The Artificial Intelligence Act Between the EU and National Levels: The Slovenian Case Study

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UDK: 347.121:004.8(497.4)
34:004.8(497.4)
341.176:004.8(4)EU
https://doi.org/10.31297/hkju.25.3.6
Original paper / izvorni znanstveni rad
Received / primljeno: 19. 5. 2025.
Accepted / prihvaćeno: 17. 9. 2025.

The Artificial Intelligence Act (AIA) represents a pioneering step in the European Union's approach to digital governance, establishing a legally binding regulation directly

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applicable across all Member States. However, its hybrid character, combining legal obligation with policy guidance, creates challenges for implementation at the national level. This article examines how this dual nature is understood and applied by administrative authorities in Slovenia, based on a mixed-method study involving normative legal analysis, surveys, and focus groups. Although the AIA is formally recognised as binding legislation, the findings reveal substantial gaps in awareness, institutional readiness, and administrative application. Operational authorities often interpret the AIA more as a strategic framework than enforceable law. The study underscores the urgent need for coordinated action, clearer delineation of responsibilities, and structured support mechanisms to ensure effective implementation. The Slovenian case provides important insights for other Member States facing similar challenges in the multi-level governance of artificial intelligence.[1]

Keywords: Artificial Intelligence Act, EU regulation, legally binding vs. policy act, administrative authorities as AI providers/users, Slovenia

1. Introduction

The Artificial Intelligence Act (AIA) is a regulation that was adopted in 2024 after several years of coordination on its content and holders. In view of its purpose and scope, which is directly applicable in all Member States of the European Union (EU), it is a groundbreaking regulation (Fernández-Llorca et al., 2024). In this context, AI is understood as a rapidly evolving group of technologies capable of delivering numerous societal benefits by improving predictions, optimising operations, allocating resources, and providing tailored services (EC, 2021).

An AI system is defined as software that makes it possible to generate predictions, recommendations, or decision-making processes that influence its environment (EC, 2021; Misuraca, Barcevicius & Codagnone, 2020;

[1] The authors gratefully acknowledge the financial support from the Slovenian Research and Innovation Agency (research core funding program No. P5-0093, and project No. J5-50165).

Wischmeyer & Rademacher, 2020). According to the AIA, an AI system is 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 environment" (Art. 3/1). However, AI systems, especially in the public sector, are only acceptable if they adhere to principles such as protecting human autonomy, ensuring transparency, explainability, and accountability, promoting inclusivity and fairness, and fostering AI development that is both responsive and sustainable (Babšek et al., 2025a), therefore their legal regulation is necessary.

The AIA is a highly complex regulation. It comprises 180 points in the preamble, 113 articles, and 13 annexes. More importantly, the question arises as to how its legal and overall multi-layered or hybrid character is to be understood (Gstrein, Haleem & Zwitter, 2024; Madan & Ashok, 2024; Quintais, 2025). As an EU regulation, the AIA is formally a legally binding act that applies directly in all EU Member States. In terms of content, however, the AIA functions more as a policy guideline for policymakers than as a direct regulatory instrument for implementers, AI providers, and users. The research problem addressed by this article is therefore to analyse the (mis)understanding of the character of the AIA from the perspective of the institutional representatives responsible for its implementation, i.e., primarily the authorities operating at the national level. Namely, if the obliged authorities do not fully understand the objectives and rules of such laws, the (non-)implementation in practice remains an open question.

To investigate the research gap between the legally defined and the actually perceived character of the AIA, a study was designed and addressed to two groups of administrative authorities in Slovenia as an EU Member State. The first group consists of policymakers, the coordinating and line ministries responsible for the establishment of the AI system, i.e., the institutional level of public governance. The second group consists of the operational authorities that apply this system, i.e., the instrumental or implementation level of public governance (Godec, 1993; Madan & Ashok, 2024). Initially, normative, historical, and comparative research methods were applied, followed by the empirical part mainly based on an online survey and a further focus group with representatives of ministries and selected administrative authorities as AI providers and/or users.

The article is structured as follows: after the introduction, the methodology is outlined, starting with a review of the existing scientific literature on legal regulation of AI. The third chapter then provides a theoretical and normative definition of AIA and its context. This is followed by a presentation of empirical research findings among government representatives in practice. Thus, we answer Research Question 1: How do administrative authorities at the national level understand the significance, scope, and content of the AIA? Furthermore, the study addresses Research Question 2: To what extent are the Slovenian administrative authorities aware of and ready to implement the AIA on a systemic and operational level? The article concludes with a discussion chapter in which the main challenges are identified and necessary measures are proposed, followed by the final conclusions.

