

## Digital Leadership, Knowledge Management, and Employee Performance: The Mediating Role of Employee Engagement in a Knowledge-Intensive Public Organization

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### ABSTRACT

Public-sector digital transformation is often framed as a technological modernization project, yet recurrent difficulties in government digitalization indicate that leadership capability, knowledge governance, and employee engagement are equally decisive. This study examines the effects of digital leadership and knowledge management on employee performance, and tests employee engagement as a mediating mechanism, in a knowledge-intensive public health policy organization in Indonesia. A quantitative cross-sectional census survey was administered to all 56 employees of the Center for Health System Resilience Policy (Pusjak SKK), Ministry of Health of the Republic of Indonesia. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 4. The measurement model satisfied convergent validity, discriminant validity, and internal consistency criteria, with indicator loadings above 0.70, average variance extracted values above 0.50, and heterotrait-monotrait ratios below 0.90. The structural model explained 65.2% of the variance in employee engagement and 74.4% of the variance in employee performance. Digital leadership and knowledge management had positive and significant direct effects on employee engagement and employee performance. Knowledge management was the strongest antecedent of engagement ( $\beta = 0.580$ ,  $p < 0.001$ ), while employee engagement was the strongest direct predictor of performance ( $\beta = 0.475$ ,  $p < 0.001$ ). The indirect effects of digital leadership and knowledge management on performance through engagement were also significant, indicating partial mediation. The findings suggest that digital capability in public bureaucracies produces performance gains not only through systems and infrastructure, but through engaged employees who are able to convert digital vision and organizational knowledge into policy-relevant work. The study contributes to the integration of Dynamic Capabilities Theory, the Knowledge-Based View, and Job Demands-Resources Theory in explaining performance in knowledge-intensive public organizations in the Global South.

**Keywords:** digital leadership; knowledge management; employee engagement; employee performance; public-sector digital transformation; PLS-SEM; Indonesia

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### INTRODUCTION

Health-system transformation is no longer limited to service-delivery reform. It increasingly concerns governance capacity, organizational adaptability, knowledge integration, and the performance of the civil servants who sustain policy execution. Public health organizations face rising complexity of health risks, the need for rapid evidence-based policy responses, and growing expectations for transparency, accountability, and digital public value. Under these conditions, digital transformation

is widely regarded as an enabling condition for resilient health governance (Vial, 2019; Verhoef et al., 2021; Mergel, Edelmann, & Haug, 2019).

However, the performance effects of digital transformation are not automatic. International evidence suggests that digital transformation initiatives frequently underperform when technological investments are not accompanied by leadership capability, knowledge-management routines, and active employee involvement (Kane, Palmer, Phillips, Kiron, & Buckley, 2019; McKinsey & Company, 2022). In such settings, organizations may experience digitalization without transformation: the adoption of platforms, dashboards, or electronic workflows without a corresponding improvement in work quality, policy learning, or institutional responsiveness.

Indonesia's public-sector reform agenda reflects this tension. The Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik, SPBE), mandated through Presidential Regulation No. 95 of 2018, establishes a national policy foundation for digital government. In the health sector, the Ministry of Health's transformation agenda positions digital capability as a cross-cutting lever for improving system resilience and policy coordination. Yet recent Indonesian public-administration literature continues to identify gaps between the availability of digital systems and the leadership capacity required to deploy them strategically (Nuryadin, Sobandi, & Santoso, 2024).

This condition brings digital leadership to the center of the performance debate. Digital leadership is not merely the ability of leaders to use information technology. It refers to the capacity to formulate a digital vision, coordinate digital work, mobilize data for decision-making, and manage adaptive organizational change (Van Wart, Roman, Wang, & Liu, 2019; Sow & Aborbie, 2018). From the perspective of Dynamic Capabilities Theory, digital leadership represents an organizational capability for sensing technological opportunities, seizing them through strategic action, and reconfiguring work routines to create value (Teece, Pisano, & Shuen, 1997; Teece, 2007).

Leadership, however, does not operate in isolation. Public health policy organizations are knowledge-intensive organizations. Their core outputs are policy analysis, data interpretation, recommendation quality, and institutional learning rather than physical products. Consequently, knowledge management - the systematic creation, capture, sharing, and utilization of knowledge - becomes a central determinant of performance (Alavi & Leidner, 2001; Grant, 1996; Nonaka & Takeuchi, 1995). Without structured knowledge-management practices, evidence, expert judgment, and institutional memory can remain fragmented across individuals, teams, or administrative units.

A third element is employee engagement. Organizational behavior research shows that employees who are cognitively, emotionally, and behaviorally engaged display higher vigor, dedication, absorption, adaptability, and performance (Kahn, 1990; Schaufeli, Salanova, González-Romá, & Bakker, 2002; Albrecht, Bakker, Gruman, Macey, & Saks, 2015). In public organizations undergoing digital transformation, engagement is especially important because civil servants must translate new systems, leadership priorities, and knowledge routines into day-to-day work. If digital change is perceived as an additional administrative burden rather than a resource for better work, its performance effect may remain weak.

