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# Digital Organizational Culture and Employee Performance: How Digital Literacy and Digital Leadership Shape Performance?

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**ABSTRACT**

The study investigates the association of Digital Organizational Culture with Employee Performance through Digital Literacy, as well as whether Digital Leadership alters the strength of that association. A cross-sectional survey produced 228 usable responses from employees in a digitalized function of an Indonesian State-Owned Enterprise (SOE). The SmartPLS, a partial least squares structural equation modeling (PLS-SEM) software package, was used for model evaluation. Digital Organizational Culture was related to Digital Literacy ($\beta = 0.612$; $t = 15.582$; $P < 0.001$) and Employee Performance ($\beta = 0.286$; $t = 3.827$; $P < 0.001$). Digital Literacy was also related to Employee Performance ($\beta = 0.315$; $t = 4.634$; $P < 0.001$), mediating part of the influence of Digital Organizational Culture on Employee Performance ($\beta = 0.193$; $t = 4.314$; $P < 0.001$). The Digital Leadership interaction was not significant ($\beta = 0.033$; $t = 0.523$; $P = 0.601$). Thus, the supported model contains both a direct DOC-Employee Performance path, as well as an indirect path through Digital Literacy, but no supported moderation by Digital Leadership.

**Keywords:** Digital Organizational Culture, Digital Literacy, Digital Leadership, Employee Performance, Digital Transformation, State-Owned Enterprise
**JEL Classifications:** M12, M14, M15, O33

## 1. INTRODUCTION

Digital transformation changes how organizations coordinate work, communicate, collaborate, use data, and organize business processes (Kraus et al., 2022). These changes are not purely technical. They also require adjustments in organizational structure, culture, and leadership (Leso et al., 2023). Digital Organizational Culture matters because it concerns how an organization understands digital issues, responds to new technologies, and keeps digital change on the organizational agenda. The cultural context is considered significantly important in contexts of change where digital strategies need to be developed (Leso et al., 2023; Martínez-Caro et al., 2020).

Empirical setting is a digitalized function of Indonesia State-Owned Enterprise (SOE) in the oil and gas sector. The function is rolling out a number of digital initiatives to shift from manual to automated and connected working operations. The trend shows the need to investigate Digital Organizational Culture, employees' digital competence, Digital Leadership and Employee Performance in a work environment where the digital systems are already interconnected into daily work practices. This is necessary because the adoption of only the technology is unable to describe digital transformation. Moreover, organizations need to have a Digital Organizational Culture that allows the use of digital technologies to create process change and value (Martínez-Caro et al., 2020). The analysis conducted at the employee level by Lyu and Luo (2024) related Digital Literacy with job performance. Similarly, Fahmi et al. (2023) also emphasized the capability of knowing when technology was necessary and how it should be used for work based on Ribble (2015). These studies indicate that two key elements are important for digital transformation:

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A culture that supports digital resource use and employees' capability to utilize them effectively.

How Digital Organizational Culture leads to Employee Performance is not substantially clear. Pangarso et al. (2022) demonstrated a positive association between the two constructs, while Rahim et al. (2024) found that cultural influences also affected employees indirectly through satisfaction and engagement. Another independent study by Lyu and Luo (2024) linked Digital Literacy with job performance. These streams collectively suggest that the Digital Literacy can be used to make sense of the transformation process of a digital cultural environment into employee performance outcomes.

In this study, Digital Literacy is treated as an employee capability related to the effective use of digital technologies and information. Fahmi et al. (2023) reported that Digital Culture was associated with the employee responses to digital transformation. Lyu and Luo (2024) additionally demonstrated that digital literacy is connected with job performance. This was a reflection of the Digital Organizational Culture as the antecedent of the Digital Literacy and Employee Performance.

Another gap identified is related to Digital Leadership. The process of recognizing opportunities and risks, understanding the effect of technology on the organization and taking action in uncertain situations after technological change are all considered the characteristics of digital transformation leaders (Gilli et al., 2024). Digital Leadership has gained increasing visibility in the literature but still in the process of being integrated into explanatory models (Wang et al., 2022). Rather than adding it as another direct predictor, this study tests whether Digital Leadership alters the strength of the Digital Organizational Culture-Employee Performance relationship.

