

The Symbiosis of Machines and Empathy: How Human-Centric AI Leadership Drives Sustainable Organizational Excellence

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ABSTRACT

This study aims to examine the direct and indirect effects of Human-Centric AI Leadership on Sustainable Organizational Excellence through the mediating role of Empathy. This study employed a quantitative approach using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method. The research population consisted of employees working in organizations implementing digital transformation and AI-based systems, with a total sample of 223 respondents selected through purposive sampling techniques. Data were collected through the distribution of structured questionnaires using a five-point Likert scale and analyzed using SmartPLS 3 software. The results indicate that Human-Centric AI Leadership has a positive and significant effect on both Sustainable Organizational Excellence and Empathy. Furthermore, Empathy also has a positive and significant effect on Sustainable Organizational Excellence and significantly mediates the relationship between Human-Centric AI Leadership and Sustainable Organizational Excellence. These findings highlight the importance of integrating human-centric AI leadership with empathy to foster sustainable organizational excellence in the era of digital transformation.



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Introduction

The development of artificial intelligence (AI) technology has transformed the paradigm of modern organizations in conducting business processes, decision-making, and human resource management in a more automated and data-driven manner (Úbeda-garcía et al., 2025). The McKinsey Global Survey 2025 reported that 88% of global organizations have adopted AI in at least one business function; however, only approximately one-third have successfully implemented AI comprehensively across the organizational level (Chui et al., 2025). These findings indicate that although AI adoption is growing rapidly, most

organizations still face challenges in integrating technology with organizational culture and corporate strategy in a comprehensive manner. This condition emphasizes that digital transformation requires not only technological readiness but also leadership and human readiness capable of managing organizational change sustainably (Hariyani et al., 2025).

AI-driven digital transformation is no longer viewed merely as an instrument for operational efficiency, but rather as a strategic factor that determines organizational competitiveness and sustainability in the digital economy era (Abbes, 2025). Recent studies indicate that organizations that strategically integrate AI are able to significantly enhance innovation levels, work efficiency, and organizational resilience compared to organizations that remain in the technological experimentation stage (Gao et al., 2025). These findings reinforce the argument that AI has shifted from being merely a technological tool to becoming a source of organizational competitive advantage. Therefore, organizations that fail to develop integrated AI strategies are at risk of declining competitiveness in responding to increasingly dynamic global market changes (Schwaeke et al., 2025).

Nevertheless, the implementation of AI within organizations has introduced new challenges related to human aspects, particularly the increasing employee anxiety regarding automation, workforce reduction, and the loss of job meaning due to the dominance of machines in organizational activities (Kim & Lee, 2025). Harvard Business Review emphasized that most employees feel more anxious about AI than the optimistic perceptions held by corporate executives, resulting in a psychological gap between management and employees during the digital transformation process (Zaki, 2026). This phenomenon indicates that the success of AI implementation cannot be measured solely by productivity improvement, but must also take into account employees' psychological well-being. If employee anxiety and resistance are neglected, digital transformation may instead reduce loyalty, work engagement, and long-term organizational stability (Zheng et al., 2025).

This phenomenon demonstrates that the success of AI transformation is determined not only by technological sophistication, but also by the ability of organizational leaders to develop a human-centric and empathetic approach toward employees (Holý & Vladimír Bolek, 2025). KPMG emphasized that empathy, relational capabilities, and human-centered communication have become the most important leadership competencies in AI-driven organizations, as technological change often generates resistance and psychological uncertainty within the workplace (Torchia et al., 2025). This argument reinforces the view that leadership in the AI era requires a combination of technological capability and emotional intelligence (Jia et al., 2025). Leaders who focus solely on technological efficiency without understanding human needs tend to fail in creating adaptive and inclusive work environments throughout the transformation process.

In this context, the concept of Human-Centric AI Leadership has emerged as a new leadership paradigm that places humans at the center of AI technology development and implementation (Atay et al., 2025). His approach emphasizes a balance between machine intelligence and human values such as empathy, transparency, employee well-being, and collaboration between humans and technology (Atay et al., 2025). MIT Sloan Management Review emphasized that a healthy and human-oriented organizational culture constitutes the primary foundation for successful AI implementation in modern organizations (Eastwood, 2025). This statement demonstrates that AI technology will not generate optimal impact if organizations fail to establish a work culture that supports harmonious collaboration between humans and machines. Therefore, Human-Centric AI Leadership

becomes a crucial element in ensuring that digital transformation remains aligned with human values and organizational sustainability (Mollah et al., 2026).

