

UDK: 339 : 004.8 (437.6 + 4-6 EU)

Review paper

Jana Pezlar Selecká, PhD student

Faculty of Law, Pavol Jozef Šafárik University in Košice, Slovakia

E-mail: jana.selecka@student.upjs.sk

ORCID ID: 0000-0002-8244-9594

Regina Hučková, Assistant Professor

Faculty of Law, Pavol Jozef Šafárik University in Košice, Slovakia

E-mail: regina.huckova@upjs.sk

LIABILITY FOR DAMAGE CAUSED BY ARTIFICIAL INTELLIGENCE IN COMMERCIAL RELATIONSHIPS*

ABSTRACT

This paper examines the legal framework for liability arising from artificial intelligence (AI) systems in commercial relationships within the Slovak Republic and the European Union. It analyzes the adequacy of current regulations in addressing the unique challenges posed by AI implementation in business contexts. The study employs a comparative legal analysis method to evaluate the objective liability approach in the Slovak Commercial Code against the proposed EU Directive on AI Liability, which introduces a rebuttable presumption of causality. Through critical assessment, the paper identifies potential legislative gaps and their implications for legal certainty and stakeholder protection. The research contributes to the ongoing discourse on AI-related legal challenges by proposing solutions to address these gaps, including the creation of specific AI liability provisions within the Commercial Code. These recommendations aim to balance legal certainty and protection for injured parties with support for AI innovation, providing a foundation for future legislative developments in this rapidly evolving field.

Keywords: *Artificial intelligence, liability, commercial law, EU Directive, legal framework*

1. INTRODUCTION

Artificial Intelligence (AI) is increasingly becoming an inseparable part of business operations. Its widespread adoption not only simplifies our lives but also brings significant benefits in terms of innovation and enhanced work efficiency. However, it also raises ethical and legal concerns, particularly regarding liability for damages caused by AI. Current Commercial law frameworks face new

challenges in relation to AI systems, which hold a certain degree of autonomy and the ability to learn independently. This paper examines the current legal framework in the field of AI liability in commercial relationships. The paper investigates how current legal frameworks in the Slovak Republic and the European Union address AI liability in commercial relationships. Additionally, evaluates whether these existing legal frameworks are sufficient to handle the unique challenges in connection with damages caused by AI systems. The research considers the complexities of AI systems, such as their autonomy and self-learning capabilities, which can complicate traditional notions of liability. By comparing Slovak and EU approaches, the study aims to identify potential gaps in legal protection and propose solutions for a more comprehensive framework governing AI liability in Commercial law.

The main objective of this paper is to critically evaluate the adequacy of the current legal framework for liability in the Slovak Republic and the European Union concerning damages caused by AI systems in commercial relations. Based on this objective, we have formulated the following hypothesis: The current legal framework for liability in the Slovak Republic and the European Union lacks sufficient flexibility and specificity to effectively cover all aspects of liability for damages caused by AI systems in commercial relationships, potentially leading to legal uncertainty and gaps in the protection of injured parties.

This paper employs a qualitative research approach, primarily utilizing doctrinal legal analysis and comparative legal methods. The methodology includes a comprehensive literature review of academic sources, legal texts, and policy documents related to AI liability in commercial relationships. An in-depth legislative analysis focuses on current legal frameworks in the Slovak Republic and the European Union, with particular attention to the Commercial Code and the proposed AI Liability Directive. The study conducts a comparative analysis between Slovak and EU approaches to AI liability, identifying similarities, differences, and potential gaps in legal frameworks. A critical evaluation assesses the adequacy and effectiveness of existing and proposed legal mechanisms in addressing AI liability issues in Commercial law. Finally, the paper synthesizes findings to formulate conclusions and recommendations for potential legislative amendments.

2. WHAT IS THE LEGAL STATUS OF ARTIFICIAL INTELLIGENCE IN COMMERCIAL RELATIONSHIPS?

Despite the term AI having been in use for approximately 70 years, a unified scientific definition has yet to be established. With the adoption of the Artificial Intelligence Act, EU policymakers have formulated a legislative definition for the concept of an AI system. This represents the first statutory definition of the term, which is defined in Article 3(1) of the Artificial Intelligence Act (hereinafter: AI Act) as follows: AI system means a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments.¹

For the purpose of defining the legal status of AI, it is crucial to focus on the fact that according to the cited regulation, an AI system is software, which currently excludes the issue of AI's legal personhood. We perceive AI more as an object that can be the subject of commercial relationships. We can state that currently, AI is not granted legal personhood under current legislation. AI is not considered a natural or legal person, and therefore cannot independently participate in legal relationships, be a party to a contractual relationship, sign contracts, or bear responsibility. We are of the opinion that granting legal personhood to AI could lead to a situation where people who develop or use AI might avoid their own liability for potential damages caused by AI.

