

The Relationship Between Organizational Culture and the Level of Artificial Intelligence Application Use Among Employees

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Abstract

Purpose: This study examines the relationship between organizational culture and employees' actual use of Artificial Intelligence (AI) applications in the workplace.

Methodology: A quantitative survey was conducted with 126 employees in Indonesia, selected through random sampling. Organizational culture was measured using innovation orientation, collaboration, adaptability, and openness to technology, whereas AI usage was assessed based on frequency, intensity, and practical application at work. Data were collected using a Likert-scale questionnaire and analyzed using validity and reliability tests, Pearson correlation, and simple linear regression.

Results: The findings revealed a positive and significant relationship between organizational culture and AI usage ($r = 0.626$, $p < 0.001$). Regression analysis indicated that organizational culture accounted for 39.2% of the variance in AI usage ($R^2 = 0.392$).

Conclusions: Organizational cultures characterized by innovation, collaboration, and openness to technological change promote higher AI adoption among employees. Effective AI implementation depends not only on technological readiness but also on supportive organizational environments.

Limitations: The study is limited by its relatively small sample size and the use of a single independent variable, which may not fully explain the factors influencing AI usage.

Contributions: This study contributes to the organizational behavior and information systems literature by providing empirical evidence of employee-level AI usage in Indonesia and offering practical insights for fostering a digital-ready culture that supports AI adoption and digital transformation.

Keywords: *AI Adoption, Artificial Intelligence, Digital Transformation, Employee Behavior, Organizational Culture*

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1. Introduction

In the era of globalization and rapid technological advancement, organizations are compelled to adapt to dynamic business environments. Digital transformation, shifting consumer preferences, and increasing competitive complexity drive companies to rely not only on physical resources but also to strengthen internal aspects, such as organizational culture. Organizational culture is a system of

values, norms, and beliefs that shape employee behavior when carrying out work activities. An adaptive and innovative organizational culture can serve as a source of competitive advantage, whereas a rigid and unresponsive culture has the potential to hinder an organization's ability to face change ([Gunawan, Hasibuan, Sinaga, & Solin, 2025](#)). The strategic importance of this culture is increasingly evident in its role as a filter for external disruption. According to recent organizational theories, a robust culture acts as a navigational compass, ensuring that when new technologies emerge, employees do not view them as threats but as tools for collective advancement. In Indonesia, where organizational structures often lean towards hierarchical and paternalistic styles, the transition toward a more egalitarian and tech-savvy culture represents a significant shift that requires deeper exploration into how traditional values interact with modern digital demands ([Margherita, 2022](#)).

Alongside these developments, Artificial Intelligence (AI) technology has emerged as a primary innovation that transforms organizational operations. AI is utilized not only for automation but also plays a role in supporting decision-making, enhancing operational efficiency, and fostering organizational innovation ([Benbya, Davenport, & Pachidi, 2020](#)). The implementation of AI also shifts employee work patterns toward data- and technology-driven approaches, requiring organizational readiness not only in terms of infrastructure but also in terms of human resources and a supportive work culture. However, not all organizations can optimally implement and utilize AI, particularly at the employee level.

It is important to distinguish between AI adoption, AI acceptance, and actual AI usage, as these concepts are often used interchangeably despite representing different stages of technology implementation. AI adoption generally refers to an organization's decision to introduce and implement AI technologies in its operations. AI acceptance, rooted in the Technology Acceptance Model (TAM), focuses on employees' attitudes, perceived usefulness, and intention to use AI systems. In contrast, actual AI usage reflects the real and observable utilization of AI applications in daily work. While adoption and acceptance indicate organizational readiness and user willingness, actual usage represents the extent to which AI has been integrated into employees' work practices and their routines. Therefore, examining actual usage provides a more concrete assessment of AI implementation success than merely measuring adoption intention or acceptance perception.

The integration of AI within an organization impacts technical aspects and influences work culture and overall organizational practice. AI encourages the creation of a more adaptive, innovative work environment oriented toward continuous learning ([Murire, 2024](#)). Additionally, AI implementation can alter the values, norms, and interaction patterns within an organization, thereby forming a new and more dynamic work culture ([Pawar & Shah, 2024](#)). In this context, organizational culture serves not only as a background but also as a factor that actively influences the success of technological implementation. In other words, the successful use of AI is determined not only by the technology itself but also by how the organizational culture supports or hinders its use at the individual level of the organization.

Furthermore, organizational culture plays a vital role in shaping employees' attitudes and behaviors toward technology use. Research by [Soulami, Benchekroun, and Galiulina \(2024\)](#) indicates that AI adoption in the workplace affects employee motivation, engagement, and attitudes. Employees in organizational environments with cultures that support collaboration, openness, and innovation tend to accept new technologies more readily. Conversely, less adaptive organizational cultures can lead to uncertainty and resistance to technology use. This is reinforced by research from [Sundarasan, Kamaludin, Ibrahim, Rajagopalan, and Danila \(2021\)](#), stating that organizational and strategic factors, including work culture, are key determinants in the success of AI adoption within human resource management. However, most of these studies still focus on general adoption aspects rather than actual usage by employees in their daily work activities.