These issues converge at the Center for Health System Resilience Policy (Pusat Kebijakan Sistem Ketahanan Kesehatan, hereafter Pusjak SKK), a strategic policy unit under the Ministry of Health of the Republic of Indonesia. Pusjak SKK is responsible for policy analysis, data integration, strategic recommendations, and knowledge support related to health-system resilience. Its performance is therefore judged not only by administrative output, but by analytical quality, policy relevance, timeliness, and contribution to national health resilience.

This study asks: How do digital leadership and knowledge management influence employee performance in a knowledge-intensive public health policy organization, and to what extent does employee engagement mediate these relationships? By addressing this question, the study provides an empirically grounded explanation of how organizational capabilities are converted into individual-level performance in a public-sector digital transformation context.

Three gaps motivate the study. First, digital leadership research has developed largely in private-sector and market-oriented contexts, while its operation in public administration remains comparatively underexplored (Kane et al., 2019; Verhoef et al., 2021). Where it is studied in government settings, digital leadership is often reduced to technological literacy rather than being theorized as a dynamic capability for sensing, seizing, and reconfiguring organizational resources.

Second, knowledge management in the public sector is frequently examined as an isolated administrative or information-systems issue. Less attention has been given to knowledge management as a performance-relevant capability in knowledge-intensive public organizations, where analytical quality and institutional memory are central outputs (Alavi & Leidner, 2001; Grant, 1996).

Third, the micro-level psychological mechanism linking organizational capability to employee performance remains insufficiently specified, particularly in Global South public bureaucracies. Employee engagement offers a theoretically plausible mechanism because it explains how organizational resources become individual energy, commitment, and task persistence (Bakker & Demerouti, 2007; Albrecht et al., 2015).

The study contributes in three ways. Conceptually, it integrates Dynamic Capabilities Theory, the Knowledge-Based View, and Job Demands-Resources (JD-R) Theory in a single empirical model. Mechanistically, it positions employee engagement as the psychological bridge between organizational capability and performance. Contextually, it provides empirical evidence from a knowledge-intensive Indonesian health policy organization, a setting rarely represented in the literature on digital leadership, knowledge management, and public-sector performance.

## **Literature Review and Hypothesis Development**

### **1. Digital Leadership and Employee Performance**

Digital leadership refers to leadership behavior that enables organizations to use digital technologies, data, and agile work arrangements to achieve strategic objectives. In public organizations, digital leadership also includes the capacity to align digital initiatives with public value, accountability, and policy responsiveness (Van Wart et al., 2019; Mergel et al., 2019). Effective digital leaders do not merely introduce digital systems; they create direction, reduce ambiguity, and enable employees to use technology for better decisions and more adaptive work processes.

Dynamic Capabilities Theory explains this relationship. Organizations perform better when they can sense changes in their environment, seize opportunities through strategic action, and reconfigure resources in response to changing demands (Teece et al., 1997; Teece, 2007). Digital leadership functions as a micro-foundation of these capabilities because leaders frame digital priorities, allocate attention and resources, and legitimize new routines. Accordingly, digital leadership is expected to improve employee performance through clearer digital direction, more efficient coordination, and stronger data-informed decision-making. H1: Digital leadership has a positive and significant effect on employee performance.

## **2. Knowledge Management and Employee Performance**

The Knowledge-Based View conceptualizes knowledge as a strategically distinctive organizational resource (Grant, 1996). This view is particularly relevant in policy organizations where the main work involves collecting evidence, interpreting complex information, producing recommendations, and transferring lessons across policy cycles. Knowledge management includes the processes through which knowledge is created, captured, stored, shared, and applied in organizational decision-making (Alavi & Leidner, 2001; Nonaka & Takeuchi, 1995).

In a knowledge-intensive public organization, weak knowledge management can reduce performance even when employees possess high individual expertise. Knowledge that remains tacit, undocumented, or siloed becomes difficult to mobilize for policy response. Conversely, systematic knowledge capture, collaborative learning, and knowledge utilization can improve work quality, reduce duplication, accelerate policy analysis, and protect institutional memory during personnel rotation. H2: Knowledge management has a positive and significant effect on employee performance.

## **3. Digital Leadership, Knowledge Management, and Employee Engagement**

Employee engagement is commonly understood as a positive work-related state characterized by vigor, dedication, and absorption (Schaufeli et al., 2002). Earlier conceptual work emphasized psychological meaningfulness, safety, and availability as conditions that enable employees to invest themselves in work roles (Kahn, 1990). Engagement is therefore not only an attitude, but a motivational state through which employees apply cognitive, emotional, and behavioral energy to organizational tasks.