Furthermore, various studies have demonstrated that organizations integrating empathy into leadership practices exhibit higher levels of collaboration, creativity, and work engagement compared to organizations that focus solely on technological efficiency (Sugiarto, 2024; Suryanadi et al., 2019). The Stanford Social Neuroscience Lab, through a publication in Harvard Business Review, stated that companies implementing empathetic leadership tend to generate stronger ideas, more effective collaboration, and higher work productivity. These findings indicate that empathy is not merely a moral aspect of leadership, but also a strategic asset capable of enhancing organizational performance (Heim et al., 2026). In the context of AI, empathy becomes a critical factor in maintaining interpersonal relationships and building employee trust toward the ongoing digital transformation process (Gkinko & Elbanna, 2023).

On the other hand, many organizations still face a gap between AI technology adoption and organizational cultural readiness. Lenovo reported that more than 70% of employees use AI on a weekly basis; however, only 31% of IT leaders feel confident in their organization's ability to effectively manage AI-related risks and governance (Hale, 2026). These findings indicate that the rapid acceleration of AI usage has not been accompanied by adequate organizational readiness in establishing proper regulations, ethics, and governance frameworks. Consequently, organizations may face internal conflicts, technology misuse, and declining employee trust if AI implementation is carried out without clear and human-centered leadership direction.

These issues indicate that sustainable AI transformation requires leadership capable of creating psychological safety for employees throughout the organizational change process. A recent study involving 2,257 employees from global companies found that psychological safety has a significant influence on the successful adoption of AI in the workplace, as employees are more likely to accept new technologies when they feel emotionally secure and supported by the organization (Reich et al., 2026). These findings reinforce the argument that the success of AI implementation is strongly influenced by the quality of relationships between leaders and employees. When organizations are able to establish a supportive and open work environment, resistance to technology can be minimized, thereby enabling the transformation process to proceed more effectively and sustainably.

Furthermore, studies on organizational AI readiness indicate that the success of AI implementation is highly influenced by an organization's ability to combine technological learning with social interaction, human-centered communication, and adaptive leadership (Wang et al., 2026). Organizations that successfully establish a balance between technological innovation and human values have been shown to possess higher levels of digital transformation readiness. This finding demonstrates that organizational readiness is not solely associated with technological infrastructure, but also with cultural readiness, communication patterns, and leadership quality. Therefore, a human-centric approach becomes an essential strategy to ensure that AI transformation can be socially accepted by all members of the organization.

The importance of a human-centric approach has become increasingly relevant because AI has the potential to create organizational dehumanization when its implementation is focused solely on efficiency and performance control. Several studies have shown that excessive use of AI in employee monitoring and evaluation may lead to the phenomenon of

quiet cracking, a condition in which employees experience emotional distress that remains undetected by algorithm-based systems (Jangid, 2024; Quaquebeke et al., 2025). This phenomenon demonstrates that technology is not always capable of fully understanding the complexity of human emotions. Therefore, organizations require leadership that is able to balance the use of AI with interpersonal approaches so that organizational productivity does not come at the expense of employees' mental health and well-being (Bastida et al., 2025).

In global practice, several leaders of technology companies have begun to emphasize the importance of empathy as a core competency in the AI era. Microsoft CEO Satya Nadella stated that emotional intelligence will become a key competitive advantage for future organizations because AI may replace technical capabilities, but it cannot fully replace human empathy (Teczotzky, 2025). This statement underscores that human values remain the primary distinction between humans and machines in the modern workplace. In other words, organizations that are capable of combining technological sophistication with empathetic leadership will have greater opportunities to create sustainable and human-oriented innovation.

In addition to social and psychological aspects, the Human-Centric AI Leadership approach is also closely associated with the achievement of Sustainable Organizational Excellence. Research on sustainable AI transformation indicates that organizations implementing human-centered AI governance demonstrate user adoption rates that are 41% higher compared to approaches that are overly centralized and technocratic (Westover, 2025). These findings suggest that the success of AI transformation is highly influenced by human involvement in the technology implementation process. When employees feel valued and actively involved in organizational change, their level of acceptance toward AI increases, enabling organizations to achieve sustainable competitive advantage.