From the perspective of organizational behavior theory, organizational culture shapes employees' cognitive frameworks, behavioral norms, and responses to technological change. According to the Technology Organization Environment (TOE) framework and contemporary organizational behavior

literature, cultural characteristics such as innovation orientation, learning support, openness to change, and collaborative practices significantly influence employees' engagement with digital technology. Recent studies have emphasized that successful AI implementation depends not only on technological capabilities but also on organizational factors that encourage experimentation, knowledge sharing, and continuous learning. Consequently, organizational culture serves as a critical mechanism through which organizations translate technological investments into actual employee behaviors.

In addition to technology adoption, organizational culture drives innovation and improves organizational performance. [Vargas-Halabi and Yagüe-Perales \(2024\)](#) explain that organizational culture functions as an internal mechanism influencing decision-making processes, collaboration, and the development of creative ideas. Consistent with this, [Zhang, Zeng, Liang, Xue, and Cao \(2023\)](#) state that an organizational culture supporting openness, collaboration, and knowledge sharing can enhance innovation and a firm's competitive advantage. Thus, organizational culture functions not only as a behavioral guide but also as a strategic factor in increasing organizational competitiveness in the face of external environmental changes.

Despite various studies examining the relationship between organizational culture and AI adoption, several limitations remain in the literature. Most previous research tends to focus on the macro-organizational level, such as corporate strategy, organizational innovation, and technological readiness in supporting AI implementation ([Neumann, Guenduez, & Veit, 2024](#); [Pawar and Shah, 2024](#)). However, this approach does not fully explain how organizational culture influences the behavior of individual employees in using AI technology in their daily work routines. Consequently, there is a gap between macro-level organizational studies and the reality of technology use at the individual employee's level.

Moreover, previous research generally emphasizes general AI adoption aspects, such as behavioral intention or organizational readiness, rather than the actual usage of technology by employees ([Nguyen, 2025](#)). Actual usage is a more concrete indicator of successful technological implementation, as it reflects the extent to which the technology is utilized in work practices. This suggests that research on the actual use of AI by employees remains empirically underexplored. On the other hand, research approaches used in previous studies are still dominated by conceptual methods, literature reviews, and qualitative studies; thus, quantitative empirical research directly testing the relationship between organizational culture and AI use at the individual level is still relatively limited ([Murire, 2024](#); [Al-Samman, 2024](#)). This limitation indicates the need for more measurable, data-driven research to understand the link between organizational culture and technology use behavior. This reinforces the urgency of conducting empirical research that specifically tests the relationship between these two variables.

Furthermore, most previous studies were conducted in the context of developed countries, which may not fully represent the organizational conditions in developing countries, specifically Indonesia. Differences in work culture characteristics such as collectivism values, social norms, and interaction patterns potentially influence how employees perceive and use AI technology in their work ([Zhang et al., 2023](#)). Therefore, research specifically examining the relationship between organizational culture and the level of AI application usage by employees within the local Indonesian context is necessary. Thus, the Indonesian context is vital for obtaining a more contextual understanding.

Although previous studies have contributed substantially to the understanding of AI implementation, three important gaps remain. First, existing research predominantly examines AI adoption and acceptance rather than actual AI usage at the employee-level. Second, most studies focus on organizational readiness, technological infrastructure, or strategic implementation, while paying limited attention to the behavioral outcomes of organizational culture on employees' daily AI utilization. Third, empirical evidence from developing countries, particularly Indonesia, remains scarce, despite significant differences in cultural values, organizational structures, and digital transformation trajectories. Addressing these gaps is important because actual usage represents the

final stage of technology assimilation and serves as a more direct indicator of whether AI generates practical value within an organization.

Most studies have investigated AI adoption or acceptance at the organizational level. However, little empirical evidence explains how organizational culture influences actual AI usage among employees, particularly in developing countries such as Indonesia. Based on the aforementioned points, a research gap has been identified: limited empirical studies linking organizational culture with the level of AI application usage at the individual employee level, particularly within Indonesian organizations. Based on this gap, the problem formulation of this study is: "How does organizational culture relate to the level of artificial intelligence application usage among employees?" Consequently, this study aims to analyze the relationship between organizational culture and employees' level of AI application usage. This study is expected to provide an empirical contribution to enriching the literature on the role of organizational culture in technology adoption and serve as a foundation for organizations to develop cultures that effectively support digital transformation.

