

TRUST IN ARTIFICIAL INTELLIGENCE AND ITS ACCEPTANCE IN CROATIAN SOCIETY

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ABSTRACT

Important questions concerning citizen trust in artificial intelligence (AI) systems have been raised by their rapid development and widespread application throughout various social and economic activities. Trust in AI has become a crucial element determining the level of its societal acceptance along with a series of interconnected factors. This study aims to investigate the factors influencing trust in AI, the social implications of such trust and distrust, as well as the perception of and readiness to accept AI within Croatian society. Conducted on a sample of 500 respondents in the Republic of Croatia, the research sought to examine the frequency of AI tool usage, the level of trust in AI, and the citizens' readiness to accept it in everyday and professional contexts. The results indicate an overall moderate level of trust in AI, characterized by a prevailing cautious optimism. Most respondents recognize the benefits of AI in various life situations, while also expressing pronounced caution and selective acceptance of certain forms of its application. Simultaneously, they voice concerns regarding ethical dilemmas. The analysis shows that trust in AI is significantly correlated with the frequency of AI tool usage and the level of digital literacy, suggesting that personal experience and understanding of the technology positively influence the perception of its reliability. Within the Croatian context, a key remaining challenge relates to raising the level of public awareness and building a transparent system for AI application based on ethical standards and social responsibility.

KEY WORDS

artificial intelligence, trust, technology acceptance, Croatian society

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INTRODUCTION

AI has become one of the key technologies of contemporary society, with broad applications in education, healthcare, economics, transportation, and everyday digital interactions. While it offers a range of advantages in terms of efficiency, service personalization, task automation, analytics, and time savings, its widespread adoption also raises concerns regarding fears of job displacement, diminished privacy, as well as ethical dilemmas and inequalities in access to technology [1-5]. The development of AI reflects a broader process of transformation in the modern world and its relationship with technology. Distrust toward new technologies and the consequent fear of job loss have a long history, from the Luddite movement of the early 19th century, which opposed the introduction of machinery, to labor strikes triggered by job automation and assembly-line work, skepticism toward electrification, telephony and robotics, resistance to new media, and the fears and concerns that emerged with the widespread use of the internet regarding privacy and security.

TRUST IN AI FROM A SOCIOLOGICAL PERSPECTIVE

Modernization theory in sociology has sought to explain how societies transition from traditional forms to modern ones. In this process, the emergence of new technologies, rationalization, industrialization, and urbanization are held to lead to the formation of more educated, efficient, wealthy, and democratic societies. Among the early sociologists, Auguste Comte believed that society could be understood and improved through scientific methods. In his conceptual framework, AI would symbolize the pinnacle of the positive stage of society. It embodies the positivist ideal of a rational, scientific society driven by data rather than emotions or metaphysics.

Beck [6] argues that contemporary societies are increasingly organized around the production, management, and perception of risk. Risks are manufactured, resulting from technological and industrial progress, such as nuclear energy, genetic engineering, climate change, or AI. Beck's concept of reflexive modernization denotes a phase in which society begins to critically reflect on the side effects of its own progress. The human pursuit of automating and optimizing its activities through AI creates new global and difficult-to-control challenges, leading society to contemplate the dangers it has itself produced. George Ritzer's concept of McDonaldization, based on efficiency, predictability, calculability, and control through technology, is today directly linked to the development of AI. AI now represents the latest phase of McDonaldization, in which not only human behaviour but also human thought is subject to control. Technology thus extends McDonaldization from the physical world into the digital and cognitive realms, expanding a form of rational control, standardization, and efficiency into the domain of human thought. However, this rationality gives rise to new forms of irrationality, such as dehumanization, inequality, data exploitation, and a loss of meaning [7]. With accelerated technological advancements and growing investments, AI has become a global phenomenon and an important part of everyday life. Its origins trace back to the mid-20th century with the development of computer science, which cultivated the ability of computers to independently perform tasks requiring intelligence, such as learning, reasoning, and pattern recognition [8]. Today, chatbots have become synonymous with AI, although AI is a far broader concept. In the context of societal perception of new technologies, trust proves to be a key factor influencing their acceptance.

