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Georgios Pavlidis

*Guardians of the Digital Frontier: Pioneering a Supranational
Approach to AI Regulation and Supervision in the EU*

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Neapolis University Pafos, School of Law

Pafos, 8042, Cyprus

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Guardians of the Digital Frontier: Pioneering a Supranational Approach to AI Regulation and Supervision in the EU

Abstract

This paper proposes to explore the legal and policy challenges posed by the regulation of Artificial Intelligence (AI) in a globalized world. The rapid advancement and widespread adoption of AI technologies have transcended geographical boundaries, prompting the need for a comprehensive legal framework that can effectively address the challenges posed by AI. This paper aims to examine how law should protect and realize rights in the face of AI's proliferation across international borders. Moreover, this paper advocates in favour of establishing a supra-national EU agency on AI; it also examines the guiding principles and the key roles and responsibilities for such an agency. This paper contribute to the broader conversation on AI regulation in the EU and in a globalized world in the coming decades.

Keywords

Artificial Intelligence (AI), trustworthy AI, regulation, oversight, supervision, European Union

1. Introduction

Recently, we have been witnessing an extraordinary transformation in the realm of technology. The advance of Artificial Intelligence (AI) continues at a pace that few could have anticipated. From healthcare to finance, from manufacturing to autonomous vehicles and beyond, the influence of AI continues to expand. So do the challenges that are associated with its regulation and ethical use. In 2022, global private investment in AI reached approximately \$92 billion—18 times greater than it was ten years ago¹. The global AI market was valued at \$430 billion in 2022; there are estimates that it will grow to approximately \$2 trillion by 2030.² By that year, it is also anticipated that AI will contribute \$16 trillion to the worldwide economy; or a 14% increase in global GDP, surpassing the collective economic output of China and India at present.³

The business world, especially Big Tech, is experiencing an AI fever. The percentage of companies using AI technology has doubled in the last five years. So has the average number of AI capabilities utilized in business units (natural-language generation, computer vision, etc.).⁴ AI technologies are expected to enhance labor productivity by as much as 40% across a spectrum of 16 different industries by 2035⁵; not surprisingly, an astonishing 83% of companies emphasize the incorporation of AI into their business strategies as a priority.⁶

2. Regulating AI to Mitigate its Risks

Many jurisdictions, such as Brazil, Canada, and China, take steps to regulate AI. At the level of the EU, an ambitious first step has been the initiative for the adoption of the EU AI Act.⁷ Contrary to the EU, the UK intends to enhance the responsibilities of its existing regulatory bodies, such as the Information Commissioner's Office, the Financial Conduct Authority, and the Competition and Markets Authority, rather than introducing comprehensive new legislation. These bodies in the UK will have authority to offer guidance and supervise the utilization of AI within their specific domains of jurisdiction.

So, disparities exist and will continue to exist in national approaches to AI regulation and oversight.⁸ This is troublesome because attempting to regulate a global

¹ Stanford University, 2023 AI Index Report: Measuring trends in Artificial Intelligence, available at: <https://aiindex.stanford.edu/report/>

² Fortune Business Insights, Artificial Intelligence Market, Market Research Report, April 2023.

³ PWC, Sizing the Price: What's the real value of AI for your business and how can you capitalise? PWC Report, 2017.

⁴ McKinsey, The state of AI in 2022—and a half decade in review, Survey, December 6, 2022.

⁵ Accenture, Why Artificial Intelligence is the Future of Growth, Accenture Report 2016.