2. Literature Review and Hypothesis Development

2.1 Organizational Culture

Organizational culture is a system of values, norms, and beliefs shared by members of an organization that serves as a guideline for behavior and interaction in the work environment. It reflects a collective mindset that distinguishes one organization from another and influences how individuals make decisions and respond to change ([Widjajakusuma & Anindita, 2025](#)). Furthermore, organizational culture plays a role in forming organizational identity and enhancing social cohesion among members ([Chatman, 2016](#); [Kamaluddin, Ridwan, & Munifa, 2026](#)). According to the Competing Values Framework (CVF), culture is often categorized into four types: Clan, Adhocracy, Market, and Hierarchy, each of which dictates a different level of receptivity toward external disruptions ([Hartnell, Ou, & Kinicki, 2011](#)). In the digital age, this framework has evolved to emphasize "Adhocracy" as the most conducive environment for technological experimentation, as it prizes flexibility and individuality over rigid stability ([Hennekam, Ladge, & Shymko, 2020](#)).

In its development, organizational culture functions not only as a tool for social control but also as a strategic factor in increasing corporate competitiveness ([Nugroho, Riyanto, & Silitonga, 2026](#)). Organizations with strong and adaptive cultures tend to be more capable of facing dynamic business environment changes ([Gunawan, Hasibuan, Sinaga, & Solin, 2025](#); [Manalu, 2025](#)). An innovative organizational culture can also foster a work environment that supports creativity and the development of new ideas ([El, & Clark, 2023](#); [Febrian, & Sani, 2026](#)).

Organizational culture is closely linked to innovation. Research indicates that a culture opens to change and supportive of collaboration can enhance a company's innovation capabilities ([Vargas-Halabi & Yagüe-Perales, 2024](#)). This is particularly relevant in Indonesian organizations, where "Paternalistic" leadership often shapes the culture. If leaders demonstrate a pro-technology stance, the collective culture tends to align more rapidly with digital goals ([Chen & Tian, 2022](#)). This is reinforced by findings that organizational culture significantly influences performance and competitive advantage through mechanisms of innovation and knowledge sharing ([Zhang, Jehangir, Yang, Tahir, & Tabasum, 2024](#)). In a technological context, organizational culture is a critical factor in determining the success of new technology adoption. A flexible, adaptive, and open culture facilitates the implementation of digital technology ([Ekobalawati, 2020](#)). Conversely, a rigid and resistant culture can be a major barrier to digital transformation.

2.2 Artificial Intelligence Usage

Artificial Intelligence (AI) is a technology that enables computer systems to mimic human cognitive abilities, such as learning, data analysis, and automated decision-making. AI has become a primary innovation in digital transformation, capable of improving operational efficiency and the quality of organizational decision-making ([Benbya et al., 2020](#)). The scope of AI usage in modern firms has transitioned from narrow AI, which handles specific tasks like data entry, to generative AI and predictive analytics, which assist in creative problem-solving and strategic planning ([Nguyen, Bui,](#)

[Pham, Nguyen, Pham, & Nguyen, 2025](#)). This shift requires employees to develop AI Fluency, a subset of digital literacy that allows for effective interaction with machine-learning models ([Lubis, Purnomo, Lado, & Hung, 2024](#)). In practice, the use of AI in the workplace continues to grow across various fields, including human resources, marketing and customer service. AI technology helps organizations automate routine tasks and enhance employee productivity ([Murire, 2024](#)). Additionally, AI plays a role in shifting work patterns and organizational structures, creating new dynamics in work culture ([Hirtranusi, Ranti, Nugroho, & Jatmiko, 2026](#)).

Employee AI usage can be measured using indicators such as frequency of use, extent of utilization in work tasks, and perceived benefits. However, a more nuanced measurement also considers actual usage behavior, which distinguishes between forced adoption (using AI because it is mandated) and voluntary usage (using AI because of perceived utility and ease of use ([Aldossary, Ayad, & Moustafa, 2026](#)). Studies show that AI adoption is influenced not only by technological factors but also by organizational and individual factors ([Soulami et al., 2024](#)). Factors such as organizational readiness, management support, and an innovation-supportive work culture also influence the level of AI usage ([Uren & Edwards, 2023](#)). This indicates that successful AI implementation depends not only on technological sophistication but also on the readiness of human resources and organizational environment.

2.3 Theoretical Foundation: Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT)

The relationship between organizational culture and AI usage can be explained through the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). The TAM, developed by [Davis \(1989\)](#), proposes that technology usage is influenced primarily by perceived usefulness and perceived ease of use. Employees are more likely to use technology when they believe it enhances their job performance and can be utilized with minimal effort. In organizational settings, culture plays a significant role in shaping perception. A culture that encourages innovation, experimentation, and continuous learning can increase employees' perceptions of AI usefulness and reduce anxiety associated with new technologies.