2. Literature Overview and Methodological Framework

2.1. State of the Art in AIA and the Legal Regulation of AI Studies

Most academic discussions of the AIA are recent (post-2023) and focus on its adoption, definitions, and regulatory challenges. Castán (2024) criticises the lack of societal consensus on the definition of AI, which led the AIA to adopt a narrower legal definition that combines system characteristics with a closed list of techniques. Boone (2023), on the other hand, defends this approach as workable and unambiguous. Fernández-Llorca and colleagues (2024) emphasise the need for definitions that are accessible to both legal and technical experts, and analyse how the AIA defines AI for general purposes and foundational models. An important innovation of the AIA is its risk-based framework (Schuett, 2024). Beck and Burri (2024) highlight the shift from "human control" to "human oversight", while Peeters (2024) points to shortcomings in areas with less human intervention, such as tax administrations. Despite this progress, various authors express concerns related to unclear provisions for human intervention, weak protections for affected individuals, limited liability mechanisms, and institutional ambiguity (Alfieri, Caroccia & Inverardi, 2022; Wörsdörfer, 2024). Others note that the regulation overemphasises social fairness at the expense of individual rights (Kattnig et al., 2024), does not

set strict requirements for explainability (Panigutti et al., 2023), and is based on an oversimplified understanding of trust in AI (Laux, Wachter & Mittelstadt, 2024).

2.2. Research Design, Data Collection, and Selection of Respondents

A three-stage methodological approach was used in this study: (1) a contextual legal analysis of the AIA and related laws, (2) an online expert survey, and (3) a structured focus group discussion. The first phase comprised a normative and content-related legal analysis, which was well suited to answer the research questions due to its explanatory nature and proximity to content analysis (Korcová & Borská, 2019). Central to this analysis was the multi-layered nature of the AIA, which aims to provide value-based guidance rather than strict requirements for national actors, reflecting the interplay between EU and national law and the broader social and political functions of regulation. In the second and third phases, a mixed-methods approach combined data from an online survey with qualitative findings from focus group discussions. This design captured both the institutional and instrumental levels of governance, and examined the formulation and implementation of AI policy. The survey was divided into two thematic sections. The first section focused on awareness and understanding of the scope of the AIA, its legal character, and links to other EU legislation. Respondents rated the importance of the AIA objectives, identified the key features of AI systems under the AIA, and assessed their familiarity with AIA-related EU legislation. The second part of the survey focused on implementation responsibilities at the EU and national levels. Respondents assessed the readiness of their institution, identified gaps, and prioritised implementation measures. The final focus group sessions addressed six key issues: awareness, perceived importance and readiness for implementation, governance roles, regulatory challenges, and future steps.

Respondents included representatives from both the institutional and instrumental levels of Slovenian public administration (see Table 1). These authorities were selected based on their active use of AI systems (Aristovnik, Kovač & Jukić, 2024; Murko, Babšek & Aristovnik, 2024; Rudolf & Kovač, 2024).

Table 1: *Study respondents in the online survey and the focus group*

Selected specific administrative areas that use AI systems	Institutional public governance	Instrumental public governance
Tax and customs collection	Ministry of Public Administration (MPA), and Ministry of Digital Transformation (MDT)	Financial Administration of the Republic of Slovenia (FARS)
Allocation of social benefits	Ministry of Labour, Family and Social Affairs and Equal Opportunities (MLFSA)[2]	Centre for Social Work Ljubljana (CSW)

Source: Authors.

The selection aimed to obtain a balanced overview of policy and practice, central and line ministries, and authorities subject to both national and EU legislation. Although the operational authorities vary in size, both play a crucial role in the delivery of public services and offer insight into the adoption of AI on the ground. Their dual role as providers and users of national digital systems strengthens the generalisability of the results, particularly for similarly structured public administrations in other EU countries.

3. Normative and Social Analysis of the AIA

The AIA was developed over several years of negotiations between various stakeholders, taking into account, among other things, the Commission's policy guidelines for the period 2019–2024 and the White Paper on AI, (COM (2020) 65 final of 19 February 2020). The AIA is legally bound by the EU Charter of Fundamental Rights as well as Art. 16 on the protection of personal data and Art. 114 of the Treaty on the Functioning of the EU.[3] The AIA has been in force since 1 August 2024, with the general

[2] Despite multiple requests, the MLFSA did not participate in the survey or the focus group. Therefore, its role in the implementation of the AIA was analysed from the perspective of the CSW as a subordinate authority and other ministries.

