



Revista Moldovenească de Drept Internațional și Relații Internaționale /  
Moldavian Journal of International Law and International Relations /  
Молдавский журнал международного права и международных отношений

2025, Issue 1, Volume 20, Pages 72-82.

ISSN 1857-1999 EISSN 2345-1963

Submitted: 15.09.2024 | Reviewed: 12.10.2024 | Accepted: 20.12.2024 | Published: 01.01.2025

<https://doi.org/10.61753/1857-1999/2345-1963/2025.20-1.06>

**TRIBUNA TÎNĂRULUI CERCETĂTOR**  
**THE TRIBUNE OF YOUNG SCIENTISTS**  
**ТРИБУНА МОЛОДЫХ УЧЕНЫХ**

**LEGAL REGULATION OF ARTIFICIAL INTELLIGENCE  
IN INTERNATIONAL TRADE**

**REGLEMENTAREA LEGALĂ A INTELIGENȚEI ARTIFICIALE  
ÎN COMERȚUL INTERNAȚIONAL**

**ПРАВОВОЕ РЕГУЛИРОВАНИЕ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА  
В МЕЖДУНАРОДНОЙ ТОРГОВЛЕ**

PETRIC Valeria\* / PETRIC Valeria / ПЕТРИК Валерия

**ABSTRACT:**

**LEGAL REGULATION OF ARTIFICIAL INTELLIGENCE  
IN INTERNATIONAL TRADE**

*This article examines the legal regulation of artificial intelligence (AI) within the context of international trade. As AI technologies increasingly influence global commerce, the need for a cohesive legal framework becomes paramount. The paper explores existing regulatory approaches across various jurisdictions, highlighting the challenges of harmonizing standards to accommodate the rapid evolution of AI. It analyses key issues such as intellectual property rights, liability, while proposing recommendations for international cooperation and the development of comprehensive guidelines. By addressing the intersection of AI and international trade law, this article aims to contribute to the ongoing discourse on fostering innovation while ensuring legal compliance and protecting stakeholders' interests.*

**Keywords:** Artificial Intelligence, Global Trade, Data Protection, International Cooperation, Intellectual Property Rights, Regulatory Harmonisation.

**JEL Classification:** F51, Z18, K37, K23

**Universal Decimal Classification:** 323.1, 341.2, 342.7

<https://doi.org/10.61753/1857-1999/2345-1963/2025.20-1.06>

**REZUMAT:**

**REGLEMENTAREA LEGALĂ A INTELIGENȚEI ARTIFICIALE  
ÎN COMERȚUL INTERNAȚIONAL**

*Acest articol examinează reglementarea legală a inteligenței artificiale (IA) în contextul comerțului internațional. Pe măsură ce tehnologiile AI influențează din ce în ce mai mult comerțul global, necesitatea unui cadru juridic coeziv devine primordială. Lucrarea explorează abordările de*

\* **PETRIC Valeria** - Student/masterand, Universitatea de Studii Europene din Moldova, Facultatea de Drept (Chișinău, Republica Moldova). / **PETRIC Valeria** - Student/master's student, University of European Studies of Moldova, Faculty of Law (Chisinau, The Republic of Moldova). / **ПЕТРИК Валерия** - Студент/магистрант, Университет европейских исследований Молдовы, юридический факультет, MD-2069 (Кишинёв, Республика Молдова). **E-mail:** [valeriap.usem@my.com](mailto:valeriap.usem@my.com) ; <https://orcid.org/0009-0008-4319-4497>

reglementare existente în diferite jurisdicții, subliniind provocările armonizării standardelor pentru a se adapta la evoluția rapidă a IA. Acesta analizează aspecte cheie precum drepturile de proprietate intelectuală, răspunderea, propunând în același timp recomandări pentru cooperarea internațională și dezvoltarea unor orientări cuprinzătoare. Abordând intersecția dintre inteligența artificială și dreptul comercial internațional, acest articol își propune să contribuie la discursul în curs privind încurajarea inovării, asigurând în același timp conformitatea legală și protejând interesele părților interesate.

**Cuvinte cheie:** Inteligență artificială, Comerț global, Protecția datelor, Cooperare internațională, Drepturi de proprietate intelectuală, Armonizare reglementară.