Similarly, UTAUT suggests that technology use is influenced by performance expectancy, effort expectancy, social influence, and facilitating conditions ([Wujarso, Saprudin, & Andhitiyara, 2026](#)). Organizational culture contributes to these determinants by establishing norms, values, and behavioral expectations regarding technology use. Supportive organizational cultures provide social encouragement, knowledge-sharing opportunities, and access to resources that facilitate the utilization of AI. Consequently, employees working in cultures characterized by openness, collaboration, and adaptability are more likely to use AI. Both the TAM and UTAUT emphasize that technology adoption is not solely determined by technical factors but is also influenced by organizational and social contexts. Therefore, organizational culture can be considered an important antecedent that shapes employee behavior regarding AI use in the workplace.

2.4 Relationship between Organizational Culture and AI Usage

Organizational culture plays a vital role in influencing employee behavior, including the use of new technologies such as AI. A culture that supports innovation, openness, and learning encourages employees to accept and utilize technology more effectively ([Al-Razgan et al., 2021](#)). This relationship is often mediated by Psychological Safety a cultural climate where employees feel safe to make mistakes while learning new AI systems. When the culture emphasizes learning over immediate perfection, the barriers to AI usage, such as fear of failure or technostress, are significantly reduced ([Raisch & Krakowski, 2021](#)). In the context of AI adoption, an adaptive culture creates a conducive environment for technological implementation by influencing employee perceptions, trust, and readiness ([Murire, 2024](#)). Previous research has also indicated that organizational culture affects the level of innovation and technology use. A strong and positive culture can enhance employees' digital readiness and accelerate the adoption process ([Gunawan et al., 2025](#)). In the specific context of Indonesian firms, cultural values like Mutual Cooperation (*Gotong Royong*) can be leveraged to foster collaborative AI usage, where teams share prompts and insights to improve overall department

performance ([Guo, Bandyopadhyay, Lim, Yang, & Cheng, 2017](#)). Consequently, organizational culture is a key factor in determining the level of AI usage among employees.

2.5 Research Hypotheses

Based on the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and previous empirical findings, organizational culture is expected to influence employees' actual AI usage by fostering innovation, collaboration, adaptability, and openness to technological change. These cultural characteristics create favorable conditions that support learning, experimentation, and the integration of AI technologies into daily work. Therefore, organizational culture is expected to play a significant role in shaping employees' actual AI usage behaviors.

H₁: Organizational culture has a positive and significant relationship with employees' actual usage of artificial intelligence applications

3. Methodology

This study uses a quantitative approach with a survey method, in which data were collected through a research instrument in the form of a Likert-scale questionnaire. This approach was chosen to objectively and measurably test the relationship between organizational culture and the level of AI application usage by employees. The population consisted of employees in companies or institutions that had implemented AI applications in their work activities. The sampling technique used was non-probability convenience sampling, as the questionnaire was distributed through online platforms and professional social networks to reach employees who had experience using AI applications in their work. A random sampling technique was used, with 130 respondents participating in the survey. Data screening procedures were conducted to identify incomplete responses and ensure data quality, resulting in 126 respondents being considered valid for analysis.

The variables consist of an independent variable, organizational culture (*X*), and a dependent variable, the level of AI application usage (*Y*). Organizational culture is measured through indicators, including core values, work norms, leadership, collaboration, and openness to technology. Meanwhile, AI usage is measured through the frequency of use, variety of applications, perceived benefits, and work integration. The instrument consists of 18 statement items using a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

The questionnaire items were developed based on the established literature on organizational culture and technology usage. The organizational culture construct was adapted from previous studies, emphasizing dimensions such as core values, leadership support, collaboration, work norms, and openness to innovation. The AI usage construct was adapted from technology adoption and information systems research, focusing on the frequency of use, diversity of AI applications, work integration, and perceived usefulness. All items were reviewed and adjusted to ensure their suitability for the Indonesian workplace context. Prior to the main survey, the questionnaire was reviewed to assess the clarity, readability, and relevance of its items. Necessary revisions were made to improve the instrument's comprehensibility and minimize potential response bias. Participation in this study was voluntary. Respondents were informed about the purpose of the research before completing the questionnaire and were assured that their responses would remain anonymous and confidential. No personally identifiable information was collected, and all data were used solely for academic research.

Before the data analysis, the instrument was tested for validity and reliability. Validity was determined by the correlation between item scores and total scores (valid if ≥ 0.30). Reliability was tested using Cronbach's Alpha (reliable if ≥ 0.60). The data analysis technique used is Pearson Product Moment correlation to determine the relationship between variables, processed using statistical software with a significance level of 5% ($\alpha = 0.05$). If the significance value is < 0.05 , it is concluded that a significant relationship exists between the two variables.