TRUST IN AI IN THE CONTEXT OF RECENT RESEARCH AND THE “EMERGING” REGULATIONS: FROM THE INTERNATIONAL TOWARDS THE CROATIAN PERSPECTIVE

Ever since the *ChatGPT* was launched in 2022, it can be noticed that the global public has become increasingly aware of the numerous benefits, but also the risks, of using highly developed AI tools in their everyday lives [9; p.4]. Namely, considering the recent developments and increasingly intensive use of AI tools in almost all spheres of life (e.g. from leisure and work to education, security, health and finance), it is not surprising that one of the key issues in this regard refers to the question of trust in AI, since the answer to this question indicates the extent of its acceptance or non-acceptance in a broader social context. Accordingly, the importance of trust as a condition for the acceptance of AI tools is also reflected in one of the definitions of trust in AI which refers to “a *willingness to be vulnerable* to an AI system (e.g. by relying on system recommendations or output or sharing personal data) based on *positive expectations* of how the system will operate (such as accuracy, helpfulness, data privacy and security)” [9; p.27]. In other words, this conceptualization implies that “positive expectations” related to interaction with an AI system stem from trust.

In line with provided views it can also be asserted that prior to, and after the release of the *ChatGPT*, scientific interest in researching trust in AI did not lose relevance up to present day. In other words, growing multidisciplinary research shed light on various aspects related to trust in AI. Namely, to indicate a few of these aspects, it can be emphasized that certain inquiries based on the review of recent research on the subject matter offer conceptual and practical insights regarding the importance of building trust in AI, as well as they offer proposals for further research in the field, e.g. [10-14]. Likewise, since the question of trust in AI is inevitably interwoven with ethical implications concerning implementation and use of AI systems, it is not surprising that inquiries in the corresponding field also accentuate significant role of ethics in this regard, e.g. [15-17]. Furthermore, considering that intensified use of AI tools in everyday lives requires adequate regulation, recent inquiries are also highlighting connection between trust and governance of AI systems, e.g. [18-20]. Subsequently, and along with indicated corpus of growing literature, it is needed to add that research interest on the subject matter is also tightly aligned and complemented with relevant studies which are providing recent insights into changes in public perception, attitudes and trust towards AI on a global level. In this context, it is necessary to highlight studies conducted by KPMG in cooperation with the Australian Universities of Queensland and Melbourne [9, 21-23], which in its latest, fourth study, shed more light on numerous questions¹ concerning public trust and attitudes toward AI based on the views obtained from population in 47 countries worldwide [9; p.4].

Moreover, since the questions related to governance of AI systems are unavoidably linked to trust and acceptance of AI, it is important to signify that policymakers at all levels of governance (from national to regional and international) were urged to promptly provide adequate AI regulatory guidelines. In this regard, it is necessary to highlight international initiatives introduced by relevant organizations active in the field of setting standards for regulating AI such as the Organization for Economic Co-operation and Development (OECD), the Council of Europe (COE) and the European Union (EU). Accordingly, the OECD has introduced *Recommendation of the Council on Artificial Intelligence* [24] (adopted in 2019 and amended in 2024), which represents the first international standard for AI policies based on responsible and trustworthy governance. Namely, the relationship between governance and trust in AI is expressed already in the preamble of this document by implying “that trust is a key enabler of digital transformation”, as well as this intention is further reflected within its five value-based principles² and recommendations for policymakers³ [24]. Likewise, the COE

has introduced in 2024 *Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law* as the first-ever international legally binding treaty in this field [25], which clearly recognizes importance of governance in relation to developing trust in AI within its Article 12 devoted to Reliability⁴. Nonetheless, in terms of AI governance, the European Union's *Artificial Intelligence Act* (AI Act), adopted in 2024, stands out as the first-ever legislative framework intended to regulate AI [26]. Evidently, the *AI Act* also acknowledges the necessity to ensure governance of the trustworthy AI systems by indicating (in art. 1) that "[T]he purpose of this Regulation is to improve the functioning of the internal market and promote the uptake of human-centric and trustworthy artificial intelligence (AI)" [26].

