

DIGITAL LEADERSHIP AND PERCEIVED SUSTAINABLE PERFORMANCE: THE MEDIATING ROLE OF EMPLOYEE AGILITY IN ORGANIZATIONS UNDERGOING DIGITAL TRANSFORMATION

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Abstract

Digital transformation has become a strategic priority for organizations seeking to strengthen competitiveness and enhance perceived sustainable performance in increasingly dynamic business environments. This study examines the effect of digital leadership on sustainable performance through the mediating role of employee agility within the context of human capital development. A cross-sectional quantitative explanatory survey was employed using data collected from 312 employees working in public and private organizations undergoing digital transformation initiatives in South Sulawesi, Indonesia. Respondents were selected using a purposive sampling technique based on their direct involvement in digital transformation programs. Data were collected through a structured questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0 to examine the direct and indirect relationships among the proposed constructs. The findings indicate that digital leadership significantly enhances employee agility by fostering adaptability, continuous learning, and responsiveness to technological change. Employee agility was found to have a strong positive effect on perceived sustainable performance, indicating that employees who are more adaptive, responsive, and capable of continuous learning tend to perceive higher levels of organizational sustainability. Furthermore, employee agility was found to partially mediate the relationship between digital leadership and perceived sustainable performance ($\beta = 0.406$, $p < 0.001$), indicating that the positive effect of digital leadership on perceived sustainable performance is substantially transmitted through employees' adaptability and responsiveness to organizational change. These results highlight the critical role of human capital development in digital transformation and provide empirical evidence that digital leadership contributes to higher perceived sustainable performance through the enhancement of employee agility, rather than implying causal certainty. The study contributes to the growing literature on digital transformation and human resource management by offering an integrated framework that links leadership, employee capabilities, and sustainability-oriented organizational outcomes.

Keywords: Digital Leadership, Employee Agility, Human Capital Development, Perceived Sustainable Performance.

1. INTRODUCTION

Digital transformation has become a fundamental driver of organizational change, reshaping how organizations create value, compete, and sustain performance in increasingly dynamic environments. The rapid advancement of digital technologies, including artificial intelligence (AI), big data analytics, cloud computing, and automation, has accelerated organizational efforts to redesign business processes and improve operational efficiency. However, successful digital transformation extends beyond technological adoption, requiring organizations to simultaneously strengthen workforce capabilities and organizational readiness. As emphasized by Vial (2021), digital transformation represents a multidimensional organizational process that alters business models, organizational structures, and employee competencies. Consequently, human capital development has become a strategic context for ensuring that technological investments generate sustainable organizational value. This perspective is further reinforced by the emergence of Industry 5.0, which shifts the focus from technology-centered automation toward a human-centric paradigm that integrates advanced technologies with human creativity, adaptability, and continuous learning (Xu et al., 2021).

Despite substantial investments in digital technologies, many organizations continue to experience difficulties in realizing the expected benefits of digital transformation. Previous studies indicate that digital transformation initiatives frequently encounter workforce-related barriers, including resistance to change, insufficient digital competencies, and limited adaptability to new technologies (Kane et al., 2021; Verhoef et al., 2021). These findings suggest that technological implementation alone is insufficient to achieve sustainable organizational outcomes. Rather, organizations require employees who are capable of continuously learning, adapting to changing work environments, and responding effectively to emerging technological challenges.

These challenges are particularly relevant for public and private organizations in South Sulawesi, Indonesia, where digital transformation has accelerated through the adoption of integrated information systems, digital platforms, cloud-based services, and data-driven decision-making processes. Although these initiatives have improved operational efficiency and service delivery, many organizations continue to face practical difficulties in preparing employees for continuous technological change. Variations in digital competencies, organizational readiness, and employee adaptability remain significant obstacles to transformation success. Consequently, organizations increasingly recognize that sustainable digital transformation depends not only on technological infrastructure but also on developing an agile workforce capable of supporting organizational resilience and long-term performance.

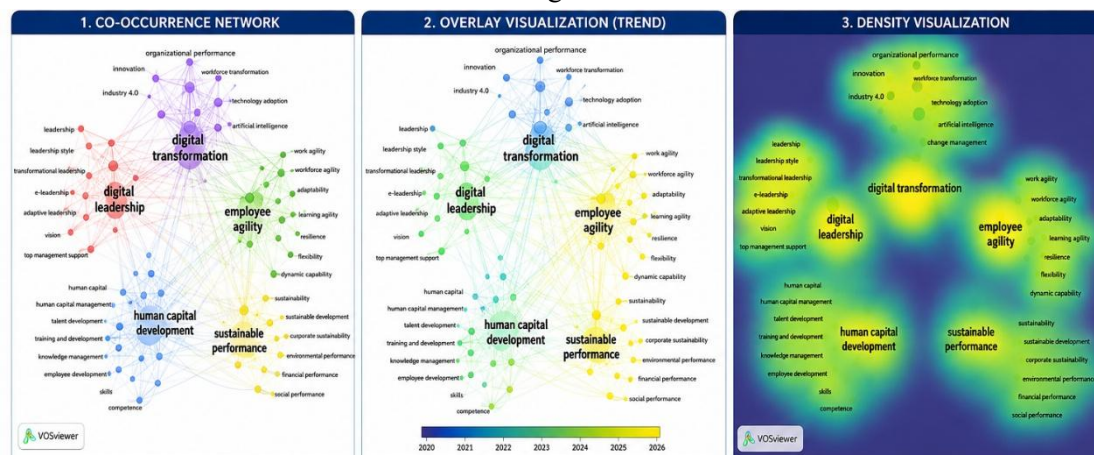
Within this context, digital leadership has emerged as an essential organizational capability. Digital leaders play a strategic role in guiding transformation by promoting innovation, collaboration, and continuous learning while facilitating the effective use of digital technologies. Existing studies have demonstrated that digital leadership contributes positively to employee engagement, digital competence, organizational learning, and innovation performance (Bresciani et al., 2021; Eberl & Drews, 2021). Nevertheless, empirical findings regarding its direct effect on organizational performance remain inconclusive. While some studies report a significant positive relationship, others argue that leadership influences organizational performance indirectly through employee capabilities