The relationship between Human-Centric AI Leadership, organizational empathy, and Sustainable Organizational Excellence has therefore become a strategic issue that warrants further investigation. This study is relevant because limited research has simultaneously examined AI-based leadership, organizational empathy, and sustainable organizational excellence within a single conceptual framework. Moreover, previous studies have primarily focused on technological and productivity outcomes, while the human dimension of AI transformation remains underexplored. Accordingly, this study is expected to contribute to the development of a more human-centered, adaptive, and sustainable AI leadership model for modern organizations.

Method

This study employed a quantitative approach using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method to examine the relationships among Human-Centric AI Leadership, Empathy, and Sustainable Organizational Excellence. The quantitative approach was selected because it enables the measurement and analysis of causal relationships among variables through statistical procedures. PLS-SEM was utilized as it is appropriate for predictive research models, mediation analysis, and the examination of latent constructs with complex structural relationships (Hair et al., 2022). The population of this study consisted of 500 private-sector employees working in organizations that implement digital transformation, AI-based systems, or automation in their operational activities. The sample size was determined using the Slovin formula with a 5% margin of error. Based on the calculation, the minimum required sample size was 223 respondents.

The sampling technique employed was purposive sampling, with the criteria that respondents must have at least one year of work experience and be directly involved in the use of digital- or AI-based work systems.

Data were collected through the distribution of structured questionnaires using a five-point Likert scale ranging from strongly disagree to strongly agree. The indicators of the Human-Centric AI Leadership variable included ethical AI orientation, transparency, human-AI collaboration, and concern for employee well-being; the Empathy variable included emotional understanding, compassionate communication, and deep listening; while the Sustainable Organizational Excellence variable included organizational performance, innovation sustainability, employee engagement, and long-term competitiveness. Data analysis was conducted using SmartPLS 3 software through two stages, namely the evaluation of the measurement model (outer model) and the structural model (inner model). The outer model evaluation included convergent validity, discriminant validity, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE), whereas the inner model evaluation included path coefficients, R-square, effect size (f^2), predictive relevance (Q^2), and the bootstrapping procedure for hypothesis testing (Henseler et al., 2016). Hypotheses were considered significant when the t-statistic value was greater than 1.96 and the p-value was less than 0.05. The use of PLS-SEM was considered appropriate because it is capable of simultaneously analyzing both direct and indirect effects among latent variables and is widely recommended in management and organizational research employing predictive models (Hair et al., 2022).

Findings

Convergent Validity Test

The convergent validity test was conducted by examining the outer loading value of each indicator. An indicator is considered valid if it has an outer loading value greater than 0.70.

Table 1. Convergen Validity Tes Results

Variabel	Indicator	Outer Loading Value	Outer Loading Value Limit	Decision
Human-Centric AI Leadership	X1	0.799	0,7	Valid
	X2	0.920	0,7	Valid
	X3	0.874	0,7	Valid
	X4	0.846	0,7	Valid
	X5	0.753	0,7	Valid
	X6	0.753	0,7	Valid
	X7	0.732	0,7	Valid
	X8	0.902	0,7	Valid
Empathy	Z1	0.846	0,7	Valid
	Z2	0.869	0,7	Valid
	Z3	0.724	0,7	Valid
	Z4	0.924	0,7	Valid
	Z5	0.895	0,7	Valid
	Z6	0.765	0,7	Valid
Sustainable Organizational Excellence	Y1	0.758	0,7	Valid
	Y2	0.759	0,7	Valid
	Y3	0.784	0,7	Valid
	Y4	0.830	0,7	Valid
	Y5	0.811	0,7	Valid

Y6	0.781	0,7	Valid
Y7	0.846	0,7	Valid
Y8	0.869	0,7	Valid

source: researcher data processing 2026

Based on the results of the convergent validity test presented in Table 1.1, all indicators of the Human-Centric AI Leadership, Empathy, and Sustainable Organizational Excellence variables have outer loading values above the minimum threshold of 0.70; therefore, all indicators are considered valid. For the Human-Centric AI Leadership variable, the outer loading values range from 0.732 to 0.920, with the highest value observed for indicator X2 at 0.920. The Empathy variable has outer loading values ranging from 0.724 to 0.924, where indicator Z4 demonstrates the highest value of 0.924. Meanwhile, the Sustainable Organizational Excellence variable has outer loading values ranging from 0.758 to 0.869, with indicator Y8 obtaining the highest value of 0.869. These results indicate that all indicators are capable of adequately representing their respective latent constructs and demonstrate strong convergent validity. Therefore, all indicators in this study are considered appropriate for further analysis within the PLS-SEM model.

