and the erosion of democratic participation. PL No. 2630/2020 (the Digital Platform Bill), which sought to address these risks, was ultimately abandoned during the Bolsonaro administration. In response, the Superior Electoral Court of Brazil issued judicial resolutions on AI and electoral law in 2024,²⁶⁰ pursuant to its regulatory powers under Article 23(9) of the Electoral Code.²⁶¹ This, in turn, has triggered renewed debates regarding the allocation of regulatory competences in this area.²⁶²

²⁵⁸ Maranhão et al., *supra* note 40, at 335.

²⁵⁹ AI actors may formulate Codes of Practice in accordance with Article 40 PL No. 2338/2023. This means that the competent authority will regard adherence to these Codes – once drafted – as evidence of good faith when considering administrative sanctions. Moreover, Article 41 foresees the possibility for private AI actors to voluntarily form a legal entity to promote self-regulatory mechanisms, such as the establishment of technical criteria. Finally, developers of GPAI may draft Codes of Practice to demonstrate compliance with the obligations stipulated in the AI Bill (Article 30(2)). It must be noted, however, that this is not obligatory under the Brazilian AI Bill and will otherwise be up to the National Data Protection Authority under Article 33 PL No. 2338/2023.

²⁶⁰ *TSE proíbe uso de inteligência artificial para criar e propagar conteúdos falsos nas eleições*, TRIBUNAL SUPERIOR ELEITORAL (Feb. 22, 2025), <https://www.tse.jus.br/comunicacao/noticias/2024/Fevereiro/tse-proibe-uso-de-inteligencia-artificial-para-criar-e-propagar-conteudos-falsos-nas-eleicoes> [https://perma.cc/HJH5-4RBK]. See also Lucas Conceição, *Brazilian Judges Regulate Elections ... and AI*, VERFASSUNGSBLOG (Mar. 15, 2024), <https://verfassungsblog.de/brazilian-judges-oversee-elections-and-ai/> [https://perma.cc/N2ML-KWQB] (indicating the use of AI in the creation and manipulation of electoral campaigns).

²⁶¹ Lei No. 4.737, de 15 de Julio 1965, CÓDIGO ELEITORAL (Braz.).

²⁶² Conceição, *supra* note 260.

AI technologies have been extensively used in Brazil, not only in the private sector,²⁶³ but, more significantly, by public authorities.²⁶⁴ A survey conducted during the Covid19- pandemic – coinciding with the initial legislative efforts to regulate AI in Brazil – found that, in 2021, just under half of federal agencies and 22% of state agencies in Brazil had deployed AI systems, primarily machine-learning tools for data prediction and analysis.²⁶⁵ In the judiciary, 55% of judges reported adopting AI technologies, despite the absence of a dedicated regulatory framework.²⁶⁶ These developments unfolded alongside public debates on the risks associated with AI, particularly concerning transparency and potential discriminatory impacts.²⁶⁷ More recent studies provide updated evidence on the use of AI within the Brazilian judiciary.²⁶⁸ Research conducted by the National Council of Justice found that approximately half of Brazilian judges are familiar with generative AI tools, while one-third report using them regularly in their judicial work.²⁶⁹ The study further highlights limited transparency among judges and court staff regarding the extent and modalities of such use.²⁷⁰

These findings have prompted sector-specific regulations initiated by the judicial branch. In 2020, the National Council of Justice, which holds regulatory and supervisory authority over the Brazilian judiciary, issued Resolution No. 332 on ethics, transparency, and governance in the development and use of AI within the judiciary.²⁷¹ Resolution No. 332 includes provisions aimed at preventing discriminatory bias.²⁷² It was

²⁶³ According to ALEXANDRE F. BARBOSA ET AL., ICT ENTERPRISES SURVEY 2024 (2024), in 2024, 13% of Brazilian enterprises reported using AI applications.

²⁶⁴ Tribunal de Contas da União, *Relatório de Gestão do TCU 2023 12* (Tribunal de Contas da União) (Brasília 2024), https://portal.tcu.gov.br/data/files/5E/46/E7/8F/6FF7E810943E72C8E18818A8/Relatorio_anual_de_atividades_TCU_2023.pdf [<https://perma.cc/YSF3-DVML>], at 12.

²⁶⁵ BARBOSA ET AL., *supra* note 263, at 25, 27.

²⁶⁶ *Id.*

²⁶⁷ Kira & Schertel Mendes, *supra* note 37, at 242.

²⁶⁸ GABRIELE S. ARAÚJO ET AL., THE ARTIFICIAL INTELLIGENCE INTEGRATION IN THE BRAZILIAN LEGAL SECTOR: A SYSTEMATIC REVIEW, SBSI (May 19-23, 2025).

GABRIELE S. ARAÚJO, EWALDO E. C. SANTANA, ANTONIO F. L. JACOB JUNIOR, FÁBIO M. F. LOBATO, THE ARTIFICIAL INTELLIGENCE INTEGRATION IN THE BRAZILIAN LEGAL SECTOR: A SYSTEMATIC REVIEW, SBSI (May 19-23, 2025).

²⁷⁰ JULIANO MARANHÃO, O USO DA INTELIGÊNCIA ARTIFICIAL GERATIVA NO PODER JUDICIÁRIO BRASILEIRO: RELATÓRIO DE PESQUISA, 10 (1st ed. Brasília: Conselho Nacional de Justiça), 2024.

²⁷¹ *Conselho Nacional de Justiça, Resolução No. 332* (Aug. 21, 2020), <https://atos.cnj.jus.br/atos/detalhar/3429> [<https://perma.cc/4QKZ-2WZS>]; Eduardo Villa Coimbra Campos, *Artificial Intelligence, the Brazilian Judiciary and Some Conundrums*, SCIENCEPO (Mar. 3, 2023), <https://www.sciencespo.fr/public/chaire-numerique/en/2023/03/03/article-artificial-intelligence-the-brazilian-judiciary-and-some-conundrums/> [<https://perma.cc/MW53-WPN4>].

²⁷² Article 20 of Resolution No. 322 (2020).

subsequently amended by Resolution 615 in 2025.²⁷³ The new resolution adopts a more explicit rights-based approach, prohibiting certain uses, imposing governance obligations for high-risk AI systems, and requiring courts to implement internal policies governing the use of generative AI by judges and court staff.

Literature has described both the European and the Brazilian AI governance models as forms of co-regulation.²⁷⁴ However, as shown above, they exhibit important differences. Under the Brazilian AI Bill, the involvement of private actors is more clearly structured through competences allocated to public authorities, particularly as the organization of private actors in relation to standard-setting remains open and therefore institutionally less prominent.²⁷⁵ The rights-based structure of the Bill further reinforces its state-centered dimension. While rights may be invoked against both private and public AI actors, the National Data Protection Authority is responsible for issuing guidelines on their exercise.²⁷⁶ The Brazilian regulatory approach to AI is therefore characterized as *state-centered collaborative AI governance*. Although this model remains open to legislative revision, a state-centered orientation is also evident in existing sectoral AI regulations issued by the judiciary.

b. Future developments

While Brazil joined the Global Partnership on AI in 2020, there appears to be a growing consensus on the need for a regional Latin American approach to AI governance, with Brazil playing a leading role. Consistent with the interdisciplinary orientation of this article, such an approach is understood as incorporating diverse perspectives and fostering public engagement. As has been argued, “AI regulation should not be a top-down process; instead, it should involve a broad range of stakeholders, including civil society, industry, academia, and the public. Public engagement can help build trust in AI systems and ensure that AI regulations reflect the values and concerns of society.”²⁷⁷

The governance model approved by the Federal Senate draws its strength from close cooperation with sectoral authorities and the

²⁷³ Conselho Nacional de Justiça, Resolução No. 615 (Mar. 11, 2025), <https://juslaboris.tst.jus.br/handle/20.500.12178/247151> [<https://perma.cc/E39C-2UR6>].

²⁷⁴ Almeida et al., *supra* note 192, at 72.

²⁷⁵ Maranhão et al., *supra* note 40, at 350 (adherence to best practices and ethical standards in AI development and use as “bottom-up mechanisms”).

²⁷⁶ Article 10 PL No. 2338/2023.

²⁷⁷ Maranhão et al., *supra* note 40, at 342.

flexibility it offers in addressing diverse applications of AI systems.²⁷⁸ While building on the central role of public authorities and inputs from the private sector, the model nonetheless raises concerns regarding enforcement capacity. The National Data Protection Authority, designated as the coordinating authority under the SIA, has expressed concerns about its limited budget, lack of financial autonomy, insufficient staffing, and other structural constraints that may impair its enforcement capacity.²⁷⁹ This challenge is exacerbated by Brazil's federal structure, compromising twenty-six states and the Federal District, as well as over 5,000 municipalities, each with its own fiscal and administrative capacities.²⁸⁰ In practice, technology policy is primarily led at the federal government, while sector-specific regulation is developed through ministries and regulatory agencies.²⁸¹ Within this institutional architecture, the SIA functions as a channel for expert input and is therefore well suited to identifying risks in the AI sector and developing a detailed, sector-specific regulation.²⁸²

At the same time, AI regulation in Brazil has come under mounting deregulatory pressure.²⁸³ Current debates increasingly favor a sectoral model that reflects elements of Japanese AI governance, notwithstanding the Bill's original orientation toward the European approach.