and behavioral mechanisms (Sousa & Rocha, 2022). This inconsistency highlights the need to examine the processes through which digital leadership contributes to sustainable organizational performance.

One potential explanatory mechanism is employee agility, which refers to employees' ability to adapt rapidly, learn continuously, and respond proactively to organizational and environmental changes. In digitally transforming organizations, employee agility enables individuals to acquire new competencies, embrace technological innovations, and adjust effectively to evolving work processes. Agile employees are characterized by flexibility, resilience, and learning orientation, attributes that strengthen organizational responsiveness and innovation capability (Muduli & Pandya, 2022). The strategic importance of employee agility became particularly evident during and after the COVID-19 pandemic, when organizations with agile workforces demonstrated greater resilience and maintained operational continuity under conditions of uncertainty (Kniffin et al., 2021).

To complement the literature review and identify emerging research trends, a bibliometric analysis was conducted using the Scopus database and visualized with VOSviewer version 1.6.20. The search was performed in January 2026 using the Scopus database with the search string covering "digital transformation", "digital leadership", "employee agility", "human capital development", and "perceived sustainable performance" within article titles, abstracts, and author keywords. English-language journal articles published between 2020 and 2025 were included. Duplicate and irrelevant records were excluded following title and abstract screening. A full counting method with a minimum keyword occurrence threshold of five was applied using VOSviewer version 1.6.20. The bibliometric analysis was intended solely to support the identification of research trends and should not be interpreted as the sole basis for establishing the research gap. The results are presented in Figure 1.

Figure 1. Bibliometric Analysis of Digital Transformation and Human Capital Development Research Using VOSviewer



Source: Data Processed, 2026

The visualization in Figure 1 indicates that digital transformation remains the dominant theme within the current research landscape, exhibiting strong conceptual connections with digital leadership and human capital development. By contrast, employee agility and perceived sustainable performance appear as relatively emerging topics with lower publication density, suggesting that their interrelationships have not yet been extensively investigated. Furthermore, the overlay visualization reveals a gradual shift in recent studies from technology-oriented perspectives toward workforce adaptability and sustainability-oriented organizational outcomes. These findings reinforce the relevance of investigating how digital leadership enhances perceived sustainable performance through employee agility within the broader context of human capital development.

Based on the preceding literature, three research gaps can be identified. First, an empirical gap exists because previous studies have reported inconsistent findings regarding the relationship between digital leadership and organizational performance. While several studies reported a significant positive relationship, others suggested that the influence of digital leadership is largely indirect and depends on intervening organizational capabilities. Second, a mechanism gap remains because relatively few studies have examined employee agility as the behavioral capability through which digital leadership is translated into sustainable organizational outcomes. Third, a contextual gap exists because empirical evidence from organizations undergoing digital transformation in emerging economies, particularly within Indonesian public and private organizations, remains limited. Addressing these three gaps provides a more comprehensive understanding of how digital leadership contributes to perceived sustainable performance through employee agility within the context of digital transformation.

Conceptual Framework and Hypothesis Development

This study primarily adopts Dynamic Capability Theory as the main theoretical foundation to explain how organizations develop adaptive capabilities through digital leadership and employee agility. The Resource-Based View is employed as a complementary perspective to explain why employee agility represents a valuable strategic human resource capable of enhancing perceived sustainable performance.

Digital leadership plays an important role in creating an organizational environment that encourages innovation, continuous learning, and adaptability. Leaders with strong digital competencies are more capable of facilitating employees' responses to technological change and fostering agile work behaviors. Previous studies consistently indicate that digital leadership positively influences employee agility by enhancing flexibility, proactive learning, and responsiveness to organizational change (Sousa & Rocha, 2022; Zeike et al., 2023). From the perspective of Dynamic Capability Theory, digital leaders facilitate organizational adaptation by enabling employees to continuously acquire new competencies and respond effectively to technological changes. Therefore, this study proposes that digital leadership positively influences employee agility (H1).