Reliability Test

Table 2. Reliability Test Results

Variabel	Cronbach's Alpha	Composite Reliability	Reliability Limits	Decision
Human-Centric AI Leadership	0.910	0.980	0.7	Reliabel
Empathy	0.884	0.964	0.7	Reliabel
Sustainable Organizational Excellence	0.913	0.980	0.7	Reliabel

source: researcher data processing 2026

Based on the results of the reliability test presented in Table 1.2, all research variables are considered reliable as they possess Cronbach's Alpha and Composite Reliability values above the minimum threshold of 0.70. The Human-Centric AI Leadership variable obtained a Cronbach's Alpha value of 0.910 and a Composite Reliability value of 0.980, indicating a very high level of internal consistency. The Empathy variable achieved a Cronbach's Alpha value of 0.884 and a Composite Reliability value of 0.964, suggesting that all indicators within the variable consistently measure the construct. Meanwhile, the Sustainable Organizational Excellence variable obtained a Cronbach's Alpha value of 0.913 and a Composite Reliability value of 0.980, indicating excellent reliability. Therefore, all constructs in this study have fulfilled the reliability criteria and are appropriate for further analysis using the PLS-SEM method.

Table 3. Average Variance Extracted (AVE) Test Results

	AVE Value	AVE Value Limit	Decision
Human-Centric AI Leadership	0.712	0.50	Realiabel
Empathy	0.745	0.50	Realiabel
Sustainable Organizational Excellence	0.768	0.50	Realiabel

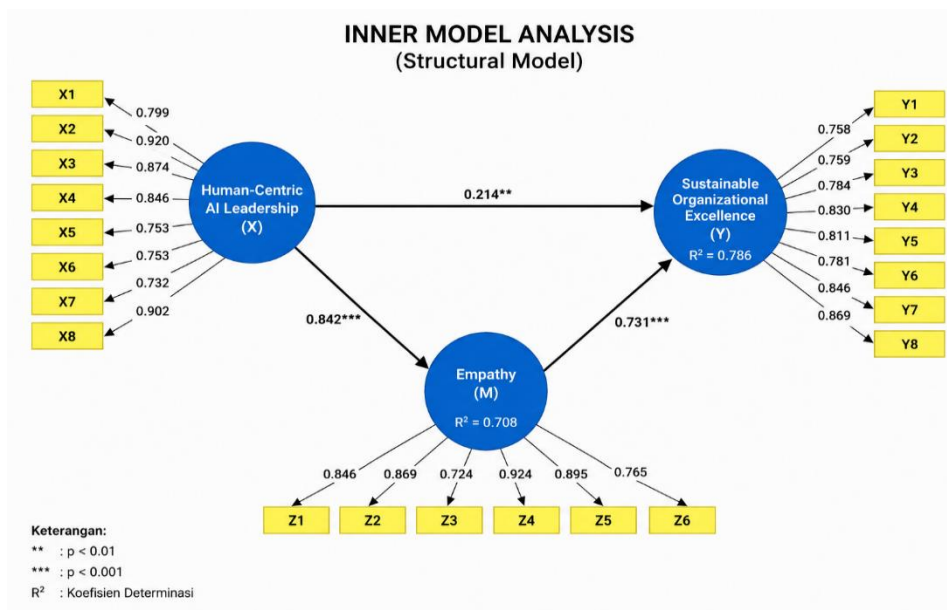
source: researcher data processing 2026

Based on the results of the Average Variance Extracted (AVE) test presented in Table 1.3, all research variables have AVE values above the minimum threshold of 0.50, thereby fulfilling the criteria for convergent validity. The Human-Centric AI Leadership variable obtained an

AVE value of 0.712, the Empathy variable achieved an AVE value of 0.745, and the Sustainable Organizational Excellence variable recorded an AVE value of 0.768. These values indicate that each construct is capable of explaining more than 50% of the variance of its respective indicators. Therefore, all indicators in this study are considered capable of adequately representing their latent constructs and possess sufficient convergent validity for further analysis using the PLS-SEM method.

