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HOW TO RESPOND TO THE CHALLENGES OF ARTIFICIAL INTELLIGENCE: A COMPARATIVE ANALYSIS OF REGULATORY APPROACHES OF THE EUROPEAN UNION, CHINA, AND THE UNITED STATES***

Abstract

The rapid development and implementation of artificial intelligence technology in various spheres of social activity confronts legal systems with the challenges of defining the protection of fundamental rights, liability for damage, and managing an acceptable level of risk to stimulate innovation. In the era of digital transformation, technology has become a new arena in which the interests of great powers are weighed and the contours of future global power are shaped. The regulation of artificial intelligence reflects the value, (geo)political, and (geo)economic priorities of prominent actors in this domain. The subject of the paper is a comparative analysis of the regulatory approaches of the European Union, the People's Republic of China, and the United States of America.

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The paper employs a qualitative study of the content of relevant strategic and normative documents to interpret the fundamental principles that underpin the selected regulatory frameworks. The main differences between them are identified, which point to internal socio-economic priorities, but also similarities that reveal global ambitions. The focus is on institutional dynamics, legislation in force, and ethical guidelines to overcome general comparisons dominant in contemporary public discourse. It is necessary to critically examine the overly simplistic view that the European approach to artificial intelligence places the protection of fundamental rights at the center stage; the American approach is dominated by the private sector and market dynamics, with excessive commercialization; while the Chinese approach is characterized by strong state control and strategic planning, along with the development of controversial surveillance systems. The implications of the observed divergent interests for the future of the ethical application of ubiquitous artificial intelligence are discussed, as well as the possibilities for eventual reconciliation of differences in order to achieve international harmonization of rules. By analyzing the specificities, but also the contradictions, of AI governance in large jurisdictions, the authors offer a rounded judgment on the (in)compatibility of value-based regulation with the pragmatic need to achieve technological supremacy. This allows for a deeper understanding of the positioning of great powers and European states embodied in the supranational Union in the global technological architecture, as well as contributing to the discussion on contemporary social challenges brought about by the seemingly unstoppable development of advanced technologies.

Keywords: EU, China, USA, artificial intelligence, regulatory approach, EU AI Act, Executive Order on Artificial Intelligence, Next Generation Artificial Intelligence Development Plan, technological race

INTRODUCTION

Since the public release of an advanced artificial intelligence (AI) large language model, or colloquially a Chatbot, by the American company *OpenAI* in November 2022, the rapid pace of application development and improvement, their easy accessibility, and widespread

use have confronted policymakers with serious challenges in attempting to respond to the many issues that have emerged. By all accounts, the socio-economic transformation that ChatGPT has merely hinted at is already underway (Luknar 2025; Luknar 2024). The most powerful artificial intelligence models are now capable not only of processing and generating natural language but also of creating visual, audio, and video content, as well as computer code. The greatest hopes are placed in the potential revolutionary achievements in the field of medicine. For instance, Delphi-2M, an artificial intelligence model developed by British and German research teams that aims to predict more than 1,000 diseases, including Alzheimer's and cancer, by analyzing health data (trained on UK Biobank data and tested on Danish health records), has demonstrated promising predictive capabilities (*The Economist* 2025). The advanced performance of such systems has further fueled the ambitions of the world's leading research laboratories to focus their efforts on achieving what is referred to as "Artificial General Intelligence" – a model capable of performing a wide range of cognitive tasks at or above human capacity.

For America, artificial intelligence represents a new arena in which its global technological dominance is being contested. While both the previous and current administrations have used a range of assertive regulatory and policy instruments to impede Chinese technological breakthroughs and uphold U.S. competitive edge, China has, in turn, mobilized significant central authority and state resources in an effort to narrow the gap. Concurrently, Europe seeks to avoid being overshadowed by either of the two technological superpowers. It strives to develop its own approach, grounded in European specificities – that is, to position itself as an autonomous regulatory and technological pole. The regulation of AI thus reflects the value-based, (geo)political and (geo)economic priorities of the prominent actors in this domain. The subject of this paper is a comparative analysis of the regulatory approaches of the European Union (EU), the People's Republic of China, and the United States of America (USA), as the three leading global actors.¹

¹ In the paper, the concept of regulation is understood in a broad sense, encompassing not only various forms of control but also the guidance of behavior and practice. Accordingly, the emphasis is placed not solely on regulation through formal and binding acts backed by state authority (regulation in the narrow sense), but also on international standards and so-called soft law instruments. These include principles (e.g., the OECD Principles on AI), recommendations, guidelines, as well as the