JD-R Theory provides a useful explanation of how digital leadership and knowledge management influence engagement. The theory argues that job resources, including leadership support, autonomy, feedback, and access to information, stimulate engagement by helping employees achieve work goals and buffer job demands (Bakker & Demerouti, 2007). Digital leadership can operate as a leadership resource by reducing uncertainty about digital change, while knowledge management can operate as an informational and collaborative resource by making expertise accessible and socially valued. H3: Digital leadership has a positive and significant effect on employee engagement. H4: Knowledge management has a positive and significant effect on employee engagement.

## **4. Employee Engagement and Employee Performance**

Engaged employees are more likely to invest effort, persist in complex tasks, share knowledge, and respond adaptively to change. Meta-theoretical and empirical discussions of engagement suggest that engagement is associated with higher

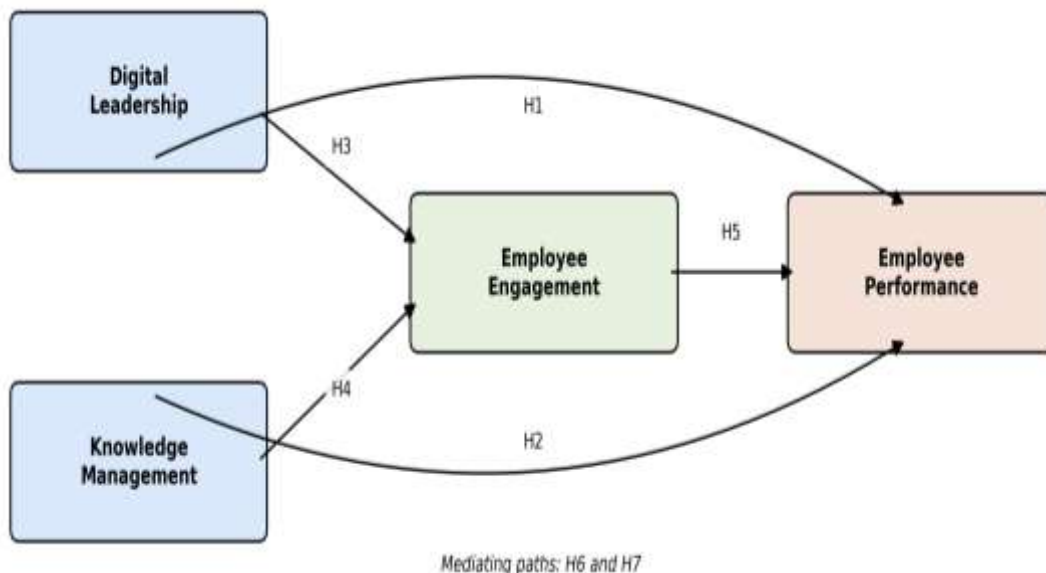
individual and organizational performance because engaged employees connect their personal energy to work goals (Macey & Schneider, 2008; Albrecht et al., 2015).

In knowledge-intensive policy work, engagement is especially consequential. Policy analysts and functional experts must integrate evidence, coordinate with stakeholders, and sustain intellectual effort under time pressure. Engagement can therefore strengthen performance by improving analytical focus, collaboration, timeliness, and willingness to use digital and knowledge-based tools. H5: Employee engagement has a positive and significant effect on employee performance.

### 5. Mediating Role of Employee Engagement

Digital leadership and knowledge management can affect performance directly by improving work processes and decision quality. At the same time, their performance effects may operate indirectly through employee engagement. Employees who perceive digital leadership as useful and knowledge management as supportive are more likely to feel that their work is meaningful, that their expertise is recognized, and that they have the resources required to perform well.

This mediating logic is consistent with JD-R Theory and with the broader argument that organizational capabilities require micro-level enactment to produce performance. Digital leadership and knowledge management become effective not simply because they exist as formal systems, but because employees engage with them and convert them into work behavior. H6: Employee engagement mediates the effect of digital leadership on employee performance. H7: Employee engagement mediates the effect of knowledge management on employee performance.



**Figure 1. Conceptual Research Model**

### METHOD

This study employed a quantitative cross-sectional survey design to examine the structural relationships among digital leadership (X1), knowledge management (X2), employee engagement (Z), and employee performance (Y). The research was conducted at Pusjak SKK, Ministry of Health of the Republic of Indonesia, a knowledge-intensive public health policy organization whose activities rely on data integration, knowledge utilization, and evidence-based policy recommendations. The

population consisted of all employees of Pusjak SKK, and because the organization comprised fewer than 100 employees, a total sampling (census) approach was adopted. A total of 56 valid responses were collected from active structural and functional employees during October–November 2025. Data were gathered through a structured electronic questionnaire using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) and were complemented by limited semi-structured interviews with selected structural officials to provide contextual understanding. The interviews were used solely to support the interpretation of quantitative findings and were not subjected to formal thematic analysis.