V. GOING OUT (2): AI REGULATION IN JAPAN

The Japanese approach to AI regulation is characterized by a combination of domestic and international elements. At the domestic level, the most recent *AI Guidelines for Business* (Version 1.1)²⁸⁴ exemplify Japan's principles-based approach, combining sector-specific regulation with a prominent role for the executive branch. This regulatory orientation has recently been endorsed by the "Act on the Promotion of

²⁷⁸ Articles 25(1), 33 PL No. 2338/2023.

²⁷⁹ Trib. de Contas da União, Relatório de Auditoria Operacional sobre a Autoridade Nacional de Proteção de Dados (2023).

²⁸⁰ Inst. Bras. de Geografia e Estatística (IBGE), Cidades e Estados, <https://www.ibge.gov.br> [<https://perma.cc/XPE4-MW7G>] (last visited, June 11, 2026). For a critical discussion of the challenges of public policy implementation in Brazilian federalism, see Marta Arretche, *Federalismo e Políticas Públicas no Brasil: Problemas de Coordenação e Autonomia*, 18 São Paulo em Perspectiva, no. 2, at 1 (2004).

²⁸¹ See Sergio Guerra, *Agências Reguladoras: da Organização Administrativa Piramidal à Governança em Rede* (Fórum 2021); OECD, *Regulatory Reform in Brazil* (2022), <https://doi.org/10.1787/d81c15d7-en> [<https://perma.cc/S9GL-ZVCU>].

²⁸² Kubota & Benedeti Rosa, *supra* note 235, at 18.

²⁸³ See *infra* Part IV A a.

²⁸⁴ AI Guidelines for Business, *supra* note 10.

Research, Development, and Use of Artificial Intelligence-Related Technologies” (人工知能関連技術の研究開発及び活用の推進に関する法律),²⁸⁵ which was introduced by the government in February 2025, adopted by the Japanese Parliament on 28 May 2025, and entered fully into force on 1 September 2025. Closely linked to Japan’s engagement in international AI governance, this model may gain further momentum amid current regulatory and deregulatory trends. However, a full understanding of the Japanese regulatory landscape requires consideration not only of institutional and legal developments but also of the ethical traditions and strong culture of compliance that shape AI governance in Japan.

a. Disruption

Japan’s approach to AI regulation has often been described as resembling that of the United States due to the absence of a comprehensive and strongly enforceable regulatory framework.²⁸⁶ At first glance, this characterization appears to remain valid despite the recent enactment of the Japanese AI Act, which relies primarily on non-punitive governance mechanisms and does not contain significant sanctioning provisions. Closer examination, however, reveals a more nuanced approach that acknowledges the hybrid risks associated with AI while consistently prioritizing technological innovation and societal adoption.²⁸⁷

a. Legislating technological uptake through soft law

Public perceptions of AI in Japan are characterized by a comparatively high degree of risk awareness and support for regulatory intervention. According to a 2023 survey of 17,000 respondents across seventeen countries, 77% of respondents in Japan considered further regulation of AI necessary, while only 13% believed that AI could be used safely under the existing regulatory framework.²⁸⁸ The risks

²⁸⁵ 人工知能関連技術の研究開発及び活用の推進に関する法律 [Act on the Promotion of Research, Development, and Use of Artificial Intelligence-Related Technologies], Law No. 53 of 2025 (Japan).

²⁸⁶ Ken Huang, Aditi Joshi, Sandy Dun, & Nick Hamilton, *AI Regulations, in* GENERATIVE AI SECURITY. THEORIES AND PRACTICES 61, 84 (Ken Huang et al. eds, 2024).

²⁸⁷ Kyoko Yoshinaga, *Japan’s Hybrid Approach to AI Governance: Balancing Soft Law and Hard Law*, NBR, Nov. 2025, <https://www.nbr.org/publication/japans-hybrid-approach-to-ai-governance-balancing-soft-law-and-hard-law/> [<https://perma.cc/CW4U-QHES>].

²⁸⁸ Nicole Gillespie, Steven Lockey, Cailin Curtis, Javad Pool, & Ali Akbari, *Trust in Artificial Intelligence: A Global Study*, UNIV. OF QUEENSLAND & KPMG AUSTL. 14, 38 (2023); see also AI

associated with AI include, inter alia, misinformation and disinformation,²⁸⁹ cybersecurity breaches, and system malfunctions, concerns that may be amplified by Japan's reliance on smart technologies.²⁹⁰ These perceptions are reflected in comparatively low levels of AI adoption among the general public.²⁹¹

At the same time, public authorities increasingly rely on AI-based services,²⁹² and the Japanese government has articulated ambitious expectations regarding AI-driven economic and societal transformation.²⁹³ This includes support for "disruptive innovation" through initiatives such as the Moonshot Research and Development Program.²⁹⁴ The contrast between public concerns and governmental promotion of AI provides an important backdrop for understanding Japan's regulatory approach.

The Japanese AI Act reflects a fundamentally innovation-oriented conception of AI governance. In articulating the basic philosophy of the legislation, it characterizes AI as a key driver of economic and societal development.²⁹⁵ Consistent with this orientation, the government is required to promote the active use of AI-related technologies within national administrative agencies,²⁹⁶ while citizens are encouraged to deepen their understanding of and interest in such technologies.²⁹⁷ A similar perspective is evident in the *AI Guidelines for Business*, which present AI as a means of addressing a range of societal challenges,

STRATEGIC COUNCIL, INTERIM REPORT 3 (Feb. 4, 2025), https://www8.cao.go.jp/cstp/ai/interim_report_en.pdf [<https://perma.cc/58JS-3R43>] [hereinafter Interim Report].

²⁸⁹ *Id.*, at 12.

²⁹⁰ Gillespie et al., *supra* note 288, at 26.

²⁹¹ See *id.*, at 45-6. Only 9.1% of individuals in Japan use generative AI, as compared to individuals in China (56.3%), the U.S. (46.3%), the U.K. (39.8%), and Germany (34.6%). In a survey of companies, the percentage of Japanese companies using generative AI in their business was 46.8%, as compared to businesses in China (84.4%), the U.S. (84.7%), and Germany (72.7%). See also MINISTRY OF INTERNAL AFFAIRS AND COMMUNICATIONS, 2024 WHITE PAPER ON INFORMATION AND COMMUNICATIONS (Jul. 5, 2024), <https://www.soumu.go.jp/johotsusintokei/whitepaper/index.html> [<https://perma.cc/NP3M-3WFX>].

²⁹² Akemi Yokota, *The Current Position of AI in Administrative Law: From the Aspects of Regulation and Utilization*, MEIJI UNIV. (Apr. 2, 2024), <https://english-meiji.net/articles/4612/> [<https://perma.cc/3UN4-MNLQ>].

²⁹³ See already the Basic Act on the Formation of a Digital Society, Act No. 35/2021.

²⁹⁴ Council for Science, Technology and Innovation, *Moonshot Research and Development Program* (Feb. 27, 2020), https://www8.cao.go.jp/cstp/english/moonshot/basicapproach_en.pdf [<https://perma.cc/N9LU-S6SN>].

²⁹⁵ Article 3(2) Japanese AI Act.

²⁹⁶ Article 4(2) Japanese AI Act.

²⁹⁷ Article 8 Japanese AI Act.

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 353

including labour shortages²⁹⁸ associated with Japan's declining birth rate and ageing population.²⁹⁹ This regulatory outlook is further embedded in the government's Society 5.0 vision, introduced in 2016, which seeks to combine economic growth with solutions to social challenges through the advanced integration of cyberspace and physical space in a "Cyber-Physical System."³⁰⁰

To pursue these technology-oriented objectives, Japan has relied primarily on non-binding regulatory instruments, reflecting a broader tradition within its legal culture.³⁰¹ This approach is illustrated by three key policy instruments: the *AI Guidelines for Business*, the Japanese AI Act, and the *Guidelines on the Procurement and Use of Generative AI for the Evolution and Innovation of Government Administration*. Among these, the *AI Guidelines for Business* occupy a central position.³⁰² They consolidate and update earlier guidelines issued in 2017, 2019, and 2022, thereby providing a comprehensive framework for AI governance.³⁰³ Through these instruments, the government encourages voluntary efforts by public and private stakeholders³⁰⁴ to mitigate societal risks associated with AI while simultaneously fostering innovation.³⁰⁵ The Guidelines establish broad principles for AI developers, providers, and business users, which are supplemented by more detailed guidance in the Annexes.³⁰⁶

²⁹⁸ But see the House of Councillors, Resolution on the Bill on the Promotion of Research and Development and Utilization of Artificial Intelligence-related Technologies (May 27, 2025), https://www.sangiin.go.jp/japanese/gianjoho/ketsugi/217/f063_052701.pdf [<https://perma.cc/KC53-HBSU>], which recognizes at 4 that "the promotion of AI utilization may lead to job replacement and widening economic disparities".