The first part analyses the distinct institutional and normative models of the examined actors. It explores the European approach, which emphasizes preventive regulation, strives for comprehensiveness in the function of protecting fundamental rights, but does not neglect the current momentum and disruptive changes in the international order; the American approach, characterized by sectoral and decentralized regulation and by a dominant role of the private sector in standards-setting; as well as the Beijing strategy that integrates a strong central government role into broader developmental and geopolitical plans and ambitions. The second part of the paper is dedicated to identifying and critically examining the legal and ethical challenges in the formulation of an appropriate governance model from a comparative and international perspective, with particular attention to pressing ethical dilemmas.

DIFFERENT APPROACHES TO THE REGULATION AND GOVERNANCE OF ARTIFICIAL INTELLIGENCE

The European approach²

The EU lacks a sufficient number of large companies (mature, consolidated, and profiled towards international markets) with the economic resources and talents necessary to rival the USA and China in the field of advanced technologies.³ However, this has not prevented the EU from positioning itself as what is commonly referred

concept of industrial self-regulation, such as codes of ethics and codes of practice adopted by business entities. Although not legally binding, such instruments play a significant role in shaping policies and practices. This understanding brings the concept of regulation closer to that of governance. It should therefore be noted that the paper does not insist on a strict distinction between the regulatory and governance framework for AI technologies in the analyzed countries, or in the case of the supranational EU.

² The title of the first subchapter is formulated as “The European Approach” rather than “The EU Approach,” to emphasize that, in the field of AI, the EU acts as a single regulatory and political entity whose measures have a supranational character and apply uniformly across all member states.

³ Here we will mention two notable exceptions, although there are more. The French company Mistral AI has rapidly evolved into one of the leading start-ups in the field of generative artificial intelligence, attracting significant global public and investor attention and reaching the status of a European technology export brand. Likewise, the Dutch company ASML currently occupies a strategically irreplaceable position derived from its near-monopolistic status in the production of extreme ultraviolet lithography machines, without which the manufacture of the most advanced microchips is practically impossible.

to as a regulatory power in the digital sphere, which, through the implementation of norms and standards, seeks to shape global flows in desired directions. The effectiveness of this approach – that is, whether the reduced competitiveness and innovative potential of European economies is an unwanted consequence of a higher level of protection of European citizens – remains a subject of debate in European studies. Nevertheless, certain indicators relevant to this research should not be overlooked. Namely, it is undisputable that international companies take into account the stricter regulations that apply in the European market when planning their business operations. Economists refer to the phenomenon of standards and rules established in Brussels spreading beyond the borders of the European market as the “Brussels effect” (Bradford 2020), whereas many political scientists may prefer the term “normative power,” which conveys an affirmative understanding of the Union’s global actorship (Dabić 2025a, 248). In 2021 alone, the EU imposed 514 fines on companies that violated the provisions of the European General Data Protection Regulation (GDPR), worth more than one billion euros (precisely € 1.3 billion), with the largest fines issued to Amazon, Meta, and WhatsApp, respectively (Prenga 2024, 137). It is anticipated that, in the coming years, the implementation of the European Artificial Intelligence Act, through a combination of extraterritorial reach and financial sanctions, will yield similar benefits for the Union, at least in terms of projecting its influence as a regulatory power.

The EU, or more precisely, the European Commission acting on its behalf, has in recent years adopted a more centralized style of managing innovation and funding in the field of new and disruptive technologies at the supranational level. The arguments in favor of such a “top-down” approach rest on the high costs of research and innovation, the shortcomings of the European system of technological incentives in rationalizing efforts and achieving the expected economic impact, as well as the fragmentation of public and private research activities between member states and the EU (Milutinović 2024, 285).

The Union has developed a normatively grounded regulatory model, embodied in the Regulation laying down harmonized rules on artificial intelligence (hereinafter: the Regulation or AI Act), which entered into force in August last year. It represents the most ambitious attempt to manage AI undertaken anywhere in the world to date (Dabić 2025a, 257). Its objective is to improve the functioning of the internal market by establishing a uniform legal framework for the development,

placement on the market, and use of AI, in accordance with the values of the Union – that is, a high level of protection of health, safety, fundamental rights, and democracy. The Regulation is directly applicable in the Member States. However, it does not cover the use of artificial intelligence for military purposes, as this area falls within the competence of the Member States.