In addition, a simple linear regression analysis was employed to examine the predictive relationship between organizational culture and AI usage. Given the exploratory nature of this study and its objective of examining the overall relationship between the two constructs, Pearson correlation and simple regression were considered appropriate analytical techniques. Future studies should employ more advanced methods, such as Structural Equation Modeling (SEM) or Partial Least Squares Structural Equation Modeling (PLS-SEM), to investigate the relationships among specific dimensions and explore potential mediating or moderating factors.

4. Results and Discussions

4.1 Descriptive Analysis

The questionnaire was distributed to 130 respondents via social media. However, only 126 respondents were analyzed because four respondents did not fill out the questionnaire completely. The collected data were then analyzed using frequency distribution to describe the characteristics of the respondents.

Table 1. Characteristics of respondents by gender

Gender	Frequency (n)	Percentage (%)
Male	86	68.3
Women	40	31.7
Total	126	100

Table 1 shows that the majority of respondents were men (68.3%), while women accounted for 31.7%. This shows that the use of AI applications in this study is dominated by male employees, which can reflect the composition of the workforce in sectors that use AI technology.

Table 2. Characteristics of respondents by age

Age (Years)	Frequency (n)	Percentage (%)
22-30	41	32.5
31-40	42	33.3
41-50	29	23
51-63	14	11.1
Total	126	100

Table 2 shows that the respondents were dominated by the age groups of 31-40 years (33.3%) and 22-30 years (32.5%). This shows that the majority of respondents were in the productive age group, who tend to be more adaptive to technological developments, including the use of AI applications at work.

Table 3. Characteristics of respondents based on length of service

Tenure	Frequency (n)	Percentage (%)
< 1 year	8	6.3
1-5 years	19	15.1
6-10 years	45	35.7
11-20 years	15	11.9
> 20 years old	39	31
Total	126	100

Table 3 shows that most respondents had a working period of 6-10 years (35.7%) and more than 20 years (31.0%). This shows that the respondents had a fairly mature work experience, allowing them to assess organizational culture and the use of AI more objectively.

Table 4. Characteristics of respondents based on education

Education	Frequency (n)	Percentage (%)
High School	72	57.1
D3	8	6.3
S1	36	28.6
S2	8	6.3
S3	2	1.6
Total	126	100

Table 4 shows that most respondents have high school (57.1%) and S1 (28.6%) education levels. This shows that the use of AI is not only limited to employees with higher education but has also been used by various levels of education in organizations.

Table 5. Characteristics of respondents based on field of work

Field of Work	Frequency (n)	Percentage (%)
Operational	79	62.7
Administration	18	14.3
Finance	8	6.3
Marketing	7	5.6
Education	8	6.3
Research	4	3.2
Hospitality	2	1.6
Total	126	100

Table 5 shows that most respondents came from the operational field (62.7%). This shows that the use of AI in this study is widely applied to operational activities that are generally related to work efficiency and process automation.

4.2 Validity and Reliability Tests

The validity test was carried out using the Corrected Item-Total Correlation. The test results showed that all items had a correlation value greater than 0.30; therefore, all items were declared valid. The highest value was found in the integration indicator in the work (0.784), while the lowest value was 0.441, which still met the validity criterion. The reliability test was conducted using Cronbach's alpha. The results showed a value of 0.931, which means that all the research instruments have a very high level of reliability ($\alpha > 0.60$). Thus, the questionnaire was deemed suitable for use as a data collection tool.

4.3 Descriptive Statistics of Research Variables

Table 6. Descriptive statistics of research variables

Variables	Mean	Standard Deviation
Organizational Culture	4.12	0.58
AI Usage	3.98	0.63

Table 6 shows that respondents generally perceived organizational culture positively ($M = 4.12$, $SD = 0.58$). Similarly, the level of AI usage among employees was relatively high ($M = 3.98$, $SD = 0.63$), suggesting that AI applications have been integrated into various work-related activities. The relatively low standard deviation values for both variables indicate that respondents' perceptions were reasonably consistent, with limited dispersion around the mean scores for organizational culture and AI usage alike.

4.4 Assumption Testing

Table 7. Normality test results

Test	Statistic	Sig.	Criteria	Conclusion
Kolmogorov-Smirnov	0.072	.200	Sig. > 0.05	Normal
Shapiro-Wilk	0.984	.180	Sig. > 0.05	Normal

Table 7 shows that both normality tests yielded significance values above the 0.05 threshold, with the Kolmogorov-Smirnov test producing a statistic of 0.072 ($p = 0.200$) and the Shapiro-Wilk test producing a statistic of 0.984 ($p = 0.180$). Because both tests converge on the same conclusion despite relying on different underlying calculations, this consistency strengthens confidence that the residuals were normally distributed and that the data satisfy the normality assumption required for subsequent parametric analyses, including Pearson correlation and simple linear regression.

