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THE IMPACT OF TRUST ON ADOPTING ARTIFICIAL INTELLIGENCE TECHNOLOGY: THE PERSPECTIVE OF SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs)

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ABSTRACT

Purpose: *This study aimed to analyze the influence of trust on the acceptance of artificial intelligence (AI) technologies among small and medium-sized enterprises (SMEs). Based on the modified Technology Acceptance Model (TAM), the relationships between trust and perceived usefulness, ease of use, attitude, and implementation intention were examined.*

Need for the study: *In dynamic digital transformation, SMEs face limited resources, low technological competence, and uncertainty about AI's ethical and functional aspects. Previous studies have rarely considered trust as a central factor in AI adoption models in the SME sector. Filling this research gap became the main motivator of this project.*

Methodology: *A quantitative research method based on structural equation modeling (SEM) was used, using a five-point Likert scale questionnaire. Data were collected from the management staff of SMEs in Poland. The relationships between constructs were analyzed using confirmatory factor analysis (CFA) and model fit indices.*

Findings: *The results confirmed the significant influence of trust on perceived ease of use, usefulness, and attitude towards AI and indirectly on implementation intention. Trust was a key factor supporting the positive perception and acceptance of AI technologies in the SME environment. The model achieved high construct validity and a good fit to empirical data.*

Practical Implications: *The study suggests strengthening trust in AI – through algorithm transparency, user education, certification, and ethical frameworks – should be essential to SMEs' digital transformation strategies. The results provide practical guidance for decision-makers, policymakers, and technology providers on effectively supporting AI adoption in the SME sector.*

Keywords: Artificial Intelligence; Trust; Technology; SMEs; Digital Transformation; SEM; Technology acceptance model.

Jel codes: O33, M15, L26

1. INTRODUCTION

Small and medium-sized enterprises (SMEs) play a fundamental role in the structure of modern economies. This sector is the main driver of employment growth, innovation, and sustainable economic development (Khan et al., 2024). SMEs generate a significant number of jobs and shape the socio-economic landscape, especially in the context of local communities. Their activities, often managed by middle-class owners, contribute to maintaining social stability and supporting economic inclusiveness. Therefore, it is important to provide these enterprises with appropriate support – financial capital, access to knowledge and modern technologies, and psychological or advisory support (Lemos et al., 2022).

Only comprehensive support allows SMEs to maintain competitiveness, operational resilience, and institutional durability (Ingalagi et al. 2021). Over the past two decades, there has been a rapid acceleration in the development of digital technologies, which has translated into a significant transformation of the organizational structures of enterprises. Progress in the Internet, data analytics, automation, and solutions based on artificial intelligence (AI) has meant that enterprises – regardless of the scale of their operations – have to adapt to new realities. SMEs are increasingly using modern technologies to gain a competitive advantage, streamline internal operations, and improve the quality of customer service. As Drydakis (2022) points out, this sector is actively looking for AI solutions, treating it as a tool to strengthen its market position. These technologies enable, among others, the analysis of consumer behavior in real-time, generating personalized recommendations, optimizing marketing campaigns, or supporting decision-making processes. However, effective implementation of AI in SMEs depends on several factors. As Almashawreh et al. (2024) note, access to technology alone is not enough – an appropriate organizational structure and institutional readiness are also necessary (Badghish & Soomro, 2024).

Implementing AI should not be treated only as a technological project but as an element of a broad transformation strategy. A holistic approach is necessary, encompassing changes in IT infrastructure, organizational culture, staff competencies, and management procedures. Only then can the company fully use the potential of artificial intelligence and obtain lasting benefits from its implementation (Govori and Sejdija, 2023).

The use of AI in SMEs is primarily associated with the automation of operational processes, which translates into cost reduction, increased efficiency, and greater scalability of operations (Ulrich et al, 2021). However, despite numerous benefits, the effectiveness of AI technology implementations in this sector is often limited by a lack of trust. Trust is a key factor influencing the decision to adopt new technological solutions.