Digital leadership was measured using three dimensions—digital vision and strategy, technological and data capability, and change leadership/agility—represented by 15 indicators (DL1–DL15) adapted from the digital leadership literature (Van Wart et al., 2019; Sow & Aborbie, 2018). Knowledge management comprised the dimensions of knowledge creation and capture, knowledge sharing and collaboration, and knowledge utilization, measured through 15 indicators (KM1–KM15) based on Alavi and Leidner (2001) and Grant (1996). Employee engagement was operationalized using the vigor, dedication, and absorption dimensions of the Utrecht Work Engagement Scale (UWES) with nine indicators (EE1–EE9) (Schaufeli et al., 2002), while employee performance was assessed through work quality, productivity and timeliness, and collaborative-adaptive contribution using nine indicators (KP1–KP9), drawing on Campbell's (1990) performance theory and the Indonesian civil-service core values framework. The complete measurement model is presented in Appendix A.

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4, as the method is appropriate for predictive modeling, mediation analysis, and relatively small sample sizes (Hair et al., 2019). The analysis followed a two-stage procedure. First, the measurement model was evaluated through convergent validity (outer loadings  $\geq 0.70$  and AVE  $\geq 0.50$ ), internal consistency reliability (Cronbach's alpha and composite reliability  $\geq 0.70$ ), and discriminant validity using the Fornell–Larcker criterion and the heterotrait–monotrait (HTMT) ratio (Fornell & Larcker, 1981; Henseler et al., 2015). Second, the structural model was assessed using path coefficients, coefficients of determination ( $R^2$ ), effect sizes ( $f^2$ ), predictive relevance ( $Q^2$ ), and bootstrapping with 5,000 resamples to test hypotheses at a significance level of  $\alpha = 0.05$ , including the significance of indirect effects for mediation analysis (Nitzl et al., 2016). Organizational access was officially granted by the leadership of Pusjak SKK, and all findings are reported at the aggregate level without disclosing respondents' identities. Because the study relied on self-reported survey data, the possibility of common method bias cannot be completely eliminated (Podsakoff et al., 2003). If required by the target journal, the manuscript should be supplemented with institutional ethics approval information, including the approving body, approval number, and approval date.

## RESULTS AND DISCUSSION

### 1. Respondent Profile

The final sample consisted of 56 active employees of Pusjak SKK, including structural and functional staff. The workforce composition reflects the mandate of the unit as a policy advisory body whose value is generated through analytical, knowledge-integrative, and coordination-intensive work rather than routine administrative throughput. The available manuscript data indicate that the unit is dominated by policy analysts and other functional experts, many of whom hold postgraduate qualifications.

### 2. Measurement Model Evaluation

The measurement model demonstrated adequate convergent validity. All 48 indicators across the four constructs exceeded the 0.70 outer-loading threshold. Digital leadership loadings ranged from 0.722 to 0.875, knowledge management from 0.798 to 0.895, employee engagement from 0.803 to 0.899, and employee performance from 0.834 to 0.922. These results indicate that the observed indicators adequately represent their intended latent constructs.

The reliability statistics also exceeded accepted thresholds. Cronbach's alpha values ranged from 0.956 to 0.974 and composite reliability values ranged from 0.962 to 0.976. AVE values ranged from 0.646 to 0.755, exceeding the minimum criterion of 0.50. Table 1 summarizes the convergent validity and reliability results.

**Table 1. Convergent Validity and Reliability Summary**

Construct	Loading Range	Cronbach's $\alpha$	Composite Reliability	AVE
Digital Leadership	0.722-0.875	0.961	0.965	0.646
Knowledge Management	0.798-0.895	0.974	0.976	0.734
Employee Engagement	0.803-0.899	0.956	0.962	0.739
Employee Performance	0.834-0.922	0.959	0.965	0.755

Source: SmartPLS 4.1.9 output, processed by the authors (2026).

Discriminant validity was confirmed using both the Fornell-Larcker criterion and the HTMT ratio. The square root of the AVE for each construct exceeded its correlations with other constructs, and all HTMT values were below the conservative threshold of 0.90. These results support the empirical distinctiveness of the four latent constructs.

**Table 2. Discriminant Validity: Fornell-Larcker Criterion and HTMT Ratio**

Construct	Digital Leadership	Employee Engagement	Employee Performance	Knowledge Mgt.
Digital Leadership	0.804	0.666 <sup>a</sup>	0.701 <sup>a</sup>	0.565 <sup>a</sup>
Employee Engagement	0.647	0.860	0.855 <sup>a</sup>	0.780 <sup>a</sup>
Employee Performance	0.682	0.823	0.869	0.772 <sup>a</sup>
Knowledge Management	0.556	0.761	0.751	0.857

Note: Diagonal values are the square roots of AVE. Below-diagonal values are Fornell-Larcker inter-construct correlations. Values marked <sup>a</sup> above the diagonal are HTMT ratios. Source: SmartPLS 4.1.9 output, processed by the authors (2026).