Table 8. Linearity test results

Relationship	F Value	Sig. Linearity	Sig. Deviation from Linearity	Conclusion
Organizational Culture → AI Usage	18.542	0	0.281	Linear

Table 8 shows that the relationship between organizational culture and AI usage produced an F value of 18.542 with a linearity significance of 0.000, well below the 0.05 threshold, while the deviation-from-linearity significance of 0.281 remained comfortably above 0.05. This pattern, a significant linearity result paired with a non-significant deviation from linearity, confirms that the relationship between the two variables follows a linear pattern rather than a curvilinear one, satisfying the linearity assumption required for simple linear regression.

Table 9. Heteroscedasticity test results (Glejser)

Variable	t-value	Sig.	Criteria	Conclusion
Organizational Culture	0.846	0.399	Sig. > 0.05	No Heteroscedasticity

Table 9 shows that the Glejser test produced a t-value of 0.846 for organizational culture with a significance value of 0.399, which exceeds the 0.05 threshold. This indicates that the variance of the regression residuals does not change systematically across levels of organizational culture, confirming that heteroscedasticity was not present in the model and that the assumption of homoscedasticity required for valid regression inference was satisfied.

4.5 Correlation Test

Pearson's correlation analysis was conducted to determine the relationship between organizational culture and employees' use of AI applications.

Table 10. Pearson correlation test results

Variables	Organizational Culture	Use of AI
Organizational Culture	1	0.626**
Use of AI	0.626**	1
Sig. (2-tailed)	-	0
N	-	126

Table 10 shows a correlation coefficient of 0.626 between organizational culture and AI usage, indicating a moderately strong positive association between the two variables. This finding suggests that employees working in organizations characterized by supportive values, collaboration, innovation, and openness to technology are more likely to integrate AI applications into their daily work. This result supports the view that organizational culture functions as a contextual factor that facilitates technology utilization beyond purely technical considerations.

4.6 Simple Linear Regression Analysis

Table 11. Regression coefficients

Variables	B	Std. Error	Beta	t	Sig.
Constant	1.214	0.382	0.771	3.178	0.002
Organizational Culture	0.655	0.073	0.626	8.938	0.001

Table 11 shows that organizational culture had a positive and significant effect on employees' AI usage ($B = 0.655$, $\beta = 0.626$, $t = 8.938$, $p = 0.001$). This indicates that an increase in organizational culture is associated with an increase in AI usage among employees. The positive regression coefficient suggests that employees working in organizations characterized by stronger cultural values, collaboration, leadership support, and openness to technology are more likely to use AI applications in their daily work activities.

Table 12. Model summary

Statistic	Value
R	0.626
R^2	0.392
Adjusted R^2	0.387
F	79.885
Sig.	0.001

Table 12 shows an R value of 0.626, indicating a moderately strong positive relationship between organizational culture and AI usage. The coefficient of determination ($R^2 = 0.392$) indicates that organizational culture explains 39.2% of the variance in employees' AI usage, while the remaining 60.8% is influenced by other factors not included in this study. Furthermore, the F value of 79.885 with a significance level of 0.000 demonstrates that the regression model is statistically significant and suitable for explaining the relationship between organizational culture and AI usage.

4.7 Discussion

The results of the study show that there is a relationship between organizational culture and the level of use of Artificial Intelligence (AI) applications by employees. This finding suggests that organizational culture functions not only as a set of shared values but also as a contextual mechanism that shapes employees' technology-related behaviors. Employees working in organizations characterized by innovation, collaboration, leadership support, and openness to technology are more likely to integrate AI applications into their daily work. Therefore, the successful utilization of AI depends not only on technological availability but also on the cultural environment in which employees operate in.

The integration of AI in the modern workspace, particularly in the 2024-2025 period, suggests that organizational culture acts as a digital catalyst. According to [Gunawan, Hasibuan, Sinaga, and Solin \(2025\)](#), organizations in Indonesia that successfully implement AI are those that have moved beyond technical infrastructure to focus on cultural psychological safety. This concept refers to an environment in which employees feel safe to experiment with AI tools without fear of immediate replacement or reprimands for technical errors. When the culture explicitly rewards data-driven curiosity, the barriers to AI use diminish significantly. Furthermore, [Nguyen, Bui, Pham, Nguyen, Pham, and Nguyen \(2025\)](#) highlight that in the post-pandemic work environment, culture serves as the primary filter through which employees perceive AI either as a threat to their job security or as an empowering "digital co-pilot." This study confirms that a positive cultural filter significantly boosts actual usage metrics beyond mere behavioral intention, as employees begin to see technology as a partner in their professional growth.