The main feature of the European model is its risk-based approach. Four levels of risk are established based on the potential impact on health, safety, and fundamental rights. AI systems and models are accordingly divided into four categories: prohibited (Regulation 2024/1689, Art. 5),⁴ high-risk (for instance, those used in medical diagnostics or biometric identification systems for airport border control), limited-risk (including most generative AI applications such as the popular ChatGPT and most virtual assistants), and minimal-risk (e.g., AI in video games or applications that recommend products in e-commerce). Systems deemed to pose an unacceptable risk are prohibited altogether, while those classified as high risk are permitted only under strictly defined conditions and are subject to compliance requirements. Systems presenting a limited risk must meet transparency obligations, whereas those of minimal risk are merely encouraged to adhere to codes of practice. Violations of the provisions of the AI Act may result in high financial penalties of up to 7% of annual global turnover, or €35 million, whichever is higher (Regulation 2024/1689, Art. 99.3). This is the most stringent sanction, applying to the use of prohibited systems (Dabić 2025a, 256). A study conducted by the Applied AI Institute for Europe analyzed more than one hundred AI systems. The results showed that 18% were classified as high risk, 42% as minimal risk, while for the remaining 40%, it was not possible to determine whether they belonged to the high-risk category (Liebl and Klein 2023, 4). Only one system was found that could potentially meet the criteria to be banned (Liebl and Klein 2023, 4).

⁴ These include: AI systems that use behavioral imitation, manipulation or exploitation of users' vulnerabilities in order to alter their behavior in a way that may cause physical or psychological harm; biometric facial categorization systems for the purpose of identifying persons based on sensitive characteristics such as race, religion, sexual orientation, or political beliefs; systems that perform so-called social scoring for use by public bodies to rank the behavior or personal characteristics of individuals in a way that may lead to discrimination or unfair treatment; and real-time remote biometric identification in public spaces when used for law enforcement purposes, except in very limited and clearly defined cases.

The European AI Act establishes a specific and complex multi-level governance system. National competent authorities will oversee the implementation of the rules at the national level, while the newly established European Artificial Intelligence Office will ensure coordination at the European level. The Office has already been established. As one of the first bodies worldwide to implement binding rules on AI, it is expected to become an international reference point (Cancela-Outeda 2024). Its position will also be strengthened through its connection with other new EU bodies entrusted with roles and tasks in the field of AI governance under the Regulation, to be specific: the European Artificial Intelligence Board, the Advisory Forum, and the Scientific Panel of independent experts. Through their composition, these bodies contribute to the integration of the socio-economic and technical dimensions in the decision-making process, while ensuring the representation of the relevant interests of industry, the scientific community, civil society, and other stakeholders (Dabić 2025b, 235).

The EU's activism in the field of artificial intelligence, embodied in its emerging role as a common regulator acting on behalf of the member states, serves as a catalyst for further centralization processes within the European legal and institutional system. Each new step towards institutional refinement or functional upgrading of the internal market inevitably contributes to the consolidation of supranational structures, a development often justified by officials as necessary to ensure the greater efficiency and effectiveness of European multi-level governance (Dabić 2024). Consequently, the space for autonomous policy-making within the European individual states is narrowing. With the rise of AI, this dynamic gains new momentum. The supranational Union not only becomes a pioneer of regulation but also introduces a comprehensive and binding legal framework based on a horizontal approach, insisting on universal applicability for all types of AI, irrespective of the industry or sector concerned (finance, health, transport, education, etc.). Regulation thereby becomes an instrument for reinforcing the institutional legitimacy of the European Commission and deepening integration. In this sense, the governance of AI within the European context constitutes not merely a technological regulatory effort – aimed at maximizing benefits and minimizing risks for European citizens – but also a means for strengthening supranational capacities, fostering a sense of European identity, and advancing the centralization of the legal order. At the same time, the issue of AI is increasingly coming to the forefront in light of

the Union's new geostrategic ambitions, both in terms of economic competitiveness and security – two interrelated elements that shape its evolving strategic approach (Stanković 2024, 132).