²⁹⁹ AI Guidelines for Business, *supra* note 10, at 2.

³⁰⁰ Cabinet Office, *Society 5.0*, https://www8.cao.go.jp/cstp/english/society5_0/index.html [<https://perma.cc/HW9K-PUUX>] (last visited, Jan. 19, 2026).

³⁰¹ See for earlier (non-binding) principles applying to AI use by government agencies as well as for the discussion on applying general administrative law to AI: Akemi Yokota, *Artificial Intelligence Accountability of Public Administration in Japanese Law and Policy*, 16 ICCLP PUBLICATIONS 159, 165 (2023).

³⁰² AI Guidelines for Business, *supra* note 10.

³⁰³ AI R&D Guidelines for International Discussions, AI Utilization Guidelines, and the Governance Guidelines for Implementation of AI Principles. Jason D. Schloetzer & Kyoko Yoshinaga, *Algorithmic Hiring Systems: Implications and Recommendations for Organisations and Policymakers*, in YSEC YEARBOOK OF SOCIO-ECONOMIC CONSTITUTIONS 231 (Eduardo Gill-Pedro & Andreas Moberg eds., 2023).

³⁰⁴ AI Guidelines for Business, *supra* note 10, at 4: "The Guidelines are intended for all AI business actors (including public institutions such as governments and authorities) who develop, provide, or use AI in various businesses".

³⁰⁵ *Id.* at 2.

³⁰⁶ *Id.*, Appendix.

In 2021, the Ministry of Economy, Trade and Industry (METI) maintained that legally binding AI requirements were unnecessary.³⁰⁷ Nevertheless, in February 2024, the ruling party's Project Team on the "Evolution and Implementation of AI" proposed a draft AI Act that would have introduced regulation for large-scale foundation models.³⁰⁸ Following the formation of a new government after the October 2024 general election, Japan ultimately reaffirmed its preference for a soft-law approach and abandoned the earlier proposal.³⁰⁹ This development coincided with a significant shift in the political landscape: for the first time since 2012, the Liberal Democratic Party (LDP) lost its sole majority in the House of Representatives.³¹⁰ Although the LDP remained the largest governing party, the loss of parliamentary dominance altered policymaking dynamics, including in the field of AI governance.³¹¹

The Cabinet Office AI Policy Study Group's Interim Report of February 2025 emphasized voluntary action by AI actors,³¹² a position subsequently reflected in the Japanese AI Act. Rather than establishing a comprehensive regulatory regime, the Act creates institutional structures to coordinate AI policy, most notably the AI Strategy Headquarters, chaired by the Prime Minister and comprising all cabinet ministers.³¹³ Although the government is empowered to request information from private actors, compliance with such requests is not backed by sanctions.³¹⁴ The Act sets out fundamental principles for the promotion

³⁰⁷ METI, *AI Governance in Japan Ver. 1.1* (Jul. 9, 2021), https://www.meti.go.jp/shingikai/mono_info_service/ai_shakai_jisso/pdf/20210709_8.pdf [<https://perma.cc/ALV3-HER6?type=image>].

³⁰⁸ Tomomi Fujikouge et al., *Understanding AI Regulations in Japan. Current Status and Future Prospects*, DLA PIPER (Oct. 28, 2024), <https://www.dlapiper.com/en/insights/publications/2024/10/understanding-ai-regulations-in-japan-current-status-and-future-prospects> [<https://perma.cc/Z7ZT-E4EF>].

³⁰⁹ Sakura Murakami, John Geddie & Tim Kelly, *Japan's Ruling Coalition Loses Majority, Election Outcome in Balance*, Reuters (Oct. 27, 2024), <https://www.reuters.com/world/asia-pacific/japan-votes-election-expected-punish-pm-ishibas-coalition-2024-10-26/> [<https://perma.cc/J9XA-DKMS>].

³¹⁰ *Id.*

³¹¹ Note that in the 2026 general election, the LDP regained a decisive majority in the House of Representatives, reversing the fragmented parliamentary situation that followed the 2024 election, William Pesek, *Japan's LDP Wins Big in Snap Election, Secures Majority in Lower House*, Washington Post (Feb. 8, 2026), <https://www.washingtonpost.com/world/2026/02/08/japan-election-sanae-takaichi-victory/> [<https://perma.cc/WK46-QPSN>].

³¹² Interim Report, *supra* note 288, at 16 (mentioning third-party certification to be established in the future).

³¹³ *Id.* "It is necessary for the public and private to cooperate and work together because information sharing and cooperation from related entities including business operators are essential". See Chapter 4 of the Japanese AI Act, Articles 19 et seq.

³¹⁴ Article 16 Japanese AI Act.

2026] *EXPANDING THE HORIZONS OF AI GOVERNANCE* 355

of research, development, and utilization of AI-related technologies and adopts a broad definition of AI that encompasses generative AI.³¹⁵ While acknowledging that the misuse of AI-related technologies may result in harms such as the leakage of personal information, copyright infringements, and other infringements of public rights and interests,³¹⁶ it does not employ a risk-classification model comparable to that of the EU AI Act. Instead, its primary function is to articulate guiding principles and coordinate public policy in support of AI development and deployment. This approach extends beyond legislation. The Japanese government has also developed a range of voluntary instruments, including model contracts for the use of AI and data in different contexts.³¹⁷ Taken together, these measures point to a form of supportive AI governance that seeks to encourage technological adoption while addressing concerns associated with AI through nonformal regulatory mechanisms.

The policy orientation reflected in the Japanese AI Act was subsequently reaffirmed in the *AI Basic Plan*, approved by the Cabinet in December 2025.³¹⁸ At the highest level, the Plan articulates a dual objective: promoting trustworthy AI while positioning Japan as the most attractive environment globally for AI development and deployment. Notably, AI is framed not only as a driver of economic growth but also as an instrument for addressing broader societal challenges and strengthening resilience in the face of demographic and social pressures.

This vision is guided by three overarching principles: balancing innovation and risk, ensuring agile policy responses, and advancing AI policy through close domestic and international coordination. These principles are operationalized through four policy pillars: accelerating the adoption of AI across government and society; strengthening domestic AI capabilities, including foundation models and computing infrastructure; promoting AI governance through institutions such as the AI Safety Institute and international initiatives such as the Hiroshima AI Process; and preparing society for long-term transformation through

³¹⁵ Article 2 Japanese AI Act. For the purposes of this Act, “artificial intelligence–related technologies” refers to technologies that enable systems to perform functions replicating or substituting for human cognitive, reasoning, or decision-making capabilities through artificial means. This includes technologies associated with information-processing systems that analyze input data and generate outputs using such capabilities.

³¹⁶ Article 3(4) Japanese AI Act.

³¹⁷ METI, *Contract Guidelines on Utilization of AI and Data* (Jun. 30, 2018), https://www.meti.go.jp/policy/mono_info_service/connected_industries/sharing_and_utilization/20180615001-1.pdf [<https://perma.cc/YM8U-VZFS>].

³¹⁸ Artificial Intelligence Basic Plan, *supra* note 17.

investments in skills, talent, and human capabilities. Taken together, these priorities reinforce Japan's distinctive model of supportive AI governance, which seeks to combine technological leadership, international cooperation, and risk management within a predominantly nonformal regulatory framework.

b. Hybridity in Japanese AI governance

A more detailed analysis of Japan's legal framework, however, reveals that it also addresses the hybrid risk dimensions identified in the European and Brazilian models, albeit through a sector-specific approach.

First, it is important to note that, alongside Japan's predominantly soft-law approach, sector-specific hard regulation applies to certain AI-related applications. While the Japanese AI Act explicitly refers only to other policy instruments concerning the promotion of research and development,³¹⁹ it must be understood in the broader context of more restrictive regulatory regimes in specific sectors. For example, the *Digital Platforms Transparency Act* imposes transparency obligations on certain platform providers,³²⁰ while the *Financial Instruments and Exchange Act* establishes risk management requirements for operators engaged in algorithmic high-frequency trading.³²¹ In the area of copyright, sectoral guidelines are intended to support implementation rather than establish binding rules.³²² Although Japan does not explicitly prohibit specific AI applications at the general regulatory level, parliamentary discussions indicate a comparatively strict stance toward AI-generated deepfake pornography, which is addressed under existing criminal law provisions.³²³

³¹⁹ Namely, the Act on the Promotion of the Creation of Science, Technology and Innovation (Act No. 63/2008), the Basic Act on Science and Technology (Act No. 130/1995), and the Basic Act on the Formation of a Digital Society (Act No. 35/2021).