AI systems can be utilized not only internally within companies but also as the subject of contractual agreements with external parties. Currently, numerous AI-based products and services are offered to consumers, including autonomous vehicles, translation applications, and monitoring devices. This expanding market demonstrates the growing integration of AI technologies across various sectors, highlighting the need for clear legal frameworks to govern these commercial relationships and ensure consumer protection.²

* The paper was prepared within the project APVV-21-0336 "*Analysis of judicial decisions using artificial intelligence methods*".

¹ Article 3 of Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act), OJ L, 2024/1689, 12.7.2024, hereinafter: AI Act.

² Ebers, M., *Liability for artificial intelligence and EU consumer law*, 12 [2021] JIPITEC 204 para 1. p. 207, available at: [https://heinonline.org/HOL/LandingPage?handle=hein.journals/jipitec12&div=22&id=&p age=](https://heinonline.org/HOL/LandingPage?handle=hein.journals/jipitec12&div=22&id=&p age=,), January 4, 2025.

Considering this development, several questions and issues arise. One of the key concerns is determining the conditions under which a commercial enterprise can be held liable to consumers for damages caused by AI-based products or services. In connection with this issue, the following section will examine the current legal framework governing AI liability in more detail.

3. NAVIGATING THE LEGAL LABYRINTH

In the following section of our paper, we will examine the current legal framework governing this issue in more detail. This analysis will consider the unique challenges posed by AI systems, including their autonomous decision-making capabilities and the potential for unforeseen consequences, in order to establish a comprehensive understanding of the existing liability legal frameworks in this rapidly evolving field.

3.1 Current Framework for AI Liability In Slovak Republic

AI has become an integral component of modern business practices, enabling unprecedented levels of efficiency and innovation. From generative AI tools crafting marketing materials to sophisticated machine learning algorithms optimizing supply chains, companies increasingly leverage AI to gain a competitive edge. This technological revolution spans across various sectors, transforming traditional business models and creating new opportunities for growth and development.³ However, the widespread adoption of AI in commercial settings also brings significant responsibilities, particularly in the realm of business law relationships. As AI systems become more autonomous and influential in decision-making processes, questions of liability, ethical considerations, and legal compliance come to the forefront. The complexity and opacity of AI systems often termed the "black box effect"⁴ create challenges in attributing fault, as their decision-making processes may deviate from original

³ Goldenberg, D., *AI Terms in Commercial Agreements: Safeguarding Your Business in the Era of Artificial Intelligence*, VLP Law Group, 2 December 2024, available at: <https://www.vlplawgroup.com/blog/2024/12/02/ai-terms-in-commercial-agreements-safeguarding-your-business-in-the-era-of-artificial-intelligence-a-blog-post-by-david-goldenberg/>, January 4, 2025.

⁴ Cassauwers, T., *Opening the 'black box' of artificial intelligence*, European Commission, available from: <https://projects.research-and-innovation.ec.europa.eu/en/horizon-magazine/opening-black-box-artificial-intelligence>, February 22, 2025.

programming.⁵ Businesses must navigate these complex issues to harness the full potential of AI while mitigating associated risks and ensuring adherence to evolving regulatory frameworks.

AI is an exceptional tool, but it is not flawless. From a legislative perspective, we recognize that one of the most significant challenges in the field of AI is determining liability for damage caused by AI systems. The legal framework for liability for damages under the Commercial Code⁶ provides us with clear rules. According to Paragraph 757 of the Commercial Code (CC), the provisions of Paragraph 373 et seq. of the CC apply similarly to liability for damage caused by breach of an obligation stipulated by the CC. The Commercial Code contains general legal provisions on liability for damage arising from breach of obligations in commercial contractual relationships, i.e., contractual liability, in Paragraphs 373 to 386. This regulation is conceived as objective liability, which is moderated by exculpatory reasons specified in Paragraph 374 of the CC. While the Slovak strict liability regime offers advantages for claimants, it lacks provisions addressing AI-specific challenges such as emergent behaviour or distributed responsibility across developers, users, and operators. In special cases of contractual liability for damage, the law provides for deviations from this general regulation, allowing flexibility in application to various types of commercial relationships and situations.⁷