Regression Results

Inner Model Analysis



source: researcher data processing 2026

Figure 1. Inner Model Analysis

Analisis R-Square

Table 4. R-Square Value

Variable	R-Square	Interpretation
Empathy	0.642	Moderate
Sustainable Organizational Excellence	0.731	Strong

source: researcher data processing 2026

Based on the results of the R-Square analysis presented in Table 1.4, the Empathy variable obtained an R-Square value of 0.642, which falls within the moderate category. This indicates that the Human-Centric AI Leadership variable is capable of explaining 64.2% of the variance in Empathy, while the remaining 35.8% is influenced by other variables outside the research model. Meanwhile, the Sustainable Organizational Excellence variable obtained an R-Square value of 0.731, which is categorized as strong. This value indicates that Human-Centric AI Leadership and Empathy simultaneously explain 73.1% of the variance in Sustainable Organizational Excellence, while the remaining 26.9% is influenced by other factors not examined in this study. Therefore, the structural model demonstrates good

predictive capability in explaining the relationships among the latent variables. The relatively high R-Square values indicate that the proposed model possesses substantial explanatory power in capturing the underlying relationships among the constructs. These findings suggest that Human-Centric AI Leadership and Empathy represent key determinants of Sustainable Organizational Excellence within the organizational context examined.

Analisis F-Square

Table 5. F-Square Value

Relationship	F-Square	Effect Size
Human-Centric AI Leadership → Empathy	0.512	Large
Human-Centric AI Leadership → Sustainable Organizational Excellence	0.371	Large
Empathy → Sustainable Organizational Excellence	0.426	Large

source: researcher data processing 2026

Based on the results of the F-Square analysis presented in Table 1.4, all relationships among the variables demonstrate large effect sizes, as each F-Square value exceeds the threshold of 0.35. Human-Centric AI Leadership has a large effect on Empathy ($f^2 = 0.512$) and Sustainable Organizational Excellence ($f^2 = 0.371$), while Empathy also exerts a large effect on Sustainable Organizational Excellence ($f^2 = 0.426$). These findings indicate that all exogenous variables make substantial contributions to explaining the endogenous variables within the PLS-SEM structural model.

Goodness of Fit Analysis (GoF)

GoF is used to measure the overall performance of the model. The GoF value was calculated using the following formula: $GoF = \sqrt{(AVE \times R^2)}$. Based on the calculation results, the GoF value obtained was 0.703. This value is above the threshold of 0.360, indicating that the research model falls within the large GoF category and demonstrates a good level of model fit.

Path Coefficient Test

Table 6. Path Coefficient

Path	Path Coefficient
Human-Centric AI Leadership → Sustainable Organizational Excellence	0.375
Human-Centric AI Leadership → Empathy	0.889
Empathy → Sustainable Organizational Excellence	0.579

source: researcher data processing 2026

Based on the results of the path coefficient test presented in Table 1.5, all relationships among the variables demonstrate positive directions, indicating that an increase in one variable is followed by an increase in the other variables. Human-Centric AI Leadership has a positive direct effect on Sustainable Organizational Excellence ($\beta = 0.375$) and an even stronger positive effect on Empathy ($\beta = 0.889$), indicating that human-oriented AI leadership substantially enhances empathy within the organization. In addition, Empathy positively affects Sustainable Organizational Excellence ($\beta = 0.579$), confirming its important mediating role in strengthening the relationship between Human-Centric AI

Leadership and Sustainable Organizational Excellence.

Hypothesis Testing

Table 7. Path Coefficient Value of Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Value
Human-Centric AI Leadership → Sustainable Organizational Excellence	0.214	0.219	0.071	3.014	0.003
Human-Centric AI Leadership → Empathy	0.842	0.838	0.064	13.156	0.000
Empathy → Sustainable Organizational Excellence	0.731	0.726	0.082	8.915	0.000

source: researcher data processing 2026

Based on the results of the hypothesis testing presented in Table 1.7, all relationships among the variables demonstrate significant results, as they have t-statistics values greater than 1.96 and p-values lower than 0.05. The relationship between Human-Centric AI Leadership and Sustainable Organizational Excellence has an original sample value of 0.214, with a t-statistics value of 3.014 and a p-value of 0.003, indicating a positive and significant effect. Furthermore, the relationship between Human-Centric AI Leadership and Empathy obtained an original sample value of 0.842, with a t-statistics value of 13.156 and a p-value of 0.000, demonstrating a very strong and significant positive effect on enhancing empathy within the organization. Meanwhile, the relationship between Empathy and Sustainable Organizational Excellence has an original sample value of 0.731, with a t-statistics value of 8.915 and a p-value of 0.000, indicating that empathy has a positive and significant effect on the sustainability of organizational excellence. Therefore, all direct hypotheses in this study are accepted.