In addition to the provided insights, it should be further emphasized that recent research related to the perception, attitudes and trust towards AI in Croatia is in line with the above-mentioned international inquiries and regulations. Therefore, speaking of research, this notably refers to project titled *Perception of Artificial Intelligence in the Republic of Croatia*⁵ (conducted by the Prizma CPI in cooperation with several partners), which was based on three public opinion surveys in the period from 2023 to 2025. In this regard, it is important to add that this inquiry among numerous questions concerning the perception of AI within the Croatian population also includes the question of trust in AI [27, 28]. In addition, another relevant research on the subject matter within Croatian context refers to the inquiries conducted by Ipsos agency in 2023 titled *Artificial Intelligence - Attitudes and Opinions*⁶, and in 2025 titled *Artificial Intelligence: Attitudes and Habits of Croatian Citizens*⁷ [29, 30]. Although both inquiries don't include the question of trust in AI, still they provide valuable and timely insights regarding the broader attitudes of Croatian population towards the AI. Finally, it is important to signify that further trust of Croatian citizens in AI certainly relates to recently announced (i.e. in 2025) preparation of the *National Plan for the Development of Artificial Intelligence*⁸ [31], which gives the current Croatian Government the opportunity to adequately support further development and use of trustworthy AI systems in Croatia consistent with the EU's *AI Act* [26].

In synthesis, the extant literature establishes trust in AI as a function of knowledge, positive performance expectations, and perceived ethical governance. Global studies reveal cautious public optimism tempered by significant concerns over risk and misuse, a sentiment increasingly reflected in emerging international regulations. Within Croatia, while general attitudes are being mapped, a focused analysis of citizens' willingness to be vulnerable to AI in high-stakes domains, and its correlation with their perceptions of ethics and preferred governance models, mostly remains unexplored. This study directly addresses this gap, leveraging the conceptual foundations of prior international research to investigate the specific drivers and manifestations of AI trust in the Croatian societal context.

RESEARCH AIM

The primary objective of this study is to examine the factors influencing trust in AI, the social implications of such trust and distrust, as well as perceptions of and readiness to accept AI within Croatian society. The research question is which factors influence trust in AI and its acceptance in Croatian society, and how is this trust manifested through willingness to delegate decision-making and demands for regulation? The specific objectives of the study focus on analyzing the correlation between the level of digital literacy and perceptions of AI reliability and ethicality; identifying ethical dilemmas and fears related to the potential misuse of technology that influence the selective acceptance of AI systems; examining the contextual dependency of trust, with particular emphasis on differences in willingness to delegate decisions to AI systems in critical domains such as finance and healthcare; and exploring attitudes toward AI governance and regulation, as well as the roles of the state and international institutions in comparison to private companies in ensuring a transparent and accountable system of AI application.

METHODOLOGY

For this study, a survey was conducted on a sample of 500 citizens of the Republic of Croatia. A more comprehensive description of the sample characteristics is provided in the Introduction. The data collection was conducted as part of a larger, coordinated research project. Therefore, the comprehensive description of the sample, the sampling method, fieldwork procedures, response rates, and inclusion/exclusion criteria is presented in the editorial introduction to this thematic issue [32]. Our individual article draws upon this common dataset and follows the methodological framework established therein. For the purposes of the analysis, selected items from the survey questionnaire were utilized, specifically those relevant to the focus of this article.