**JEL Classification:** F51, Z18, K37, K23

**CZU:** 323.1, 341.2, 342.7

<https://doi.org/10.61753/1857-1999/2345-1963/2025.20-1.06>

РЕЗЮМЕ:

## ПРАВОВОЕ РЕГУЛИРОВАНИЕ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В МЕЖДУНАРОДНОЙ ТОРГОВЛЕ

В данной статье рассматривается правовое регулирование искусственного интеллекта (ИИ) в контексте международной торговли. Поскольку технологии искусственного интеллекта все больше влияют на глобальную торговлю, необходимость в единой правовой базе становится первостепенной. В документе исследуются существующие подходы к регулированию в различных юрисдикциях, подчеркиваются проблемы гармонизации стандартов для соответствия быстрому развитию искусственного интеллекта. В нем анализируются ключевые вопросы, такие как права интеллектуальной собственности, ответственность, а также предлагаются рекомендации по международному сотрудничеству и разработке всеобъемлющих руководящих принципов. Рассматривая пересечение ИИ и международного торгового права, эта статья призвана внести свой вклад в продолжающийся дискурс о содействии инновациям, обеспечивая при этом соблюдение законодательства и защиту интересов заинтересованных сторон.

**Ключевые слова:** искусственный интеллект, глобальная торговля, защита данных, международное сотрудничество, права интеллектуальной собственности, гармонизация регулирования.

**JEL Classification:** F51, Z18, K37, K23

**УДК:** 323.1, 341.2, 342.7

<https://doi.org/10.61753/1857-1999/2345-1963/2025.20-1.06>

### Introduction

#### 1. Definition of Artificial Intelligence (AI) and its role in international trade.

Artificial intelligence (AI) has become a crucial component of contemporary business practices, and its role in global trade continues to expand. From warehouse automation to intelligent market analysis, AI technologies are providing companies with a competitive advantage by enabling them to optimize processes and enhance efficiency. However, as the use of AI in trade increases, there is a growing need for legal regulation that can protect the rights of all participants in the process, from consumers to producers.<sup>1</sup>

Legal regulation of AI in international trade requires a comprehensive approach that takes into account both technical aspects and social, ethical and economic implications. In the context of globalization and rapid technological advancement, it is important to develop universal norms and standards that account for the diversity of legal systems and practices in different countries. This includes data protection, liability for actions committed by AI, and respect for consumer rights.

<sup>1</sup> Richmond et al. "Explainable AI and Law: An Evidential Survey." Digital Society Vol.3, no. 1 (2023): 123–80.

This article discusses the current trends in the use of AI in international trade, the primary legal considerations, as well as the prospects and challenges related to the legal regulation of this rapidly evolving domain.

## **2. The relevance of AI legal regulation to ensure fair and safe trading.**

Artificial intelligence is currently reshaping global trade, influencing various facets of business operations. Nowadays, organisations worldwide are implementing AI to increase efficiency, refine processes, and elevate customer experience. Logistics is among the initial sectors where AI has demonstrated its capability. AI-based systems help analyse freight data, anticipate potential delays, and optimize delivery routes.<sup>1</sup> Using algorithms to plan shipments can significantly reduce time and costs, and minimise losses by monitoring the status of goods in real time. Analysing big data is another important application area of AI. Algorithms can process vast amounts of information about sales, customer preferences, and market conditions, revealing hidden patterns and trends. This allows companies to forecast demand more accurately, which helps with effective inventory management and new product development. For example, major retailers are using AI to personalise offers and improve marketing strategies.

Process automation is also a game-changer. Virtual assistants, chatbots and robotic systems can handle customer inquiries, manage inventory and perform routine tasks, freeing up employees for more important functions. This not only improves service quality, but also reduces operational costs, which in turn increases customer satisfaction and boosts repeat purchases. Many companies are already successfully utilising AI in their business models. For example, Amazon<sup>2</sup> uses AI to manage its huge warehouse to optimise delivery processes. Similarly, Alibaba<sup>3</sup> uses AI to analyse shopping data and predict consumer preferences, which significantly improves their service quality.

Thus, the current trends in the use of AI in international trade show that technology is opening new horizons for business, allowing it to be more flexible and adaptive. However, such changes also require a sensible approach to legal regulation to ensure that the rights of all market participants are protected.

## **I. Trends in the use of AI in international trade**

### **1. Application of AI in logistics and supply chain management.**

Artificial intelligence has become extensively integrated into the fields of logistics and supply chain management. In today's globalised economy where speed and efficiency are critical, the utilisation of AI enables companies to optimise their processes and enhance their competitiveness. One of the key areas where AI is being employed is in analytics and forecasting. Advanced algorithms are capable of processing vast amounts of data, including information on weather conditions, transportation route status, inventory levels, and market demand. This allows AI-based systems to predict possible delays in deliveries, enabling companies to respond to potential problems in advance and mitigate risks. Furthermore, AI is significantly improving inventory management. Machine learning technologies can analyse historical data on sales and seasonal fluctuations, allowing companies to plan their inventory more accurately. This not only reduces storage costs but also avoids shortages or oversupply, ensuring that goods are available at the right time and place, ultimately enhancing customer service. The integration of AI with the Internet of Things (IoT)<sup>4</sup> is also opening up new opportunities in logistics. Sensors installed on vehicles and in warehouses collect real-time

---

<sup>1</sup> Wachter et al. "Why fairness cannot be automated: Bridging the gap between EU non-discrimination law and AI." *Computer Law & Security Review* Vol. 41 (2021): 01-72.