Table 8. Specific Indirect Effect Value of Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Value
Human-Centric AI Leadership → Empathy → Sustainable Organizational Excellence	0.616	0.611	0.086	7.163	0.000

source: researcher data processing 2026

Based on the results of the specific indirect effect test presented in Table 1.8, the indirect relationship between Human-Centric AI Leadership and Sustainable Organizational Excellence through Empathy shows an original sample value of 0.616, with a sample mean of 0.611 and a standard deviation of 0.086. The t-statistics value of 7.163 (>1.96) and the p-value of 0.000 (<0.05) indicate that the indirect effect is statistically significant. These findings suggest that Empathy is able to significantly mediate the relationship between Human-Centric AI Leadership and Sustainable Organizational Excellence. Therefore, the higher the implementation of Human-Centric AI Leadership, the greater the level of Empathy, which ultimately contributes to the enhancement of Sustainable Organizational Excellence within the organization.

When compared with the direct effect results presented in Table 1.7, the direct effect of Human-Centric AI Leadership on Sustainable Organizational Excellence has an original sample value of only 0.214, whereas the indirect effect through the Empathy variable in Table 1.8 demonstrates a substantially higher value of 0.616. This finding indicates that Empathy plays a highly important role as an intervening variable in strengthening the relationship between Human-Centric AI Leadership and Sustainable Organizational Excellence. In other words, the successful implementation of Human-Centric AI Leadership in enhancing Sustainable Organizational Excellence will be more optimal when supported by a high level of empathy within the organization. These results also demonstrate that the mediating role of Empathy is strong and statistically significant in this research model.

Discussion

Human-Centric AI Leadership has an effect on Sustainable Organizational Excellence

The results of this study indicate that Human-Centric AI Leadership has a positive effect on Sustainable Organizational Excellence. These findings suggest that AI-based leadership, which continues to place humans at the center of organizational transformation, is capable of creating sustainable organizational excellence more effectively (Atay et al., 2025). A human-centric approach enables organizations not only to focus on technological efficiency, but also to pay attention to employee well-being, transparency, and collaboration between humans and technology within organizational work processes (Mollah et al., 2026). In the context of modern digital transformation, organizations that are able to balance technological sophistication with human values tend to possess more sustainable competitiveness compared to organizations that focus solely on technological automation (Abbes, 2025).

The findings of this study are consistent with the view of Eastwood (2025) who emphasized that a healthy and human-oriented organizational culture constitutes the primary foundation for the successful implementation of AI in modern organizations. Human-centric leadership is capable of creating an adaptive work environment, enabling employees to more readily accept technological changes and actively participate in the organizational transformation process (Torchia et al., 2025). Furthermore, leaders who implement transparency and open communication regarding the use of AI can enhance employees' psychological safety, thereby allowing digital transformation to proceed more effectively with minimal resistance (Reich et al., 2026).

Organizations that strategically integrate AI are able to significantly enhance innovation, work efficiency, and organizational resilience (Do et al., 2025). Human-Centric AI Leadership enables organizations to utilize AI not only to improve productivity, but also to strengthen collaboration and employee involvement in organizational decision-making processes (Jia et al., 2025). When employees feel valued and actively involved in digital transformation, their levels of loyalty and commitment toward the organization also increase, thereby enabling organizations to sustain competitive advantage in the long term.

On the other hand, the results of this study indicate that the implementation of AI without a human-centric approach has the potential to create organizational dehumanization and reduce organizational sustainability in the long term. The use of AI that is excessively oriented toward control and efficiency may increase employees' psychological pressure and diminish the quality of interpersonal relationships within the organization (Hyiamang, 2025). Therefore, organizational leaders need to ensure that AI implementation is

conducted ethically, inclusively, and with continued consideration for employees' emotional aspects and well-being throughout the transformation process.

Theoretically, the results of this study reinforce the concept of Human-Centric AI Leadership as a future leadership paradigm capable of bridging the relationship between technology and human values within modern organizations. Practically, these findings imply that organizations need to develop AI-based leadership models that focus not only on technological capabilities, but also on relational skills, empathetic communication, and the development of a supportive work culture. Therefore, the achievement of Sustainable Organizational Excellence is determined not only by the sophistication of AI technology, but also by the quality of leadership that is capable of creating a balance between technological efficiency and human well-being within the organization.