INSTRUMENT

For the purposes of this study, six questions from the survey questionnaire described in the editorial [32] were used.

The first question addressed participants' self-assessed knowledge of AI functioning and read as follows: "Please indicate the extent to which the following applies to you: I am familiar with how artificial intelligence (AI) works". Respondents could select one of five options on an ordinal scale: (1) not at all, (2) slightly, (3) moderately, (4) considerably, and (5) very much. The same response scale was used for the next three questions: I am willing to entrust my financial decisions to artificial intelligence (AI); I am willing to use artificial intelligence (AI) for the purpose of my medical diagnostics; and I am concerned about the potential misuse of artificial intelligence (AI) in society.

The fifth question concerned the ethicality of AI decisions and was phrased as: Artificial intelligence (AI) can make ethically correct decisions". Responses were provided on a five-point ordinal scale: (1) I completely disagree, (2) I mostly disagree, (3) I neither agree nor disagree, (4) I mostly agree, and (5) I completely agree.

The sixth and final question was: "The management of artificial intelligence tools should be guided by the Government of the Republic of Croatia in cooperation with international bodies, scientific institutions and the public, rather than by private companies". This question used the same ordinal response scale as the fifth question.

ANALYSIS

Descriptive statistical methods were employed to process the data, while relationships between variables were examined using the chi-square (χ^2) test. Ordinal categories were treated as categorical variables; for example, responses (1) "I completely disagree" and (2) "I mostly disagree" were combined into a single category (12) "I disagree," and responses (4) "I mostly agree" and (5) "I completely agree" were combined into a single category (45) "I agree", whereas response (3) "I neither agree nor disagree" remained unchanged, representing neutrality. The categories were merged to ensure adequate expected cell frequencies.

Results are presented using both tabular and graphical displays, including bar charts. Data analysis was performed using IBM SPSS Statistics (version 21), and inferential conclusions were based on a significance level of $\alpha = 0,05$.

RESULTS

PARTICIPANT CHARACTERISTICS REGARDING ATTITUDES TOWARD AI

Analysis of the collected data allowed for the formulation of several relevant conclusions. For clarity and interpretative ease, the categories displayed in Figure 1 have been further simplified.

Regarding self-assessed knowledge of AI functioning, the largest proportion of participants (41 %) reported understanding AI tools to a moderate extent. A smaller proportion (31 %) expressed uncertainty or indecision regarding their level of knowledge, while 28 % stated that they were not familiar with how such tools function. These findings indicate that nearly two-thirds (59 %) of participants perceive their knowledge of AI as insufficient or are unable to assess it, which may have further implications for their willingness to use such technologies.

Concerning the perception of the ethical correctness of AI decisions, almost half of respondents (49 %) did not express a clear opinion, potentially reflecting a lack of familiarity with ethical standards, distrust in technology, or general uncertainty regarding automated decision-making. Nearly one-third (31 %) expressed a negative stance, whereas only one-fifth (20 %) judged AI decisions as ethically acceptable. This distribution suggests a certain level of public skepticism regarding the ethical implications of algorithmic decision-making.

In the domain of financial decision-making, the results were even more pronounced: 69 % of participants would not delegate their financial decisions to AI tools. Indecision was reported by 21 % of participants, while only 10 % expressed willingness to entrust such decisions to AI. These findings indicate that finance remains one of the areas where citizens exhibit the highest caution and maintain a preference for human oversight and decision-making.

A similar pattern, though less pronounced, was observed in attitudes toward the use of AI in medical diagnostics. The largest proportion of participants (43 %) held a negative view regarding the use of AI for their own diagnostic purposes, whereas the smallest proportion (26 %) expressed a positive orientation toward such practice. Approximately one-third of participants (31,1 %) remained neutral or undecided, which may indicate insufficient knowledge about the capabilities and limitations of medical AI systems.