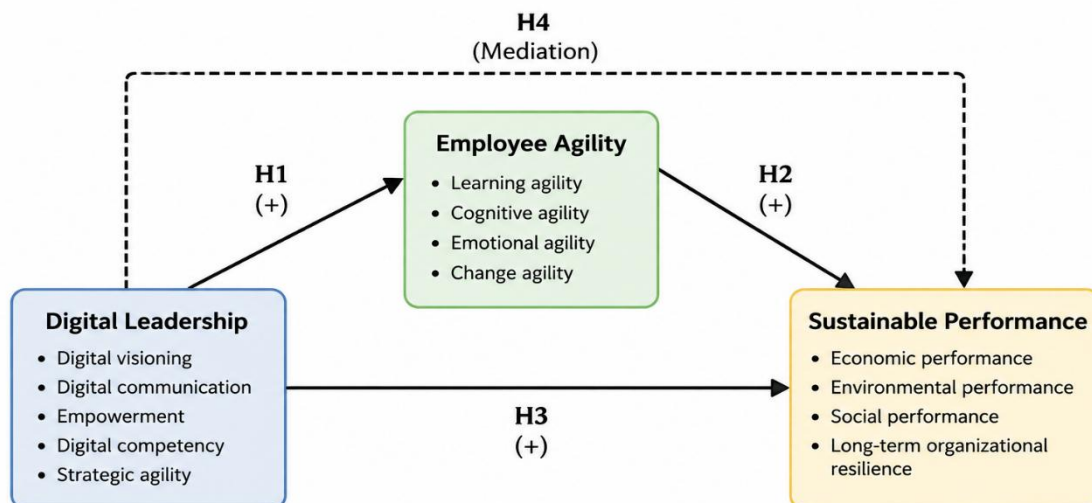
Employee agility enables employees to respond effectively to environmental changes, continuously acquire new competencies, and support organizational resilience. Organizations with agile employees are more capable of sustaining innovation and maintaining long-term performance under dynamic conditions (Muduli & Pandya, 2022;

Sherehiy & Karwowski, 2020). Therefore, this study proposes that employee agility positively influences sustainable performance (H2).

Digital leadership has also been associated with improved organizational performance through enhanced innovation, collaboration, and strategic decision-making. Nevertheless, previous empirical findings remain inconsistent, suggesting that additional explanatory mechanisms should be considered (Sousa & Rocha, 2022). Therefore, this study proposes that digital leadership positively influences sustainable performance (H3).

Drawing upon Dynamic Capability Theory, employee agility represents a critical organizational capability through which digital leadership can be translated into sustainable organizational outcomes. Employees who are agile are more likely to transform leadership initiatives into adaptive work behaviors that enhance long-term organizational performance. Therefore, employee agility is expected to mediate the relationship between digital leadership and sustainable performance (H4).

Figure 2. Conceptual Research Model of the Relationships among Digital Leadership, Employee Agility, and Sustainable Performance



Source: Developed by the authors based on Dynamic Capability Theory (Teece, 2018) and previous studies (Sousa & Rocha, 2022; Muduli & Pandya, 2022; Zeike et al., 2023).

2. RESEARCH METHOD

This study employed a cross-sectional quantitative explanatory research design to examine the relationships among Digital Leadership, Employee Agility, and Perceived Sustainable Performance in organizations undergoing digital transformation. The study primarily adopts Dynamic Capability Theory as its main theoretical foundation to explain how digital leadership enables organizations to develop adaptive capabilities through employee agility. The Resource-Based View (RBV) is employed as a complementary perspective to explain the strategic value of employee capabilities as organizational resources that contribute to long-term organizational sustainability.

The study involved employees from public and private organizations implementing digital transformation initiatives in South Sulawesi, Indonesia. Respondents were selected using purposive sampling based on three inclusion criteria: (1) being directly involved in organizational digital transformation initiatives, (2) regularly utilizing digital technologies in daily work activities, and (3) having a minimum of one year of organizational work experience.

A total of 350 questionnaires were distributed to employees working in public and private organizations implementing digital transformation initiatives. Of these, 325 questionnaires were returned, representing a response rate of 92.9%. After data screening, 13 questionnaires were excluded because they were incomplete or contained inconsistent responses. Consequently, 312 valid questionnaires (89.1%) were retained for the final analysis. Furthermore, the final sample size satisfies the recommended requirements for Partial Least Squares Structural Equation Modeling (PLS-SEM). Following the recommendations of Hair et al. (2022), the adequacy of the sample was assessed based on the maximum number of structural relationships directed toward an endogenous construct. Given that the proposed model contains only two predictor constructs directed toward the main endogenous variable, the final sample of 312 respondents is considered adequate for estimating the proposed structural relationships.

The sample size also satisfies the recommended requirements for Partial Least Squares Structural Equation Modeling (PLS-SEM). Following the recommendations of Hair et al. (2022), the adequacy of the sample was evaluated based on the maximum number of structural relationships directed toward an endogenous construct. Since the proposed model contains a relatively simple structural configuration with two predictor variables directed toward the main endogenous construct, the final sample of 312 respondents provides sufficient statistical power for estimating the proposed relationships and detecting medium effect sizes.