[3] Formally, the main steps to raise awareness and further implementation were the following: the publication of the Regulation proposal by the European Commission in spring 2021 (European Commission, 2021), which was also accompanied by a memorandum of more than 100 pages outlining the legal basis and limitations of AI use in general, especially

provisions and the provisions on prohibited practices (Sections I and II) applying from 2 February 2025, the obligations for general AI from 2 August 2025, all AI provisions from 2 August 2026, and Annex II on high-risk systems only from 2 August 2027. This gradual implementation alone shows how important the legislation is, as it must bring about change and strike a balance between the various interests involved.

The AIA undoubtedly has a hybrid character in terms of its objectives and content (Gstrein, Haleem & Zwitter, 2024), as it is a framework that focuses primarily on product safety and standardisation while at the same time containing fundamental rights protection. However, beyond this legal-technical mix, other perspectives need to be considered, such as policy design with macroeconomic dimensions, which involves a balance between an innovative and competitive European market and legal protection through concrete and individually applicable AIA rules. In this context, Musch, Borrelli, and Kerrigan (2023) examined the fragile balance between AI innovation and the protection of individual data rights through the AIA. For example, while the General Data Protection Regulation (GDPR) takes a bottom-up approach, the AIA establishes a risk-based top-down legal framework that primarily emphasises the responsibilities of public authorities (De Gregorio & Dunn, 2022). Essentially, the AIA builds on the GDPR, while the GDPR already serves as the primary existing protection and legal framework that restricts certain AI applications and big data processing in the EU (Rudolf & Kovač, 2024).[4]

The AIA is part of the so-called "new legislative framework" (see point (1) of the AIA), which comprises several different, yet interrelated and interconnected regulations. These include mostly directly legally binding EU regulations, i.e.:

in public administration, according to a pyramidal system to protect EU values and individuals, based on varying levels of risk. This was followed by the approval of the European Parliament in June 2023, adoption on 13 June 2024, and publication in the Official Journal of the EU on 12 July 2024.

[4] Art. 25 of the GDPR stipulates that all systems processing personal data must be equipped with built-in and default data protection, while at the same time AI systems are strictly limited to ensure compliance with the basic principles of personal data processing. In addition, Article 15 stipulates that any person whose data is processed has the right to obtain information as to whether their data has been processed by automated means, as well as meaningful insight into the underlying logic, significance, and likely consequences of such processing. Art. 22 of the GDPR grants the data subject the right not to be subject to a decision based solely on AI and the right to request not to be subject to such a decision, except under the specific conditions set out in Art. 22/1.

- General Data Protection Regulation (27 April 2016), in force since 25 May 2018;
- European Data Governance Act (30 May 2022), in force since 24 September 2023;
- Digital Markets Act (14 September 2022), in force since 2 May 2023;
- Digital Services Act (19 October 2022), in force since 17 February 2024; and
- Data Act (23 December 2023), in force since 12 September 2025.

In this context, not only the scope of application, the content, and the obligors of these individual legal acts, but also their overlaps and interactions, raise numerous questions. To fully understand the character of the AIA, one must also understand the character and mutual influence of these related legal acts.

When examining the legal character of the AIA, the relationship between EU regulations and national legislation must also be considered. Despite the direct legal effect of EU regulations in Member States, it is not uncommon for national laws to be adopted to implement or supplement these regulations. This is the case in Slovenia, where the GDPR is complemented by the national Personal Data Protection Act (adopted in 2022; see Rudolf & Kovač, 2024). This raises questions about the relationship and hierarchy between the various acts, both in terms of levels of governance and the general principle of the primacy of *leges speciales* prevailing over *leges generales*. The concept of multi-level governance (MLG) and the process of Europeanisation characteristic of the EU have a clear impact on data protection and AI regulation (Benjamin, 2023; Tartaro, 2023). Consequently, the adoption of such EU laws raises critical questions, including the alignment of harmonised EU standards with regulatory requirements, the legitimacy of EU standardisation, and the ability of standards to ensure fundamental rights (Tartaro, 2023). Regarding the relationship between the EU and Member States—or so called autonomy of the latter—a stable principle has emerged: Member States have full discretion in the implementation of EU directives, provided they respect the principles of EU equivalence and effectiveness as well as the rights of defence, in particular the right to be informed, the right to be heard, and the right to legal protection (Galetta & Hofmann, 2023). This principle is important for the use of AI systems in court and administrative procedures. Within the framework of EU regulations, national discretion exists only if an explicit implementation clause is provided or if national law can be applied alongside the direct application of an EU legal act (as in the GDPR). The relationship between

EU law and national law is therefore not strictly hierarchical but follows a pluralistic concept of EU governance.