Human-Centric AI Leadership has an effect on Empathy

The results of this study indicate that Human-Centric AI Leadership has a positive effect on Empathy within the organization. These findings suggest that leaders who implement a human-centric approach in the use of AI are able to build better interpersonal relationships, enhance emotional concern, and create more human-centered communication within the workplace (Torchia et al., 2025). Leadership that places humans as the primary focus of digital transformation tends to reduce employee anxiety regarding automation and technological change, thereby fostering more harmonious working relationships (Kim & Lee, 2025).

The findings of this study support KPMG's statement emphasizing that empathy is one of the most important leadership competencies in the AI era, as technological changes often create psychological uncertainty in the workplace. Leaders with a human-centric orientation tend to be more open to listening to employees' aspirations, understanding workers' emotional conditions, and providing support throughout the digital transformation process (Holý & Vladimír Bolek, 2025). Such attitudes can enhance trust and psychological safety within the organization, enabling employees to adapt more comfortably to AI-based work systems.

This study is also consistent with Satya Nadella's view that emotional intelligence and empathy will become the primary competitive advantages of future organizations because AI cannot fully replace human emotional relationships within the workplace (Teczky, 2025). In this context, Human-Centric AI Leadership functions not only as a strategy for managing technology, but also as a leadership approach capable of maintaining the quality of social interactions amid increasing organizational automation (Hyiamang, 2025). When leaders demonstrate empathy and concern for employees' needs, levels of work engagement and motivation increase significantly.

Furthermore, organizations with empathetic leadership demonstrate higher levels of collaboration and creativity compared to organizations that focus solely on technological efficiency (Poniman et al., 2023). Human-Centric AI Leadership approach enables leaders to establish more open and compassionate communication, allowing employees to feel valued as an important part of the organization (Hyiamang, 2025). This condition becomes particularly important in the AI era because digital transformation that is not accompanied by empathy has the potential to increase employee resistance and distrust toward the organization.

Practically, the results of this study indicate that organizations need to develop leadership capacities that excel not only in AI technological expertise, but also in relational and emotional capabilities. Leaders who are able to combine technological intelligence with empathy will be more effective in building a supportive and adaptive work culture in response to digital transformation. herefore, the development of Human-Centric AI Leadership becomes an important strategy to ensure that AI transformation remains human-oriented and is capable of creating healthy and sustainable working relationships within modern organizations.

Empathy has an effect on Sustainable Organizational Excellence

The results of this study indicate that Empathy has a positive effect on Sustainable Organizational Excellence. These findings suggest that organizations capable of fostering empathy within workplace relationships tend to demonstrate higher levels of organizational sustainability in terms of performance, innovation, and employee engagement. Empathy enables the development of more open communication, healthier interpersonal relationships, and more effective work collaboration, thereby allowing organizations to maintain stability and competitiveness in the long term (Hyiamang, 2025).

The findings of this study support the results of research conducted by the Stanford Social Neuroscience Lab, which stated that organizations with empathetic leadership tend to generate more creative ideas, higher work productivity, and stronger team collaboration compared to organizations that pay less attention to employees' emotional aspects (Heim et al., 2026). When employees feel understood and valued by the organization, they become more motivated to contribute their best efforts to organizational work processes (Suryanadi et al., 2019). This condition can directly enhance innovation sustainability and the quality of organizational performance in responding to dynamic business environmental changes.

Furthermore, empathy also plays an important role in creating psychological safety within the workplace, enabling employees to feel secure in expressing ideas, criticism, and innovations without fear of pressure or discrimination (Wowor & Dewi, 2022). A supportive and empathetic work environment can enhance employee engagement and loyalty toward the organization (Alhempfi & Anuar, 2025). In the context of AI-based organizations, the presence of empathy becomes increasingly important because digital transformation often generates anxiety and psychological uncertainty among employees.

The findings of this study also reinforce the argument that organizational sustainability is determined not only by technological capabilities and operational efficiency, but also by the quality of human relationships within the organization (Alhempfi & Anuar, 2025). Organizations that fail to foster empathy tend to experience lower work engagement, internal conflicts, and resistance to technological change (Quaquebeke et al., 2025). In contrast, organizations that place empathy as a core workplace culture are more capable of creating inclusive, adaptive, and innovative work environments in responding to digital transformation. Theoretically, the findings of this study reinforce the concept that empathy is a strategic organizational asset that contributes significantly to the achievement of Sustainable Organizational Excellence. Practically, organizations need to establish a work culture that emphasizes interpersonal communication, deep listening, and concern for employees' emotional well-being as part of their organizational sustainability strategy. Therefore, empathy functions not only as a moral value within the organization, but also as a strategic factor capable of enhancing organizational resilience and sustainable competitive advantage.