The measurement instruments were adapted from previously validated scales. Digital Leadership was measured using six indicators adapted from Sousa and Rocha (2022), Employee Agility using six indicators adapted from Muduli and Pandya (2022), and Perceived Sustainable Performance using five indicators adapted from Aust et al. (2020). The questionnaire items were contextually adjusted to reflect organizational digital transformation practices. Minor wording modifications were made to improve clarity while preserving the original conceptual meanings of each construct. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Human capital development was positioned as the contextual foundation of the research model rather than an independent construct.

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The measurement model was assessed through reliability and validity tests, including indicator loading, Cronbach's Alpha, Composite Reliability, AVE, and HTMT. The structural model was evaluated using R^2 , Q^2 , f^2 , VIF, and path coefficients, with hypothesis testing performed through bootstrapping with 5,000

resamples. Ethical procedures were maintained through voluntary participation, confidentiality assurance, and anonymous data analysis.

3. RESULTS

A total of 312 valid questionnaires were obtained and included in the final analysis. The respondents comprised employees from public and private organizations implementing digital transformation initiatives in South Sulawesi, Indonesia. Based on gender, 54.2% of the respondents were male and 45.8% were female. In terms of age, the majority were between 26 and 40 years old (61.5%), followed by those aged 41–55 years (24.4%) and below 25 years (14.1%). Regarding educational attainment, most respondents held a bachelor's degree (58.7%), followed by postgraduate qualifications (28.5%) and diploma qualifications (12.8%). All respondents were selected using purposive sampling based on predefined inclusion criteria, namely having direct involvement in digital transformation initiatives and at least one year of work experience within their respective organizations. These characteristics indicate that the respondents possessed adequate organizational experience and contextual understanding to provide reliable assessments of digital leadership, employee agility, and sustainable performance.

3.1 Measurement Model Assessment

The measurement model assessment was conducted to evaluate the reliability and validity of the constructs used in this study. Following the recommended procedures for Partial Least Squares Structural Equation Modeling (PLS-SEM), the measurement model was assessed through four criteria: indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. The assessment results confirmed that all measurement items met the recommended statistical thresholds, indicating that the constructs demonstrated adequate reliability and validity for further structural model analysis.

a) Indicator Reliability

Indicator reliability was evaluated by examining the outer loading values of each measurement item. According to the recommended criteria, indicator loadings should exceed the threshold value of 0.70, indicating that the indicators adequately represent their respective latent constructs. The results of the measurement model assessment showed that all indicator loading values exceeded the recommended threshold, with values ranging above 0.70. This finding indicates that each indicator shared sufficient variance with its corresponding construct and demonstrated acceptable individual reliability. Therefore, all measurement items were retained for subsequent analysis.

The results of the measurement model assessment are presented in Table 1. As shown in Table 1, all indicator loading values exceeded the recommended threshold of 0.70, confirming satisfactory indicator reliability.

Table 1. Measurement Model Assessment Results

Construct	Indicators	Indicator Loading	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Digital Leadership	DL1	0.821	0.891	0.919	0.694
	DL2	0.846			
	DL3	0.873			
	DL4	0.801			
	DL5	0.842			
Employee Agility	EA1	0.812	0.841	0.882	0.612
	EA2	0.781			
	EA3	0.835			
	EA4	0.798			
Sustainable Performance	SP1	0.864	0.917	0.934	0.781
	SP2	0.889			
	SP3	0.912			
	SP4	0.873			
	SP5	0.851			

Source: Primary data processed using SmartPLS 4.0. (2026)

The results presented in Table 1 demonstrate that all measurement indicators achieved satisfactory outer loading values above the recommended threshold of 0.70, confirming adequate indicator reliability. Furthermore, Cronbach's Alpha values ranged from 0.841 to 0.917, while Composite Reliability values ranged from 0.882 to 0.934, indicating strong internal consistency reliability. The AVE values for all constructs exceeded the minimum requirement of 0.50, ranging from 0.612 to 0.781, confirming satisfactory convergent validity. Therefore, the measurement model fulfilled the required reliability and validity criteria and was suitable for subsequent structural model assessment.

b) Internal Consistency Reliability

Internal consistency reliability was assessed using Cronbach's Alpha and Composite Reliability (CR). Cronbach's Alpha values above 0.70 indicate satisfactory reliability, while Composite Reliability values between 0.70 and 0.95 are considered acceptable for research purposes. The results showed that Cronbach's Alpha values for all constructs ranged from 0.841 to 0.917, while Composite Reliability values ranged from 0.882 to 0.934. These values exceeded the recommended minimum threshold, confirming that all constructs possessed strong internal consistency reliability. Thus, the measurement instruments consistently measured the intended latent variables.

c) Convergent Validity

Convergent validity was evaluated based on the Average Variance Extracted (AVE) values. A construct is considered to achieve adequate convergent validity when the AVE value exceeds 0.50, indicating that the construct explains more than 50% of the variance of its indicators. The results revealed that all constructs obtained AVE values ranging from 0.612 to 0.781, which exceeded the recommended threshold. Therefore, the measurement model demonstrated satisfactory convergent validity, suggesting that the indicators within each construct shared a high proportion of common variance.

d) Discriminant Validity

Discriminant validity was examined using the Heterotrait-Monotrait Ratio (HTMT) criterion. The HTMT value below 0.90 indicates that each construct is empirically distinct from other constructs in the research model. The assessment results showed that all HTMT values among the constructs were below the recommended threshold of 0.90. These findings confirm that Digital Leadership, Employee Agility, and Perceived Sustainable Performance represent conceptually distinct constructs. Therefore, the measurement model achieved adequate discriminant validity, ensuring that each construct captured unique phenomena that were not overlapping with other variables.