Finally, the aforementioned institutional and instrumental levels of public governance should be considered, as the AIA and other laws within the new legislative framework act as both regulations and policy guidelines. Many administrative authorities perform these tasks through administrative procedures that reflect, through the disputability of relations with legal remedies and their necessary enforcement, whether the objectives set out in the laws and implementing regulations of supranational authorities or national ministries are properly implemented. If this is not the case, these individual case problems at the overall level point to the need to initiate a new regulatory cycle and adopt better rules. As part of the executive branch, public administration is predominantly limited to operational governance (Godec, 1993; i.e., limited executive according to May & Winchester, 2018), as it is restricted to determining the means to achieve predetermined policy objectives. In contrast, the overarching institutional framework for public policy objectives is determined by the highest authorities such as national parliaments, governments and ministries or, at EU level, by the Commission. This distinction is particularly important when considering the legal character of the AIA, as its implementation in a Member State raises the question of whom it primarily binds and in what capacity.

4. Results of the Empirical Case Study on Understanding the Character of the AIA

In the winter of 2024/2025, a study was conducted among representatives of two central ministries and two operational authorities to examine their understanding of the legal character, scope, and implementation tasks of the AIA. The first part of the survey focused on the definitions of AI, the legal status of the regulation, and its consistency with EU policy objectives and legal frameworks. MDT and FARS demonstrated an accurate understanding of the definitions of AI, while MPA and CSW incorrectly cited dependence on humans as a defining characteristic. Most respondents viewed the AIA as legally binding; however, CSW viewed it primarily as a policy guideline. Ministries emphasised the strategic importance of the AIA, while operational authorities saw it more as an administrative tool (see Table 2).

Table 2: *The importance of AIA objectives according to respondents*

	Very important	Important	Moderately important
Unified legal framework for the entire EU	MDT, MPA, FARS	CSW	
Reliability	MPA, FARS, CSW	MDT	
Legal certainty in the market	MDT, MPA, FARS	CSW	
Innovation	MPA	MDT, CSW	FARS
Protection of fundamental rights (non-discrimination, freedom of expression, privacy, dignity)	MDT, MPA, CSW	FARS	
Excellence		MDT, MPA, CSW	FARS

Source: Authors.

All respondents recognised the link between the AIA and the EU Charter of Fundamental Rights and TFEU. The MPAs correctly identified the unrelated treaties. Table 3 provides an overview of the familiarity with related digital legal acts and the perceived links to AIA.

Table 3: *Knowledge, relevance, and connection to the AIA in the "new legislative framework"*

	MDT	MPA	FARS	CSW
GDPR	Mainly familiar; know the enforcement date; relevant for enforcement; strong connection to AIA	Very familiar; know the enforcement date; relevant for enforcement; strong connection to AIA	Very familiar; know the enforcement date; relevant for enforcement; strong connection to AIA	Very familiar; know the enforcement date; relevant for enforcement; strong connection to AIA
ePrivacy Directive	Mainly familiar; do not know the enforcement date; relevant for enforcement; partial connection to AIA	Mainly familiar; do not know the enforcement date; relevant for enforcement; partial connection to AIA	Mainly familiar; do not know the enforcement date; relevant for enforcement; strong connection to AIA	Mainly familiar; do not know the enforcement date; not relevant for enforcement; strong connection to AIA

DSA (Digital Services Act)	Mainly familiar; know the enforcement date; relevant for enforcement; partial connection to AIA	Mainly familiar; know the enforcement date; relevant for enforcement; partial connection to AIA	Partially familiar; know the enforcement date; not relevant for enforcement; strong connection to AIA	Mainly familiar; know the enforcement date; not relevant for enforcement; strong connection to AIA
DMA (Digital Markets Act)	Partially familiar; know the enforcement date; partially relevant for enforcement; strong connection to AIA	Partially familiar; know the enforcement date; relevant for enforcement; partial connection to AIA	Partially familiar; know the enforcement date; not relevant for enforcement; partial connection to AIA	Not familiar; do not know the enforcement date; not relevant for enforcement; partial connection to AIA
DGA (Digital Gover-nance Act)	Very familiar; know the enforcement date; relevant for enforcement; partial connection to AIA	Mainly familiar; know the enforcement date; relevant for enforcement; strong connection to AIA	Mainly familiar; know the enforcement date; partially relevant for enforcement; strong connection to AIA	Not familiar; do not know the enforcement date; partially relevant for enforcement; strong connection to AIA
Data Act	Mainly familiar; know the enforcement date; relevant for enforcement; partial connection to AIA	Partially familiar; know the enforcement date; relevant for enforcement; strong connection to AIA	Very familiar; know the enforcement date; partially relevant for enforcement; strong connection to AIA	Not familiar; do not know the enforcement date; partially relevant for enforcement; strong connection to AIA

Source: Authors.