Small business owners, who often have limited resources, are wary of complex algorithmic systems, especially in the context of the lack of full understanding of their operation, personal data protection, or potential decision-making biases (Crockett et al., 2021). For this reason, building trust in artificial intelligence should become a priority of digitalization policy and innovation strategies. Activities such as increasing the transparency of algorithms, creating a clear legal framework, offering certified technological solutions, and organizing training and workshops for entrepreneurs are important here.

In an environment where specialist knowledge and technical infrastructure are lacking, trust acts as an institutional buffer, allowing for rational decisions to be made despite uncertainty and risk. In the long term, developing trust in AI can contribute to increasing companies' efficiency and adaptability to market changes (Skarzynska & Paliszkiewicz, 2025). Companies that can integrate modern technologies into their daily operations can generate greater value, operate more flexibly, and compete locally and internationally.

This study aims to provide an in-depth analysis of the relationship between trust and other key variables influencing the effectiveness of AI implementation in the SME sector.

The study puts forward six hypotheses to verify the relationship between trust and perceived usefulness, ease of use, attitude toward technology, and implementation intention. It is assumed that:

- (H1) Trust has a positive effect on the perceived usefulness of technology.
- (H2) Trust has a positive effect on attitude towards AI.
- (H3) Trust has a positive effect on the assessment of the ease of use of AI.
- (H4) Perception of usefulness affects attitude towards technology.
- (H5) Perceived ease of use also affects attitude.
- (H6) Attitude towards AI has a positive effect on implementation intention.

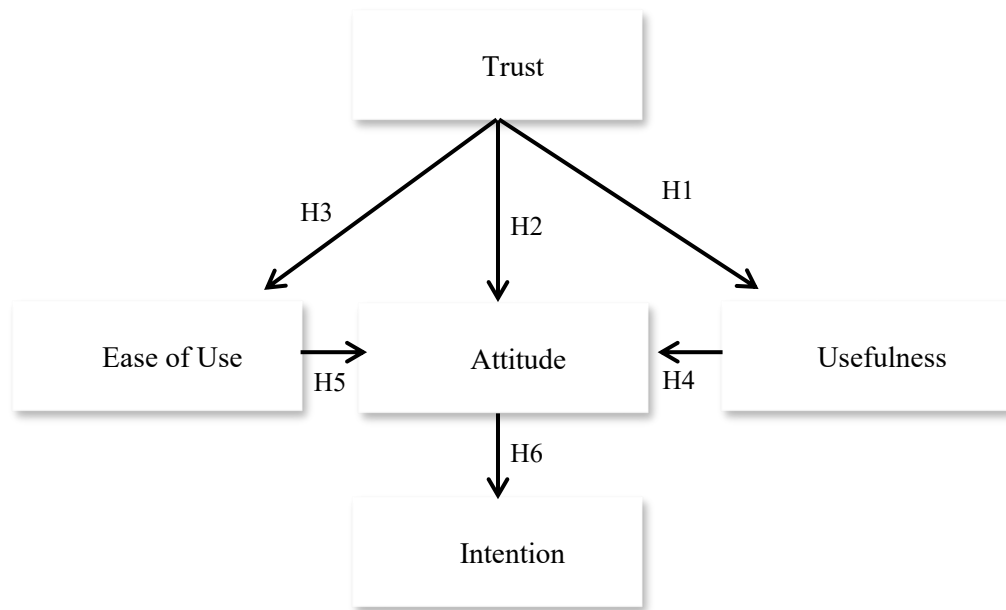


Figure 1. The conceptual framework

Source: own elaboration.

Verifying the above hypotheses will allow for a better understanding of the mechanisms influencing implementation decisions in the SME sector and for formulating recommendations for policymakers, business support institutions, and entrepreneurs themselves. Understanding the role of trust as a factor moderating the implementation of digital technologies is crucial for effectively supporting digital transformation in the knowledge-based economy (Paliszkiewicz & Skarżyńska, 2022).