Regarding concerns about potential AI misuse, the data indicate a high degree of uncertainty and distrust: 73 % of participants expressed concern, 20 % remained neutral, and only 7 % reported no concern. These results point to the prevailing perception of AI as a potentially risky or inadequately regulated technology.

Finally, regarding AI governance, nearly half of respondents (45 %) believed that oversight of AI tools should be the responsibility of the Government of the Republic of Croatia rather than the private sector. Over one-fifth (22 %) disagreed, expressing greater trust in private companies or perceiving their management as unproblematic. One-third of participants (33 %) did not have a clearly defined opinion on who should have primary responsibility for AI governance. This distribution indicates that the issue of AI regulation and ownership remains complex, and public opinion does not converge on an optimal governance model.

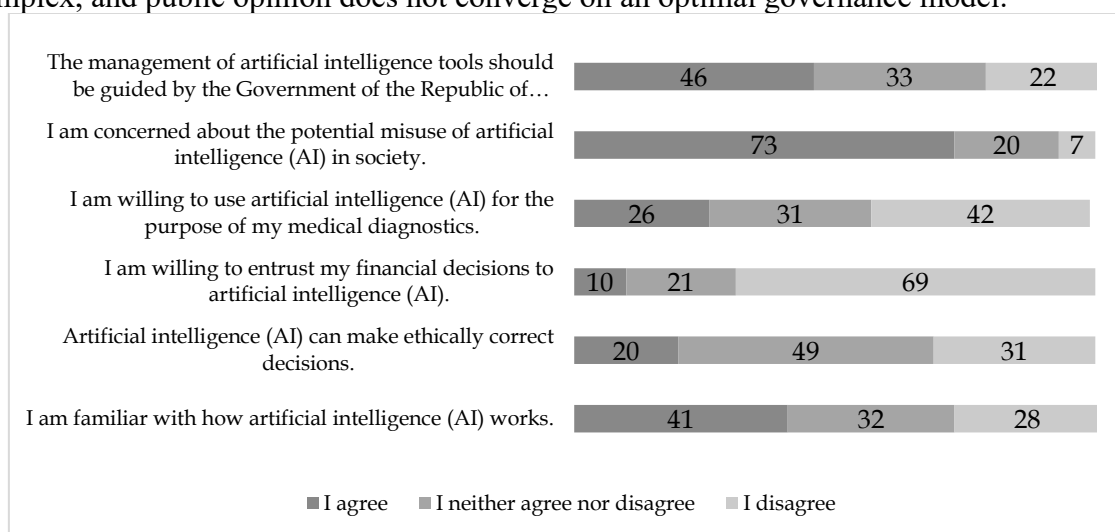


Figure 1. Level of agreement with statements on the use of AI tools.

ANALYSIS OF KEY FACTORS INFLUENCING TRUST IN AI

The results of the conducted correlation analysis indicate a moderate, positive, and statistically significant association between self-assessed knowledge of AI functioning and attitudes toward the ethicality of AI decisions, $\rho = 0,38, p < 0,01$. This finding suggests that participants who rate their understanding of AI higher also exhibit more positive attitudes toward the ethicality of AI decisions. This result can be interpreted in the context of the assumption that better comprehension of algorithmic systems increases trust in their ethical aspects and reduces the perceived risk of errors or misuse. In other words, a higher level of self-perceived knowledge is associated with more favorable attitudes toward the ethical use of AI in sensitive decision-making contexts.

To examine potential differences in the level of concern about possible AI misuse based on gender, a χ^2 test of independence was conducted. Results indicated no statistically significant difference between men and women, $\chi^2(1, N = 500) = 1,12, p < 0,289$. Fisher's exact test also did not reveal significant differences ($p < 0,315$). The minimum expected count per cell was 64,74, confirming that test assumptions were met. These findings suggest that gender does not influence participants' level of concern regarding potential AI misuse. In other words, men and women in this sample demonstrate similar levels of concern, indicating that risk perception related to AI is not gender-specific.