<sup>2</sup> [https://www.aboutamazon.com/?utm\\_source=gateway&utm\\_medium=footer](https://www.aboutamazon.com/?utm_source=gateway&utm_medium=footer)

<sup>3</sup> [https://activities.alibaba.com/alibaba/following-about-alibaba.php?spm=a2700.product\\_home\\_newuser.0.0.66b067affHy1Du](https://activities.alibaba.com/alibaba/following-about-alibaba.php?spm=a2700.product_home_newuser.0.0.66b067affHy1Du)

<sup>4</sup> The internet of things, or IoT, is a network of interrelated devices that connect and exchange data with other IoT devices and the cloud. IoT devices are typically embedded with technology such as sensors and software and can include mechanical and digital machines and consumer objects. Source: <https://www.techtarget.com/iotagenda/definition/Internet-of-Things-IoT>

data, allowing for better tracking of shipments and equipment status and leading to improved management and forecasting in an uncertain environment.

Another important aspect is predictive maintenance, where AI helps predict the need for vehicle and equipment maintenance. This avoids unexpected breakdowns and delays in deliveries, which is critical to maintaining stable operations. Additionally, AI-powered risk analysis provides companies with risks assessment associated with changes in the supply chain, including political instability, economic fluctuations, or natural disasters. This enables companies to develop contingency plans to minimize potential impacts and reduce vulnerability. The use of AI can also contribute to more sustainable practices in logistics. Route optimisation and inventory management can help reduce carbon footprints, which is becoming increasingly important for companies seeking to meet environmental standards and consumer expectations.

Finally, AI facilitates better collaboration between different departments within the company, such as sales, marketing and logistics. This cross-functional communication leads to the creation of more aligned and efficient business processes. As a result, the integration of AI in logistics and supply chain management not only improves operational efficiency but also helps companies adapt to rapidly changing market conditions. Businesses that incorporate AI into their logistics processes gain a significant competitive advantage, allowing them to better meet customer needs and provide high-quality service.

## **2. Using AI to analyse data and predict market trends.**

The use of artificial intelligence in analysing data and forecasting market trends is proving to be advantageous for international trade. In fast-paced markets, having accurate and up-to-date information is crucial for strategic decision-making. Modern AI-based technologies can process and analyse massive amounts of data from various sources, such as transactions, customer feedback, economic indicators, and even social media which allows companies to identify hidden patterns and trends that would be difficult to uncover using traditional data analysis methods. For instance, machine learning algorithms can analyse consumer preferences and behavioural patterns, making it possible to predict changes in demand and adapt product offerings accordingly.

Forecasting market trends using AI is also important for planning and strategic management. Algorithms can consider various factors such as seasonal fluctuations, changes in the economic situation, and political events to create more accurate predictions and to help prepare in advance for changes in demand, optimising inventory and reducing the risk of shortages or surpluses. Natural Language Processing (NLP)<sup>1</sup> technologies play an important role in analysing textual data such as customer reviews and social media posts in order to identify customer sentiment and preferences, which further enriches the understanding of market trends and enables companies to respond faster to changes in public opinion.

AI can also be useful in analysing the competitive environment. It can monitor competitors' actions, analyse their strategies and price changes, enabling companies to react swiftly to shifts in the competitive landscape and adapt their own strategies. In addition, AI's ability to process data in real-time is particularly beneficial in fast-changing industries, where customer needs can evolve rapidly. Customisation of offers and cross-selling are also becoming more effective through the use of AI. Algorithms can analyse shopping habits and suggest additional products or services, which helps increase the average transaction value and improves overall sales efficiency. Another important application of AI is the improvement of product quality. By analysing data on returns and complaints, companies can identify quality issues and make necessary changes to improve customer satisfaction and build customer loyalty. Finally, integrating AI with other technologies, such as blockchain, can provide even greater transparency and security in the data analysis process. Blockchain technology, in particular,

---

<sup>1</sup> Natural language processing (NLP) is a subfield of computer science and artificial intelligence (AI) that uses machine learning to enable computers to understand and communicate with human language. Source: <https://www.ibm.com/topics/natural-language-processing>



may be used for ensuring transparent and unchangeable record-keeping of the trade transactions, allowing the use of decentralised ledgers to record all of the information.<sup>1</sup> A shared, unchanged record increases the level of trust and transparency between the trading partners, helps meet the increased tracking level for the goods, and allows real-time verification of the goods' stages at all parts of the supply chain.<sup>2</sup> As a result, the representatives will be able to completely eliminate the dangers of counterfeiting, theft, and illicit trade, reducing the risks of administrative delays that continue to occur due to paperwork processes.<sup>3</sup>

Thus, using AI to analyse data and predict market trends not only enhances business efficiency, but also enables companies to be more proactive in a rapidly changing market environment. This opens up new avenues for innovation and growth providing means to adapt to customer needs and market demands.