2. LITERATURE REVIEW

2.1. Trust in AI: Challenges and Adoption in SMEs

As small and medium-sized enterprises (SMEs) navigate the rapidly evolving digital landscape, trust in technology and especially artificial intelligence (AI) has become a key determinant of successful adoption. While large enterprises exhibit higher AI adoption rates across various dimensions of project management (Tominc et al., 2024), SMEs encounter significant barriers, including trust deficits, knowledge gaps, infrastructure limitations, and a shortage of skilled professionals (Zavodna et al., 2024). Overcoming these obstacles requires a strategic approach that fosters trust through transparency, ethical compliance, and tailored support systems. Factors influencing AI adoption in SMEs include top management commitment, organizational readiness, external support, employee adoption, and competitive pressure (Ingalagi et al., 2021). Despite these challenges, AI and other modern technologies are increasingly important for SMEs to remain competitive (Hansen & Bøgh, 2020). To overcome implementation barriers, SMEs require targeted strategies, including better understanding of AI applications, improved access to expertise, and development of tailored solutions that address their specific needs and resource constraints (Tominc et al., 2024; Zavodna et al., 2024).

Trust in AI is contingent on multiple interrelated factors, including top management commitment, organizational readiness, external support, employee adoption, and competitive pressure (Ingalagi et al., 2021). Research indicates that many SME decision-makers lack confidence in AI's ability to generate reliable and ethical outcomes, which inhibits widespread adoption (Szedlak et al., 2021). Additionally, SMEs often struggle with aligning AI applications with their operational needs due to insufficient information and training resources (Zavodna et al., 2024). Ethical concerns further compound the trust

deficit (Wang, 2022). Many AI governance frameworks prioritize large enterprises, leaving SMEs without clear ethical guidelines that address their specific challenges (Soudi, Bauters, 2024). The absence of standardized AI accreditation processes contributes to uncertainty regarding compliance with ethical standards, regulatory frameworks, and data protection measures (Rawashdeh et al., 2023). Consequently, SME leaders remain hesitant to invest in AI-driven solutions, fearing legal ramifications and reputational risks (Zavodna et al., 2024). It should be noted that specific factors such as access to knowledge, transparency, explainability, certification, and self-imposed standards and guidelines are important for increasing overall trust in AI (Bedué, Fritzsche, 2021).

Developing reliable artificial intelligence (AI) solutions, both in academia and industry, requires addressing multiple dimensions, including legal, social, ethical, public perception, and environmental factors. While numerous guidelines, principles, and toolkits have been introduced worldwide, their practical implementation—particularly among small and medium-sized enterprises (SMEs) – remains limited due to insufficient knowledge, expertise, and resources (Crockett et al., 2023).

Enhancing transparency and explainability in AI systems is essential for building trust among SME stakeholders. AI solutions must provide clear insights into decision-making processes, allowing users to interpret algorithmic outputs effectively. Studies emphasize that SMEs are more likely to adopt AI when they understand how it functions and can assess its reliability in real-world applications (Szedlak et al., 2021). Furthermore, trust in AI can be reinforced by introducing sector-specific ethical frameworks and accreditation mechanisms. A tailored accreditation system would ensure that SMEs have access to reliable AI solutions that adhere to industry-specific ethical standards (Marwa Samih Soud). Establishing transparent auditing mechanisms and AI certification processes can mitigate concerns regarding biased decision-making and data privacy violations, fostering a regulatory environment conducive to responsible AI adoption (Soudi, Bauters, 2024).

Building AI trust in SMEs necessitates targeted training programs that address the unique knowledge gaps within smaller organizations. A lack of AI literacy remains a critical barrier to adoption, as SME employees and managers often lack the expertise to evaluate AI's potential benefits and risks (Soudi, Bauters, 2024). To address this issue, SMEs require accessible educational resources, including case studies, best practices, and hands-on training modules designed to enhance their AI capabilities. Additionally, collaborative initiatives between policymakers, industry leaders, and academic institutions can support SMEs in their AI adoption journey (Kumar, 2022). By facilitating AI knowledge-sharing platforms and mentorship programs, stakeholders can provide SMEs with the necessary guidance to navigate ethical, technical, and operational challenges (Szedlak et al., 2021).