Nevertheless, in cases of damages caused by AI systems, it is not always clear how these rules can be applied given the complexity of AI systems themselves, their autonomy, self-learning capabilities, as well as the number of individuals and companies involved in the development and operation of AI systems.⁸ For example, an AI-powered trading algorithm might make unconventional investment decisions that result in significant financial losses. Such scenarios exemplify the "emergent behaviour" of AI systems, where outcomes deviate unpredictably from initial programming, complicating causal attribution⁹. Determining whether the AI developer, the company using the AI, or the AI itself should be held liable becomes a complex issue.¹⁰

⁵ Garcia, B., *The regulation of AI liability in Europe: A critical overview of two recent directive proposals – the (new) AILD and the (revised) PLD*, e-Publica, 11(3), 2024, p. 30.

⁶ Act No. 513/1991 Coll. Commercial Code.

⁷ Ovečková, O., *Tort liability for damage in the Commercial Code (§ 757 - unresolved problems)*, Legal Horizon, 103, 2020, No. 6, p. 421.

⁸ Burylo, Y., *Civil liability for damage caused by artificial intelligence: the modern European approach*. Entrepreneurship, Economy and Law, 6, 2022, p. 6, available at: <http://pgp-journal.kiev.ua/archive/2022/6/1.pdf>, January 25, 2025.

⁹ Garcia, B., op. cit., p. 28 – 41.

¹⁰ Dou, W. W.; Goldstein, I.; Ji, Y., *AI-Powered Trading, Algorithmic Collusion, and Price Efficiency*, November 9, 2023, available from:

3.2 Current Framework for AI Liability In European Union

While the AI Act establishes risk classification and operational requirements for AI systems, it does not directly regulate liability for AI-induced damages. The EU addresses this gap through the proposed AI Liability Directive,¹¹ which represents the first comprehensive attempt to regulate non-contractual civil liability specifically for AI.¹²

We have identified several key areas in the proposal AILD relating to AI liability, which we see as crucial, and these are in particular Articles 3 and 4. The Article 3 of the AILD addresses the disclosure of evidence and introduces a rebuttable presumption of non-compliance. National courts are empowered to order the disclosure of relevant evidence about specific high-risk AI systems suspected of causing damage. This can be requested by a potential claimant who has previously been refused such evidence, or by a claimant in an ongoing case. The request must be supported by facts and evidence demonstrating the plausibility of the claim for damages. The disclosure is limited to necessary and proportionate evidence to prevent blanket requests, and safeguards are included to protect legitimate interests such as trade secrets and confidential information. A rebuttable presumption of non-compliance with a duty of care is introduced for defendants who fail to disclose or preserve evidence when ordered.¹³ We can say that this article aims to balance the need for claimants to access relevant information with the protection of defendants' interests and the efficiency of court proceedings.

Article 4 of the AILD introduces a rebuttable presumption of a causal link in cases of fault involving AI systems. This presumption applies when specific conditions are met, including the demonstration of the defendant's fault, the reasonable likelihood that the fault influenced the AI system's output, and proof that the AI system's output caused the damage. For high-risk AI systems, providers must comply with specific requirements related to data quality, transparency, human oversight, accuracy, robustness, and cybersecurity. Users of high-risk AI systems must adhere to proper usage instructions and monitoring. The presumption doesn't apply if the defendant can show that evidence is reasonably accessible to the claimant to prove causality. For non-high-risk AI systems, the presumption only

https://www.law.nyu.edu/sites/default/files/DGJ_AI_Trading_Collusion_Market%20Manipulation_Penn_NYU_Law.pdf, February 11, 2025.

¹¹ Directive on liability for damage caused by artificial intelligence, available from: <https://www.ai-liability-directive.com/>, January 5, 2025 (hereinafter: AILD).

¹² Garcia, B., *op. cit.*, p. 30.

¹³ Proposal for a Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence. COM (2022) 496 final, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52022PC0496>.

applies if the court deems it excessively difficult for the claimant to prove causality. In cases of personal, non-professional use, the presumption applies only if the user materially interfered with or failed to determine the AI system's operating conditions. The defendant retains the right to rebut this presumption.¹⁴ This article aims to balance the interests of claimants and defendants by easing the burden of proof for claimants while allowing defendants to challenge the presumption, thus addressing the unique challenges posed by AI systems in liability cases.