### **3. The role of AI in automating processes and improving customer service.**

Artificial intelligence plays a pivotal role in streamlining business operations, significantly improving the efficiency of companies engaged in international trade. Automation can not only reduce the time and cost associated with routine tasks, but also improve customer service, ultimately contributing to customer satisfaction. One of the most notable applications of AI is the introduction of chatbots and virtual assistants that can handle customer inquiries around the clock. These systems are capable of answering frequently asked questions, assisting with ordering, and providing delivery status information. By doing so, companies can significantly alleviate the workload on their help desks, freeing up employees to handle more complex tasks. Another important area is the analysis of customer behaviour data. AI can identify buying patterns, which makes it possible to create personalised offers and recommendations. This approach not only increases customer satisfaction, but also leads to higher average check as customers receive more relevant recommendations.

AI can also automate marketing campaigns by analysing the results of previous efforts and optimising them in real-time. Algorithms can determine the most effective advertising channels and tailor messages based on the target audience resulting in a lower cost. In addition, the use of AI in customer relationship management (CRM)<sup>4</sup> processes can automate the collection and analysis of customer data. This helps companies better understand the needs and preferences of their customers, which ultimately leads to more targeted and effective sales strategies. Automation also plays a crucial role in product quality management. AI can analyse data on production processes and identify deviations from standards. Feedback from customers collected through AI helps identify weaknesses in service and drive necessary improvements. Analysing user behaviour on a website or app helps tailor the interface and user experience, which improves convenience and customer satisfaction. In addition, modern AI systems can learn from new data and changing market conditions, allowing them to adapt to new requirements and improve the efficiency of their functions.

Automating operational processes plays a pivotal role in mitigating the occurrence of human errors, particularly in domains such as financial management and inventory control. Leveraging artificial intelligence for analysing resource utilization enables organizations to streamline expenditures and enhance resource efficiency. In the context of the fiercely competitive landscape of global commerce, the significance of AI in process automation and enhancing

---

<sup>1</sup> Fornes, Gaston, and Maria Altamira. "Artificial intelligence and international business." In *Digitalization, technology and global business: How technology is shaping value creation across borders*, pp. 71-90. Cham: Springer International Publishing, 2023.

<sup>2</sup> Shrivastava, Pranjali, and Vandana Sharma. "Debunking the 5G Covid 19 Myth-A Comprehensive Review of 5G and its Implications in IoT." In 2023 4th International Conference on Intelligent Engineering and Management (ICIEM), pp. 1-6. IEEE, 2023.

<sup>3</sup> Mayo, Shaker Mahmood. "Restrictions, Challenges and Opportunities for AI and ML." *International Journal of Innovations in Science & Technology* Vol. 5, no. 2 (2023): 121-132.

<sup>4</sup> Customer relationship management (CRM) is a set of integrated, data-driven software solutions that help manage, track, and store information related to your company's current and potential customers. Source: <https://www.microsoft.com/en-us/dynamics-365/topics/crm/what-is-crm>

customer service experiences is increasingly underscored. AI technologies not only contribute to heightened productivity levels within enterprises, but also foster the cultivation of enduring and value-driven customer relationships—a determinant factor for success in contemporary markets.

## II. Legal aspects of the use of AI in international trade

### 1. General principles of legal regulation of AI.

The regulatory framework surrounding the application of artificial intelligence (AI) in the realm of international trade is emerging as a critical domain of interest, given the multifaceted implications of AI technologies on various facets such as consumer safeguards, accountability for AI-related errors, and the preservation of data protection and privacy standards. These principles form the basis for developing effective and ethical regulations that can ensure the safe use of technology.<sup>1</sup>