FARS and MDT demonstrated the strongest understanding of the AIA's immediate applicability in the EU and its potential for national transposition. MPA and CSW misinterpreted the legal character of the AIA. While all agreed that national legislation could complement the AIA, MPA preferred guidelines to legislation for reasons of flexibility and clarity. Opinions differed on the clarity and legal status of the preamble. Risk-based AI management was generally understood, with references to high-risk categories such as diagnostics and autonomous driving, although the examples remained general.

In the second part of the study, participants addressed AI governance responsibilities. All recognised the EU AI Office as the EU-level imple-

menting body, and the Ministry of Digital Transformation as the Slovenian national authority. Views differed on whether central or line ministries should lead policy. Table 4 compares the expected and actual roles in the implementation of the AIA.

Table 4: *Expected vs. actual roles of ministries in implementing the AIA at the national level*

Ministry	Should	Experience up to 2025/1
MDT	1 = for MDT and CSW 2 = for MPA and FARS	1 = for MDT, MPA and FARS 2 = for CSW
MPA	3 = for MDT, MPA, FARS, CSW	1 = for CSW; 4 = for MDT, MPA and FARS
Line ministry (finance, social affairs)	3 = for MDT, MPA, FARS, CSW	2 = for CSW; 4 = for MDT, MPA and FARS

Note: 1 - key, supreme in both content and IT, 2 - central information role, not content-related, 3 - key in content, but supplementary regarding IT, 4 - no role.

Source: Authors.

Awareness and readiness for AI implementation varied. Operational authorities reported a particularly low level of readiness. In the focus group discussions, it was emphasised that digital literacy needs to be improved across society to increase trust in AI. Table 5 presents the self-assessments of the four authorities.

Table 5: *Self-assessment of authorities' awareness and readiness to implement the AIA (content-wise)*

	MDT	MPA	FARS	CSW
Awareness	inadequate but improving	inadequate but improving	(still) too low	(still) too low
Readiness	inadequate but improving	mostly good	inadequate but improving	(still) too low

Source: Authors.

Table 6 presents a ranking of measures to bridge awareness gaps and indicates the status of implementation. While all authorities prioritised

measures such as staff training, collaboration, and defined protocols, implementation was limited or delayed.

Table 6: *Measures to bridge the gap between awareness and readiness*

Measure	MDT	MPA	FARS	CSW
Additional financial, personnel, and informational resources	7	2	3	5
	Implemented by 2024/8	Implemented by 2024/8	No plan yet	No plan yet
Defined procedures/ protocols	2	1	4	6
	Planned in 2025	Planned in 2025	Planned after 2025	No plan yet
Consistent impact assessments (ex ante/ ex post)	1	4	8	4
	Planned in 2025	Planned in 2025	Planned in 2025	No plan yet
More cooperation between national ministries and operational service providers	4	8	5	1
	Planned in 2025	Planned in 2025	No plan yet	No plan yet
More cooperation/ information exchange in the EU at the same authority level	6	7	6	7
	Planned in 2025	Planned in 2025	No plan yet	No plan yet
More cooperation / information exchange between Slovenian authorities using AI systems	5	5	2	2
	Implemented by 2025/1	Planned in 2025	No plan yet	No plan yet
Training of staff	3	3	1	3
	Planned in 2025	Implemented by 2025/1	Planned after 2025	No plan yet
Training or providing more information to users/clients	9	6	9	9
	Planned after 2025	No plan yet	No plan yet	No plan yet
Measuring the perception of risks associated with using AI	8	9	7	8
	No plan yet	Planned after 2025	Planned in 2025	No plan yet

Note: The measures are ranked in order of importance, with 1 and 2 being the most important and 9 the least important.

Source: Authors.

Finally, the respondents assessed Slovenia's AI readiness relative to other EU countries. Most rated it as average or below average, pointing to the slow adoption of AI in both the business and public sectors, particularly in personal data protection and social services. The delays were attributed to limited awareness, unclear responsibilities, and a lack of AI-enabled operational systems.