It should be emphasized, that trust in AI is a cornerstone of successful AI adoption in SMEs. Addressing concerns related to transparency, ethical compliance, and AI literacy is essential for fostering confidence among SME decision-makers. By implementing sector-specific accreditation, explainable AI solutions, and targeted training programs, SMEs can overcome trust-related barriers and leverage AI for enhanced competitiveness and innovation. In the broader context of Industry 5.0, prioritizing human-centric AI approaches will be instrumental in unlocking the full potential of AI technologies while ensuring ethical integrity and regulatory alignment (Enshassi et al., 2024).

3.METHODOLOGY

3.1. *Participants*

The study focused on managers employed in Poland's small and medium-sized enterprises (SMEs) sector. The sampling method was used to obtain primary data from a wider group of respondents. A purposive sampling technique (convenience sample) was used to increase the possibility of generalizing the results, covering 350 managers of SMEs in which AI technology was implemented. Of these, 295 complete responses were obtained, corresponding to a return rate of 84.29% compared to the initially assumed number of participants. This group included people holding managerial positions at various levels of management – from operational managers to business owners. The respondents represented various industries like trade, services, manufacturing, and information technology. Most participants had higher education (87.11%) and at least several years of professional team management or business experience. Their knowledge and practical experience made them a valuable source of information in the context of the analyzed research variables.

3.2. Research Protocol and Stimulus

The primary data for this study was collected using a self-administered questionnaire. The survey questions were developed based on a thorough analysis of the literature. They were prepared in Polish to ensure respondents fully understood the content and to obtain reliable answers. The data collection process lasted from February 15 to March 10, 2025. A research questionnaire containing items measuring trust, usefulness, ease of use, attitude, and behavioral intention was used as a stimulus. The questions were formulated clearly and understandably to give respondents accurate answers.

3.3. Research Apparatus

The questionnaire began with an introductory section that presented the study objectives, the principles of voluntary participation, the possibility of withdrawing from participation at any stage, and ethical issues related to data processing. The following section included questions about demographic data and key aspects of the study. The main variables were assessed using a five-point Likert scale, where one meant 'strongly disagree' and five meant 'strongly agree.' The scales for measuring trust, attitude, and behavioral intention were adapted from the study by Al-Momani and Ramayah (2023). At the same time, the items regarding perceived usefulness and ease of use were based on the work of Alsharo et al. (2020).

3.4. Analysis of Measurement Data

In order to investigate the role of perceived trust in the process of implementing AI technologies in the SME sector, a multi-stage analytical approach was used. The first stage included the analysis of descriptive statistics, such as arithmetic means, standard deviations, and correlations between variables, which allowed for the preliminary identification of patterns and relationships in the empirical data (Al-Rahamneh et al., 2023). A factor analysis (CFA – Confirmatory Factor Analysis) was conducted in the next stage. Factor Analysis) to confirm the construct validity of the adopted latent variables. Then, structural equation modeling (SEM – Structural Equation Modeling) allowed for the simultaneous estimation of the relationships between variables and verification of the research hypotheses (H1–H6). The analyses were carried out using SmartPLS 4 software, which allows for the analysis of models using the Partial Least Squares (PLS-SEM), appropriate for exploratory research and composite models. The hypothesis verification process included assessing the significance of paths between variables based on the values of regression coefficients and the level of statistical significance ($p < 0.05$). The reliability and validity of the measurement model were assessed separately. Reliability was assessed using the Composite coefficients Reliability (CR) and Cronbach's Alpha, while the values of the average confirmed convergent validity explained variance (AVE). The assumption of data normality and the values of correlation coefficients between variables were also checked.