³²⁰ Act on Improving Transparency and Fairness of Digital Platforms (Act No. 38/2020).

³²¹ Financial Instruments and Exchange Act (Act No. 25/1948), amended on 17 May 2017. *See* Schloetzer & Yoshinaga, *supra* note 303, at 232. The Interim Report, *supra* note 288, at 18, also points toward safety regulation, i.e. the Electrical Appliances and Materials Safety Act (Act No. 234/1961) and the Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices (Act No. 145/1960).

³²² Agency for Cultural Affairs, *General Understanding on AI and Copyright in Japan* (Mar. 15, 2024), https://www.bunka.go.jp/english/policy/copyright/pdf/94055801_01.pdf [<https://perma.cc/94HW-6QNQ>].

³²³ House of Representatives, Supplementary Resolution, 217th Session of the Diet, Cabinet Bill No. 29, at 4; House of Councillors, Resolution on the Bill on the Promotion of Research and Development and Utilization of Artificial Intelligence-related Technologies, at 5.

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 357

Second, with regard to national security risks, Japan has thus far adopted a largely case-by-case regulatory response. A recent example is the government's reaction to the release of the Chinese chatbot DeepSeek in early 2025.³²⁴ Shortly after the publication of the aforementioned Interim Report, the Japanese government issued an administrative notice to ministries and agencies restricting the use of DeepSeek's generative AI services.³²⁵ A notable concern in this context was the attribution of the Senkaku Islands to China by the chatbot.³²⁶ At the same time, Japan has more broadly adopted a supportive stance toward the use of generative AI within public administration, as reflected in the *Guidelines for the Procurement and Use of Generative AI in Public Administration*, issued on 27 May 2025 and applied from 2026 onwards.³²⁷ While these guidelines encourage the use of generative AI, they also require risk assessments and mitigation measures, explicitly acknowledging risks such as information leakage and the generation of inappropriate outputs.³²⁸ Although national security risks and the dissemination of false or misleading information appear to be central concerns in Japan's AI governance model,³²⁹ the Interim Report also highlights risks related to life and physical safety, as well as broader systemic risks, which are to be addressed by competent ministries and agencies.³³⁰ Finally, the Japanese AI Act requires the government to collect information and monitor cases involving infringements of rights or interests, thereby reinforcing once again the systemic approach to rights protection as a matter of public interest.³³¹

³²⁴ Hiroki Habuka, *New Government Policy Shows Japan Favors a Light Touch for AI Regulation*, CSIS (Feb. 25, 2025), at 3: "DeepSeek Shock." One problem with DeepSeek was that the Chatbot "described the Senkaku Islands – territory claimed by both Japan and China – as 'China's inherent territory, both historically and under international law'".

³²⁵ Secretariat of the Executive Committee of the Council for the Promotion of Digital Society, *Administrative Notice* (Feb. 6, 2025), https://www.digital.go.jp/assets/contents/node/basic_page/fi_eld_ref_resources/d2a5bbd2-ae8f-450c-adaa-33979181d26a/e7bfbeba7/20250206_councils_social-promotion-executive_outline_01.pdf [<https://perma.cc/9H57-A2AB>].

³²⁶ The Japan News, *Caution Grows Over DeepSeek's Inaccuracy, Personal Data Issue; Countries Concerned Users' Data Could be Provided to Chinese Government* (Feb. 2, 2025), <https://japannews.yomiuri.co.jp/society/general-news/20250202-236509/> [<https://perma.cc/TPN2-B99P>].

³²⁷ Guidelines for Japanese Governments' Procurements, *supra* note 10; *see also* Yoshinaga, *supra* note 287, at 3.

³²⁸ Guidelines for Japanese Governments' Procurements, *supra* note 10.

³²⁹ House of Councillors, Resolution on the Bill on the Promotion of Research and Development and Utilization of Artificial Intelligence-related Technologies, at 12.

³³⁰ *See also* Ziosi et al., *supra* note 36, at 47.

³³¹ Article 16 Japanese AI Act.

c. Changing geoeconomic landscape

Japan's AI governance is characterized by active international engagement, highlighted by its leadership at the 2023 G7 Hiroshima Summit,³³² which established global principles and a Code of Conduct for safe and trustworthy AI. The Hiroshima AI process, developed through a series of high-level forums and iterative stages, has since resulted in a framework supported by 66 countries (as of March 2026) within the Hiroshima AI Process Friends Group.³³³ Japan's international role in AI governance dates back to 2016, with the AI R&D Principles adopted at the G7 ICT Ministers' Meeting in Takamatsu, Kagawa – an initiative that contributed to the development of the OECD AI Principles.³³⁴ This trajectory continued in 2025 with the launch of the Hiroshima AI Process Reporting Framework by the G7 and OECD.³³⁵ Japan also signed the Council of Europe Framework Convention on AI in February, 2025 during the Paris AI Action Summit.³³⁶

Japan's international AI engagement aligns with its supportive domestic regulatory approach. In December 2024, former Prime Minister Shigeru Ishiba emphasized the goal of making Japan the most attractive jurisdiction for AI research and development, positioning the country as a potential global model and promoting this ambition through the Hiroshima AI Process Friends Group.³³⁷ The Japanese AI Act reinforces this orientation, pledging leadership in international cooperation and active participation in the development of global AI standards.³³⁸

Japan's domestic AI policy is consistently aligned with international developments. The 2025 Interim Report emphasizes interoperability and notes that the *AI Guidelines for Business* are based on OECD AI

³³² *Hiroshima AI Process*, <https://www.soumu.go.jp/hiroshimaaiprocess/en/index.html> [<https://perma.cc/Z8PJ-GETZ>] (last visited, Jan. 19, 2026).

³³³ *Hiroshima AI Process, Member Countries* (December 2025), <https://www.soumu.go.jp/hiroshimaaiprocess/en/supporters.html> [<https://perma.cc/BC45-6R8X>] (last visited, Jan. 19, 2026).

³³⁴ Schloetzer & Yoshinaga, *supra* note 303, at 230.

³³⁵ OECD, *Launch of the Hiroshima AI Process (HAIP) Reporting Framework* (Feb. 7, 2025), <https://www.oecd.org/en/events/2025/02/launch-of-the-hiroshima-ai-process-reporting-framework.html> [<https://perma.cc/3TV8-AM4F>].

³³⁶ OECD, *Canada and Japan Sign Council of Europe's First Ever Global Treaty on AI* (Feb. 11, 2025), <https://www.coe.int/en/web/portal/-/canada-and-japan-sign-council-of-europe-s-first-ever-global-treaty-on-ai> [<https://perma.cc/D4FA-43QX>].

³³⁷ Prime Minister's Office of Japan, *Joint Meeting of the AI Strategy Meeting and the Study Group of the AI System*, <https://www.kantei.go.jp/jp/103/actions/202412/26ai.html> [<https://perma.cc/6M4B-V6SB>] (last visited, Jan. 19, 2026).

³³⁸ Articles 3(5) and 17 Japanese AI Act.

Principles.³³⁹ Businesses are encouraged to comply with international standards,³⁴⁰ with particular emphasis on ISO frameworks to ensure global interoperability of AI systems.³⁴¹ The Japanese AI Act further requires the government to develop guidelines consistent with international standards,³⁴² while existing guidelines already reflect such standards. Reporting obligations under domestic law are also to be aligned with those under the Hiroshima AI Process.³⁴³ This indicates a policy orientation toward continuous adaptation within an evolving geoeconomic and regulatory environment.

B. Path dependence

Given Japan's longstanding reliance on soft law, it is particularly important to examine the role of ethics in its approach to AI governance. Ethical considerations form part of Japan's broader soft governance strategy – characterized by government leadership, a technology orientation, and an emphasis on responsiveness to international developments.

a. Ethical traditions: global and domestic

In international comparison, the development of ethics guidelines for AI in Japan began relatively early. Unlike the EU, Japan's ethical principles are generally framed around enabling the beneficial use of AI rather than constraining its deployment.³⁴⁴

The first significant development followed a 2014 incident in which the activities of the Japanese Society for Artificial Intelligence were criticized for reflecting gender stereotypes, prompting the organization to issue Ethical Guidelines in 2017.³⁴⁵ Around the same period, the defeat of the world's top Go player by Google DeepMind's AlphaGo in 2016

³³⁹ OECD LEGAL INSTRUMENTS, *supra* note 91; *see* Interim Report, *supra* note 288, at 12.