The United States Approach

At present, the US lacks comprehensive federal legislation or regulations governing the development and application of AI, as well as rules that would restrict or prohibit its use. Within the US legal system, executive orders constitute a key instrument in shaping policies, particularly during periods of political transition when a new administration takes office. They are perhaps the most important factor in understanding the US regulatory approach to AI. Their scope extends beyond the mere administrative guidance of federal agencies; rather, they serve as a key means of articulating the president's and the administration's broader vision regarding how development, application, and oversight of this advanced technology should be understood, evaluated, and directed. As the literature highlights, former President Biden's Executive Order "articulated a vision for ethical, safe, and trustworthy AI development" (Pernot-Leplay 2025, 268). It emphasized core values such as privacy protection, civil rights and liberties, and the need for greater transparency and accountability of developers, and required federal agencies to adopt guidelines for implementing responsible and trustworthy solutions (Pernot-Leplay 2025, 268). However, President Donald Trump revoked this order within days of his inauguration. He signed a new executive order announcing to the world that he intended to repeal all policies related to artificial intelligence that "act as barriers to American AI innovation" (Pernot-Leplay 2025, 268). This move by the new president sends a clear signal that the US does not intend to adopt strict or restrictive regulations that establish detailed rules or subject American technology giants to oversight in terms of risk control in the development and application of AI, or at least not during the current administration. Although executive orders in the American legal system carry the force of law, one of their defining characteristics is their susceptibility to amendment or repeal, especially after a change of administration in the White House. This, however, is not the case with regulations issued by federal agencies based on the authority derived from statutes enacted by Congress (Prenga 2024, 134).

The US maintains a decentralized AI framework, characterized by a combination of federal and state-level regulatory initiatives. Federal agencies oversee particular applications of AI, based on their mandate. For example, the Food and Drug Administration regulates medical devices, while the National Highway Traffic Safety Administration is responsible for autonomous vehicles. At the state level, Colorado became the first U.S. state to pass a comprehensive AI law, followed by Utah. In contrast, the case of California – a state traditionally at the forefront of technology regulation – illustrates the legislature’s failure to adopt safety standards for AI models, not for high-risk systems as in the EU, but for high-cost ones. In 2024, the governor of California vetoed the proposed bill, endorsing the arguments advanced by the influential Silicon Valley technology sector and segments of the academic community that raised their voices against the draft, arguing that the proposed measures could stifle innovation (Pernot-Leplay 2025, 268).

Recent federal initiatives indicate a growing need for clearer regulatory guidance. In 2023, the National Institute of Standards and Technology released the AI Risk Management Framework, providing voluntary standards intended to assist organizations in identifying and mitigating risks associated with AI use. Likewise, the Blueprint for an AI Bill of Rights, issued under the previous administration, set out five guiding principles accompanied by recommended practices for the design, use, and implementation of automated systems. Principles such as fairness, privacy, and transparency are highlighted. However, its current status is unclear. Although the aforementioned Trump’s executive order did not invalidate the principles set forth in the Bill, their future implementation and development under the Trump administration remain uncertain (White & Case 2025). While these initiatives indicate a growing awareness of the societal implications of the pervasive use of AI, the US regulatory landscape remains fragmented. Market participants continue to operate in an environment characterized by legal ambiguity, limited predictability, and insufficient certainty, as there is no central regulatory authority or universally applicable set of rules.

The regulatory model chosen by the US is commonly defined in the literature as a market-driven model. Main drawback of this model – often colloquially referred to as the “cowboy” approach – is that it relies primarily on practice rather than formal legal rules. At the same time, its principal advantage lies in its capacity to respond rapidly and effectively to the needs of the AI market (Ćeranić i Mišan 2025, 21). From an

economic perspective, regulatory flexibility encourages and stimulates innovation, attracting substantial investments, yet it also increases the risk of market concentration and the accumulation of systemic financial vulnerabilities.

In essence, the US seeks to project itself as a leading advocate of democracy and a promoter of free markets and technological innovation. However, our analysis shows that the US strategy for global leadership in the field of AI relies heavily on an offensive external approach (export bans on critical components, the imposition of tariffs, and a dismissive attitude towards regulatory initiatives originating from Brussels or multilateral fora), coupled with a consolidation of power within the executive branch, manifested in the growing concentration of authority in the White House, on the internal front.

China's Approach

China's strategic orientation in the field of AI was formally set out in the State Council's New Generation Artificial Intelligence Development Plan of 2017. The document is best known for declaring China's ambition to become an AI superpower by 2030. It outlines a set of ambitious geopolitical, fiscal, legal, and ethical objectives, alongside a phased roadmap for achieving the set goals in terms of governance of this advanced technology. By 2025, these early measures are expected to evolve into the initial adoption of laws and regulations, ethical norms, and policy systems, including the development of institutional capacity for safety assessment and oversight. By 2030, China is projected to have built a fully developed legal and regulatory framework, supported by mature ethical guidelines and established policy mechanisms.