4. RESULTS

For grade properties, psychometric applied tools research was carried out analysis model measuring, including assessment accuracy convergent, relevance discriminatory, and reliability internal construction latent. Results obtained for attempts SME managers in Poland indicate a high-quality model measuring and adequacy to the specificity of the examined context (Table 1). Relevance convergent verified by indicator average explained variance (AVE, Average Variance Extracted). All constructs have reached AVE values exceeding the recommended threshold of 0.50, including ranges from 0.603 to 0.761. This means that over 60% of the variance position observed is explained by corresponding latent variables, which confirms the cohesion content scale and its ability to measure assumed constructs. The highest AVE value was obtained for construct perceived usability, which suggests a strong link position with a given theoretical variable. Reliability construction was rated by use of coefficient reliability composite (CR, Composite Reliability), which in all cases exceeded the minimum value recommended in the literature item ($CR > 0.70$). CR values were within ranges from 0.801 to 0.861, confirming internal tools' high cohesion. The highest reliability was noted for variable perceived trust ($CR = 0.861$), which may testify to high homogeneity position measuring in this area. All standardized loads they contained ranged from 0.588 to 0.819 and were important statistically. This confirms the strong compounds between observable variables and their corresponding latent constructs.

No low values load factorial indicates accurate selection position measuring and lacks the need to eliminate them from further analysis.

Table 1. Validity and reliability of the questionnaire

Constructs	1	2	3	4	5
1. Trust	0.672				
2. Usefulness	0.482	0.684			
3. Ease of use	0.621	0.608	0.589		
4. Attitude	0.636	0.581	0.498	0.618	
5. Behavioral intention	0.611	0.525	0.683	0.598	0.701
Number of items	4	5	5	3	3
Range of factor loadings	0.672–0.812	0.588–0.731	0.596–0.693	0.762–0.819	0.715–0.782
Average explained variance (AVE)	0.692	0.761	0.603	0.621	0.665
Maximum shared variance	0.514	0.498	0.493	0.487	0.531
Composite Reliability (CR)	0.861	0.813	0.823	0.801	0.812

Source: own elaboration.

Discriminant validity was assessed according to the Fornell-Larcker criterion. The square roots of the AVE values (placed on the diagonal of the correlation matrix) exceed the correlations between the constructs, confirming that the studied variables represent separate and identified theoretical concepts. This indicates a lack of semantic overlap between the variables and the tool's ability to distinguish between them. This may indicate a higher level of digital maturity, greater trust in new technologies, and a clearer internalization of measurement concepts in the Polish SME sector. Such results confirm that the applied measurement model is statistically correct and culturally appropriate to local conditions.

The results of path analysis conducted within the framework of structural equation modeling (SEM) indicate statistically significant relationships between all the studied constructs. All t-statistic values exceed the threshold value of 1.96, and each path reached the significance level of $p < 0.001$, indicating a very high confidence level in the assumed relationships.

Table 2. Structural Equation Path Coefficients Among Variables

	B	Beta	SE	T
Trust → Usefulness	0.239	0.314	0.023	10.39
Trust → Attitude	0.261	0.298	0.026	10.04
Trust → Ease of use	0.268	0.336	0.025	10.72
Usefulness → Attitude	0.204	0.269	0.028	7.29
Ease of use → Attitude	0.312	0.359	0.027	11.56
Attitude → Behavioral intention	0.347	0.371	0.029	11.97

Note : $p < 0.05 = *$, $p < 0.01 = **$, $p < 0.001 = ***$

Source: own elaboration.

Trust significantly affected Usefulness, Attitude, and Ease of Use, with standardized Beta coefficients of 0.314, 0.298, and 0.336, respectively. A particularly strong effect was observed in the path from trust to ease of use, suggesting that people who trust a technological system perceive it as more intuitive and easy to use. Furthermore, usability and ease of use significantly affected the user's attitude towards the technology (Beta = 0.269 and 0.359). These results are consistent with the Technology Acceptance Model (TAM) assumptions, in which cognitive constructs shape the attitude

leading to the decision to accept the system. The strongest relationship in the entire model was observed between attitude and behavioral intention, where the beta coefficient value was 0.371, which had a high statistical significance ($T = 11.97$). This means that the more positive the attitude towards technology, the greater the readiness to use it. The presented results confirm the coherence and adequacy of the theoretical model, in which trust plays a key role in shaping the perception of usefulness and ease of use, and these, in turn, affect the user's attitude and intention to implement the technology. In the context of the study conducted among SME managers in Poland, this model effectively explains the mechanisms behind adopting modern technological solutions, including artificial intelligence.