### 3. Structural Model Evaluation

The structural model explained a substantial proportion of variance in both endogenous constructs. Employee engagement produced an R<sup>2</sup> of 0.652 and an adjusted R<sup>2</sup> of 0.638, indicating that digital leadership and knowledge management jointly explained 65.2% of the variance in engagement. Employee performance produced an R<sup>2</sup> of 0.744 and an adjusted R<sup>2</sup> of 0.729, indicating that digital leadership,

knowledge management, and employee engagement jointly explained 74.4% of the variance in performance.

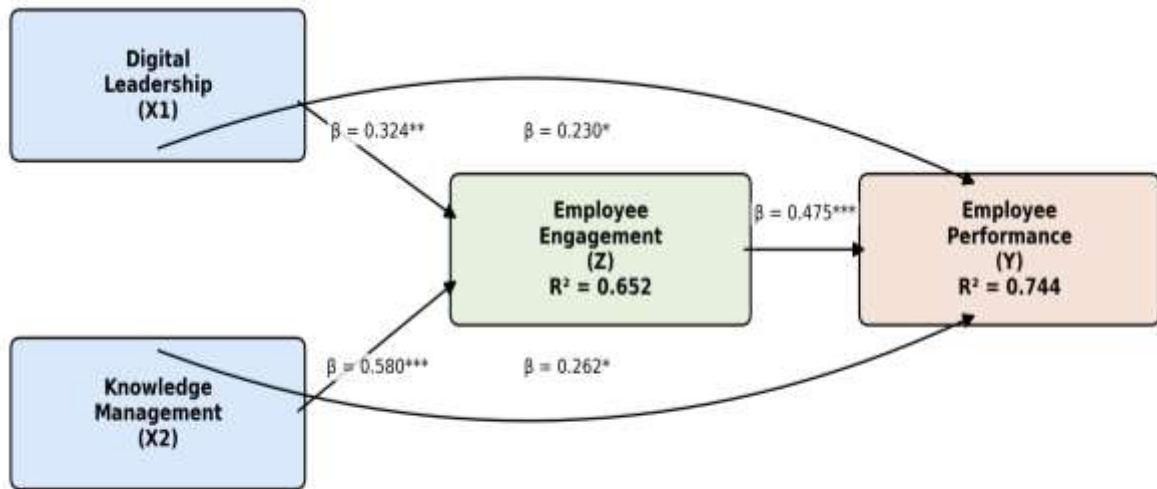
Predictive relevance was supported by positive Q<sup>2</sup> values for both endogenous constructs. Employee engagement had a Q<sup>2</sup> of 0.472, while employee performance had a Q<sup>2</sup> of 0.541. These values indicate that the model has adequate predictive relevance for the endogenous variables.

**Table 3. Coefficient of Determination and Predictive Relevance**

Endogenous Variable	R <sup>2</sup>	Adjusted R <sup>2</sup>	Q <sup>2</sup> (Blindfolding)
Employee Engagement	0.652	0.638	0.472
Employee Performance	0.744	0.729	0.541

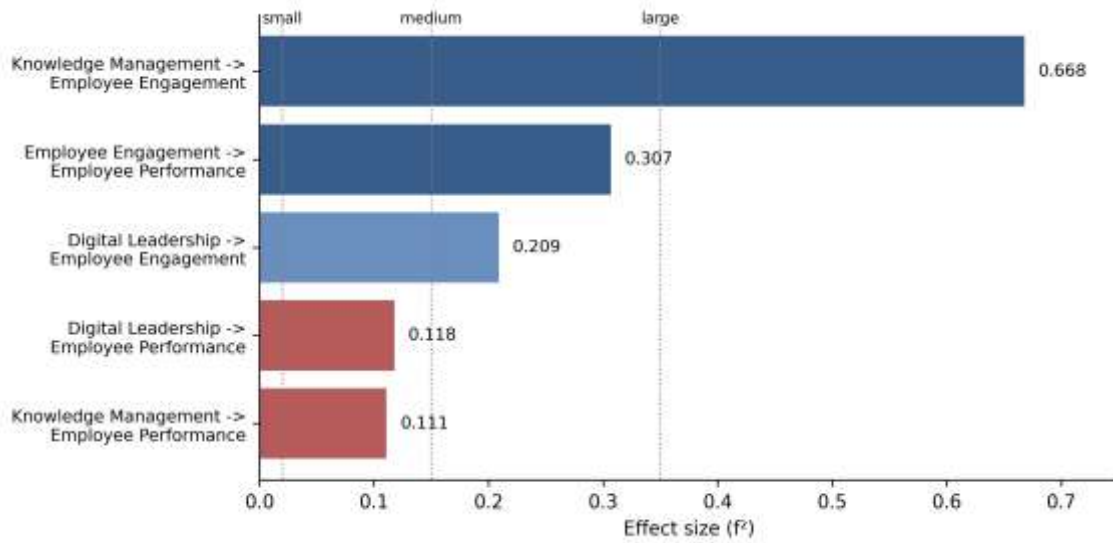
Source: SmartPLS 4.1.9 output, processed by the authors (2026).