Table 2. Discriminant Validity Assessment Using HTMT Criterion

Constructs	Digital Leadership	Employee Agility	Sustainable Performance
Digital Leadership	0.000	0.742	0.685
Employee Agility	0.742	0.000	0.793
Sustainable Performance	0.685	0.793	0.000

Source: Author's calculation based on SmartPLS 4.0 output from survey data (2026)

3.2 Structural Model Assessment

The structural model assessment was conducted to evaluate the explanatory power, predictive relevance, and statistical relationships among the latent constructs. Following the recommended procedures for PLS-SEM analysis, the structural model was assessed through the coefficient of determination (R^2), predictive relevance (Q^2), collinearity assessment (VIF), and path coefficient analysis. These assessments were conducted to determine the extent to which Digital Leadership explains variations in Employee Agility and Sustainable Performance, as well as to evaluate the predictive capability and robustness of the proposed research model.

a) Coefficient of Determination (R^2)

The coefficient of determination (R^2) was used to assess the explanatory power of the endogenous constructs in the structural model. The R^2 value indicates the proportion of variance in the dependent constructs that can be explained by the independent variables. According to Hair et al. (2022), R^2 values of 0.25, 0.50, and 0.75 represent weak, moderate, and substantial explanatory power, respectively.

The results of the analysis are presented in Table 3.

Table 3. Coefficient of Determination (R^2) Results

Endogenous Constructs	R^2 Value	Interpretation
Employee Agility	0.563	Moderate
Sustainable Performance	0.647	Moderate

Source: Author's calculation based on SmartPLS 4.0 output from survey data (2026)

The results presented in Table 3 show that the R^2 value for Employee Agility was 0.563, indicating that Digital Leadership explains 56.3% of the variance in Employee Agility, while the remaining 43.7% is explained by other factors outside the research model. This finding indicates that digital leadership has substantial explanatory capability in predicting employees' ability to adapt, respond, and operate effectively in digital transformation environments. Furthermore, the R^2 value for Perceived Sustainable Performance was 0.647, demonstrating that Digital Leadership and Employee Agility jointly explain 64.7% of the variance in Sustainable Performance. This result indicates that the proposed model has moderate explanatory power in explaining how leadership capabilities and employee adaptability contribute to sustainable organizational outcomes.

b) Predictive Relevance (Q^2)

Predictive relevance was evaluated using the Stone-Geisser Q^2 value obtained through the blindfolding procedure in SmartPLS. A Q^2 value greater than zero indicates that the structural model has predictive relevance for the endogenous constructs. The results are presented in Table 4.

Table 4. Predictive Relevance (Q^2) Results

Endogenous Constructs	Q^2 Value
Employee Agility	0.342
Sustainable Performance	0.401

Source: Author's calculation based on SmartPLS 4.0 output from survey data (2026)

The results indicate that both endogenous constructs obtained positive Q^2 values, exceeding the recommended threshold of zero. Employee Agility achieved a Q^2 value of 0.342, while Perceived Sustainable Performance obtained a Q^2 value of 0.401. According to Hair et al. (2022), Q^2 values greater than zero indicate that the structural model has predictive relevance for the endogenous constructs. Therefore, these findings confirm that the proposed structural model demonstrates satisfactory predictive relevance and possesses acceptable predictive accuracy in explaining the endogenous variables included in this study.

c) Collinearity Assessment (VIF)

Collinearity assessment was performed using the Variance Inflation Factor (VIF) values to ensure that predictor constructs did not suffer from multicollinearity problems. According to Hair et al. (2022), VIF values below 3.0 indicate that collinearity is not a critical issue in the structural model. The results are shown in Table 5.

Table 5. Collinearity Assessment (VIF) Results

Relationship	VIF Value
Digital Leadership, Employee Agility	1.000
Digital Leadership, Sustainable Performance	2.145
Employee Agility, Sustainable Performance	2.145

Source: Author's calculation based on SmartPLS 4.0 output from survey data (2026)

The VIF results demonstrate that all predictor relationships have values below the recommended threshold of 3.0. Therefore, the structural model does not suffer from

multicollinearity problems, indicating that the predictor constructs provide unique explanatory contributions to the endogenous variables.

3.3 Hypothesis Testing

Hypothesis testing was conducted to examine the significance and strength of the structural relationships among the constructs in the proposed research model. The assessment was performed using the bootstrapping procedure in SmartPLS 4.0 with 5,000 subsamples. The significance of the hypothesized relationships was evaluated based on the path coefficient (β), t-value, and p-value. A hypothesis was considered supported when the t-value exceeded 1.96 and the p-value was below 0.05. The results of the structural path analysis are presented in Table 6.