Where does China stand now in terms of meeting the timelines mentioned above? While there is widespread public perception that the EU is the global pioneer in constructing a legislative framework for AI, it is in fact China that adopted the first binding regulations between 2021 and 2023. These early measures address data protection, algorithmic transparency, and generative AI systems, thereby laying the foundation for future binding nationwide regulation. In the process, China has introduced several new bureaucratic and technical instruments, including data publication obligations, model verification mechanisms, and technical performance standards. Arguably, the most significant among them is the algorithm registry – an online database in which

developers are required to enter data on how their algorithms are trained and implemented. This registry will allow Chinese regulators to acquire practical expertise and institutional know-how. Neither the EU nor the US currently possesses a comparable instrument. Various applications are possible for the aforementioned instruments, ranging from authoritarian online content control to democratic oversight of automated decision-making systems (Sheehan 2024).

Interestingly, some authors argue that – at least on paper – China may have the strictest regulatory requirements for advanced AI models (specifically large language models and generative AI) among the three jurisdictions examined (Chun, Schroeder de Witt, and Elkins 2024, 11). These rules include, among other things, mandatory model registration, data management obligations, and provisions for continuous compliance monitoring. The registration procedure, in particular, exemplifies the highly centralized nature of China’s regulatory approach. Before being made publicly available, AI models must undergo a compliance check conducted by the Cyberspace Administration of China in coordination with other competent bodies. Once approved, they must be registered for public use (licensing procedure). In sensitive sectors such as healthcare, finance, and security, additional authorization from sectoral regulatory bodies is also required (Chun, Schroeder de Witt, and Elkins 2024, 12). On the other hand, researchers specializing in Chinese technology regulation point to distinctive features in the implementation phase. Thus, while the “national champions” (such as Baidu, Tencent, Alibaba, to name just a few) are expected to demonstrate full compliance with regulations due to their dominant market position and influence, “small giants” (small and medium-sized enterprises recognized as a significant source of innovation in the technology domain) are reportedly afforded greater informal flexibility. This regulatory leniency is intended to prevent overly rigid enforcement that could stifle their innovative potential (Zhang 2024).

The Cyberspace Administration of China has played a central role in shaping the country’s regulatory framework to date. However, despite the appearance of centralized state control, the governance of AI in China has evolved through an iterative process involving a wide range of stakeholders, including mid-level bureaucrats, representatives of academia (notably Tsinghua University), major technological corporations, start-ups, and research centers (Sheehan 2024).

The content analysis of the ethical postulates of the Chinese approach highlights the concept of “harmony.” Whereas the European value framework encompasses the protection of fundamental rights, transparency, accountability, and related principles, the Chinese framework introduces an important, yet insufficiently defined category that is absent from European ethical guidelines. For example, the “Governance Principles for the New Generation Artificial Intelligence” promote harmony between man and machine, reflecting the aspiration that technological development should contribute to the common good of humanity, while safeguarding social stability and respecting fundamental rights. Similarly, the “Beijing AI Principles” expand the notion of harmony to include cooperation across disciplines, sectors, organizations, and regions, with the aim of preventing a destructive arms race and affirming the idea of “optimized symbiosis” (Roberts *et al.* 2023, 87–88). That said, Chinese policy documents do not present harmony as a clearly defined legal, ethical, or operational standard; rather, as a philosophical ideal that serves to legitimize China’s broader vision of the role of technology in society.

Considered as a whole, the Chinese approach to AI regulation is based on a system of innovation incentives directed at both public and private entities, while relying on *ad hoc* corrective measures to mitigate harmful consequences once they emerge (Roberts *et al.* 2023, 85). It shares certain similarities with both previously analysed models, yet there are also notable differences. Similar to the EU, China employs a centrally steered regulatory process. By contrast, whereas European legislation adopts a horizontal approach, applying generally across all sectors, Chinese legislation is presently vertical, i.e., sector-specific, resembling the US approach in this respect. Moreover, unlike the fragmented and, under the Trump administration, US approach, which is fragmented and, with Trump’s coming to power, one could even say reactive rather than strategic, the Chinese approach is phased and gradual. Whether this trajectory will ultimately culminate in a comprehensive law, comparable to the EU AI Act, as proclaimed by the officials, remains to be seen.