Effect-size analysis showed that knowledge management exerted the largest effect on employee engagement ( $f^2 = 0.668$ ), while employee engagement exerted a medium-to-large effect on employee performance ( $f^2 = 0.307$ ). Digital leadership had a moderate effect on engagement ( $f^2 = 0.209$ ) and a smaller direct effect on performance ( $f^2 = 0.118$ ). Knowledge management also had a smaller direct effect on performance after engagement was included in the model ( $f^2 = 0.111$ ). Following Cohen’s (1988) benchmarks as adapted in PLS-SEM, these results indicate that engagement carries a considerable portion of the explanatory weight linking organizational capability to individual performance.



Note: \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001. Indirect effects: DL -> EE -> EP = 0.154\*; KM -> EE -> EP = 0.276\*\*.

**Figure 2. Structural Model and Standardized Path Coefficients**



**Figure 3. Effect Size (f<sup>2</sup>) of Structural Paths**

#### 4. Hypothesis Testing

Bootstrapping with 5,000 resamples was used to test the significance of each direct and indirect path. All proposed hypotheses were supported at the 5% significance level. Table 4 summarizes the path coefficients, t-statistics, p-values, and hypothesis decisions.

**Table 4. Path Coefficients and Hypothesis Testing Results**

Hypothesis and Path	$\beta$	t-statistic	p-value	Decision
H1: Digital Leadership -> Employee Performance	0.230	2.108	0.035	Supported
H2: Knowledge Management -> Employee Performance	0.262	2.423	0.015	Supported
H3: Digital Leadership -> Employee Engagement	0.324	2.876	0.004	Supported
H4: Knowledge Management -> Employee Engagement	0.580	5.242	<0.001	Supported
H5: Employee Engagement -> Employee Performance	0.475	3.729	<0.001	Supported
H6: Digital Leadership -> Engagement -> Performance	0.154	2.445	0.015	Supported; partial mediation
H7: Knowledge Management -> Engagement -> Performance	0.276	2.800	0.005	Supported; partial mediation

Source: SmartPLS 4.1.9 bootstrapping output based on 5,000 resamples, processed by the authors (2026).

Digital leadership had a positive and significant effect on employee performance ( $\beta = 0.230$ ,  $t = 2.108$ ,  $p = 0.035$ ), supporting H1. Knowledge management also had a positive and significant effect on employee performance ( $\beta = 0.262$ ,  $t = 2.423$ ,  $p = 0.015$ ), supporting H2. Digital leadership and knowledge management both significantly predicted employee engagement, supporting H3 ( $\beta = 0.324$ ,  $t = 2.876$ ,  $p = 0.004$ ) and H4 ( $\beta = 0.580$ ,  $t = 5.242$ ,  $p < 0.001$ ). Employee engagement had a positive and significant effect on employee performance ( $\beta = 0.475$ ,  $t = 3.729$ ,  $p < 0.001$ ), supporting H5.

The mediation tests showed significant indirect effects for both pathways. Employee engagement mediated the relationship between digital leadership and

employee performance ( $\beta = 0.154$ ,  $t = 2.445$ ,  $p = 0.015$ ), supporting H6. Employee engagement also mediated the relationship between knowledge management and employee performance ( $\beta = 0.276$ ,  $t = 2.800$ ,  $p = 0.005$ ), supporting H7. Because the direct effects of digital leadership and knowledge management on performance remained significant after engagement was included, the mediation is partial rather than full.

## **Discussion**

### **1. Digital Leadership and Employee Performance**

The positive effect of digital leadership on employee performance supports the argument that digital transformation requires leadership capability rather than technology adoption alone. In the Pusjak SKK context, digital leadership appears to improve performance by clarifying digital priorities, enabling data-informed coordination, and supporting adaptive work routines. This finding is consistent with Dynamic Capabilities Theory, which emphasizes leaders' roles in sensing, seizing, and reconfiguring organizational resources (Teece et al., 1997; Teece, 2007).

The finding also aligns with public-sector digital leadership literature, which argues that leaders influence digital performance by combining technological understanding with strategic direction, collaboration, and change management (Van Wart et al., 2019). In a health policy organization, this means that digital leadership is valuable when it helps employees use digital tools to improve policy analysis, not merely when it promotes the use of new platforms.