To investigate whether differences in concern about potential AI misuse exist among participants of different ages, a χ^2 test of independence was conducted. Results showed no statistically significant differences among age groups, $\chi^2(4, N = 500) = 2,47, p < 0,650$. The Likelihood Ratio test also indicated no significant differences, $\chi^2(4) = 2,40, p < 0,664$, and the Linear-by-Linear Association test did not reveal a trend, $p < 0,346$. The minimum expected count per cell was 14,69, confirming that test assumptions were satisfied. These results suggest that age does not affect participants' concern regarding potential AI misuse. Participants across all age groups in this sample exhibit similar levels of concern, implying that AI risk perception is not age-specific.

The relationship between attitudes regarding concern about potential AI misuse and willingness to delegate decisions to AI in the domains of finance and healthcare was examined using Spearman's rank correlation. Results indicated a statistically significant negative correlation, $\rho(500) = -0,150, p < 0,001$, suggesting that participants who express higher concern about possible AI misuse are less willing to delegate decisions to AI in key domains such as finance and healthcare. Although the correlation coefficient is relatively small, the association is consistent and statistically reliable.

The relationship between participant age and willingness to delegate decisions to AI in finance and healthcare was also tested using Spearman's rank correlation. Results showed no statistically significant association, $\rho(500) = -0,025, p < 0,568$. These findings suggest that age does not influence willingness to delegate decisions to AI in the specified domains. The absence of a correlation indicates that participants of different ages are equally willing or unwilling to delegate decisions to AI systems, meaning that age is not a determining factor in trust in technology.

To examine potential gender differences in willingness to delegate financial and healthcare decisions to AI, a Mann-Whitney U test was conducted. Results indicated a statistically significant difference between men and women, $U = 28,041, Z = -2.493, p < 0,013$. Mean ranks suggest that men (mean rank = 270,55) are somewhat more willing to delegate decisions in finance and healthcare to AI compared to women (mean rank = 238,53). This finding suggests that gender is associated with small differences in willingness to trust AI in decision-making, with men showing slightly higher readiness. The effect size was small ($r = 0,11$), indicating limited practical significance. The difference is small but statistically significant, which may have implications for designing educational and informational campaigns about AI, taking into account the perceptions and readiness of different user groups.

The difference in willingness to delegate decisions to AI between finance and medical diagnostics was tested using the Wilcoxon Signed-Rank test. Results indicated a statistically significant difference, $Z = -11,933$, $p < 0,001$. Rank analysis showed that most participants ($n = 239$) were more willing to use AI for their own medical diagnostics than for financial decisions, while a smaller number ($n = 35$) held the opposite view. Tied ranks amounted to 226. These findings suggest that willingness to delegate decisions to AI is context-dependent. Participants demonstrate greater willingness to delegate decisions to AI in healthcare than in finance, which may reflect higher perceived expertise and reliability of AI in medical diagnostics or greater caution regarding financial decisions. The results highlight the importance of a contextual approach in AI implementation and user education, as risk perception and trust in technology may vary across application domains.

To examine the association between concern about potential AI misuse and the belief that AI governance should be managed by the Government of the Republic of Croatia in cooperation with international bodies, scientific institutions, and the public rather than private companies, Spearman's correlation was conducted. Results revealed a weak but statistically significant positive correlation, $\rho = 0,25$, $p < 0,001$, $N = 500$. In other words, participants who are more concerned about possible AI misuse are also more likely to support the view that AI governance should be under state and public institutional control rather than private companies. This finding indicates a relationship between risk perception and attitudes toward AI regulation, although the correlation is relatively weak. Importantly, correlation does not imply causation; thus, the results are interpreted solely as indicators of association among the observed attitudes.