Central to AI legal regulation is the imperative of **consumer protection**, particularly concerning the proliferation of AI-driven decision-making processes impacting individuals. Transparency in the decision-making mechanisms of AI and the provision of mechanisms for contesting such decisions are paramount in safeguarding consumer rights. Explicit disclosure of data usage practices and options for opting out of automated decision-making processes are deemed essential elements to protect consumer interests. Addressing **liability ramifications stemming from AI errors** poses a multifaceted challenge, precipitating a nuanced examination of delineating responsibility among developers, users, and the AI systems themselves. The absence of explicit legislation in this domain underscores the exigency of formulating liability standards, notably in cases where AI malfunctions result in tangible harm or infringements on human rights. Legal frameworks should account for the unpredictability of AI-generated outcomes and devise equitable systems for liability assignment. **Data protection and privacy** is another important aspect of legal regulation. Data protection and privacy can be defined as activities related to the protection of personal data owned by individuals and the management of their rights to control the data.<sup>2</sup> In terms of AI and international trade, these activities become highly important because of the amount of data exchanged and the level of danger in regard to the data processing and transactions<sup>3</sup>. AI depends on large amounts of data to learn and function, which poses a risk of privacy breaches. Data protection laws, such as the General Data Protection Regulation (GDPR) in the European Union<sup>4</sup>, set strict requirements for collecting, processing and storing personal data. These laws ensure the rights of users to access, correct and delete their data. However, the need for big data to improve AI algorithms presents human rights advocates with a challenge: how to balance innovation and privacy protection.

The **ethical underpinnings** of AI utilization are gaining increasingly salience, mandating organizations to adhere to ethical standards encompassing algorithmic transparency and decision-making elucidation to foster trust and accountability. Additionally, ensuring **inclusivity and non-discrimination** precepts within AI frameworks poses a pivotal mandate to eliminate biases in algorithms that may disproportionately impact marginalized sectors of society. Encumbering companies with reporting obligations to signal AI interactions to users not only augments transparency but also empowers informed decision-making in user-technology interactions. **Collaborative endeavours** in international cooperation are adjudged pivotal for harmonizing regulatory paradigms concerning AI, mitigating legal lacunae and fostering a comprehensive approach to regulation. Autonomous systems such as unmanned

---

<sup>1</sup> Davis, Joshua P. "Artificial wisdom? A potential limit on AI in law (and elsewhere)." *Okla. L. Rev.* Vol. 72, no. 1 (2019): 51-89

<sup>2</sup> Hoofnagle et al. "The European Union general data protection regulation: what it is and what it means." *Information & Communications Technology Law* Vol. 28, no. 1 (2019): 65-98.

<sup>3</sup> Goldfarb, Avi, and Daniel Tremler. AI and international trade. No. w24254. National Bureau of Economic Research, 2018.

<sup>4</sup> Minssen et al. "The EU-US Privacy Shield Regime for Cross-Border Transfers of Personal Data under the GDPR: What are the legal challenges and how might these affect cloud-based technologies, big data, and AI in the medical sector?" *EPLR* Vol. 4, no. 1 (2020): 34-50.

aerial vehicles and self-driving cars necessitate specialized regulations to address unique legal and ethical ramifications, including safety protocols and liability considerations. **Intellectual property rights (IPR)** emerge as a pivotal jurisdiction necessitating scrutiny, particularly concerning the ownership claims with respect to IP generated through AI applications. The development of proprietary algorithms or software products through AI intervention necessitates robust IP protections to incentivize investments in AI research and development activities<sup>1</sup>.

Conclusively, the foundational principles underpinning the legal regulation of AI in international trade underscore the necessity for a judicious equilibrium between consumer rights preservation and the facilitation of progressive technological advancements. A comprehensive legal framework serves as an indispensable step towards fostering a secure and ethical milieu for AI integration in the realm of trade.

## 2. Comparative analysis of international norms and standards:

- a. Regulation of AI in the European Union (GDPR, AI Act).
- b. Approaches to regulation in the USA and other countries.
- c. The role of international organizations (WTO, UN) in developing recommendations.

The disparate regulatory landscape for artificial intelligence (AI) necessitates a meticulous examination of prevailing norms and standards across regions and countries, encompassing both regulatory frameworks and initiatives spearheaded by international organizations to furnish regulatory guidance.