5. Discussion

The Slovenian case shows a persistent discrepancy between the formal recognition of the AIA and its operational implementation. This gap can be better understood based on the interlinked but different dimensions of awareness, readiness, and application. In the context of AIA, awareness refers to the recognition of the AIA's legal status, its objectives, and its links to related EU legislation (e.g., GDPR, DSA). Readiness refers to the institutional capacity to build organisational structures, procedures, and resources to act on this awareness (Madan & Ashok, 2024). Finally, application involves the integration of AIA provisions into administrative practice. As the findings show, the hybrid legal-policy character of the AIA makes this development difficult, especially at the operational level, where formal awareness is often not translated into actionable readiness or compliant practice (Wörsdörfer, 2024). This hybrid character can be better understood through established EU legal principles, where binding regulatory norms coexist with non-binding policy guidance, reflecting a layered and flexible approach to governance.

From an administrative law perspective, the AIA represents a significant step forward—even though building on an existing framework, such as the GDPR—as it addresses key issues related to automated decision-making (ADM), and the use of AI by public authorities (Fernández-Llorca et al., 2024; Galetta & Hofmann, 2023). To bridge the gap between legal frameworks and real-world ADM practices, Palmiotto (2024) and the European Law Institute (2022) propose extending legal protection through a taxonomy that facilitates the analysis of fundamental rights (Gstrein, Haleem & Zwitter, 2024; Musch, Borrelli & Kerrigan, 2023). The integration of AI into public administration requires a systematic approach that combines big data, remote operations, efficiency gains, and sustainability, and is underpinned by responsible, explainable, and trustworthy systems, as emphasised by Babšek and colleagues (2025b). Ethical dilemmas, user involvement, objectivity, accountability for errors, and transparency must

be considered (Castán, 2024; Linhartova, 2022; State et al., 2025). It is crucial to protect privacy to prevent drifting into a surveillance society in which freedom is compromised.

However, the Slovenian case study shows notable gaps in awareness and understanding of the (legal) character of the AIA. These misinterpretations can lead to various detrimental outcomes, such as administrative inertia, inconsistent implementation by different authorities, delayed policy implementation, and increased legal uncertainty, which can ultimately undermine the protection of fundamental rights and the intended harmonisation of AIA in Member States. Differences persist between the institutional ministerial level and operational tax and social services, but even the institutional authorities often misinterpret the binding nature of the AIA, which undermines effective implementation across the EU (see Lind, 2023; Madan & Ashok, 2024). The complex nomotechnical design of the AIA complicates its implementation and limits the protection of data subjects, contributing to institutional ambiguity (Wörsdörfer, 2024). Systemic improvements are therefore urgently needed to remedy this. In Central Europe, where legal formalism prevails, legislation is still often seen as the most important lever for change. However, practical implementation depends not only on legal texts, but also requires coordinated organisational, managerial, HRM, and IT measures to effectively implement the rules and objectives of the AIA (Amin & Afiqah, 2024). The national analysis shows that while most authorities recognise the AIA as legally binding, some, such as the CSW, mistakenly believe that its obligations apply only to ministries, and not to all administrative authorities. Hereby, smaller states such as Slovenia often face greater challenges in interpreting and applying complex EU legislation. These difficulties have a direct impact on the objectives of important regulations such as the GDPR and the AIA (Bertaina et al., 2025; Rudolf & Kovač, 2024). To avoid implementation gaps, the European Commission and national executive authorities should draw up action plans at an early stage, and introduce mechanisms for monitoring and gap analysis once the AIA comes into force.

A key added value of the AIA, confirmed also by this study, is its risk-based classification system—ranging from unacceptable to minimal risk—coupled with its direct applicability across the EU. This framework is particularly relevant for public services, as it determines whether the use of AI is prohibited, restricted, or permitted (Beck & Burri, 2024). The role of an authority, whether as provider or user, also has a significant impact on its responsibility (Koivisto, Koulu & Larsson, 2024). The Slovenian study highlights transparency and human-centredness as core objectives of the

AIA (Schuett, 2024; Tartaro, 2023), yet it remains unclear whether all administrative authorities fully grasp this. While lower awareness among operational authorities is to be expected, such gaps are concerning at the ministerial level. The study found no national legal provisions addressing specific AIA risk levels, only hypothetical discussions. Despite the use of AI by FARS and CSW in high-volume administrative procedures, the AIA appears to be too general and insufficiently understood. A crucial distinction must be made between AI used for decision support, which can be outsourced, and AI employed for final decision-making, which must remain under control of accountable public authorities (Alfieri, Caroccia & Inverardi, 2022; Galetta & Hofmann, 2023).