⁶ Forbes, 3 Ways Artificial Intelligence Is Transforming Business Operations, May 29, 2019

⁷ European Commission, Proposal for a Regulation laying down harmonized rules on artificial intelligence (Artificial Intelligence Act), COM(2021) 206 final

⁸ See the legislative initiatives on AI in Brazil (Projeto de Lei n° 2338, de 2023), in China (2021 Regulation on Recommendation Algorithms; 2022 Rules for Deep Synthesis; 2023 Draft Rules on Generative AI), and in Canada (Draft Law C-27, Digital Charter Implementation Act 2022, Part 3:

issue at local level is always an uphill battle.⁹ International organizations such as the OECD and UNESCO have proposed guidelines on AI,¹⁰ but these initiatives lack binding regulatory power. An international convention on AI is not to be seen soon in the horizon, although the Council of Europe has taken some steps to this direction¹¹ The lack of a commonly accepted standards might hinder innovation due to legal uncertainties and different compliance burdens.¹² It might also hinder the management of significant ethical issues related to AI.

Indeed, there are concerns about the risks of AI. Historically, this has been true for most emerging novel technologies;¹³ in the context of AI, many of these concerns appear to be well founded. Increasingly, AI systems influence decisions with consequences for humans, especially in sensitive domains such as healthcare, credit scoring, policing and the criminal justice system.¹⁴ In these domains, the potential for bias and discrimination within AI systems could inadvertently perpetuate preexisting societal inequalities.¹⁵ Furthermore, there are security concerns since AI creates opportunities for cyberattacks, data compromises, as well as other malicious uses and abuses of AI.¹⁶ Furthermore, the consolidation of power and data within a small group of dominant tech companies gives rise to worries regarding the possible abuse of this

Artificial Intelligence and Data Act); see also UK Secretary of State for Science, Innovation and Technology, A pro-innovation approach to AI regulation, Policy Paper presented to the Parliament, August 2023, available at: <https://www.gov.uk/government/publications/ai-regulation-a-pro-innovation-approach/white-paper>

⁹ See for example: Jonathan B. Wiener, Think Globally, Act Globally: The Limits of Local Climate Policies, *University of Pennsylvania Law Review*, Vol. 155, No. 6 (2007), pp. 1961-1979; James Bushnell, Carla Peterman, Catherine Wolfram (2008). Local Solutions to Global Problems: Climate Change Policies and Regulatory Jurisdiction. *Review of Environmental Economics and Policy*, Vol. 2(2), pp. 175-193.

¹⁰ OECD, Recommendation of the Council on Artificial Intelligence, OECD/LEGAL/0449, 22 May 2019; UNESCO (2021) Recommendation on the Ethics of Artificial Intelligence, Document No SHS/BIO/PI/2021/1.

¹¹ At the level of the Council of Europe, the Committee of Ministers mandated the Committee on Artificial Intelligence (CAI) to elaborate a framework Convention on the development and application of AI, based on the standards of the Council of Europe; see <https://www.coe.int/en/web/artificial-intelligence>

¹² Peter Cihon, Matthijs Maas, Luke Kemp (2020), Fragmentation and the Future: Investigating Architectures for International AI Governance, *Global Policy*, Vol. 11(5), pp. 545-556.

¹³ Bernard Cohen (1981), The Fear and Distrust of Science in Historical Perspective. *Science, Technology, & Human Values*, Vol. 6(3), pp. 20-24; Marita Sturken, Douglas Thomas, Sandra Ball-Rokeach, *Technological Visions: Hopes and Fears That Shape New Technologies*, Temple University Press, 2004.

¹⁴ Jacob O Arowosegbe (2023), Data bias, intelligent systems and criminal justice outcomes, *International Journal of Law and Information Technology*, Vol. 31 (1), pp. 22-45; Abdul Malek (2022), Criminal courts' artificial intelligence: the way it reinforces bias and discrimination, *AI and Ethics*, volume 2, pp. 233-245; Michael Bucker et al. (2022) Transparency, auditability, and explainability of machine learning models in credit scoring, *Journal of the Operational Research Society*, Vol. 73:1, pp. 70-90; Georgios Pavlidis (2023), Deploying artificial intelligence for anti-money laundering and asset recovery: the dawn of a new era, *Journal of Money Laundering Control*, Vol. 26 No. 7, pp. 155-166.