Regulation of AI in the **European Union (EU)** has epitomized a progressive approach. Notably, the EU's enactment of the General Data Protection Regulation (GDPR) in 2018, which engenders stringent regulations governing personal data processing, stands as a pinnacle. GDPR mandates transparency, user consent, and consumer protection measures pertaining to data processing. Moreover, the proposed AI Act purported by the European Commission in 2021 represents a salient initiative, aiming to establish a legal groundwork for the ethical and secure deployment of AI within the EU. Categorizing AI systems by risk tiers and prescribing developmental and operational mandates, the AI Act ensconces rigorous controls and mandatory evaluations for high-risk AI applications, such as those utilized in healthcare and law enforcement. In contrast, the regulatory paradigms in the **United States** and other countries deviate, lacking a unified national AI legislation but instead featuring regulations manifested at the state level and reliant on existing statutes like the Data Protection Act. The US administration's delineation of principles for responsible AI usage in 2020 underscores the emphasis on inclusivity and safeguarding citizen rights. Notably, individual states such as California are espousing their own data protection statutes, potentially surpassing federal regulations. Parallely, countries like China integrate AI regulation within broader initiatives concerning the digital economy, endeavouring to strike a balance between innovation and governmental oversight. **International organizations**, including the World Trade Organization (WTO) and the United Nations (UN), play pivotal roles in promulgating recommendations and standards for AI regulation. The WTO scrutinizes the impact of AI on international trade, endeavouring to sculpt strategies to adapt extant rules in consonance with the evolving digital milieu.<sup>2</sup> The UN actively espouses the formulation of ethical norms and principles to underpin the safe and equitable utilization of AI technologies, encompassing recommendations concerning human rights vis-à-vis digital technologies. As a notable exemplar, Asif Khan's doctoral dissertation titled "Rules on Digital Trade in the Light of WTO Agreements" reflects a scholarly exploration of the burgeoning intersection between digital trade and WTO conventions.

Conclusively, the multifaceted regulatory framework governing AI underscores the dynamic interplay between regional and international guidelines, necessitating a nuanced approach that

---

<sup>1</sup> Brander, James A., Victor Cui, and Ilan Vertinsky. "China and intellectual property rights: A challenge to the rule of law." *Journal of International Business Studies* Vol. 48 (2017): 908-921.

<sup>2</sup> Khan, Asif. "Rules on Digital Trade in the Light of WTO Agreements." PhD Law Dissertation, School of Law, Zhengzhou University China, 2023.

amalgamates varying legislative precepts, while harmonizing divergent regional imperatives to foster a comprehensive and cohesive regulatory ethos.

### **III. Prospects and challenges of legal regulation of AI**

#### **1. Challenges in adapting existing laws to rapidly evolving technologies.**

The challenges associated with effectively regulating artificial intelligence (AI) are complex and multifaceted, largely stemming from the intricacies of aligning existing laws with the rapid advancements and unique characteristics of AI technologies. The high autonomy and self-learning capabilities inherent in AI pose novel legal and ethical dilemmas, as traditional legal frameworks may struggle to account for the unpredictable nature of AI decision-making and the dynamic evolution of these technologies. One of the key challenges is the unpredictability of the technology. AI systems can make data-driven decisions, making their behaviour difficult to predict. Traditional legal systems, based on clear rules and regulations, have difficulty interpreting results from AI. For example, machine learning algorithms may show different results depending on the input data, which creates legal uncertainty regarding responsibility for the consequences of their decisions.

The unpredictability of AI systems, driven by their data-driven decision-making processes, presents a significant hurdle in legal interpretation, particularly in assigning responsibility for AI-generated outcomes. The variability in results produced by machine learning algorithms due to different input data sources further compounds legal uncertainty, accentuating the challenge of attributing accountability for AI actions. Furthermore, the lag in updating existing laws to keep pace with technological progress necessitates legislative agility and adaptability to effectively address emergent AI challenges. The reliance on temporary measures or exemptions to bridge regulatory gaps can introduce inconsistencies and complexities, impeding comprehension by businesses and consumers. A critical obstacle lies in the requisite technical expertise among lawmakers to grasp AI intricacies, a skill set that may not always be readily available, hindering the formulation of robust and pragmatic regulations. Enhancing stakeholder engagement involving researchers, developers, and consumers is imperative to foster a balanced and efficacious regulatory environment. Embracing technology-neutral norms that transcend specific technologies enables the establishment of enduring regulations amidst rapid AI evolution. Similarly, the development of standards for testing and validating AI systems can mitigate errors and enhance accountability before widespread deployment.

The global dimension of AI regulation introduces further intricacies, with divergent approaches across countries posing challenges for international businesses operating in varying regulatory contexts. Disparities in regulatory stringency among jurisdictions can engender compliance complexities, elevating risks and operational costs for multinational enterprises. Monitoring and feedback mechanisms to assess the societal impact of AI implementations are integral for identifying and addressing regulatory shortcomings. Recognizing overarching digital law trends, such as cybersecurity and privacy imperatives, can inform the crafting of more effective legal frameworks that align with contemporary technological landscapes. Ethical and social considerations pertaining to AI deployment, encompassing concerns of discrimination, privacy infringement, and human rights violations, necessitate deliberate integration into regulatory frameworks. However, accommodating these nuanced ethical dimensions within legal norms is a complex endeavour, given the diverse cultural and societal contexts in which AI operates. Establishing specialized committees or leveraging expert insights to analyse and propose legislative adjustments in response to technological advancements can foster nuanced and ethically robust regulatory frameworks.