The results of the study in relation to RQ 1, how the national administrative authorities understand the significance, scope, and content of the AIA, reveal persistent misunderstandings and contradictory interpretations. Even experienced authorities such as FARS and CSW, which had previously implemented GDPR-compliant systems, struggled with the complexity of the AIA. Although the regulation is formally binding and directly applicable, its structure, particularly the preamble, annexes, and penalty provisions, is unclear to both legal and technical professionals. This confirms the concerns expressed in the literature regarding the AIA's regulatory approach, scope of application, and protective effect (Boone, 2023; Castán, 2024; Fernández-Llorca et al., 2024). The core concept of AI also remains elusive in practice. In view of these challenges, future EU legislation should follow the principle of "less is more". While the study disproves the assumption that the AIA is merely a policy document, responses, particularly from CSW, show that this misunderstanding persists. Commonly cited problems include the lack of enforcement, unclear oversight, limited procedural safeguards, and insufficient consideration of sustainability—issues also highlighted in academic critiques (Wörsdörfer, 2024). These contrast with the more clearly defined procedural mechanisms and greater enforceability of the GDPR. The study also examined the authorities' awareness of institutional responsibilities. While all respondents correctly identified the European AI Office, roles at the national level remain unclear or overlap (Murko, Babšek & Aristovnik, 2024).

RQ 2 examines the extent of awareness and readiness of the Slovenian administrative authorities to implement the AIA, since the mere adoption of a regulation is not enough to bring about change. It must be accompanied by additional measures such as established procedures, impact assessments, staff training, inter-authority cooperation, and user training (Štefanišinová et al., 2021). Unfortunately, the results of this study do

not indicate a systemic positive outcome. The findings suggest that the lack of system awareness and readiness is widely recognised even in core ministries such as the MDT and MPA. To address this gap, ministries emphasise the importance of formalised procedures for the deployment and evaluation of AI systems, while operational authorities prioritise training for their staff. The results also show a discrepancy between the importance attached to certain measures and their planned implementation deadlines. Another problem is the unclear division of responsibilities, which causes operational authorities—particularly the CSW—to wait for guidelines and infrastructural support from the line ministries, resulting in inefficient or delayed implementation of AI.

The Slovenian case provides insights that can be extrapolated. The normative complexity of the AIA, combined with the lack of operational mechanisms, poses procedural challenges across the EU. However, some findings are specific to the small state context of Slovenia, such as the unclear coordination between central and line ministries in areas such as taxation and social services. These results provide a solid basis for further research. The "Brussels effect" expected by the AIA seems overly optimistic and could weaken the EU's global legislative influence (Almada & Radu, 2024; Pagallo, 2023). The broader EU regulatory framework reflects the growing awareness of digital risks, but effective governance still requires clear legal foundations, proportionate safeguards, and the protection of individual rights (Galetta & Hofmann, 2023; May & Winchester, 2018). Even at the cost of global competitiveness, these safeguards are central to the European principle of the rule of law.

6. Conclusion

The AIA represents an important step in the EU's AI governance and provides a model for a human-centred, ethical, and balanced regulation that combines fundamental rights and innovation. As a binding regulation, it applies directly in all Member States, but its implementation depends on the national administrative contexts. Its hybrid nature—part legal mandate, part policy guideline—raises questions about practical enforcement. Effective understanding requires both compliance with the legislation and adaptability to technological and institutional circumstances. The Slovenian case study highlights the main challenges in interpreting and implementing the AIA. While institutional actors largely see the AIA as a

binding law, operational authorities often treat it as a strategic guide. This divergence affects awareness and readiness, and shows that regulatory expectations need to be clarified and adjusted. Although the importance of the AIA is widely recognised, practical enforcement is hampered by vague procedures, limited coordination, and insufficient training. Structured measures are needed to address these issues, such as formal impact assessments, clearer role definitions, and greater inter-institutional cooperation at both the national and EU levels. Looking ahead, the integration of AI regulation into public administration must strike a balance between flexibility and the rule of law principles to preserve rights, accountability, and legal certainty. Bridging the gap between regulatory intent and operational practice is crucial. This case study thus offers valuable lessons for other EU countries in dealing with the complex, multi-level implementation of AI governance. Furthermore, Slovenia's experience illustrates how different national interpretations and levels of readiness can lead to friction in cross-border AI applications, underlining the need for greater coordination through mechanisms such as the European AI Office.