¹⁵ This may be due to several factors, such as biased training data, data collection methods, feature selection, and feedback loops; Frederik Zuiderveen Borgesius (2018), Discrimination, Artificial Intelligence, and Algorithmic Decision-Making, Council of Europe Study, at p. 15.

¹⁶ European Union Agency for Cybersecurity (2020), Artificial Intelligence Cybersecurity Challenges, ENISA Report, at p. 24; Europol, Malicious Uses and Abuses of Artificial Intelligence, Report 2021; on computer-related crimes and virtual criminality, see Ian J. Lloyd (2020), *Information Technology Law*, 9th Edition, Oxford University Press.

power in markets, public discussions, and even political procedures.¹⁷ Finally, there is the looming prospect of job displacement, with automation and AI reshaping industries and transforming the employment landscape.¹⁸

3. Developing the Appropriate Policy and Legal Responses

Of course, identifying the risks is much easier compared to building a consensus on the necessary responses.¹⁹ For example, there is agreement on the need to address the ethical aspects of AI, but policy responses require a prior and clear definition of fairness and bias.²⁰ Such a definition might be subjective and dependent on context, leading to differing interpretations; legal definitions of bias may also differ from one jurisdiction to another. So, any attempt to regulate AI must overcome the obstacles of defining AI systems, defining the criteria for the classification of the risks, and defining the scope of transparency, explainability and due diligence obligations that will be imposed to AI developers and users.²¹

There is a certain international convergence on some key principles for AI deployment and use, in particular transparency and accountability, privacy and data protection, fairness, and inclusivity.²² However, not surprisingly, there is no convergence regarding the specific criteria for these principles. Jurisdictions around the world adopt various approaches to these issues, depending on the respective economic, business, and technological landscape. Some countries avoid any interference with innovation, while others lean towards more strict regulations, as well as broader definitions of the AI systems that fall under these regulations.

At the institutional level, governments may entrust AI regulation and supervision to dedicated agencies or departments, either new or evolution of existing ones. These bodies may be responsible for developing policies, as well as for monitoring compliance and enforcing regulations. A conventional top-down model of government regulation could be employed. Other jurisdictions may opt for the model of self-regulation, in which industry associations and Tech companies will develop their own guidelines and best practices. This form of privatization of regulation can be beneficial

¹⁷ Nick Srnicek (2018) Platform monopolies and the political economy of AI, in: John McDonnell (ed) *Economics for the many*, Verso, pp 152–163; Pieter Verdegem (2022), *Dismantling AI capitalism: the commons as an alternative to the power concentration of Big Tech*, AI & Society, <https://doi.org/10.1007/s00146-022-01437-8>

¹⁸ OECD (2021), *Artificial Intelligence and Employment*, OECD Policy Brief, at p.5; see also Accenture (2023), *A New Era of Generative AI for Everyone*, Report, at p. 3. According to this report 40% of all working hours can be impacted by Large Language Models (LLMs) like GPT-4.

¹⁹ Charlotte Stix, Matthijs Maas (2021), *Bridging the gap: the case for an ‘Incompletely Theorized Agreement’ on AI policy*, AI and Ethics, Vol. 1, pp. 261–271.

²⁰ Vincent Müller, *Ethics of artificial intelligence and robotics*, in Edward Zalta (ed.), *Stanford Encyclopedia of Philosophy*, Stanford University, 2020.

²¹ Leilani Gilpin and others (2019), *Explaining explanations: an overview of interpretability, of machine learning*, ArXiv, <http://arxiv.org/abs/1806.00069>; see also Georgios Pavlidis, *Unlocking the Black Box: Analysing the EU Artificial Intelligence Act’s Framework for Explainability in AI*, Forthcoming.