Moreover, the dimension of courage to take risks became a critical predictor of AI adoption in 2025. AI systems inherently involve iterative learning processes that may produce varied outputs. [Pawar and Shah \(2024\)](#) argue that organizations with a high tolerance for calculated errors see a much higher rate

of AI integration compared to risk-averse counterparts. In the Indonesian corporate landscape, where power distance can often stifle individual initiative, a shift toward an adhocracy culture-characterized by flexibility and decentralization-is essential. As noted by [Agrawal \(2024\)](#), when leaders provide a sandbox environment where employees can fail forward with AI tools, the frequency of daily AI application usage increases. This suggests that the leadership indicator in this study is not just about giving orders but about actively modeling a risk-tolerant approach to new technology.

Theoretically, the results of this study are in line with the theory of organizational culture put forward by [Schein \(2010\)](#) which states that organizational culture is a pattern of basic assumptions that develop in the organization and serves as a guideline for members' behavior in responding to changes in the environment. In the context of digital transformation, an organizational culture that supports innovation and openness to technology will shape an employee's mindset and behavior, making them more adaptive to the use of AI. Thus, organizational culture can function as a social mechanism that accelerates the acceptance and use of technology in an organization. In addition, [Robbins and Judge \(2017\)](#) explained that an effective organizational culture is characterized by an orientation to innovation, courage to take risks, and support for change. The organizational culture indicators in this study, such as company core values, work norms, leadership, collaboration, and openness to technology, play an important role in encouraging employees to use AI. A supportive and conducive work environment increases employee confidence in using new technologies, thereby encouraging an increase in the frequency and intensity of AI use at work.

The results of this study can also be explained through the Technology Acceptance Model (TAM) framework developed by [Davis \(1989\)](#), which states that the use of technology is influenced by perceived usefulness and ease of use. In organizations with a positive and adaptive culture, employees tend to have a better perception of the benefits of AI, thereby increasing their tendency to use the technology actively. A supportive organizational culture reduces the uncertainty associated with new technologies and encourages employees to experiment with AI tools without fear of failure. Consequently, employees develop stronger perceptions of usefulness and ease of use, which subsequently increases their actual AI usage behavior. This finding supports TAM's proposition that contextual organizational factors play an important role in shaping technology utilization. In addition, the Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by [Venkatesh, Thong, and Xu \(2012\)](#) also emphasizes that social factors and organizational conditions affect technology use behavior. In this case, organizational culture can be understood as a social factor that shapes the norms and expectations of technology use in the workplace. Furthermore, organizational culture facilitates conditions by providing resources, managerial support, learning opportunities, and collaborative environments that enable employees to use AI more effectively. Therefore, the relationship identified in this study can be explained not only through individual perceptions but also through organizational mechanisms that encourage the sustained use of technology.

Furthermore, organizational culture facilitates conditions by providing resources, managerial support, learning opportunities, and collaborative environments that enable employees to use AI more effectively. Therefore, the relationship identified in this study can be explained not only through individual perceptions but also through organizational mechanisms that encourage the sustained use of technology. The findings of this study are also consistent with those of previous studies. [Zhen, Yousaf, Radulescu, and Yasir \(2021\)](#) found that an innovative organizational culture has a significant influence on the adoption of digital technology in companies. Research shows that organizations that encourage learning, experimentation, and innovation will be faster in implementing new technologies, including AI. Furthermore, research by [Al-Shanti, Jebreel, Qabajeh, Nassoura, and Airout \(2024\)](#) shows that organizational culture that supports innovation has a positive effect on the use of information systems in organizations. This finding reinforces the notion that organizational values that are open to change increase employees' tendency to utilize technology.

Research by [Uren and Edwards \(2023\)](#) also found that a flexible and adaptive organizational culture plays an important role in improving employees' digital readiness, including in the use of AI-based technology. In addition, [Wibowo \(2016\)](#) stated that a strong organizational culture is able to shape

employee work behavior consistently, including in the use of technology as a work tool. Thus, organizational culture influences attitudes and forms work habits related to technology use.

Building upon these classic studies, recent literature from [Zhang, Zeng, Liang, Xue, and Cao \(2023\)](#) highlights that an innovative culture is the "engine" of competitive advantage in the AI era. Their research demonstrates that organizations encouraging continuous learning and knowledge sharing are 50% more likely to integrate AI across multiple departments rather than localizing it. [Pedrami and Vaezi \(2025\)](#) points out that in the contemporary workplace, digital readiness is as much a cultural attribute as it is a technical one. Employees who perceive their organization as forward-thinking are more likely to spend extra hours mastering AI prompts and workflows. This aligns with the findings of this study, where the Openness to Technology indicator was a major driver of actual usage. It suggests that when technology is embedded in the cultural identity of a company, usage becomes a natural habit rather than a forced task ([Davis, 1989](#)).