5. DISCUSSION

In the face of dynamic technological changes, small and medium-sized enterprises (SMEs) are faced with the need for structural and operational transformation, which is increasingly being catalyzed by artificial intelligence (AI). However, integrating AI-based solutions is not limited to the technical aspect - it is a profound transformation of how an organization functions. It requires not only the modernization of infrastructure and the implementation of new digital tools but also the reconstruction of decision-making processes, organizational culture, and knowledge management models. As noted by Almashawreh et al. (2024), effective AI implementation depends not only on the level of technological advancement but also on structural organizational readiness, including the openness of management, digital competencies of employees, and the ability to adapt to learning. Similarly, Schwaeye et al. (2024) point to the need for a holistic approach to innovation management. AI is not perceived as an incidental technological implementation but as a long-term component of the company's development strategy. Only such an approach allows for achieving the full benefits of implementing systems based on artificial intelligence, such as increasing operational efficiency, improving the quality of business decisions, or personalizing the product offer. In this context, trust in artificial intelligence appears to be one of the key determinants of the effective adaptation of this technology in the SME environment.

Trust acts as a factor that enables the transition from technological possibilities to practical use. It includes trust in the technology itself - its operation, transparency, and reliability - and in the organizational processes supporting its implementation, such as leadership, training, quality control processes, or applied ethical standards. Trust takes the form of a compensatory mechanism in conditions of limited financial resources, deficits in technological competencies, and the lack of a clear regulatory framework. In practice, this means that companies that trust new technologies are more willing to take risks related to their implementation, even if they do not have full knowledge of their operation. Trust also helps to alleviate the fear of the unknown, reduce the cognitive barrier, and mobilize to make strategic decisions in situations of uncertainty.

The results of this empirical study confirm the importance of Trust as a central variable in the process of AI adoption in SMEs. As the analysis of the structural model showed, Trust directly affects the perceived ease of use ($\beta = 0.336$), perceived usefulness ($\beta = 0.314$), and attitude towards technology ($\beta = 0.298$). This means that the greater the respondents' trust in AI-based systems, the more likely they perceive these technologies as user-friendly, intuitive, and useful in everyday operational activities. This is consistent with the classic TAM (Technology Acceptance Model) assumptions, which assume that perceptions regarding usefulness and ease of use are the main determinants of attitude toward new technology, which conditions implementation intention. The strongest relationship was observed between attitude and implementation intention ($\beta = 0.371$), which indicates that managers' positive attitude towards AI translates into their readiness to implement these solutions in practice. Importantly, in the analyzed model, Trust also indirectly affects this readiness - through its impact on earlier cognitive components. Such results allow us to consider Trust as an intermediary variable with high predictive power in the digital transformation process of small and medium-sized enterprises. The discussed results are also consistent with the observations of other researchers. Dörr et al. (2024) emphasize that trust in predictive algorithms and decision support systems is a condition for their acceptance in management practice. Ekuma (2024) and Oldemeyer et al. (2024) indicate that the AI implementation strategy should include not only technological aspects but also a social component - including educational activities, transparency of algorithms, certification of systems, and implementation of transparent ethical principles. All these elements support building Trust among employees and management staff, which

translates into higher implementation effectiveness and reduced risk of failure. In conditions of economic instability, high volatility of the environment, and constantly growing competitive pressure.