²² Jessica Fjeld and others, *Principled Artificial Intelligence: Mapping Consensus in Ethical and Rights-based Approaches to Principles for AI*, Berkman Klein Center for Internet & Society, 2020.

under certain circumstances,²³ but it has received criticism for producing weak and ineffective norms, due to barriers to collective action, tolerance for noncompliant behavior and free-rider problems, lack of public participation or oversight, etc.²⁴ Another option would be a hybrid model of meta-regulation, which favors collaboration and interactions between government and industry, as well as with other stakeholders, to develop policies and rules.²⁵

We will not examine in too much detail the definition of AI; this is still work-in-progress at EU level. In its initial proposal for the EU AI Act, the Commission put forward a technology-neutral, albeit quite broad, definition of AI systems.²⁶ The Council of the EU proposed a more refined description to distinguish AI from established software systems.²⁷ Conversely, the European Parliament proposed to amend the definition to align it with the OECD definition.²⁸ The ultimate shape of the definition remain yet to be finalised (as of October 2023).²⁹ In this context, it has been correctly pointed out that rather than relying on the definition of the term ‘AI,’ policymakers should focus on identifying the specific risks they want to reduce.³⁰

The next challenge for the EU and jurisdictions that will follow its model will be the classification of the risks that are associated with AI. The EU has opted for a ‘risk-based approach’ (RBA) that assigns different requirements and obligations to different

²³ Margot Priest (1998), *The Privatization of Regulation: Five Models of Self-Regulation*, *Ottawa Law Review*, Vol. 29(2), pp. 233-302.

²⁴ William Bendix, Jon MacKay (2022), *Fox in the henhouse: The delegation of regulatory and privacy enforcement to big tech*, *International Journal of Law and Information Technology*, Vol. 30 (2), pp. 115–134 ; Ian Maitland (1985), *The Limits of Business Self-Regulation*, *California Management Review*, Vol. 27(3), pp. 132–147.

²⁵ Cary Coglianese, Evan Mendelson (2010), *Meta-Regulation and Self-Regulation*, in Robert Baldwin, Martin Cave, and Martin Lodge (eds), *The Oxford Handbook of Regulation*, Oxford University Press; Ifeoma Elizabeth Nwafor (2021), *AI ethical bias: a case for AI vigilantism (Allantism) in shaping the regulation of AI*, *International Journal of Law and Information Technology*, Vol. 29 (3), pp. 225–240.

²⁶ Article 3(1) of the proposal defined AI system as ‘software that is developed with [specific] techniques and approaches [listed in Annex 1] and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with’.

²⁷ Council of the European Union, *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 - General approach*, Doc. 14954/22, 25 November 2022; according to the Council’s definition, AI systems are ‘systems developed through machine learning approaches and logic- and knowledge-based approaches’.

²⁸ European Parliament, *Amendments adopted on 14 June 2023 on the proposal for a regulation of the European Parliament and of the Council on laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) and amending certain Union legislative acts (COM(2021)0206 – C9-0146/2021 – 2021/0106(COD))*; according to the European Parliament’s proposal, ‘artificial intelligence system’ (AI system) means a machine-based system that is designed to operate with varying levels of autonomy and that can, for explicit or implicit objectives, generate outputs such as predictions, recommendations, or decisions, that influence physical or virtual environments’.

²⁹ No agreed definition of AI has been given yet at the level of the EU-U.S. Terminology and Taxonomy for AI initiative; see, Trade and Technology Council, *EU-U.S. Terminology and Taxonomy for Artificial Intelligence*, First Edition, May 2023, Annex A, available at: <https://digital-strategy.ec.europa.eu/en/library/eu-us-terminology-and-taxonomy-artificial-intelligence>

³⁰ Jonas Schuett (2023) *Defining the scope of AI regulations*, *Law, Innovation and Technology*, 15:1, 60-82.

risk categories.³¹ RBA has become a buzzword in the past few years³²; it has proved to be effective in areas such the fight against money laundering.³³ RBA in AI builds on the principle of proportionality, since regulations apply to applications only to the extent required. AI systems deemed to pose ‘unacceptable’ risks would be banned. ‘High-risk’ AI systems would be permitted only if they meet specific requirements and transparency and due diligence obligations before entering the EU single market. Limited transparency obligations would apply to systems that present limited risks (such as the need to indicate that an AI system is being used and interacts with humans).