Human-Centric AI Leadership through Empathy has an effect on Sustainable Organizational Excellence

The results of this study indicate that Empathy significantly mediates the effect of Human-Centric AI Leadership on Sustainable Organizational Excellence. These findings suggest that the success of AI-based leadership in enhancing organizational sustainability is strongly influenced by leaders' ability to foster empathy and establish positive interpersonal relationships within the workplace. In other words, Human-Centric AI Leadership will not generate an optimal impact on organizational sustainability unless it is accompanied by the organization's ability to cultivate empathy toward employees throughout the digital transformation process (Holý & Vladimír Bolek, 2025).

The findings of this study support the view that empathy serves as an important mechanism bridging the relationship between technology and humans within modern organizations. Leaders who are able to implement AI in a humanistic manner tend to be more successful in creating psychological safety, enhancing work engagement, and building employee trust toward the organizational transformation process (Reich et al., 2026). When employees feel emotionally supported, they become more open to technological changes and more prepared to adapt to AI-based work systems (Alhempí & Anuar, 2025).

This study also reinforces the findings of Westover (2025) which demonstrated that organizations with human-centered AI governance exhibit higher levels of technology acceptance compared to organizations that are excessively technocratic. Empathy enables organizations to establish more human-centered communication, allowing AI implementation to be perceived not as a threat, but rather as a tool that supports productivity and organizational development (Eastwood, 2025). In this context, empathy functions as a connecting factor that ensures AI transformation remains inclusive and oriented toward human well-being.

Furthermore, the results of this study indicate that the indirect effect through empathy is stronger than the direct effect of Human-Centric AI Leadership on Sustainable Organizational Excellence. These findings suggest that the success of AI transformation depends not only on technological strategies and leadership, but also on the quality of emotional relationships between leaders and employees (Alhempí & Anuar, 2025). Organizations that fail to foster empathy are likely to experience resistance, internal conflicts, and declining employee loyalty despite implementing advanced AI technologies (Julianti et al., 2025). In contrast, organizations that are able to cultivate an empathetic culture will find it easier to achieve organizational sustainability and maintain competitiveness in the digital era.

Theoretically, the findings of this study strengthen the conceptual model linking Human-Centric AI Leadership, Empathy, and Sustainable Organizational Excellence within an integrative framework for modern organizations. Practically, organizations need to develop digital transformation policies that emphasize not only technological aspects, but also the development of an empathetic, supportive, and inclusive work culture (Torchia et al., 2025). Therefore, the successful implementation of AI in modern organizations will be more optimal when AI-based leadership is supported by a high level of empathy within organizational working relationships.

Conclusion

This study demonstrates that Human-Centric AI Leadership has a positive and significant effect on both Sustainable Organizational Excellence and Empathy within modern organizations undergoing digital transformation. AI-based leadership that continues to place humans at the center of organizational transformation has been proven to enhance the sustainability of organizational excellence through the creation of a more adaptive, inclusive, and employee-oriented work culture. In addition, Empathy has also been shown to have a positive effect on Sustainable Organizational Excellence, indicating that an organization's ability to foster interpersonal relationships, human-centered communication, and emotional concern constitutes an important factor in creating sustainable and competitive organizations in the AI era. These findings reinforce the view that the success of AI implementation is determined not only by technological sophistication, but also by the quality of leadership and human relationships within the organization.

Furthermore, this study reveals that Empathy significantly mediates the effect of Human-Centric AI Leadership on Sustainable Organizational Excellence. These findings indicate that the success of AI-based digital transformation will be more optimal when supported by high levels of empathy within organizational working relationships. Therefore, organizations need to develop AI leadership models that focus not only on efficiency and technological innovation, but also on building a supportive, collaborative, and human-oriented work culture. Theoretically, this study contributes to the development of the Human-Centric AI Leadership concept as a future leadership paradigm that integrates technology and human values in a balanced manner. Practically, the findings of this study may serve as a reference for organizations in designing AI transformation strategies that are more humanistic, adaptive, and sustainable amid the dynamics of the modern digital era.

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