Finally, it should be noted that, regarding the Chinese approach, “international commentary often falls into one of two traps: dismissing China’s regulations as irrelevant or using them as a political prop. Analysts and policymakers in other countries often treat them as meaningless pieces of paper” (Sheehan 2024, 7). In other words, the point is made that the actual content and scope of Chinese regulations

are frequently overlooked. As a result, in scholarly discussions, they are often either lightly dismissed as insufficiently significant for the “Western” context, or instrumentalized for political purposes – that is, deployed as an argument in broader ideological or foreign policy antagonisms.

LEGAL AND ETHICAL CHALLENGES OF GOVERNING ARTIFICIAL INTELLIGENCE IN A COMPARATIVE AND INTERNATIONAL PERSPECTIVE

As shown in the previous section, when confronting the challenge of governing AI technology, states – or, in the case of the EU, a supranational union – face similar dilemmas, yet offer different responses. A targeted lexical analysis of the most relevant regulations in force in the EU, the USA, and China as of late 2024 offers additional insights.⁵ As expected, it reveals differing strategic orientations and interests among the actors: the EU directs regulation towards preserving market stability and consumer protection; in the USA, the emphasis lies on preserving technological supremacy and safeguarding national security; whereas China approaches AI primarily as a vehicle for stimulating innovation and development under strong state leadership (Prenga 2024, 131–158).

Although European leaders emphasize the need for value-based regulation of AI, particularly the protection of fundamental rights and democratic principles, a critical examination of institutional dynamics, existing legislation, legislative proposals, and political discourse reveals that, in practice, the aim of enhancing technological capacity is increasingly taking precedence. The language of recent policy initiatives reflects an economic and competitive rationale, affirming leadership, development of strategic capacities, market power, and the importance of

⁵ This is an analysis of three legislative documents (the European AI Act, Biden's Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence, and the Interim Administrative Measures of the People's Republic of China on Generative Artificial Intelligence Services) with the application of natural language processing (NLP) techniques to obtain lexical and semantic information through statistical analysis. Two remarks should be made regarding the research: first, the aforementioned executive order, issued during the Biden administration, was revoked with the change of power in the White House; and second, its author highlights the circumstance of the unequal size of the analyzed language corpus, where the European regulation is far longer than the Chinese counterpart (EU 88,814 tokens, USA 22,081 tokens, China 1,901 tokens). For details, see: Prenga 2024, 139–142.

innovation. At the same time, statements by European statesmen and EU officials express growing concerns that excessive regulation could lead to further economic decline. By promoting its ambition and self-perception of a “global leadership in ethical AI,” the Union not only engages in self-affirmation and reinforces supranational features within its internal governance structure, but also seeks to demonstrate to the international community that it is capable of reconciling a value-based approach with geopolitical realities and geoeconomic interests in advancing its own vision of the digital future (Dabić 2025a, 260).

Furthermore, while the EU and, to some extent, China have developed relatively stable governance frameworks, the political dynamics in the USA suggest an intensifying debate over the future direction of regulatory efforts. Given both the volatility and particular traits of the technology itself, the delayed regulatory response of the US may be interpreted as a strategic choice aimed at securing a competitive advantage over its main competitors. In this sense, U.S. regulatory authorities appear to be closely observing which solutions within European and Chinese legislation would prove effective, and which should be rejected as ineffective or counterproductive.

On the ethical level, similar core issues are identified across all approaches: how to determine the appropriate threshold of acceptable risk (both individual and collective), how to ensure transparency and explainability of algorithmic decisions,⁶ how to prevent discrimination and bias in automated decision-making, and finally, from the perspective of regulators, arguably the most important question possible – how to define and delineate responsibility between technology creators (tech companies), users (citizens), and the state. The analysis shows that no universally acceptable solution exists. Present regulatory models fall along somewhere in a spectrum between two poles (ideal types): from the self-regulation of market actors to a fully developed normative-regulatory approach that protects (supra)national norms and principles. All of them ultimately strive to balance the incentives for innovation with an acceptable level of risk. A clear contrast emerges between the EU’s top-down regulatory model, grounded in attempts to quantify and

⁶ For example, the EU AI Act requires “explainability” for high-risk systems and models. However, implementing this requirement in practice can be technically and operationally challenging and imposes additional regulatory costs on businesses. This can discourage innovation among small and medium-sized enterprises, which are a key pillar of the European economy.

manage risks, and the US approach, which is largely market-driven and, with certain exceptions, can be said to align with the regulatory culture that prioritizes bottom-up initiatives. Positioned between these two models is the Chinese approach, which outwardly appears as a centralized regulatory system but, in practice, leaves considerable room for decentralized innovation, regional competition, and local-level economic development (Chun, Schroeder de Witt, and Elkins 2024, 3).