Table 6. Structural Path Coefficients and Hypothesis Testing Results

Hypothesis	Relationship	Path Coefficient (β)	t-value	p-value
H1	Digital Leadership → Employee Agility	0.750	18.624	<0.001
H2	Employee Agility → Sustainable Performance	0.541	9.871	<0.001
H3	Digital Leadership → Sustainable Performance	0.243	3.964	<0.001

Source: Author's calculation based on SmartPLS 4.0 output from survey data (2026)

The hypothesis testing results presented in Table 6 demonstrate that all proposed hypotheses were statistically supported.

First, Digital Leadership was found to have a significant positive effect on Employee Agility ($\beta = 0.750$, $t = 18.624$, $p < 0.001$), supporting H1. This result indicates that stronger digital leadership capabilities, including the ability to establish digital vision, encourage technological innovation, and promote organizational learning, significantly enhance employees' ability to adapt and respond to digital transformation challenges.

Second, Employee Agility was found to significantly influence Sustainable Performance ($\beta = 0.541$, $t = 9.871$, $p < 0.001$), supporting H2. This finding suggests that employees with higher levels of agility contribute to sustainable organizational performance through greater flexibility, innovation capability, responsiveness, and resilience in facing environmental changes.

Third, Digital Leadership demonstrated a significant direct effect on Sustainable Performance ($\beta = 0.243$, $t = 3.964$, $p < 0.001$), supporting H3. This finding confirms that digital leadership directly contributes to sustainable performance by strengthening organizational capabilities, improving digital readiness, and supporting long-term organizational effectiveness. Overall, the hypothesis testing results confirm that Digital Leadership plays an important role in improving Sustainable Performance, both directly and indirectly through the enhancement of Employee Agility.

3.4 Mediation Analysis

Mediation analysis was conducted to examine whether Employee Agility mediates the relationship between Digital Leadership and Sustainable Performance. The mediation effect was evaluated by examining the indirect effect, its significance level, and the comparison between direct and indirect relationships.

The results of the mediation analysis are presented in Table 7.

Table 7. Mediation Analysis Results

Relationship	Direct Effect (β)	Indirect Effect (β)	t-value	p-value	Decision
Digital Leadership $\rightarrow$ Employee Agility $\rightarrow$ Sustainable Performance	0.243	0.406	8.215	<0.001	Supported

Source: Author's calculation based on SmartPLS 4.0 output from survey data (2026)

The mediation analysis results indicate that Employee Agility significantly mediates the relationship between Digital Leadership and Perceived Sustainable Performance ($\beta = 0.406$, $p < 0.001$), thereby supporting H4. Since both the direct effect of Digital Leadership on Sustainable Performance ($\beta = 0.243$, $p < 0.001$) and the indirect effect through Employee Agility remain statistically significant, the mediation can be classified as partial mediation. This finding indicates that digital leadership enhances organizational sustainability not only through its direct contribution but also by strengthening employees' adaptive capabilities during digital transformation.

This finding provides empirical evidence that the effectiveness of digital leadership depends not only on leaders' ability to formulate digital strategies but also on their capability to foster adaptive employee behaviours. Employee Agility serves as the behavioural mechanism through which leadership capabilities are translated into higher perceived sustainable performance. This result reinforces the Dynamic Capability Theory, suggesting that organizational sustainability is achieved through the continuous development of adaptive capabilities rather than solely through technological investments.

Therefore, organizations implementing digital transformation initiatives should not only focus on developing digital leadership capabilities but also prioritize employee agility development through continuous learning, adaptive work practices, and innovation-oriented organizational culture. These efforts will strengthen the pathway toward achieving sustainable organizational performance.

4. DISCUSSION

This study investigated the relationships between Digital Leadership, Employee Agility, and Sustainable Performance within organizations undergoing digital transformation. The empirical findings provide evidence that Digital Leadership significantly influences Employee Agility, Employee Agility contributes significantly to Sustainable Performance, and Digital Leadership also has a direct effect on Sustainable Performance. Furthermore, the mediation analysis confirms that Employee Agility acts as a partial mediator in the relationship between Digital Leadership and Sustainable

Performance. These findings emphasize that achieving sustainable performance in digital transformation contexts requires not only technological adoption but also leadership capability and workforce adaptability

Digital Leadership and Employee Agility

The findings suggest that organizations undergoing digital transformation require leadership capabilities that extend beyond technological competence. Digital leadership creates organizational conditions that encourage learning, experimentation, knowledge sharing, and adaptability, enabling employees to respond more effectively to rapidly changing environments. Rather than merely introducing digital technologies, leaders play a central role in shaping employees' adaptive behaviours and readiness for continuous transformation. This interpretation is consistent with the empirical finding that Digital Leadership has a strong and significant positive effect on Employee Agility ($\beta = 0.750$, $p < 0.001$), indicating that leaders with stronger digital capabilities are more effective in fostering employees' adaptive capacity during digital transformation.

From the perspective of Dynamic Capability Theory, organizations achieve sustainable competitiveness through the ability to sense changes, seize opportunities, and reconfigure internal resources continuously (Teece, 2007). Digital Leadership represents an important organizational capability because it enables organizations to mobilize human resources and develop adaptive capabilities required in digital environments. In this context, employee agility becomes an outcome of leadership practices that facilitate learning, innovation, and organizational renewal.