These requirements are important for the protection of individual and collective rights. First, stakeholders must have legal responsibilities in preventing and mitigating algorithmic bias. Transparency and accountability in AI development are prerequisites in this context. This includes discussions on liability frameworks, auditing mechanisms, and responsible AI development practices. Moreover, so binding rules need to ensure data protection in AI systems, particularly in cases involving sensitive personal data. The judiciary will have a key role in adjudicating AI-related disputes, but there is a need for specialized expertise, adaptable legal frameworks and, most importantly, alternative avenues for addressing AI-related grievances, including dispute resolution mechanisms, regulatory bodies, and ethical review boards. Finally, there is a need for effective supervision, in which obliged entities disclose their actions and practices to competent authorities, enabling supervisors to assess compliance and potential violations.

4. Establishing an EU Agency on AI

Several factors advocate in favor of establishing a supra-national EU agency on AI. The first factor is the inherently transnational nature of AI technologies. Second, AI poses serious ethical and societal challenges, such as security and human rights risks. A patchwork of national regulations would lead to fragmentation and harmful regulatory competition (‘a race-to-the bottom’), allow for forum shopping, and undermine the effectiveness of regulation.³⁴ Most importantly, even if substantive rules are harmonized effectively, differences in the models of national supervision

³¹ Michael Veale & Frederik Zuiderveen Borgesius (2021), *Demystifying the Draft EU Artificial Intelligence Act*, *Computer Law Review International*, vol. 4/2021, pp. 97-112, at p. 98.

³² Risk-based regulation is no panacea; serious issues arise regarding justification and legitimation, along with risk-scoring, enforcement, and compliance; Robert Baldwin, Martin Cave, Martin Lodge, ‘Risk-based Regulation’, in Robert Baldwin et al. (eds) *Understanding Regulation: Theory, Strategy, and Practice* (Oxford, 2011), pp. 281–295.

³³ The key international standard-setter in this field, the Financial Action Task Force, summarized the philosophy of this approach: ‘A risk-based approach involves tailoring the supervisory response to fit the assessed risks. This approach allows supervisors to allocate finite resources to effectively mitigate the [...] risks they have identified and that are aligned with national priorities [...] A robust risk-based approach includes appropriate strategies to address the full spectrum of risks, from higher to lower risk sectors and entities. Implemented properly, a risk-based approach is more responsive, less burdensome, and delegates more decisions to the people best placed to make them’; Financial Action Task Force, *Risk-Based Supervision*, FATF, Paris 2021, p. 5.

³⁴ Frank Biermann and others (2009), *The Fragmentation of Global Governance Architectures: A Framework for Analysis*, *Global Environmental Politics*, Vol. 9 (4), pp. 14–40.

might produce inconsistent levels of quality and efficacy in AI supervision across the EU.

How to deal with these issues in a complex governance environment, such as the EU?³⁵ The simplest option would be to harmonize certain substantive rules at the EU level and keep supervision at national level without the oversight or even the coordination of a supranational body. A second option would be to introduce a two-layer framework, in which Member States designate competent bodies for the implementation of AI rules (national level), while an EU AI Board plays an advisory and coordinating role.³⁶ A third (more advanced) option would be to establish a new supranational agency and entrust it with significant responsibilities, such as direct supervision of certain entities and activities.