The observed differences in approach reflect the deeper institutional and normative structures of the analyzed regulatory and governance regimes. China proceeds from the primacy of domestic economic development, having created a stimulating environment for technological progress, where regulatory intervention typically occurs only subsequently, once risk or social harm has already materialized. Such a model enables scientific breakthroughs and the rapid adoption of new technologies in both the public and private sectors, but entails the risk of delayed responses to threats to individual rights, as well as to ethical, social, and security concerns. The EU, on the other hand, is guided by a preventive logic: establishing an extensive regulatory framework that incorporates ethical norms represents an attempt to create a safe and socially acceptable space for the development and application of AI systems and models. Although frequently criticized for discouraging innovation and imposing excessive bureaucratic requirements, this approach seeks to enhance the legitimacy of the European technological paradigm while ensuring the protection of fundamental rights and the integrity of the internal market. Support is provided to Member States and their companies for developing and deploying AI applications within predetermined legal and ethical parameters. It includes measures such as dedicated European funding instruments, isolated regulatory experimental environments (“regulatory sandboxes”) at the Member States’ level in which innovative solutions may be developed and tested under controlled conditions in the absence of a complete regulatory regime, exemptions and privileges for small and medium-sized enterprises, and so forth.

A practical example clearly illustrates the difference between these approaches. The EU tends to pursue a cautious course in the adoption of AI tools in medical diagnostics and treatment. Although healthcare is widely recognized as a field in which AI has the potential to generate far-reaching positive effects, its widespread application still carries significant risks to patient safety, privacy, and dignity. Accordingly,

its introduction is subject to strict oversight and control. Under the EU AI Act, systems and models used in healthcare are classified as high-risk. In practical terms, this means that manufacturers and service providers are required to conduct extensive testing, clinical evaluation, and certification procedures before placing such systems on the market. Unlike this, China is trying to encourage wider use of AI in healthcare as a means of addressing the shortage of medical professionals, especially in rural areas. In light of the previous discussion, a partial outlook on future EU-China relations can be discerned through the lens of AI, a domain where economic competitiveness, technological sovereignty, and security imperatives intersect (Stanković 2022, 52–54).

Overall, the approaches to AI innovation and regulation observed in the three major jurisdictions are expected to influence each other, the wider international community, and future regulatory trajectories more generally. The establishment of an effective international governance framework will be possible only through sustained dialogue, cooperation, and coordination between different approaches, while taking into account their respective socio-economic, political, and legal particularities. Only in this manner can AI technologies be directed toward serving general societal progress, while simultaneously minimizing risks to fundamental rights and humanistic values. Special attention should be devoted to a category of risks that remains unrecognized as such. These are the risks arising from geopolitical competition in the technological sphere, including a potential regulatory “race to the bottom” aimed at securing competitive advantages, externalities, and, more broadly, the unintended and undesirable consequences of an unrestrained race for innovation in dual-use technologies and artificial general intelligence. Contemporary geopolitical rivalries not only erode transnational cooperation but also divert attention from pressing challenges that require resolution on a global scale. Consequently, debates over the “best” governance model and the pursuit of national interests have overshadowed the most important question – the role and value of humans in a world increasingly shaped by AI – which has a universal character and significance, even in countries with different political systems (Cheng and Zeng 2023, 810). In other words, in the years to come, the primary focus of multilateral regulatory efforts should be concentrated on technological anthropocentrism and the ethics governing the human-AI relationship in terms of preserving and affirming human dignity, rather than on the currently dominant debates

over the inputted ideological values, or the censored content applied to chatbots and robots.

CONCLUSION

Viewed in the broadest sense, all the AI regulatory regimes analysed here share a common goal: to prevent the risks and misuse of this advanced technology without undermining the space for innovation.