The association between beliefs about the ethicality of AI decisions and the view that AI governance should be led by the government and public institutions was also tested using Spearman's correlation. Results indicated a very weak but statistically significant positive correlation, $\rho = 0,098$, $p < 0,027$, $N = 500$. In other words, participants who believe that AI can make ethically correct decisions are slightly more likely to support the notion that AI governance should be under state and public institutional oversight rather than private companies. Although the correlation is statistically significant, its very small magnitude suggests that attitudes toward AI ethics have limited practical relevance for opinions on AI governance. Again, correlation does not imply causation, and these results should be interpreted solely as indicators of association.

Finally, the association between the frequency of AI tool use and the view that AI governance should be state-led was examined using Spearman's correlation. Results indicated no statistically significant association, $\rho = -0,012$, $p < 0,788$, $N = 500$. In other words, participants who frequently use AI tools and those who use them rarely hold similar views regarding who should govern AI technologies. These results suggest that the level of AI tool use does not predict attitudes toward state or public control, and the expected negative association between usage frequency and support for government regulation was not confirmed.

DISCUSSION

The results of this study provide insight into the complex perception and level of trust in AI systems among Croatian citizens, confirming that trust is a key factor in the societal acceptance of AI. The observed moderate overall level of trust, characterized by cautious optimism, suggests that participants recognize the benefits of the technology while simultaneously expressing significant caution and selective acceptance of certain applications. This caution is particularly evident in the domain of ethical implications, where nearly half of respondents (49 %) did not take a clear stance on the ethical acceptability of AI decisions, while only 20 % expressed a positive view, indicating substantial public skepticism regarding algorithmic decision-making.

A key finding relates to the association between self-assessed knowledge of AI and attitudes toward AI ethics. A moderate, positive, and statistically significant correlation was identified between self-assessed knowledge of AI functioning and attitudes toward the ethicality of AI decisions, $\rho = 0,38, p < 0,01$. This result supports the assumption that better understanding of algorithmic systems increases trust in their ethical aspects and reduces perceived risks of errors or misuse. Given that a notable portion of participants (28 %) perceived their knowledge of AI tools as insufficient, this finding emphasizes that a lack of digital literacy and transparency may hinder the formation of favorable attitudes toward AI use in ethically sensitive contexts. Enhancing knowledge thus represents a fundamental challenge in the Croatian context, in order to promote further AI implementation aligned with ethical standards and social responsibility.

The analysis clearly demonstrated that trust in AI is not universal but context-dependent. A statistically significant difference was observed in willingness to delegate decisions, with participants being significantly more willing to use AI for personal medical diagnostics than for financial decision-making, $Z = -11,933, p < 0,001$. The prevailing caution in the financial sector, where 69 % of participants would not delegate financial decisions to AI tools, may reflect higher perceived vulnerability and financial risk, favoring human oversight. Overall, risk perception has a significant predictive influence on acceptance. A large majority of participants (73 %) expressed concern about potential AI misuse, which is associated with a statistically significant negative correlation between concern and willingness to delegate decisions in key domains such as finance and healthcare, $\rho(500) = -0,150, p < 0,001$.

Although risk perception was similar across genders and age groups, a statistically significant gender difference was observed in willingness to delegate decisions to AI, with men showing higher levels of readiness, $U = 28,041, Z = -2,493, p < 0,013$. This gender difference suggests the need to tailor educational and informational campaigns to account for perceptions of different user groups.

Attitudes toward AI governance reflect public concern about risk. Nearly half of respondents (45 %) believe that AI oversight should fall under the Government of the Republic of Croatia in cooperation with international bodies, scientific institutions, and the public, rather than private companies. This demand for public and state control correlates with concern about misuse, as evidenced by a weak but statistically significant positive correlation, $\rho = 0,25, p < 0,001$. Interestingly, frequency of AI tool usage did not predict attitudes toward state or public control of AI, $\rho = -0.012, p < 0,788$.