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THE ARTIFICIAL INTELLIGENCE ACT BETWEEN THE EU AND NATIONAL LEVELS: THE SLOVENIAN CASE STUDY

Summary

This article examines the complex legal and policy dimensions of the European Union's Artificial Intelligence Act (AIA), focusing on its implementation in Slovenia. Although the AIA is a binding regulation directly applicable in all EU Member States, its hybrid nature—part legal mandate, part policy guideline—creates interpretative and practical challenges, especially for national administrative authorities. Using a three-stage methodology (normative analysis, expert survey, and focus group discussions), the study examined how Slovenian authorities perceive the AIA's legal character, scope of application, and implementation obligations. Respondents included both institutional (ministries) and operational (tax and social services) authorities. While most recognised the formal status of the AIA as law, significant discrepancies were found in terms of awareness and readiness. Operational authorities such as the Centre for Social Work often viewed the AIA as a guideline rather than a binding regulation. Knowledge of related EU legislation (e.g., GDPR, Digital Services Act) varied from authority to authority, which impacted implementation strategies. The findings reveal three critical gaps: legal misinterpretation, institutional readiness, and actual application. Despite a shared understanding of the importance of the AIA, implementation measures, such as training, clear role definitions, and inter-agency collaboration, were insufficient or delayed. In addition, the authorities did not sufficiently recognise their role and the need for national coordination. The study concludes that effective implementation of the AIA requires not only legal clarity, but also structured action plans, sustained intergovernmental cooperation, and practical support mechanisms. These findings are especially relevant for smaller EU states, where legal formalism and limited resources hinder policy implementation. Slovenia's experience serves as a cautionary tale and a learning opportunity for other Member States grappling with the multi-level governance of AI regulation.

Keywords: *Artificial Intelligence Act, EU regulation; legally binding vs. policy act, administrative authorities as AI providers/users, Slovenia*

Kovač, Babšek & Aristovnik (2025). The Artificial Intelligence Act Between the EU and ...
HKJU-CCPA, 25(3), 481–504, https://doi.org/10.31297/hkju.25.3.6

AKT O UMJETNOJ INTELIGENCIJI IZMEĐU EUROPSKE UNIJE I NACIONALNE RAZINE: STUDIJA SLUČAJA SLOVENIJE

Sažetak

Članak ispituje složene pravne i političke dimenzije Akta o umjetnoj inteligenciji (AUI) Europske unije s naglaskom na njegovu implementaciju u Sloveniji. Iako je AUI obvezujući propis koji je izravno primjenjiv u svim državama članicama EU-a, njegova hibridna priroda, koja se sastoji od pravnih odredbi i političkih smjernica, stvara interpretativne i praktične izazove, posebno za nacionalna upravna tijela. Koristeći trodijelnu metodologiju (normativna analiza, anketiranje stručnjaka i rasprave u fokus grupama), studija ispituje kako slovenska javnopravna tijela percipiraju pravni karakter, opseg primjene i provedbene obveze AUI-ja. Ispitanici predstavljaju i institucionalna (ministarstva) i provedbena (porezne i socijalne službe) tijela. Iako je većina prepoznala formalni status AUI-ja kao zakona, utvrđene su značajne razlike u pogledu svijesti i spremnosti za njegovu provedbu. Provedbena tijela poput Centra za socijalni rad često AUI smatraju smjernicom, a ne obvezujućim propisom. Poznavanje srodnog zakonodavstva Europske unije (npr. Opće uredbe o zaštiti osobnih podataka i Akta o digitalnim uslugama) razlikuje se od tijela do tijela što utječe na strategije provedbe. Nalazi otkrivaju tri kritična nedostatka: pogrešno pravno tumačenje, institucionalnu spremnost i stvarnu primjenu. Unatoč sličnom razumijevanju važnosti Akta o umjetnoj inteligenciji, provedbene mjere poput obuke službenika, jasne definicije uloga i međuorganizacijske suradnje, bile su nedovoljne ili su kasnile. Osim toga, vlasti nisu dovoljno prepoznale svoju ulogu i potrebu za nacionalnom koordinacijom. Studija zaključuje da učinkovita provedba AUI-ja ne zahtijeva samo pravnu jasnoću, već i strukturirane akcijske planove, održivu međuorganizacijsku i međurazinsku suradnju, koordinaciju te praktične mehanizme podrške. Navedeni zaključci posebno su relevantni za manje države Europske unije gdje pravni formalizam i ograničeni resursi ometaju provedbu politika. Iskustvo Slovenije služi kao opomena i prilika za učenje drugim državama članicama koje imaju poteškoća s višerazinskim pristupom reguliranju umjetne inteligencije.

Ključne riječi: *Akt o umjetnoj inteligenciji, uredba Europske unije, pravno obvezujući akt / policy dokument, upravna tijela kao pružatelji i korisnici umjetne inteligencije, Slovenija*