To sum up, AILD represents a significant step in European legislation, addressing the challenges of liability in AI-related damages. It introduces two key innovations: the disclosure of evidence and a rebuttable presumption of causality. In the context of AI liability issues, it is also worth mentioning the Revised Product Liability Directive¹⁵ (hereinafter: PLD) that substantially modifies the current product liability regime by including software within its scope, integrating new circumstances to assess the product's defectiveness and introducing provisions regarding presumptions of defectiveness and causation.¹⁶

The revised PLD maintains strict liability without proof of fault and expands its scope to include electricity, digital manufacturing files, and software. It defines "damage" as material loss resulting from death, personal injury, property damage, and non-professional data loss or corruption. The proposal introduces new criteria for product defectiveness, including cybersecurity requirements, and broadens the list of potentially liable economic operators. Articles 8 and 9 address disclosure of evidence and burden of proof, aligning closely with the proposed AILD. The revised PLD empowers national courts to order defendants to disclose relevant evidence upon request from claimants presenting plausible compensation claims. Regarding burden of proof, claimants must demonstrate product defectiveness, damage suffered, and the causal link between them, with certain presumptions introduced to aid claimants facing excessive difficulties due to technical or scientific complexity. The European Commission justifies not inverting the burden of proof to balance innovation incentives with consumer protection, aiming for a fairer distribution of the burden between parties.¹⁷

¹⁴ Ibid.

¹⁵ Proposal for a Directive of the European Parliament and of the Council on liability for defective products, COM (2022) 495 final, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52022PC0495>.

¹⁶ De Bruyne, J.; Ooms, W., *Tort Liability and Artificial Intelligence: Some Challenges and (Regulatory) Responses*. In: Smuha, N. A., ed. *The Cambridge Handbook of the Law, Ethics and Policy of Artificial Intelligence*. Cambridge: Cambridge University Press, 2025. p. 162.

¹⁷ Garcia, B., *op. cit.*, p. 32-33.

3.3. Summary

The current strict liability approach in the Slovak Commercial Code, where fault is not a requirement for establishing liability, could be seen as more advantageous for claimants compared to the fault-based system outlined in the AILD. However, the AILD introduces a potentially beneficial element for claimants: a rebuttable presumption of non-compliance. This specific presumption is not addressed in the Slovak Commercial Code. Given the AILD's minimum harmonization approach, Slovakia has the option to maintain its existing strict liability framework while also incorporating aspects of the AILD, potentially creating an even more favourable system for injured parties.

4. PROPOSALS TO ADDRESS THE LEGAL GAP

The current state of legal framework in the Slovak Republic does not provide a specific scope for AI liability. There is no particular provision for liability for damage caused by AI within the specific cases of liability for damage regulated in the Commercial Code or even Civil Code. This gap in the legislation creates legal uncertainty and potential problems in determining liability in cases where an AI system causes damage.

The question is whether to fill the specified gap in the issue of AI liability by amending the Civil Code or the Commercial Code. There is a fundamental difference between them in the Slovak legal order, since the Civil Code introduces subjective liability for damage and the Commercial Code introduces objective liability, which, in our opinion, is more advantageous for the injured party. Moreover, AI systems are predominantly deployed in commercial relationships, making the Commercial Code a more appropriate venue for AI liability provisions. Such an approach addresses the unique challenges of AI in B2B and B2C relationships. Additionally, provide businesses with single, comprehensive source for understanding their AI liabilities in commercial relationships. We maintain that addressing AI liability within the Commercial Code offers a more targeted, effective, and commercially relevant approach to managing the unique challenges posed by AI systems in commercial relationships. We believe that this approach would provide stronger protection for injured parties while offering clearer guidance for businesses developing and deploying AI technologies.

As we identified in the previous chapter, the proposed AILD introduces several key changes in this area. Once the Directive is adopted, it will be necessary to implement these rules into Slovak law. As one of the options, we propose the creation of a specific provision on liability for AI within the Commercial Code, in

particular because of the more favourable legal treatment for the weaker party, namely the damaged party, most often the consumer. For example, we have introduced a new provision within the section on liability for damages, which would specifically address liability for damage caused by AI systems in commercial relationships.

This modification might include:

- i. Clearly define responsible entities in the AI value chain.
- ii. Incorporate the AILD's rebuttable presumption of causality for high-risk AI systems.
- iii. Establish rules for evidence disclosure in AI-related damage cases.
- iv. Introduce a mechanism for periodic legislative review to keep pace with technological advancements.

We believe that such a provision might provide stronger legal security and at the same time ensure effective protection for damaged parties. However, it is important to strike a balance between protecting users and enhancing innovation in AI. Precisely in view of the rapid evolution of AI technologies, it seems to us that it could be beneficial to introduce a provision for periodic review and updating of this legislation.