These findings can be interpreted within sociological theory. Beck's [6] concept of the risk society provides a relevant framework, explaining how modern societies are increasingly organized around the production, management, and perception of risks arising from technological advancement, including AI. Furthermore, AI can be seen as the "latest" stage of McDonaldization [7], in which rational control and standardization extend into digital and cognitive domains. The prevailing concern among participants implies that such rationalization generates new forms of irrationality, such as dehumanization and risks of inequality, which justify public demands for robust regulation.

CONCLUSION

The findings of this study indicate that trust in AI within Croatian society is a complex and multidimensional phenomenon, characterized by moderate confidence, pronounced caution, and strong ethical concerns. Respondents who evaluate their own AI-related knowledge more positively also tend to express more favorable views regarding the ethicality of AI-driven decision-making. Nevertheless, concerns about potential misuse remain exceptionally high.

Public caution is particularly evident in domains involving personal vulnerability, such as finance and healthcare, where most respondents are unwilling to delegate decision-making authority to AI systems. These results support theoretical assumptions that trust in AI is not an abstract construct but is shaped by concrete risk assessments, perceptions of control, and the broader institutional context. A statistically significant difference emerged between attitudes toward the use of AI in healthcare and in the financial sector. Respondents reported greater willingness to rely on AI for personal medical diagnostics than for financial decision-making. Individuals who express heightened concern about the potential misuse of AI are also more likely to support the view that AI governance should be led by state and public institutions. The respondents most concerned about AI are likewise the strongest advocates of public and state oversight, underscoring the importance of transparent and trustworthy institutional regulatory mechanisms. These expectations are consistent with global developments and align with the emerging regulatory framework of the European Union, particularly the Artificial Intelligence Act (AI Act).

Overall, the results highlight the need to strengthen digital and AI literacy, to develop systems that enhance transparency, reliability, and safety, and to involve citizens as well as professional communities in debates on regulation and ethical standards. Croatian society demonstrates a moderate yet clearly articulated capacity to accept AI; however, long-term acceptance will depend on systematically building trust through responsible development, ethical implementation, and robust institutional accountability. Accordingly, this study provides valuable insights that enrich discussion concerning the relevance of building trust and AI acceptance within Croatian context, and as such suggests further paths for research in this field. Likewise, the results of this study demonstrate that public trust towards AI in Croatia depends on trustworthy AI regulation. In this respect, it can be asserted that the forthcoming *National Plan for the Development of Artificial Intelligence* gives the current Croatian Government an important opportunity to build trust through regulation consistent with EU regulatory framework.

REMARKS

¹More precisely, the questions covered by the corresponding study include “the extent to which people trust, use, and understand AI systems; how they perceive and experience the benefits, risks and impacts of AI use in society, at work and in education; expectations for the management, governance and regulation of AI by organizations and governments; how employees and students are using AI for work and study; and perceived support for the responsible use of AI” [9; p.4].

²The five value-based principles refer to: Inclusive growth, sustainable development and well-being; Respect for the rule of law, human rights and democratic values, including fairness and privacy; Transparency and explainability; Robustness, security and safety; and Accountability [24].

³The five recommendations for policymakers refer to: Investing in AI research and development; Fostering an inclusive AI-enabling ecosystem; Shaping an enabling interoperable governance and policy environment for AI; Building human capacity and preparing for labour market transformation; and International co-operation for trustworthy AI [24].

⁴Article 12 – Reliability, refers to the following: “Each Party shall take, as appropriate, measures to promote the reliability of artificial intelligence systems and trust in their outputs, which could include requirements related to adequate quality and security throughout the lifecycle of artificial intelligence systems“ [25].

⁵In Croatian: Percepcija umjetne inteligencije u RH.

⁶In Croatian: Umjetna inteligencija – stavovi i mišljenja..

⁷In Croatian: Umjetna inteligencija: stavovi i navike hrvatskih građana.

⁸In Croatian: Nacionalni plan za razvoj umjetne inteligencije.

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