Trust in technology is no longer just a supporting factor - it becomes a condition for survival. As shown by Mishrif and Khan (2023), SMEs that demonstrate higher levels of Trust in digital technologies are more likely to implement them and are better prepared to respond to crises, such as the COVID-19 pandemic or supply chain disruptions. Trust thus acts as a strategic buffer, increasing organizational resilience and the ability to recover from external shocks. More broadly, the results of this study indicate the need to redefine the approach to technology implementation in SMEs – from technocratic to integrated, taking into account both technological and psychosocial aspects. Building trust should become an integral part of innovation policies, public support programs, and strategies offered by AI solution providers. This includes, among others, promoting transparency in algorithm design, creating sectoral codes of ethics, implementing certification mechanisms, and providing access to education and development resources for SME employees.

Finally, it should be emphasized that Trust in AI is not a static construct – it is subject to dynamic changes depending on the user experience, the technological maturity of the organization, and the institutional context. In this sense, trust management should be treated as a continuous process, requiring systematic monitoring and updating of the strategy. Then, will it be possible to fully exploit the potential of artificial intelligence to support the sustainable development of the SME sector in the digital economy.

6. CONCLUSION, LIMITATIONS, AND FURTHER RESEARCH

The integration of artificial intelligence (AI) technology into the organizational structure of small and medium-sized enterprises (SMEs) goes far beyond its technical aspect. It is a complex process of organizational, cultural, and strategic transformation. Implementing AI-based solutions requires appropriate IT infrastructure, a transformation of thinking and decision-making, and the redefinition of internal management processes. In this context, trust should be perceived as a strategic resource that plays a mediating role in adapting to new technologies. It is a mechanism that limits cognitive uncertainty, strengthens implementation intentions, and supports the adaptive flexibility of organizations operating in a turbulent and unpredictable environment. Perceiving trust as a component of organizational capital allows for a deeper understanding of the mechanisms of managing technological change, especially in the SME sector, which requires specific implementation strategies due to limited access to resources – both material and non-material.

The results of empirical studies indicate that trust plays a key role in shaping the perception of the usefulness of AI solutions, determining decision-makers attitudes and the level of their acceptance of technology. A high level of trust correlates positively with the willingness to implement innovations, lowers the threshold of resistance to technological change, and promotes internalizing new operational practices. Trust cannot be treated as a one-dimensional phenomenon – it includes both a rational component (based on the assessment of the credibility and effectiveness of technology) and an affective component (related to the emotional attitude of users towards AI). A multidimensional approach allows us to capture its complex structure and function in transformation processes.

The conclusions from the research indicate the need to adopt a holistic paradigm for implementing artificial intelligence technologies, in which infrastructural activities should go hand in hand with educational, ethical, and communication initiatives. Building algorithmic transparency, ensuring compliance with regulations on personal data protection, and disseminating knowledge about the functioning of AI are becoming key determinants of the institutionalization of trust in the context of digital transformation. In the long term, trust can be considered a strategic organizational buffer that increases enterprises' resilience to external disruptions, supports business continuity, and enables the development of sustainable business models. Trust also facilitates investment decisions in conditions of incomplete information and high technological complexity, making it a fundamental element supporting long-term organizational innovation. Despite the cognitive value of the proposed theoretical model, its analytical scope was limited to basic cognitive constructs such as usefulness, ease of use, attitude, and implementation intention. In order to deepen the analysis, future studies should consider additional moderating and mediating variables such as technological risk perception, data privacy concerns, the

level of digital maturity of the organization, and the institutional and regulatory context. Integration of these variables could provide a more comprehensive picture of psychosocial and organizational conditions that determine the effectiveness of AI implementations in the SME sector. It is also recommended that longitudinal studies be conducted to capture the dynamics of processes related to building trust, transforming attitudes, and making implementation decisions over a longer time horizon.

Considering the temporal dimension would allow for identifying adaptive trajectories and the evolution of artificial intelligence perception in the context of organizational experience. Given the ongoing expansion of AI technology in various sectors of the economy, including education, it would also be advisable to expand the field of analysis to include issues related to the relationship between transformational leadership, leaders' emotional competencies, and the level of organizational involvement in the technology implementation process. Examining these interactions can contribute to developing effective models of technological change management embedded in an ethical, social, and institutional context.

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