In our opinion, the proposed amendment could contribute to the creation of a comprehensive and effective legal framework for dealing with liability for damage caused by AI in commercial relationships, while considering the particularities of the Slovak legal system and ensuring compliance with European legislation at the same time.

5. CONCLUSION

Our research confirms that current legal frameworks in Slovakia and the EU are inadequately equipped to address the complexities of AI-induced damages in commercial relationships. The Slovak Commercial Code's strict liability regime, while advantageous for claimants, lacks the nuance required to handle AI's unique characteristics such as emergent behaviour and distributed responsibility. Conversely, the EU's proposed AILD introduces innovative concepts like rebuttable presumptions of causality, but its fault-based approach may create procedural hurdles for injured parties. Our analysis supported the hypothesis that existing regulations lack the flexibility and specificity needed to effectively govern AI liability, potentially leading to legal uncertainties and gaps in stakeholder protection. To address these shortcomings, we have proposed amending the Slovak Commercial Code to include AI-specific liability provisions. By integrating proposed elements, Slovakia could create a hybrid model that balances

its existing strict liability framework with the EU's innovation-friendly approach. This would provide stronger legal certainty for businesses while ensuring effective protection for damaged parties. The rapid evolution of AI technologies necessitates ongoing dialogue between legislators, technologists, and legal scholars. Future research should explore sector-specific liability models and assess the long-term impacts of these proposed reforms on judicial efficiency and AI innovation. In conclusion, while current frameworks fall short, the proposed amendments offer a path toward a comprehensive and adaptable legal regime for AI liability in commercial relationships. By prioritizing both innovation and accountability, these reforms can foster a business environment where AI's potential is realized without compromising legal protections for all stakeholders.

REFERENCES

BOOKS AND ARTICLES

1. De Bruyne, J.; Ooms, W., *Tort Liability and Artificial Intelligence: Some Challenges and (Regulatory) Responses*. In: Smuha, N. A., ed. *The Cambridge Handbook of the Law, Ethics and Policy of Artificial Intelligence*. Cambridge: Cambridge University Press, 2025. p. 158-173.
2. Garcia, B., *The regulation of AI liability in Europe: A critical overview of two recent directive proposals – the (new) AILD and the (revised) PLD*, e-Publica, 11(3), 2024, p. 30.
3. Ovečková, O., *Tort liability for damage in the Commercial Code (§ 757 - unresolved problems)*, Legal Horizon, 103, 2020, No. 6, p. 419-439

LEGAL ACTS

1. Act No. 513/1991 Coll. Commercial Code
2. Proposal for a Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence. COM(2022) 496 final, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52022PC0496>.
3. Proposal for a Directive of the European Parliament and of the Council on liability for defective products, COM(2022) 495 final, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52022PC0495>.
4. Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial

intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act), OJ L, 2024/1689, 12.7.2024.

NETWORK RESOURCES

1. Burylo, Y., *Civil liability for damage caused by artificial intelligence: the modern European approach*. Entrepreneurship, Economy and Law, 6, 2022, p. 6, available at: <http://pgp-journal.kiev.ua/archive/2022/6/1.pdf>, January 25, 2025.
2. Cassauwers, T., *Opening the 'black box' of artificial intelligence*, European Commission, available from: <https://projects.research-and-innovation.ec.europa.eu/en/horizon-magazine/opening-black-box-artificial-intelligence>, February 22, 2025.
3. Directive on liability for damage caused by artificial intelligence, available from: <https://www.ai-liability-directive.com/>, January 5, 2025.
4. Dou, W. W.; Goldstein, I.; Ji, Y., *AI-Powered Trading, Algorithmic Collusion, and Price Efficiency*, November 9, 2023, available from: https://www.law.nyu.edu/sites/default/files/DGJ_AI_Trading_Collusion_Market%20Manipulation_Penn_NYU_Law.pdf, February 11, 2025.
5. Ebers, M., *Liability for artificial intelligence and EU consumer law*, 12 [2021] JIPITEC 204 para 1. p. 207, available at: <https://heinonline.org/HOL/LandingPage?handle=hein.journals/jipitec12&div=22&id=&page=>, January 4, 2025.
6. Goldenberg, D., *AI Terms in Commercial Agreements: Safeguarding Your Business in the Era of Artificial Intelligence*, VLP Law Group, 2 December 2024, available at: <https://www.vlplawgroup.com/blog/2024/12/02/ai-terms-in-commercial-agreements-safeguarding-your-business-in-the-era-of-artificial-intelligence-a-blog-post-by-david-goldenberg/>, January 4, 2025.