³⁴⁰ *Id.* at 17.

³⁴¹ *Id.* at 18; *see also* Hiroki Habuka, *Japan's Approach to AI Regulation and its Impact on the 2023 G7 Presidency*, CSIS (Feb. 14, 2023), at 7.

³⁴² Article 13 Japanese AI Act.

³⁴³ House of Representatives, Supplementary Resolution, 217th Session of the Diet, Cabinet Bill No. 29, at 10; House of Councillors, Resolution on the Bill on the Promotion of Research and Development and Utilization of Artificial Intelligence-related Technologies, at 15.

³⁴⁴ Ziosi et al., *supra* note 36, at 36.

³⁴⁵ OECD, *JSAI Ethical Guidelines* (Feb. 23, 2022), <https://oecd.ai/en/catalogue/tools/jsai-ethical-guidelines> [<https://perma.cc/N44E-EGRA>].

contributed to global debates on AI governance.³⁴⁶ In Japan, these developments informed a series of policy initiatives, beginning with the AI Research and Development Guidelines for International Discussions issued in 2017 during Japan's G7 presidency, followed by the AI Utilization Principles in 2019.³⁴⁷ Both documents were developed by a study group established in 2016 by the Ministry of Internal Affairs and Communications.³⁴⁸

In 2022, the Ministry of Economy, Trade and Industry published the Governance Guidelines for Implementation of AI Principles,³⁴⁹ which provide guidance on risk analysis in AI system implementation, along with illustrative examples to support organizational adoption of the principles. These instruments build on the 2019 *Social Principles of Human-Centric AI*, issued by Japan's Cabinet Office.³⁵⁰

The guidelines reflect a combination of traditional Japanese perspectives on technology and widely recognized international values, with significant influence from Western traditions. Indeed, the ethical values articulated in the Japanese documents largely align with those in the EU Guidelines for Trustworthy AI, despite having been issued earlier. Interviews with members of the Japanese drafting committees indicate that these principles were informed by international sources, including the U.S.-based Institute of Electrical and Electronics Engineers and the Future of Life Institute.³⁵¹ This suggests that Japan's alignment with international ethical norms is also shaped by broader geopolitical considerations, as the country's leading role in initiating the Hiroshima AI Process further illustrates. This is notwithstanding a body of literature emphasizing the richness of Japanese philosophical traditions, which are often presented as providing resources for a distinctively Japanese approach to AI ethics.³⁵²

³⁴⁶ Kyoko Yoshinaga, *Interoperability in AI Governance: From Principles to Action. Insights from OECD-GPAI Initiatives*, 43 (1) 情報通信学会誌 (J. JAP. SOC. INF. & COMM. RESEARCH) 81 (2025).

³⁴⁷ Ministry of Internal Affairs and Communications, *The Conference Toward AI Network Society* (Aug. 9, 2019), https://www.soumu.go.jp/main_content/000637096.pdf [<https://perma.cc/QQ5V-4RFU>].

³⁴⁸ *Id.*

³⁴⁹ *Governance Guidelines for Implementation of AI Principles*, Ver. 1.1, METI (Jan. 28, 2022), https://www.meti.go.jp/shingikai/mono_info_service/ai_shakai_jisso/pdf/20220128_2.pdf.m [<https://perma.cc/Z6PW-PBDF>].

³⁵⁰ Wright, *supra* note 36, at 117–34.

³⁵¹ *Id.* at 122.

³⁵² Andrew McStay, *Emotional AI, Ethics, and Japanese Spice: Contributing Community, Wholeness, Sincerity, and Heart*, 34 (4) PHIL. & TECH. 1781 (2021); Makoto Nakada et al., *Robots and AI Artifacts in Plural Perspective(s) of Japan and the West: The Cultural–Ethical Traditions*

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 361

At the same time, Japan's approach to AI ethics also incorporates elements consistent with traditional perspectives on technology,³⁵³ including a broadly affirmative, science-fiction-inspired orientation that emphasizes potential benefits over risks, and a conception of a non-absolute difference between humans and machines, often described as "techno-animism."³⁵⁴ This attitude is most clearly reflected in the 2017 JSAI Guidelines, which include as the final guiding value the expectation that AI artifacts themselves respect the Guidelines "in order to become a member or a quasi-member of society."³⁵⁵

b. Nonformal governmental guidance and corporate interests

In line with the recommendations set out in the Interim Report,³⁵⁶ the Japanese AI Act places the government at the center of AI governance. Chapter 4 of the Act establishes the AI Strategy Headquarters, chaired by the Prime Minister and composed of all members of the Cabinet.³⁵⁷ The Headquarters is responsible for drafting and implementing the national AI strategy and performs a coordinating function across ministries and agencies, reflecting a broader objective of reducing vertical fragmentation within the administrative structure.³⁵⁸ In addition, the Headquarters is assigned an enabling role and is expected to promote the utilization of AI by public authorities.³⁵⁹ The government is granted extensive information-gathering powers with respect to both public authorities and private entities, which are obliged to cooperate.³⁶⁰ While the Act does not provide for formal enforcement mechanisms, the provision allowing for "necessary measures" leaves scope for

Behind People's Views on Robots and AI Artifacts in the Information Era, 15 (1) THE REV. OF SOCIONETWORK STRATEGIES 143 (2021); Nancy S. Jecker & Eisuke Nakazawa, *Bridging East-West Differences in Ethics Guidance for AI and Robotics*, 3 (3) AI 764 (2022).

³⁵³ Souichirou Kozuka, *A Governance Framework for the Development and Use of Artificial Intelligence: Lessons from the Comparison of Japanese and European Initiatives*, 24 (2) UNIFORM L. REV. 315 (2019).

³⁵⁴ Wright, *supra* note 36, at 120; Danit Gal, *Perspectives and Approaches in AI Ethics: East Asia*, in THE OXFORD HANDBOOK OF ETHICS OF AI 607 (MARKUS D. DUBBER ET AL. EDS., 2020).

³⁵⁵ Japanese Society for Artificial Intelligence (JSAI). 2017a. "Ethical Guidelines", <https://www.ai-gakkai.or.jp/ai-elsi/wp-content/uploads/sites/19/2017/05/JSAI-Ethical-Guidelines-1.pdf> [<https://perma.cc/LP6B-588R>], 9.

³⁵⁶ Interim Report, *supra* note 288, at 16.

³⁵⁷ Articles 22–24 Japanese AI Act.

³⁵⁸ House of Representatives, Supplementary Resolution, 217th Session of the Diet, Cabinet Bill No. 29, at 17.

³⁵⁹ Article 4(2) Japanese AI Act.

³⁶⁰ Article 7 Japanese AI Act.

administrative guidance and the development of subordinate regulatory measures.³⁶¹

The institutional design of the Japanese AI Act reflects the traditionally strong role of the executive in Japan's political system. Japan is a constitutional monarchy with a parliamentary system of government in which the Emperor performs a purely ceremonial function. State power is formally divided among the executive, legislative, and judicial branches. Administratively, governance is organized across three tiers: the national government, 47 prefectures, and more than 1,700 municipalities. At the national level, the Diet serves as the primary legislative body, while executive authority is vested in the Cabinet, headed by the Prime Minister. A significant administrative reform in 2001 strengthened political leadership over Japan's traditionally powerful bureaucracy, particularly by enhancing the Prime Minister's authority in areas such as economic policy and national security.³⁶²

The central role of the Japanese government is complemented by a strong orientation toward corporate interests. Parliamentary resolutions call for the active recruitment of private-sector AI experts into the secretariat of the AI Strategy Headquarters,³⁶³ reflecting a broader policy approach that has emerged in recent years. In comparative perspective, and in contrast to both the Brazilian and European approaches, the Japanese framework places particular emphasis on facilitating AI development through institutional and regulatory flexibility. In this context, copyright restrictions have been relaxed for the purposes of AI model training,³⁶⁴ and, since 2022, the Act on the Protection of Personal Information has been amended to include pseudonymized personal data.³⁶⁵ Both legal measures are designed to facilitate AI development by expanding permissible data use.³⁶⁶

Finally, the Japanese government's approach to AI regulation – particularly its emphasis on multi-level alignment – offers a useful perspective on the “Brussels effect” in AI governance. Bradford's

³⁶¹ Articles 25 and 16 Japanese AI Act.

³⁶² D'AMBROGIO, *supra* note 43.

³⁶³ House of Representatives, Supplementary Resolution, 217th Session of the Diet, Cabinet Bill No. 29, at 12; House of Councillors, Resolution on the Bill on the Promotion of Research and Development and Utilization of Artificial Intelligence-related Technologies, at 17.