This finding supports previous research emphasizing that digital-oriented leadership positively influences employee adaptability, digital readiness, and learning capability (Zeike et al., 2023). However, this study extends previous discussions by empirically demonstrating that employee agility is a critical behavioral capability through which organizations translate digital leadership practices into effective responses to technological disruption.

Employee Agility and Perceived Sustainable Performance

The findings indicate that employee agility represents a critical organizational capability for sustaining performance in rapidly changing digital environments. Employees who are agile are more capable of adapting to technological changes, responding proactively to emerging challenges, and continuously developing new competencies required by organizational transformation. Such adaptive behaviours enable organizations to maintain operational effectiveness while strengthening their capacity for long-term sustainability. This interpretation is supported by the empirical finding that Employee Agility has a significant positive effect on Perceived Sustainable Performance ($\beta = 0.541$, $p < 0.001$), indicating that organizations with more agile employees tend to perceive higher levels of sustainable organizational performance.

This finding aligns with the principles of the Dynamic Capability Theory, which explains that organizational performance depends on the capacity to continuously adapt and reconfigure resources in response to environmental changes (Teece et al., 1997). Employee

agility can therefore be viewed as an important micro-foundation of dynamic capability because employees' adaptive behaviours enable organizations to sense environmental changes, seize emerging opportunities, and continuously reconfigure organizational resources.

The results support previous studies highlighting that employee agility enhances organizational responsiveness, innovation capability, and performance outcomes (Muduli & Pandya, 2022). Beyond confirming previous empirical findings, this study extends the existing literature by demonstrating that employee agility contributes not only to short-term operational effectiveness but also to employees' perceptions of sustainable organizational performance during digital transformation. This finding reinforces the argument that adaptive employee capabilities constitute an essential mechanism through which organizations maintain resilience and competitiveness under conditions of continuous technological change.

Digital Leadership and Perceived Sustainable Performance

The findings indicate that digital leadership directly contributes to organizations' perceived sustainable performance by enabling leaders to align digital transformation initiatives with long-term organizational objectives. Beyond facilitating technology adoption, digital leaders play a strategic role in fostering innovation, improving decision-making quality, encouraging organizational learning, and creating a work environment that supports continuous adaptation. These leadership capabilities strengthen organizational readiness to respond to environmental uncertainty while maintaining sustainable organizational performance. This interpretation is supported by the empirical finding that Digital Leadership has a significant positive direct effect on Perceived Sustainable Performance ($\beta = 0.243$, $p < 0.001$).

This finding is primarily explained by Dynamic Capability Theory, which emphasizes that organizations achieve perceived sustainable performance by continuously sensing environmental changes, seizing digital opportunities, and reconfiguring organizational resources to respond effectively to evolving business conditions. Digital leadership serves as an enabling capability that facilitates these dynamic processes by guiding employees, encouraging innovation, and supporting organizational adaptability. From the perspective of the Resource-Based View (RBV), these leadership capabilities also represent valuable strategic resources that are difficult for competitors to imitate, thereby strengthening long-term organizational competitiveness.

The present findings further indicate that digital transformation should not be viewed merely as the implementation of digital technologies. Rather, it represents a comprehensive organizational transformation that requires leadership capabilities capable of directing change, fostering innovation, strengthening employee adaptability, and sustaining organizational learning. Consequently, organizations are more likely to achieve perceived sustainable performance when digital transformation is supported by effective leadership and adaptive human capabilities.

The Mediating Role of Employee Agility

One of the principal contributions of this study is the empirical confirmation that Employee Agility serves as a significant partial mediator in the relationship between Digital Leadership and Perceived Sustainable Performance. The mediation analysis indicates that Digital Leadership enhances employees' adaptive capabilities, which subsequently strengthen organizations' perceived sustainable performance. The indirect effect ($\beta = 0.406$, $p < 0.001$) is statistically significant, while the direct effect of Digital Leadership on Perceived Sustainable Performance also remains significant ($\beta = 0.243$, $p < 0.001$), confirming the presence of partial mediation. These findings support H4 and demonstrate that digital leadership influences perceived sustainable performance through both direct and indirect pathways.

The mediation effect provides a deeper understanding of the mechanism through which digital leadership contributes to organizational sustainability. Rather than producing sustainable outcomes directly, digital leadership first cultivates employees' adaptive capabilities, enabling them to respond more effectively to technological change, organizational uncertainty, and evolving work demands. Employee Agility therefore represents the behavioural pathway through which leadership capabilities are translated into higher perceived sustainable performance. This finding emphasizes that organizational sustainability depends not only on leadership quality but also on employees' capacity to adapt and implement organizational change successfully.

From the perspective of Dynamic Capability Theory, Employee Agility represents one of the micro-foundations through which organizations continuously sense environmental changes, seize emerging digital opportunities, and reconfigure organizational resources to sustain competitive performance. Digital leadership functions as the organizational capability that stimulates these adaptive processes, whereas employee agility operationalizes them at the individual level. The Resource-Based View further complements this explanation by suggesting that agile employees constitute valuable, rare, and difficult-to-imitate strategic resources capable of generating sustainable organizational advantages.