### **2. Knowledge Management and Employee Performance**

Knowledge management had a slightly stronger direct effect on performance than digital leadership. This result is theoretically coherent because Pusjak SKK is a knowledge-intensive organization. Its performance depends on whether evidence, policy experience, analytical methods, and institutional lessons are systematically captured, shared, and used. The finding reinforces the Knowledge-Based View, which treats knowledge as a central source of organizational capability and performance (Grant, 1996).

The result also highlights a practical risk in bureaucratic settings: expertise may remain individualized rather than institutionalized. If knowledge resides mainly in individual employees, staff rotation or changes in assignment can weaken institutional memory. Formal knowledge-management systems, regular policy-learning cycles, and cross-unit knowledge repositories can therefore become performance infrastructure in their own right.

### **3. Digital Leadership, Knowledge Management, and Employee Engagement**

Both digital leadership and knowledge management significantly predicted employee engagement, but knowledge management had the stronger effect. This suggests that, in knowledge-intensive policy work, employees may become more engaged when their knowledge is documented, shared, recognized, and used in organizational decision-making. Engagement is therefore not merely a product of motivational communication; it is also a product of whether the organization values and mobilizes employee expertise.

From a JD-R perspective, digital leadership and knowledge management function as organizational resources. Digital leadership reduces ambiguity and provides direction during digital change, while knowledge management gives employees access to information, collaboration, and learning opportunities. These

resources can increase vigor, dedication, and absorption because employees are better equipped to achieve demanding policy tasks (Bakker & Demerouti, 2007; Schaufeli et al., 2002).

#### **4. Employee Engagement as a Mediating Mechanism**

The mediation results provide the central explanatory insight of the study. Digital leadership and knowledge management affect employee performance both directly and indirectly through employee engagement. This finding indicates that organizational capabilities do not translate automatically into performance; they require psychological enactment by employees. Engagement is the mechanism through which employees invest effort, attention, and persistence in using digital tools and organizational knowledge for higher-quality work.

The partial mediation pattern is important. It suggests that digital leadership and knowledge management have direct technical or procedural benefits for performance, but they also generate performance gains by creating a more engaged workforce. Therefore, strategies focused only on systems, regulations, or platforms may be insufficient if they do not also cultivate meaningful engagement.

#### **5. Theoretical Implications**

The study makes four theoretical contributions. First, it extends Dynamic Capabilities Theory into a public health policy organization by showing that digital leadership functions as a performance-relevant capability in a non-market, public-value-oriented setting. Second, it reinforces the Knowledge-Based View by demonstrating that knowledge management is a key predictor of engagement and performance in a knowledge-intensive public organization. Third, it connects macro-level digital transformation literature with micro-level organizational behavior by identifying employee engagement as a mediating psychological mechanism. Fourth, it adds empirical evidence from Indonesia, contributing to the diversification of digital governance research beyond the Global North.

#### **6. Managerial and Policy Implications**

The findings suggest several actionable implications for public-sector leaders. First, knowledge management should be treated as a strategic governance function, not as a secondary administrative task. Pusjak SKK and similar organizations should institutionalize policy-learning cycles, standardized documentation of analytical outputs, cross-unit knowledge repositories, and routines for using past evidence in new policy work.

Second, performance management systems should include indicators of knowledge contribution, such as participation in learning forums, repository contributions, peer-review of policy analysis, and evidence-use practices. If engagement increases when employees perceive that their knowledge is valued and used, then performance systems should make knowledge contribution visible and consequential.

Third, digital leadership development should move beyond technical literacy. Leaders need competencies in change management, data-informed decision-making, collaborative problem-solving, and psychological safety. In policy organizations, employees are more likely to use digital systems productively when leaders connect these systems to meaningful work, quality improvement, and public value.

Finally, the findings caution against technology-centric reform. Investments in digital platforms without parallel investment in leadership capability and knowledge

governance risk producing digitalization without transformation. Conversely, when digital leadership enables adaptive work, knowledge management institutionalizes organizational learning, and employee engagement is deliberately cultivated, public organizations are better positioned to generate evidence-based policy value.

## CONCLUSION

This study examined the relationships among digital leadership, knowledge management, employee engagement, and employee performance in a knowledge-intensive Indonesian public health policy organization. Using PLS-SEM on census data from 56 employees of Pusjak SKK, the study found that digital leadership and knowledge management have positive and significant direct effects on employee engagement and employee performance. Employee engagement also has a positive and significant effect on performance and partially mediates the effects of both digital leadership and knowledge management on performance.

The structural model explained 65.2% of the variance in employee engagement and 74.4% of the variance in employee performance. The strongest substantive pattern was that knowledge management most strongly predicted engagement, while engagement most strongly predicted performance. This indicates that, in a knowledge-intensive bureaucracy, performance improvement depends not only on digital systems or formal leadership direction, but on whether employees are engaged enough to convert digital vision and organizational knowledge into policy-relevant work.

Overall, the study supports the view that digital transformation in public organizations is an organizational capability project rather than a purely technological project. Leadership, knowledge governance, and engagement must be developed together if digital transformation is to produce meaningful improvements in public-sector performance.