³⁶⁴ Huang et al., *supra* note 286, at 84; Copyright Act of Japan, Articles 30(4), 47(5). Since the 2017 amendment to the Copyright Act, the use of copyrighted works for AI training – such as through automatic downloading or data processing without human appreciation of the work's expressive content – generally does not constitute copyright infringement.

³⁶⁵ The sharing of data with third parties is prohibited, even when the data has been pseudonymized, *see* Article 41(6) Act on the Protection of Personal Information, Act No. 57/2003.

³⁶⁶ Japanese-style exceptions for text and data mining have recently been discussed in Brazil.

analysis highlights the incentives for commercial actors to concentrate their lobbying efforts in Brussels in order to shape global standards through the EU's regulatory leadership.³⁶⁷ Empirical evidence suggests that such actors have made substantial investments in influencing EU legislative processes, including in areas such as data protection.³⁶⁸ At the same time, global standards are shaped across a range of distributed institutional venues, and Japan's development of a model based on voluntary coordination is significant in this context. This suggests that the explanatory scope of the "Brussels effect" should not be overstated in the context of AI regulation. The specification and operationalization of socio-technical standards also depend on sustained engagement in technical working groups across multiple jurisdictions.³⁶⁹ The Japanese government and legislature appear to incorporate this multi-level governance logic into their regulatory framework.

C. Adaptiveness

a. Supportive nonformal collaborative AI governance

The Japanese model of AI governance contrasts with the Brazilian and European models in several respects. As demonstrated in the preceding sections, Japan follows a *supportive* approach to *collaborative AI governance*; in this section, we contend that this model is *nonformal*.³⁷⁰ Considering the strong cultural foundations of this approach, it may be characterized as a mode of "doing AI governance."

This description refines the Japanese government's own framing of its policy as "agile governance."³⁷¹ Although the concept has not yet been fully developed in academic literature, agile governance is commonly associated with the use of regulatory instruments other than formal (hard)

³⁶⁷ BRADFORD, *supra* note 1, at 399.

³⁶⁸ According to a study by Corporate Europe Observatory, the digital economy has become the largest lobbying sector in the EU, surpassing traditional heavy-lobbying sectors such as finance, pharmaceuticals, and energy. The scale of this engagement is evident in the GDPR's legislative process, which attracted over 4,000 amendments in the European Parliament alone, CORPORATE EUROPE OBSERVATORY, *supra* note 89.

³⁶⁹ It is important to note, however, that the EU AI Act also links to international standard-setting efforts, *see supra* III B c.

³⁷⁰ *See infra* Parts V A a, and B b.

³⁷¹ METI, *Governance Guidelines for Implementation of AI Principles Ver1.1* (Jan. 28, 2022), https://www.meti.go.jp/shingikai/mono_info_service/ai_shakai_jisso/pdf/20220128_2.pdf [<https://perma.cc/9N7P-NKW3>].

law.³⁷² In the Japanese context, the concept of agile governance was introduced in *Governance Innovation Ver. 2: A Guide to Designing and Implementing Agile Governance*, which presents a multi-stakeholder governance model aimed at continuous assessment of prevailing conditions and risks, thereby enhancing the flexibility of the intended system or policy outcome.³⁷³ Consistent with this understanding, the *AI Guidelines for Business* describe agile governance as a continuous cycle in which multiple stakeholders engage in rapid and iterative processes of environmental and risk analysis, goal setting, system design, implementation, and evaluation across various governance domains, including firms, regulatory frameworks, infrastructure, markets, and social norms.³⁷⁴ This approach is contrasted with “regular AI governance,” in which the predefined rules or procedures remain unchanged.”³⁷⁵

While the comparison with the European and Brazilian approaches suggests a more complex picture, this model seeks to bridge the temporal gap between technological development and lawmaking and enforcement, as well as to facilitate AI innovation.³⁷⁶ It is designed to respond flexibly to international developments, both in technological terms and with respect to standard-setting processes.³⁷⁷ Accordingly, it relies significantly on private-sector participation and encourages engagement by private actors,³⁷⁸ without formally institutionalizing such actors within the legal framework;³⁷⁹ as a result, the model of

³⁷² Kodai Zukeyama et al., *Agile Governance as AI Governance: A Challenge for Governance Reformation in Japan*, in HUMAN-CENTERED AI 275, 278 (CATHERINE RÉGIS ET AL. EDS., 2024); Gary E. Marchant & Carlos Ignacio Gutierrez, *Soft Law 2.0: An Agile and Effective Governance Approach for Artificial Intelligence*, 24(2) MINNESOTA J. L. SCI. & TECH. 384, 385 (2023): “Soft law includes but goes beyond industry self-regulation and consists of a variety of instruments including codes of conduct, ethical guidelines, private standards, voluntary programs, best practices, certification and auditing requirements, and private-public partnerships, among others”. OECD, *Practical Guidance on Agile Regulatory Governance to Harness Innovation*, C (2021)99/ADD1.

³⁷³ *Governance Innovation Ver. 2: A Guide to Designing and Implementing Agile Governance*, METI, <https://www.meti.go.jp/press/2021/07/20210730005/20210730005-2.pdf> [<https://perma.cc/XT57-CEWN>].

³⁷⁴ *AI Guidelines for Business*, *supra* note 10, at 27.

³⁷⁵ *Id.*

³⁷⁶ *Id.* at 2; Marchant & Gutierrez, *supra* note 372, at 383: “the biggest shortcoming of technology regulation is the so-called ‘pacing problem’, in which regulation is unable to keep pace with fast developing technologies”.

³⁷⁷ Habuka, *supra* note 341, at 3.

³⁷⁸ *Id.* at 4. Zukeyama et al., *supra* note 372, at 281; see for examples of voluntary actions in the private sector Schloetzer & Yoshinaga, *supra* note 303, at 234.

³⁷⁹ Article 9 Japanese AI Act.

2026] EXPANDING THE HORIZONS OF AI GOVERNANCE 365

collaboration remains nonformal. “Doing AI governance” thus refers to collaborative mechanisms and the dissemination of best practices,³⁸⁰ without, however, clearly delineating the institutional boundaries of such cooperation. An illustration of this approach is the Advisory Board established under the *Guidelines for the Japanese Governments’ Procurements and Utilizations of Generative AI for the sake of Evolution and Innovation of Public Administration* (27 May 2025). Under this framework ministries are encouraged to adopt generative AI in public administration while conducting use-case-specific risk assessments. For high-risk projects, they report relevant details, mitigation measures, and quality assurance plans to the Advanced AI Utilization Advisory Board, which includes both government officials and private-sector experts. The Board provides guidance based on domestic and international best practices, supports the development of evaluation methods, and contributes to the emerging regulatory framework.³⁸¹

Japan’s nonformal AI governance model prioritizes adaptability and legal flexibility. Guidelines are treated as living documents, regularly updated in light of stakeholder feedback, international developments, and regulatory changes abroad,³⁸² thereby helping to reduce regulatory fragmentation.³⁸³ Although concerns have been raised regarding the absence of binding regulation,³⁸⁴ a closer examination of the cultural and institutional embeddedness of this approach suggests that it is more robust than is sometimes assumed. While the *AI Guidelines for Business* repeatedly emphasize their status as non-binding soft law,³⁸⁵ some commentators argue that these guidelines form part of private actors’ fiduciary duties.³⁸⁶ More importantly, the system is structured in a staged manner: the sectoral approach to AI regulation outlined above suggests that hard-law intervention may be introduced where soft governance

³⁸⁰ House of Councillors, Resolution on the Bill on the Promotion of Research and Development and Utilization of Artificial Intelligence-related Technologies, at 12.

³⁸¹ Guidelines for Japanese Governments’ Procurements, *supra* note 10, at 3.1 and 4.1.

³⁸² See AI Guidelines for Business, *supra* note 10, at 3. See also Guidelines for Japanese Governments’ Procurements, *supra* note 10, at 48.

³⁸³ The Japanese government established a Digital Extraordinary Administrative Advisory Committee in 2021 to review existing laws regarding their adverse effects on the use of digital technologies, see https://japan.kantei.go.jp/101_kishida/actions/202111/_00022.html [<https://perma.cc/73T6-9N7P>] (last visited, Jan. 19, 2026); Habuka, *supra* note 341, at 5.

³⁸⁴ Wright, *supra* note 36.

³⁸⁵ AI Guidelines for Business, *supra* note 10, *passim*; see Wright, *supra* note 36, at 121.