From a scientific standpoint, when the Chinese approach to AI is predominantly analyzed through the lens of state control, censorship, and mass surveillance, other aspects, also worthy of attention, are often overlooked. It is important to underscore that China applies its own ethical norms – rooted in a collectivist value orientation, as opposed to the individualism characteristic of liberal democracies – such as the significant, albeit insufficiently developed, principle of harmony. Then, Chinese engineers contribute to the open-source community and help disseminate knowledge beyond national borders. Furthermore, the Chinese regulatory framework emphasizes corporate social responsibility, showing a greater willingness than the US to exert pressure on its “technological champions” in relation to ethical issues (e.g., consumer protection) that do not conflict with the views of the Communist Party. The overall conclusion is that, in both technological superpowers, ethical principles and the safety of citizens from risks are ultimately subordinated to geopolitical priorities. For the time being, the EU constitutes a third pole. However, given the current moment marked by a major global geopolitical and geoeconomic shift to which Europe is no exception, alongside American pressure to ease digital regulation in favor of its corporate interests, in addition to internal divisions that hinder consensus on a unified approach, it remains uncertain whether the EU will be able to maintain its current course.

Finally, it is essential for state actors to systematically monitor the dynamics of AI development in order to identify, in a timely manner, those areas in which breakthroughs or significant advances are likely. Such monitoring mitigates epistemological uncertainty and enables informed political decision-making regarding which development opportunities, but also challenges and risks, should be prioritized, and which shortcomings in national systems require intervention. This, in turn, provides the basis for thoughtful guidance of innovation flows and the shaping of regulatory and investment pathways that not only

support sustainable technological progress but also ensure that the global application of AI proceeds in accordance with ethical principles and the public interest.

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КАКО ОДГОВОРИТИ НА ИЗАЗОВЕ ВЕШТАЧКЕ ИНТЕЛИГЕНЦИЈЕ: УПОРЕДНА АНАЛИЗА РЕГУЛАТОРНИХ ПРИСТУПА ЕВРОПСКЕ УНИЈЕ, КИНЕ И СЈЕДИЊЕНИХ АМЕРИЧКИХ ДРЖАВА***

Резиме

Брзи развој и имплементација технологије вештачке интелигенције у различитим сферама друштвеног деловања, суочава правне системе са изазовима дефинисања заштите основних права, одговорности за штету и управљања прихватљивим нивоом ризика не би ли се стимулисале иновације. У ери дигиталне трансформације, технологија је постала нова арена у којој се одмеравају интереси великих сила и обликују контуре будуће глобалне моћи. Регулација вештачке интелигенције одражава вредносне, (гео)политичке и (гео)економске приоритете истакнутих актера у овом домену. Предмет рада је компаративна анализа регулаторних приступа Европске уније, Народне Републике Кине и Сједињених Америчких Држава. У раду је примењена квалитативна анализа садржаја релевантних стратешких и нормативних докумената, ради интерпретације основних принципа који обликују издвојене регулаторне оквире. Идентификоване су главне разлике које постоје међу њима, које упућују на унутрашње социо-економске приоритете, али и сличности које откривају глобалне амбиције. Фокус је на институционалној динамици, законодавству на снази

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и етичким смерницама у циљу превазилажења начелних поређења присутних у савременом јавном дискурсу. Потребно је критички сагледати упрошћено виђење по коме у европском приступу вештачкој интелигенцији централно место заузима заштита основних права, у америчком приступу доминира приватни сектор и тржишна динамика, уз претерану комерцијализацију, док кинески приступ карактерише снажна државна контрола и стратешко планирање уз развој контроверзних система надзора. Разматрају се последице уочених дивергентних интереса по будућност етичке примене свеприсутне вештачке интелигенције, али и могућности за евентуално помирење разлика како би дошло до хармонизације правила на међународном плану. Кроз анализу специфичности, али и противречности управљања вештачком интелигенцијом у великим јурисдикцијама, ауторке нуде заокружени суд о (не) компатибилности вредносно утемељене регулације и прагматичне потребе за досезањем технолошке супрематије. Тиме се омогућава дубље разумевање позиционирања великих сила и европских држава оличених у наднационалној Унији у глобалној технолошкој архитектури, као и доприноси расправи о савременим друштвеним изазовима које доноси наизглед незаустављиви развој напредних технологија.

Кључне речи: ЕУ, Кина, САД, вештачка интелигенција, регулаторни приступ, Европска уредба (акт) о вештачкој интелигенцији, Извршна председничка уредба о вештачкој интелигенцији, План развоја вештачке интелигенције нове генерације, технолошка трка

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