In the recent years, there has been a manifest trend in favour of such EU-centralised supervision and “agencification” in the implementation of EU law.³⁷ As an example, we can mention the model for the prudential supervision of credit institutions by the ECB, which in 2014 acquired supranational powers.³⁸ In this model, national authorities supervise certain activities and entities, while the supranational agency focuses on supervising high-risk entities, but it also supports national authorities and promotes supervisory convergence. Therefore, direct EU supervision is applied only when there is evidence that national action alone is not sufficient. This is consistent with the principles of subsidiarity and principle of proportionality.³⁹

In the context of AI, I argue that national authorities must supervise certain activities and entities, while an EU agency on AI must focus on supervising high-risk entities, supporting national supervisors and promoting supervisory convergence. Such an agency would accelerate the harmonization of AI regulations, thus reducing fragmentation. Businesses that develop and use AI in multiple jurisdictions would be relieved from the burden of navigating diverse supervision methodologies. Streamlining compliance in this manner would in turn promote effective protection of legal rights.

³⁵ Madeleine McNamara (2012), Starting to Untangle the Web of Cooperation, Coordination, and Collaboration: A Framework for Public Managers, *International Journal of Public Administration*, Vol. 35(6), pp. 389-401.

³⁶ Georgi Gitchev, The Governance of the AI Act: your questions answered, European AI Alliance, Blog 4 March 2022, <https://futurium.ec.europa.eu/en/european-ai-alliance/blog/governance-ai-act-your-questions-answered>

³⁷ Edoardo Chiti (2018), Decentralized Implementation: European Agencies, in Robert Schütze and Takis Tridimas (eds), *Oxford Principles Of European Union Law: The European Union Legal Order*, OUP, pp. 748-776; Mira Scholten, Marloes van Rijsbergen (2015), The Limits of Agencification in the European Union, *German Law Journal*, Vol. 15 No 7, pp. 1223-1255; Takis Tridimas (2012), Financial Supervision and Agency Power: Reflections on ESMA, in Niamh Nic Shuibhne and Laurence Gormley (eds), *From Single Market to Economic Union: Essays in Memory of John A. Usher*, OUP, p. 55 ff.

³⁸ Gianni Lo Schiavo (2022), The Single Supervisory Mechanism (SSM) and the EU Anti-Money Laundering framework compared: governance, rules, challenges and opportunities. *Journal of Banking Regulation*, Vol. 23, pp. 91–105.

³⁹ Merijn Chamon (2016), *EU Agencies: Legal and Political Limits to the Transformation of the EU Administration* (Oxford, 2016); Darren Harvey (2020), Federal Proportionality Review in EU Law: Whose Rights are they Anyway? *Nordic Journal of International Law*, Vol. 89(3-4), pp. 303-326; see also Wolf Sauter (2013), Proportionality in EU Law: A Balancing Act?, *Cambridge Yearbook of European Legal Studies*, Vol. 15, pp. 439-466.

Nevertheless, there are concerns and objections to be addressed. A recurring theme in the process of European integration has been the fear of a potential loss of sovereignty.⁴⁰ Regulating AI will not be an exception. The solution here is to design a body that works collaboratively with member states to shape AI policies and regulations, while respecting the principles of subsidiarity and proportionality. Furthermore, concerns regarding red tape constitute a recurrent point of criticism against the EU.⁴¹ Finally, regulatory initiatives may have unintended consequences, such as restraining innovation or creating compliance burdens. For these reasons, the design of a new EU supranational agency on AI should be based on the principles of agility and responsiveness. A new EU supranational agency on AI must be equipped with mechanisms for transparency and public accountability.