In conclusion, the holistic regulation of evolving AI technologies demands a comprehensive strategy encompassing technical expertise, ethical scrutiny, receptivity to novel knowledge, and international cooperation to foster an adaptive and effective legal landscape conducive to the responsible deployment of AI innovations.



## 2. The need for international co-operation to develop universal norms. Examples of successful initiatives.

The spread of globalization and the emergence of AI technologies are the impulses for worldwide initiatives concerning the development of such norms. Every country has a different opinion about AI legislation which means they may be the reasons why the legal field is split and we have unfair competition should some countries act across borders. International cooperation is a facility for the countries involved in the exchange of knowledge, skills, and best practices in the field of AI regulations along with the sharing of technologies. It favours the establishing of uniform rules which are considered applicable in different jurisdictions. This is a requirement not just only to ensure that the technology is safe and ethical, but also to provide a certain degree of certainty for the businesses that operate all around the globe.

Overcoming the multiple issues of artificial intelligence (AI) which were raised, quite a few successful programs can be pointed to that demonstrate the legal norms such as how the states and international organisations are collaborating and developing. Here, it can lie in the further development of the regulation of AI and the first steps which the new initiatives can take. Probably, the most vivid illustration is the European Union and its initiative AI Regulation (also known as AI Act) introduced in 2021. It is crafted to define aloud regulations, boundaries, and requirements for AI utilisation in different areas of economic activity. The regulation covers the danger of AI and subsequently classifying systems according to the severity of their potential threat to social welfare. The implementation of this directive is a great example of how laws could be personalised to the technology taken into account if sectorial needs, protection of consumers came to the fore, and safety was ensured.

The OECD's AI guidelines that were developed in 2019 are another example. The guiding principles of the OECD on the use of AI aim at making certain no harm occurs through the responsible and ethical use of AI. Besides, the recommendations are given in the succession of transparency, inclusiveness, and safety of technology. A pivotal role in national strategies and the implementation of policies has been given to them by bringing out the harmonisation of different countries' AI regulations towards the general goal. Moreover, some other organisations like the World Intellectual Property Organisation (WIPO) have been taking a try-and-piece approach to the production of guidelines that protect intellectual property in the AI environment, creating a common understanding of the rights of developers and users of technology.

An important aspect of successful initiatives is the work of the International Organisation for Standardisation (ISO)<sup>1</sup> to develop standards for AI. These standards can provide a unified framework for the application of technology across sectors, enhancing its safety and security. In addition, the training of AI and legal professionals is a key element in creating a sustainable legal framework. Educating future professionals will ensure that regulations are effectively enforced and can respond quickly to changes in technology. An equally important step is public consultation in the development of norms, which will allow the views of different stakeholders to be taken into account and increase confidence in the regulation. Resilience to change should also be a priority in creating regulations that can adapt to future challenges. Integrating AI into existing sectoral norms in areas such as healthcare, transport and finance will create a more harmonised legal environment. In addition, the impact of new regulations on SMEs should be considered to avoid over-regulation that could hamper their operations. All these initiatives and approaches demonstrate that successful AI regulation requires active cooperation between states, international organisations and the private sector. The role of the private sector in the norms development process should not be underestimated. The involvement of companies and research organisations can lead to more practical and effective solutions based on real-world experience with technology. It is important that these norms respect ethical standards and human rights to help create a more equitable and sustainable legal framework.

---

<sup>1</sup> Rittberger, Volker, Bernhard Zangl, Andreas Kruck, and Hylke Dijkstra. International organization. Bloomsbury Publishing, 2019.

Supporting developing countries in creating legal norms for AI is also an important aspect so that they can effectively participate in global regulation and not be left behind. Developing mechanisms to assess the societal impact of AI that can be applied internationally will help to better monitor and respond to potential problems. The need for norms to be flexible so that they can adapt to rapidly changing technologies also requires attention, given the specificities of different countries. International co-operation in developing universal norms to regulate AI is therefore a necessary step to create a safe and ethical environment for the use of the technology. It will create a more sustainable legal framework for business, enhance consumer protection and harmonise regulatory approaches globally. Thus, the successful initiatives already implemented at the international level provide clear examples of how to meet the challenges posed by AI. These examples show that effective legal regulation is possible with the active co-operation of all stakeholders.

### **Conclusion**

The legal regulation of artificial intelligence (AI) in international trade is a complex but crucial challenge that requires a comprehensive approach and international co-operation. In the course of our research, we have looked at current trends in the use of AI, including its application in logistics, data analysis and process automation. These technologies are opening up new horizons for business, but their implementation also raises a number of legal and ethical issues that require careful consideration.