³⁸⁶ Shunsuke Nagae et al., *Japan’s Inaugural AI Regulations: A Pro-innovation Approach*, CLIFFORD CHANCE (March 2025), <https://www.cliffordchance.com/insights/resources/blogs/talki-ng-tech/en/articles/2024/06/understanding-the-new-ai-operator-guidelines-in-japan.html> [<https://perma.cc/8UVD-4NR2>].

mechanisms prove insufficient. In this regard, the Parliamentary Resolutions call for continuous review of the existing AI governance framework “to enable timely response to new risks.”³⁸⁷ This includes the potential adoption of regulatory measures grounded in a risk-based approach.³⁸⁸ Although the current political environment in Japan may favor continuity and incremental adjustment over highly prescriptive legislation, the Japanese AI Act nonetheless equips the government with the tools for intervention where necessary.³⁸⁹ This reflects the “shadow of hierarchy” dynamic identified in political theory.³⁹⁰ It has also been described as a form of “state-induced self-regulation”.³⁹¹

This dynamic is closely linked to a strong tradition of compliance within Japan’s regulatory environment.³⁹² An awareness of this legal and cultural context is essential when analyzing and comparing AI regulation in Japan.³⁹³ It has been observed that “Japan features a historically unique net of trust between government and private industry. As a consequence, its soft-law guidelines and suggested frameworks imply a high likelihood of compliance within its domestic industry.”³⁹⁴ This pattern is also evident in other areas of administrative law. Although Japan has drawn extensively on French and German administrative law, formal administrative acts are comparatively rare; instead, nonformal administrative action, particularly administrative guidance (*Gyōsei Shido*³⁹⁵), is generally preferred in order to minimize compliance costs.³⁹⁶ Japan is characterized by strong informal social sanctions and a

³⁸⁷ House of Councillors, Resolution on the Bill on the Promotion of Research and Development and Utilization of Artificial Intelligence-related Technologies, at 16.

³⁸⁸ House of Representatives, Supplementary Resolution, 217th Session of the Diet, Cabinet Bill No. 29, at 14; House of Councillors, Resolution on the Bill on the Promotion of Research and Development and Utilization of Artificial Intelligence-related Technologies, at 19.

³⁸⁹ See Article 13 Japanese AI Act: “necessary measures in order to properly implement [...] the development and utilization of artificial intelligence-related technologies”.

³⁹⁰ Fritz W. Scharpf, *Die Handlungsfähigkeit des Staates am Ende des zwanzigsten Jahrhunderts*, 32 (4) POLITISCHE VIERTELJAHRESSCHRIFT 621, 629 (1991).

³⁹¹ Kozuka, *supra* note 353, at 320.

³⁹² Interim Report, *supra* note 288, at 10.

³⁹³ *Id.*; Schloetzer & Yoshinaga, *supra* note 303, at 234; Huang et al., *supra* note 286, at 84.

³⁹⁴ Schloetzer & Yoshinaga, *supra* note 303, at 234; Ziosi et al., *supra* note 36, at 38.

³⁹⁵ Article 2(6) Administrative Procedure Act No. 88/1993. See Takeshi Shimamura, *Informelles Verwaltungshandeln in Japan* (file with the authors); LUIS PEDRIZA, LECTURES ON JAPANESE LAW FROM A COMPARATIVE PERSPECTIVE 46 (Osaka University Press 2017): “Since administrative guidance is not legally binding, it cannot be counted as a source of law, although individuals and corporations may expect poorer treatment if they fail to follow them. As a result, administrative guidance has been extensively complied with in Japan”.

³⁹⁶ Jeffrey M. Lepon, *Administrative Guidance in Japan*, 2 (2) FLETCHER FORUM 139, 139 (1978): “The ‘lifted eyebrow’ of an administrative agency is sufficient to effect the action”.

significant sensitivity among private actors to the potential loss of public funding or administrative favor. These factors are relevant when assessing the extent to which the Japanese approach to AI regulation is likely to gain traction.

b. Future developments

Bradford highlights the influence of the EU AI Act, noting that countries such as Japan tend to develop analogous but more innovation-oriented regulatory frameworks.³⁹⁷ At the same time, Japan's distinct model combines nonformal governance with a strong compliance culture and sector-specific risk responses. Against the background of broader global deregulatory trends, it remains uncertain whether this approach will gain wider traction.

There are emerging indications that Brazil is increasingly drawing on elements of Japanese AI governance, including its approach to copyright exceptions for text and data mining in its AI Bill. Similarly, the European Union appears to be exploring more facilitative elements within the framework of the EU AI Act. However, for such legal transplants or policy transfers to succeed, it is important to recognize that the Japanese model of AI governance is not easily transferable. This is primarily due to its embeddedness in Japan's legal culture, its incremental design centered on a strong executive role, and the presence of relatively stable democratic majorities. Japan itself appears to be aware of these constraints: the parliamentary resolutions accompanying the Japanese AI Act address the treatment of foreign AI operators that fail to comply with domestic guidelines or guidance, and call for enhanced international cooperation as well as, where necessary, the adoption of stricter regulatory measures.³⁹⁸

Finally, the fact that Japanese AI governance is shaped both by societal perceptions of AI systems and by a framing of technological risk as something to be managed through, rather than opposed to, AI, contributes to its distinctiveness and limits its direct replicability. At the same time, Japan may nonetheless play an increasingly prominent role in the development of global AI standards at the international level.³⁹⁹

VI. CONCLUSION: EXPANDED MAP OF AI

³⁹⁷ BRADFORD, *supra* note 1, at 349, 350.

³⁹⁸ House of Councillors, Resolution on the Bill on the Promotion of Research and Development and Utilization of Artificial Intelligence-related Technologies, at 14.

³⁹⁹ BRADFORD, *supra* note 1, at 302.

GOVERNANCE

Based on our analysis, we propose an expanded map of AI governance (*see* Table below). The EU's 2024 AI Act,⁴⁰⁰ the recent adoption of Japan's AI Act⁴⁰¹ and ongoing deliberations on Brazil's AI Bill in the Chamber of Deputies⁴⁰² illustrate the evolving and multifaceted nature of AI regulation. These regulatory trajectories reveal a complexity that goes beyond a straightforward struggle between "Digital Empires."⁴⁰³ Collectively, they reinforce the importance of comparative analysis.

Our comparative analysis demonstrates the value of an interdisciplinary perspective.⁴⁰⁴ Several of the differences identified across the three jurisdictions cannot be fully explained through legal analysis alone. The EU's governance model reflects ethical path dependences rooted in Ethics Guidelines, while Brazil's rights-based approach is closely linked to its constitutional and political development, including the judiciary's prominent role in shaping AI governance. Japan's reliance on soft law and administrative coordination, in turn, is influenced not only by institutional choices but also by broader cultural attitudes toward compliance and human-machine relations. Public perceptions of AI risk further shape the legitimacy and acceptance of regulatory interventions across jurisdictions. These findings suggest that comparative AI regulation benefits from – and may require – analytical frameworks that cut across disciplinary boundaries.

To enable this interdisciplinary comparison, the article introduces the analytical heuristic of disruption, path dependence, and adaptiveness. It argues that the EU, Brazil, and Japan have all been disrupted by AI-driven innovation and have responded through regulatory development. However, their regulatory models diverge significantly.

Shaped by distinct path dependences, each jurisdiction follows a different trajectory in adapting its legal system to the challenges posed by AI, driven by the constitutional branch that serves as the initial regulatory driver. In Brazil, the judiciary has played a prominent early role in addressing emerging societal risks associated with AI, while the legislative branch has asserted itself at a later stage.⁴⁰⁵ Japan, by contrast, emphasizes an executive-led approach, in which AI actors are expected

⁴⁰⁰ Regulation 2024/1689.

⁴⁰¹ Act No. 53/2025.

⁴⁰² Projeto de Lei No. 2338/2023.

⁴⁰³ BRADFORD, *supra* note 1.

⁴⁰⁴ *See infra* Part II.

⁴⁰⁵ *See infra* Part IV C a.

2026] *EXPANDING THE HORIZONS OF AI GOVERNANCE* 369

to comply with non-binding guidelines, reflecting the continuing importance of nonformal modes of governmental steering.⁴⁰⁶ This executive-centered model is increasingly accompanied by a policy orientation that is explicitly supportive of technological development and aligned with industrial policy objectives. In this context, the Japanese government has responded to public concerns about AI with a technology-positive narrative that draws, in part, on culturally embedded conceptions of human-machine relations, sometimes described as “techno-animism.”⁴⁰⁷ Overall, Japan’s AI governance is characterized by orchestration, coordination, and agenda-setting by the executive.⁴⁰⁸ This stands in contrast to both the European Union and Brazil, where regulatory authority is more explicitly dispersed across institutional actors. In the EU, the AI Act illustrates an ongoing institutional negotiation between the European Parliament, the Commission, and the Council. Shaped by legal path dependences and sectoral lobbying – particularly from the automotive industry – the AI Act adopts a New Legislative Framework (NLF)-style approach that conceptualizes AI largely as a product.⁴⁰⁹ The European regulatory process thus reflects the continued centrality of the (tripolar) legislative institutions (European

⁴⁰⁶ See *infra* Part V B b.