5. The EU in the Future Global AI Ecosystem

Numerous jurisdictions are poised to establish their own AI agencies, which will inevitably add to the complexity of global AI governance.⁴² The challenge will be to promote international cooperation in the form of bilateral or multilateral agreements on data sharing, development of common standards, coordinated enforcement action.⁴³ The UN must contribute to this global effort.⁴⁴ A future EU Agency on AI should also promote international collaboration as a part of the emerging global AI ecosystem. In this environment, an EU Agency on AI would be the voice of EU in the development of global standards and ethical frameworks.⁴⁵

Nevertheless, the EU must exercise caution in this context. A collaborative vision to global AI governance is an ethically sound and justified approach; however, a sober assessment dictates that we must expect global antagonisms and a strenuous race to leverage AI. So, the EU must be vigilant against risks, such as instances of intellectual property theft, science and industrial espionage, data migration towards jurisdictions with less stringent regulations, harmful competition with other countries, for example

⁴⁰ Raffaele Bifulco and Alessandro Nato (2020), The concept of sovereignty in the EU – past, present and the future, RECONNECT – Reconciling Europe with its Citizens through Democracy and Rule of Law; Ole Wæver (1995), Identity, Integration and Security: Solving the Sovereignty Puzzle in EU Studies, *Journal of International Affairs*, Vol. 48(2), pp. 389-431; Neil MacCormick (1995), The Maastricht-Urteil: Sovereignty Now, *European Law Journal*, Vol. 1(3), pp. 259-266; Martin Loughlin (2013), Why Sovereignty? In Richard Rawlings, Peter Leyland, and Alison Young (eds), *Sovereignty and the Law: Domestic, European and International Perspectives*, Oxford University Press, pp. 34-49.

⁴¹ Wim Voermans and others, Codification and Consolidation in the European Union: A Means to Untie Red Tape, *Statute Law Review*, Volume 29, Issue 2, June 2008, Pages 65–81,

⁴² Karen Alter, Kal Raustiala (2018), The Rise of International Regime Complexity, *Annual Review of Law and Social Science*, Vol. 14 (1), pp. 329–349.

⁴³ Peter Cihon (2019), Standards for AI Governance: International Standards to Enable Global Coordination in AI Research and Development, Technical Report, Center for the Governance of AI, Future of Humanity Institute, Oxford. Available from: https://www.fhi.ox.ac.uk/wp-content/uploads/Standards_-FHI-Technical-Report.pdf

⁴⁴ Eugenio Garcia (2020), Multilateralism and Artificial Intelligence: What Role for the United Nations?, in Maurizio Tinnirello (ed.), *The Global Politics of Artificial Intelligence*, Routledge, pp. 1–20; Thorsten Jelinek, Wendell Wallach & Danil Kerimi (2021), Policy brief: the creation of a G20 coordinating committee for the governance of artificial intelligence’, *AI and Ethics*, Vol. 1, pp. 141-150.

⁴⁵ Alan Bundy (2017), Preparing for the future of Artificial Intelligence, *AI & Society*, Vol. 32, pp. 285–287.

in terms of incentives.⁴⁶ So, the EU will have to protect its technological sovereignty, avoiding overreliance on third-country suppliers for key technologies like AI.

While new technologies are advancing rapidly, the legal frameworks for regulation often become more sluggish due to legislative gridlocks,⁴⁷ which need to be addressed. With the proposal EU AI Act, there is already a shift from soft-law principles to hard-law regulations; this is timely and appropriate given the risks associated with AI. The next step must be the establishment of a robust supra-national authority on AI with powers and responsibilities in standards-setting, monitoring and enforcement. In this setting, the ethical use of AI technologies and the protection of legal rights are fundamental imperatives in our interconnected world. Policy makers must show collective commitment to ethical AI regulation and the protection of legal rights, ensuring that innovation and technology serve the betterment of humanity in the years to come.

⁴⁶ Wolfgang Dierker (2023), Technologische Souveränität: Begriff und Voraussetzungen im transatlantischen Kontext, *Wirtschaftsdienst*, vol. 103 (6), pp.386-393; see also European Parliament, Key enabling technologies for Europe's technological sovereignty, European Parliamentary Research Service Study, 2021.

⁴⁷ Gary Marchant, Branden Allenby, Joseph Herkert (2011), *The Growing Gap Between Emerging Technologies and Legal-ethical Oversight: The Pacing Problem*, Springer.