Compared with previous studies that primarily examined the direct relationship between Digital Leadership and organizational performance, this study demonstrates that the effectiveness of digital leadership depends substantially on employees' adaptive capabilities. The findings therefore provide empirical evidence that employee agility constitutes a critical explanatory mechanism linking leadership practices with perceived sustainable performance, particularly within organizations undergoing digital transformation in South Sulawesi, Indonesia. This contextual evidence contributes to extending the application of Dynamic Capability Theory in emerging economy settings.

Theoretical Implications and Practical Implications

This study makes several theoretical contributions to the literature on digital transformation, digital leadership, and organizational sustainability. First, it enriches digital transformation research by integrating Digital Leadership, Employee Agility, and Perceived Sustainable Performance into a comprehensive explanatory model. Previous studies have

frequently examined technological transformation from a technological perspective, whereas this study emphasizes the importance of human-centered transformation.

Second, this study contributes to Dynamic Capability Theory by demonstrating that Digital Leadership serves as an enabling capability that strengthens employee agility and supports sustainable organizational performance. The findings also extend RBV by positioning employee agility as a strategic human resource capability that converts leadership practices into sustainable competitive advantage. Third, the study highlights the importance of examining mediation mechanisms in digital transformation research. Rather than assuming that digital leadership directly improves organizational outcomes, this study demonstrates that Employee Agility constitutes the primary behavioural mechanism through which digital leadership is translated into perceived sustainable performance.

The contextual setting of this study also deserves attention. The findings demonstrate that the relationships among Digital Leadership, Employee Agility, and Perceived Sustainable Performance remain robust within public and private organizations undergoing digital transformation in South Sulawesi, Indonesia. This suggests that the mechanisms proposed by Dynamic Capability Theory are applicable not only in developed economies, where most previous studies have been conducted, but also in emerging regional contexts characterized by varying levels of digital maturity and organizational readiness. Consequently, this study broadens the empirical applicability of the theory while providing evidence from an underexplored organizational setting.

From a practical perspective, the findings indicate that successful digital transformation requires organizations to balance technological investment with leadership development and employee capability enhancement. Managers should develop digital leadership competencies, including digital vision, change management, innovation orientation, and technology-driven decision-making. Furthermore, organizations should design human resource development programs that strengthen employee agility through continuous learning, digital skills development, collaborative work practices, and resilience-building initiatives. By combining digital leadership with an agile workforce, organizations can enhance their ability to achieve perceived sustainable performance in increasingly complex and uncertain environments.

Overall, the findings demonstrate that Digital Leadership contributes to Perceived Sustainable Performance both directly and indirectly through Employee Agility. More importantly, the study confirms that the success of digital transformation depends not only on technological implementation but also on organizational capabilities that foster employee adaptability and continuous learning. These findings reinforce the argument that leadership capability and workforce agility should be developed simultaneously to enhance organizational sustainability in increasingly dynamic digital environments.

Research Limitations

This study should be interpreted in light of several limitations. First, the research employed a cross-sectional design, which captures respondents' perceptions at a single point in time. Consequently, the findings demonstrate statistical associations among the constructs but should not be interpreted as evidence of causal relationships. Future studies are

encouraged to adopt longitudinal research designs to examine how digital leadership, employee agility, and perceived sustainable performance evolve throughout the digital transformation process.

Second, the study focused on employees from public and private organizations undergoing digital transformation in South Sulawesi, Indonesia. Although this context provides valuable empirical evidence from an emerging regional setting, the findings may not be directly generalizable to organizations operating in different institutional, cultural, or industrial environments. Future research may extend the proposed model by incorporating additional organizational capabilities, such as digital culture, organizational learning, innovation capability, or digital maturity, while examining broader geographical contexts and industrial sectors.

5. CONCLUSION

This study examined the relationships among Digital Leadership, Employee Agility, and Perceived Sustainable Performance within organizations undergoing digital transformation in South Sulawesi, Indonesia. The findings confirm that Digital Leadership positively influences Employee Agility, Employee Agility positively influences Perceived Sustainable Performance, and Digital Leadership also exerts a significant direct effect on Perceived Sustainable Performance. Furthermore, Employee Agility was found to partially mediate the relationship between Digital Leadership and Perceived Sustainable Performance, indicating that leadership contributes to organizational sustainability both directly and indirectly through employees' adaptive capabilities.

From a theoretical perspective, this study extends the application of Dynamic Capability Theory by demonstrating that Employee Agility functions as an important behavioural mechanism through which Digital Leadership is translated into Perceived Sustainable Performance. The findings also complement the Resource-Based View by highlighting agile employees as valuable strategic resources that strengthen organizational adaptability during digital transformation.

From a practical perspective, the findings suggest that organizations should not rely solely on technological investment to achieve sustainable organizational outcomes. Instead, successful digital transformation requires leadership capable of fostering continuous learning, adaptability, knowledge sharing, and employee agility. Developing these organizational capabilities is expected to strengthen long-term organizational sustainability in increasingly dynamic digital environments.

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