The social influence aspect, as explored in the UTAUT model, also finds deep resonance in the *Gotong Royong* (mutual cooperation) spirit prevalent in Indonesian organizations. [Fitria, Tulodo, and Sofyan \(2025\)](#) suggest that in organizations where collaboration is a core value, "AI champions" emerge naturally within teams to assist colleagues with the learning curve. This informal knowledge-sharing culture is often more effective than formal corporate training. This study validates that a high score in the collaboration indicator leads to a more uniform and intensive use of AI across different organizational levels. By digitizing traditional cooperative values, Indonesian firms can create a unique competitive edge in the global digital economy, transforming social cohesion into technological synergy.

This study extends the existing literature by examining actual AI usage rather than adoption intention or organizational readiness. While previous studies have primarily focused on employees' intentions to use AI, this study demonstrates that organizational culture influences employees' actual technology utilization behavior. This distinction is important because actual usage provides a more concrete indicator of the success of AI implementation within organizations. Consequently, this study contributes to both organizational behavior and information systems literature by highlighting the role of organizational culture as a key antecedent of employee AI usage in Indonesia. From a practical perspective, the findings suggest that organizations seeking to maximize the benefits of AI should invest in technological infrastructure and cultural development initiatives. Leadership support, collaborative work environments, continuous learning opportunities, and openness to technological experimentation are essential for encouraging employees to utilize AI effectively. Therefore, organizational culture should be considered a strategic component of digital transformation initiatives.

Considering these limitations, this study contributes to the literature by examining the relationship between organizational culture and the level of AI application use at the individual employee level. This study focuses not only on the intention of use but also on actual use as the main indicator. In addition, this study integrates the perspective of organizational culture as a contextual factor influencing technology use behavior. Thus, this study is expected to make a theoretical contribution to the development of the study of organizational behavior and information systems, as well as a practical contribution for organizations in creating a work culture that supports AI-based digital transformation.

5. Conclusions

5.1 Conclusion

This study examined the relationship between organizational culture and employees' actual usage of Artificial Intelligence (AI) applications in Indonesian organizations. The findings demonstrate that organizational culture is a significant predictor of AI usage, indicating that employees are more likely to utilize AI applications when they work in environments characterized by innovation, collaboration, supportive leadership, and openness to technology use. Beyond confirming the existence of a significant relationship, this study contributes to the literature by extending the understanding of AI implementation from adoption intention to actual usage behavior. While previous studies have largely

focused on technology acceptance, organizational readiness, or behavioral intention, this study demonstrates that organizational culture functions as an important contextual mechanism that translates technology acceptance into actual employee behavior. The findings also provide empirical support for TAM and UTAUT by demonstrating that organizational culture shapes the social and organizational conditions that facilitate AI usage.

Furthermore, this study provides empirical evidence from Indonesia, a context that remains underrepresented in the AI and organizational behavior literature. The findings suggest that cultural factors should be considered a strategic component of digital transformation initiatives, as technological investments alone may not guarantee effective AI utilization. Unlike many previous studies that focused on AI adoption intention or organizational readiness, this study specifically examines employees' actual AI usage behavior, providing a more direct understanding of AI-implementation outcomes in organizations.

5.2 Research Limitations

These findings have several managerial implications for organizations implementing AI technologies. First, leaders should actively promote experimentation and learning by creating psychologically safe environments in which employees can explore AI tools without fear of failure. Second, organizations should integrate AI-related competencies into employee development programs through continuous training, workshops, and digital upskilling. Third, organizations should strengthen innovation-oriented cultural values by encouraging collaboration, knowledge sharing, and cross-functional learning in AI applications. Fourth, management should assess employees' digital readiness before implementing AI systems to ensure that technological investments are supported by adequate competence. Finally, organizations should establish clear AI governance policies regarding ethical use, data privacy, transparency, and accountability to foster trust and sustainable AI adoption among employees.

5.3 Suggestions and Directions for Future Research

Based on the findings and limitations of this study, several recommendations are proposed. Organizations must develop a culture that supports innovation, collaboration, and openness to technology to enhance the effective use of AI applications among employees. Training programs and leadership support should be strengthened to encourage technology adoption. For future research, it is recommended to include additional variables, such as leadership style, digital literacy, technological readiness, and employee attitudes toward AI, to provide a more comprehensive understanding. Future studies should use longitudinal designs to examine changes in AI usage over time. In addition, expanding the sample size and including diverse industries or cross-country comparisons would improve the generalizability of the findings of this study. Finally, combining quantitative and qualitative approaches could provide deeper insights into how organizational culture influences employee behavior in using AI technology.

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Author Contributions

WW contributed to the conceptualization of the study, research design, and manuscript drafting. YH was responsible for data collection and data analysis. FNB contributed to the data interpretation and manuscript revision. EYE supervised the research process and provided a critical review and final approval of the manuscript. All authors have read and agreed to the published version of the manuscript.

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