Analyses of the legal aspects of AI use have shown that existing laws often fail to keep pace with rapidly evolving technologies. Key regulatory principles such as consumer protection, liability for AI errors and data protection need to be reviewed and adapted. A comparative analysis of international regulations, including initiatives from the European Union and approaches from countries such as the US, highlights the need to create universal standards that can harmonise the legal landscape.

Examples of successful initiatives, such as the AI Regulation and the OECD principles, show that international co-operation is already beginning to bear fruit. However, further progress requires further work on adapting regulations to a rapidly changing environment, taking into account the specificities of SMEs, and providing education and training for professionals. Thus, effective legal regulation of AI in international trade is impossible without the active co-operation of all stakeholders. Only through joint efforts can a sustainable and ethical legal framework be created that will facilitate the safe and innovative use of technology. The prospects before us require a willingness to cooperate, adapt and continuously learn in order to maximise the potential of AI and overcome the challenges it poses to society.

### **References:**

1. Brander, James A., Victor Cui, and Ilan Vertinsky. "China and intellectual property rights: A challenge to the rule of law." *Journal of International Business Studies* Vol. 48 (2017).
2. Davis, Joshua P. "Artificial wisdom? A potential limit on AI in law (and elsewhere)." *Okla. L. Rev.* Vol. 72, no. 1 (2019).
3. Fornes, Gaston, and Maria Altamira. "Artificial intelligence and international business." In *Digitalization, technology and global business: How technology is shaping value creation across borders*, pp. 71-90. Cham: Springer International Publishing, 2023.
4. Goldfarb, Avi, and Daniel Treffer. AI and international trade. No. w24254. National Bureau of Economic Research, 2018.
5. Hoofnagle et al. "The European Union general data protection regulation: what it is and what it means." *Information & Communications Technology Law* Vol. 28, no. 1 (2019).
6. Khan, Asif. "Rules on Digital Trade in the Light of WTO Agreements." PhD Law Dissertation, School of Law, Zhengzhou University China, 2023.
7. Mayo, Shaker Mahmood. "Restrictions, Challenges and Opportunities for AI and ML." *International Journal of Innovations in Science & Technology* Vol. 5, no. 2 (2023).

8. Minssen et al. "The EU-US Privacy Shield Regime for Cross-Border Transfers of Personal Data under the GDPR: What are the legal challenges and how might these affect cloud-based technologies, big data, and AI in the medical sector?" *EPLR* Vol. 4, no. 1 (2020).

9. Richmond et al. "Explainable AI and Law: An Evidential Survey." *Digital Society* Vol.3, no. 1 (2023).

10. Rittberger, Volker, Bernhard Zangl, Andreas Kruck, and Hylke Dijkstra. *International organization*. Bloomsbury Publishing, 2019.

11. Shrivastava, Pranjal, and Vandana Sharma. "Debunking the 5G Covid 19 Myth-A Comprehensive Review of 5G and its Implications in IoT." In *2023 4th International Conference on Intelligent Engineering and Management (ICIEM)*, pp. 1-6. IEEE, 2023.

12. Wachter et al. "Why fairness cannot be automated: Bridging the gap between EU non-discrimination law and AI." *Computer Law & Security Review* Vol. 41 (2021).

#### **Internet resources**

13. [https://www.aboutamazon.com/?utm\\_source=gateway&utm\\_medium=footer](https://www.aboutamazon.com/?utm_source=gateway&utm_medium=footer)

14. [https://activities.alibaba.com/alibaba/following-about-alibaba.php?spm=a2700.product\\_home\\_newuser.0.0.66b067affHy1Du](https://activities.alibaba.com/alibaba/following-about-alibaba.php?spm=a2700.product_home_newuser.0.0.66b067affHy1Du)

15. <https://www.techtarget.com/iotagenda/definition/Internet-of-Things-IoT>

16. <https://www.ibm.com/topics/natural-language-processing>

17. <https://www.microsoft.com/en-us/dynamics-365/topics/crm/what-is-crm>

**Copyright©PETRIC Valeria, 2025.**

#### **Contact/Contacte/Контакты:**

##### **PETRIC Valeria**

Student/master's student,

University of European Studies of Moldova,

Faculty of Law,

MD-2069, The Republic of Moldova, Chisinau, of. 305,

2/1 Ghenadie Iablocikin str.

<https://orcid.org/0009-0008-4319-4497>

E-mail: [valeriap.usem@my.com](mailto:valeriap.usem@my.com)

<https://doi.org/10.61753/1857-1999/2345-1963/2025.20-1.06>