⁴⁰⁷ See *infra* Part V B a.

⁴⁰⁸ See *infra* Part V B b.

⁴⁰⁹ See *infra* Part III B c.

Commission, Parliament, and Council), alongside an expanding role for private actors.⁴¹⁰

	EU	Brazil	Japan
Disruption	Disruptive innovation and varying degrees of societal uptake		
	ChatGPT Traditional product risks ↔ emerging societal risks	(Global) Deregulatory tendencies 'Brussels effect'?	AI skepticism? Changing geoeconomic landscape
Path Dependence	EU Ethics Guidelines NLF style product regulation Institutional power struggle	Ethics shaped by law Individual and collective rights (data protection, Constitution)	Mix of global ethical discourse and national "technoanimis" Nonformal governmental guidance
Adaptiveness	Cascading norm-setting Adaptive NLF standardization and mix of assessments	Private actors' role concretized by public bodies Sectoral regulation (judiciary)	International engagement Sectoral approach Nonformal instruments and culture of compliance ("doing AI governance")
Form of Collaborative AI Governance	Multidimensional → values-based	State-centered → rights-based?	Nonformal and supportive → tech-oriented

Table: *Expanded Map of Collaborative AI Governance*

The Table illustrates the regulatory models in the EU, Brazil, and Japan as distinct forms of *collaborative AI governance*, in which systemic public policy functions are distributed across private and public actors. The EU model is characterized as *multidimensional*, Brazil adopts a *state-centered* approach, and Japan relies on a *nonformal and supportive* AI governance model.

The EU AI Act is more values-based than strictly rights-driven; it justifies the prohibition of certain AI practices and the classification of others as high-risk by reference to threats posed to fundamental values such as human dignity, individual autonomy, and fundamental rights.⁴¹¹ This reflects a path dependence rooted in the EU's Ethics Guidelines, which framed AI governance in value-oriented terms. As a consequence, the protection of rights is conceptualized as a systemic obligation rather than an individual entitlement within the EU AI Act. This has contributed

⁴¹⁰ See *infra* Part III B b.

⁴¹¹ See *infra* Part III B a.

to ongoing challenges in translating European values into operational regulatory standards. By contrast, the Brazilian AI Bill, as approved by the Federal Senate in December 2024, reflects a more direct translation of legal norms into ethical frameworks, indicating a different – arguably reversed – form of path dependence compared to the EU model. This development is closely linked to the judiciary’s influence in shaping AI governance in Brazil. Its rights-based orientation is reflected in the proposed AI Bill, which draws on existing data protection law, copyright law, and constitutional guarantees to recognize both individual and collective rights in the context of AI regulation.⁴¹² However, it remains uncertain whether this comparatively ambitious approach will prove resilient to deregulatory pressures.

The Brazilian AI Bill (as approved by the Senate in 2024) addresses the need for adaptive AI governance through enforcement bodies consolidated within the so-called system of AI regulation and governance (SIA).⁴¹³ While this governance architecture has attracted renewed scrutiny, sector-specific AI regulation continues to operate alongside it.⁴¹⁴ Japan’s approach to AI governance, by contrast, is characterized by the absence of comprehensive, binding legislation. It relies primarily on a soft law framework, complemented by sector-specific hard law in areas where AI use may have significant societal or economic impact.⁴¹⁵ The government sets strategic direction rather than detailed rules, coordinating across ministries, industry, and academia through strategies, principles, and guidelines that shape AI development.⁴¹⁶ This approach blends soft law instruments with targeted regulatory interventions and is reinforced by Japan’s responsiveness to international developments. Notably, the effectiveness of formally non-binding guidelines is further strengthened by a strong culture of voluntary compliance, which is an important contextual factor in assessing their regulatory impact.

The degree of collaboration between private actors and public bodies varies significantly across the three jurisdictions. In the European Union, the AI Act entrusts private actors with significant public-facing functions in relation to high-risk AI systems, including participation in standard-setting, classification of risk levels, and conformity assessment against applicable standards.⁴¹⁷ As a consequence of the AI Act’s

⁴¹² See *infra* Part IV B a.

⁴¹³ See *infra* Part IV A b.

⁴¹⁴ See *infra* Part IV A a.

⁴¹⁵ See *infra* Part V A b.

⁴¹⁶ See *infra* Part V A a.

⁴¹⁷ See *infra* Part III B c.

horizontal and comprehensive scope, interactions between public authorities and private providers and deployers are highly structured yet operationally complex.⁴¹⁸ Whether this regulatory architecture will fully realize its intended objectives remains an open question. In Brazil, by contrast, the private sector's involvement under the AI Bill as approved by the Federal Senate in December 2024 is more tightly circumscribed by public authorities. While private actors participate in implementation processes, the institutional design leaves the organization of their role in standard-setting less developed, reflecting a more state-centered model of collaborative governance.⁴¹⁹ The emphasis on rights highlights the centrality of the state, a pattern that informs sector-specific AI regulation in Brazil. In Japan, the AI governance model relies primarily on private sector implementation guided by governmental coordination, without formally embedding private actors within the legal framework. Collaboration is therefore largely nonformal.⁴²⁰

Taken together, the three jurisdictions illustrate a continuum of collaborative AI governance, ranging from highly institutionalized delegation to more informal and coordination-based models. The EU exemplifies a dense regulatory architecture in which private actors perform quasi-public functions within a comprehensive legal framework; Brazil reflects a more state-centered model in which collaboration is structured and (potentially) rights-oriented but institutionally more constrained; and Japan relies primarily on nonformal coordination mechanisms supported by soft law and administrative guidance. Across these configurations, collaborative governance emerges as a shared yet differently operationalized response to the challenges posed by AI. Rather than converging on a single model, the three systems demonstrate how regulatory design is shaped by domestic path dependences, institutional structures, and normative commitments. This suggests that global AI governance will likely not evolve through either uniform harmonization or continuous regulatory conflict, but instead through differentiated and context-specific forms of regulatory adaptation.

⁴¹⁸ See *infra* Part III C a.

⁴¹⁹ See *infra* Part IV C a.

⁴²⁰ See *infra* Part V C a.

VII. OUTLOOK

Since Anu Bradford's "Digital Empires,"⁴²¹ global AI regulation has evolved significantly, particularly following the adoption of the EU AI Act (2024) and parallel regulatory developments in Brazil and Japan.⁴²² Most recently, rising deregulatory pressures have begun to reshape the trajectory of AI governance worldwide: the second Trump administration revoked Executive Order 14110⁴²³ and advanced a market-driven approach through its "AI Action Plan."⁴²⁴ Alongside the European Commission's response to global deregulatory dynamics,⁴²⁵ this shift in U.S. policy is influencing both global regulatory dynamics and domestic debates, including ongoing discussions on the Brazilian AI Bill, which remains under legislative review.

Against this backdrop, it is notable that states continue to pursue the development of a global AI standard despite considerable regulatory divergence. However, this process does not take the form of either simple imitation or direct regulatory confrontation. Instead, it reflects a more complex pattern of interaction in which domestic regulatory models evolve in parallel and in partial relation to one another.

This article proposes a methodological framework for understanding these dynamics, grounded in domestic context and developed through an interdisciplinary – and necessarily exploratory⁴²⁶ – research design. Integrating insights from ethics, political science, psychology, and, not least, law, it examines AI regulation in the EU, Brazil, and Japan. The analysis shows that global AI standards are emerging from diverse, domestically embedded governance models that interact in complex and non-linear ways, extending beyond a simple logic of competition and convergence.

⁴²¹ BRADFORD, *supra* note 1.

⁴²² See *infra* Parts III, IV, and V.

⁴²³ Exec. Order 14179 90 FR 20 (Jan. 23, 2025).

⁴²⁴ THE WHITE HOUSE, WINNING THE AI RACE: AMERICA'S AI ACTION PLAN (Jul. 23, 2025), <https://www.whitehouse.gov/articles/2025/07/white-house-unveils-americas-ai-action-plan/> [<https://perma.cc/5VQX-PTPR>]; Tuchtfeld, *supra* note 29, at 933.

⁴²⁵ Hannah Ruschemeier, *The De-Regulatory Turn of the EU Commission*, VERFASSUNGSBLOG (Feb. 18, 2025), <https://verfassungsblog.de/the-de-regulatory-turn-of-the-eu-commission/> [<https://perma.cc/N4DS-US4R>].

⁴²⁶ There are, for example, good reasons to focus on AI regulation in South Africa, India, or South Korea. As this would exceed the scope of this paper, we leave this interesting endeavor to future research, which we hope to stimulate.