### Limitations and Future Research

Several limitations should be acknowledged. First, the cross-sectional design captures relationships at a single point in time and cannot establish how digital leadership, knowledge management, engagement, and performance evolve longitudinally. Future studies should use longitudinal or panel designs to examine causal ordering and change over time.

Second, all constructs were measured through self-reported perceptions, which creates a risk of common method bias (Podsakoff et al., 2003). Future research should triangulate survey data with objective performance indicators from the official performance-management system, supervisor ratings, repository-use data, or digital-workflow analytics.

Third, the study was conducted in a single organizational unit with a relatively small census sample ( $N = 56$ ). Although total sampling was appropriate for the bounded population, the findings should not be generalized uncritically to all public-sector organizations. Comparative multi-unit or multi-ministry studies would improve external validity.

Fourth, the model did not include contextual moderators such as organizational culture, psychological safety, digital maturity, incentive systems, or policy-task complexity. Future research could test these moderators and use mixed-methods designs to explain how knowledge-management practices are enacted in daily policy work.

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## Declarations

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## References

- Alavi, M., & Leidner, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly*, 25(1), 107-136. <https://doi.org/10.2307/3250961>
- Albrecht, S. L., Bakker, A. B., Gruman, J. A., Macey, W. H., & Saks, A. M. (2015). Employee engagement, human resource management practices and competitive advantage. *Journal of Organizational Effectiveness: People and Performance*, 2(1), 7-35. <https://doi.org/10.1108/JOEPP-08-2014-0042>
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309-328. <https://doi.org/10.1108/02683940710733115>
- Campbell, J. P. (1990). Modeling the performance prediction problem in industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of Industrial and Organizational Psychology* (2nd ed., Vol. 1, pp. 687-732). Consulting Psychologists Press.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.2307/3151312>
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(S2), 109-122. <https://doi.org/10.1002/smj.4250171110>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115-135. <https://doi.org/10.1007/s11747-014-0403-8>

- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692-724. <https://doi.org/10.2307/256287>
- Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2019). Coming of age digitally: Learning, leadership, and legacies. *MIT Sloan Management Review*. <https://sloanreview.mit.edu/projects/coming-of-age-digitally/>
- Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology*, 1(1), 3-30. <https://doi.org/10.1111/j.1754-9434.2007.0002.x>
- McKinsey & Company. (2022). Common pitfalls in transformations: A conversation with Jon Garcia. <https://www.mckinsey.com/capabilities/transformation/our-insights/common-pitfalls-in-transformations-a-conversation-with-jon-garcia>
- Mergel, I., Edelman, N., & Haug, N. (2019). Defining digital transformation: Results from expert interviews. *Government Information Quarterly*, 36(4), 101385. <https://doi.org/10.1016/j.giq.2019.06.002>
- Nitzl, C., Roldan, J. L., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling: Helping researchers discuss more sophisticated models. *Industrial Management & Data Systems*, 116(9), 1849-1864. <https://doi.org/10.1108/IMDS-07-2015-0302>
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford University Press.
- Nuryadin, R., Sobandi, A., & Santoso, B. (2024). Digital leadership in the public sector: A systematic literature review. *Jurnal Ilmu Administrasi*, 21(1), 1-18.
- OECD. (2020). *Digital government index: 2019 results (OECD Public Governance Policy Papers)*. OECD Publishing. <https://doi.org/10.1787/4de9f5bb-en>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Republic of Indonesia. (2018). Presidential Regulation No. 95 of 2018 on Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik). State Secretariat of the Republic of Indonesia.
- Republic of Indonesia. (2024). Presidential Regulation No. 161 of 2024 on the Ministry of Health. State Secretariat of the Republic of Indonesia.
- Ringle, C. M., Wende, S., & Becker, J.-M. (2024). *SmartPLS 4*. SmartPLS GmbH. <https://www.smartpls.com>
- Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two-sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71-92. <https://doi.org/10.1023/A:1015630930326>
- Sow, M., & Aborbie, S. (2018). Impact of digital leadership on organization performance. *International Journal of Information, Business and Management*, 10(2), 51-58.
- Teece, D. J. (2007). Explicating dynamic capabilities. *Strategic Management Journal*, 28(13), 1319-1350. <https://doi.org/10.1002/smj.640>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.



[https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)

- Van Wart, M., Roman, A., Wang, X., & Liu, C. (2019). Operationalizing the definition of e-leadership. *International Review of Administrative Sciences*, 85(1), 80-97. <https://doi.org/10.1177/0020852316681446>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889-901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118-144. <https://doi.org/10.1016/j.jsis.2019.01.003>
- World Bank. (2021). GovTech maturity index: The state of public sector digital transformation. World Bank. <https://doi.org/10.1596/978-1-4648-1763-6>