This study adds two elements to the model. First, Digital Literacy is examined as the capability through which Digital Organizational Culture may be translated into Employee Performance. Second, Digital Leadership is tested as a boundary condition for that relationship among employees in a digitalized function of an Indonesian SOE. The model uses Organizational Culture Theory (OCT) to represent the organizational cultural environment and Social Cognitive Theory (SCT) to connect that environment with employee capability and behavior. In action, Digital Organizational Culture as well as Digital Literacy are integrated at the core of performance improvement and Digital Leadership is considered a platform for moderation which needs to be proven and not taken for granted.

## 2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### 2.1. Organizational Culture Theory as the Foundation for the Effect of Digital Organizational Culture toward Employee Performance

In Schein's OCT (2010), organizational culture develops from assumptions that members learn and share while dealing with external adjustment as well as internal integration. Schein categorizes culture into artifacts, espoused beliefs and values, as well as core underlying assumptions. Applied to a digital setting, visible artifacts include technologies and digital work processes; espoused values appear in support for innovation and adaptation; and underlying assumptions concern the place that technology is expected to occupy in organizational activity.

OCT is used here to explain why Digital Organizational Culture may be connected with Employee Performance. A digital culture is expressed not simply by having technology available, but by embedding it in routines, work practices, and everyday ways of coordinating activities (Martínez-Caro et al., 2020; Liu et al., 2026). Pangarso et al. (2022) reported a positive effect of Digital Organizational Culture on Employee Performance. Similar culture-performance links have been reported for Organizational Culture, as well as Human Resource Performance (Raharjo et al., 2018) and for Risk Culture and Employee Performance (Rahim et al., 2024). Together, these findings fit Schein's (2010) argument that shared assumptions and practices can shape how members behave at work.

### 2.2. Social Cognitive Theory as the Foundation for the Mediating Role of Digital Literacy

Social Cognitive Theory offers the theoretical basis for explaining how digital literacy serves as a mediating factor. The theory explains a reciprocal influence between the environment, personal/cognitive factors and behavior (Wood and Bandura, 1989). Bandura (2001) also claims that personal agency exists within and not beyond the context of social and structural conditions. This logic is adopted in the current model in which Digital Organizational Culture is considered on the environment side and Digital Literacy on the capability of the employee aspect. Fahmi et al. (2023) indicated that digital literacy is linked to digital culture and influences employee attitudes towards digital transformation. Lyu and Luo (2024) further highlighted the link between Digital Literacy and job performance. The situation leads to the identification of the theory as the foundation for examining an indirect path between Digital Organizational Culture, as well as Employee Performance via Digital Literacy. In this study, the SCT mechanism is modeled as a personal capability mechanism (PCM). Digital Organizational Culture is the environment of the organization, Digital Literacy is the skill of the employee, and Employee Performance is the action or behavior. The three elements are considered as interacting in a trend which is similar to the reciprocal relationship of SCT (Wood and Bandura, 1989). From a previous study, the Digital Culture was connected with Digital Literacy (Fahmi et al., 2023) and Digital Literacy to job performance (Lyu and Luo, 2024). The mediation test evaluates whether a stronger Digital Literacy plays a mediating role in the relationship between Digital Organizational Culture and performance. This leads to the question "Does the relationship between Digital Organizational Culture and performance partially run through stronger Digital Literacy?."

### 2.3. Digital Organizational Culture and Employee Performance

Digital Organizational Culture includes shared beliefs, values, and behavioral norms that facilitate an organization's response to

digital transformation (Schein, 2010; Liu et al., 2026). In reality, this culture is expressed through innovative experimentation, open collaboration, learning, and adaptation (Liu et al., 2026). Pangarso et al. (2022) reported a positive relationship between Digital Organizational Culture and Employee Performance with the results obtained from an Indonesian government agency.

The trends are apparent in the analysis of other cultural forms where Raharjo et al. (2018) observed a relationship between Organizational culture, as well as HR performance. Rahim et al. (2024) also showed a direct relationship between Risk culture and employee performance. The common explanation for this is shared values and repeated modes of working that can shape the way organizational members work (Schein, 2010). Pangarso et al. (2022) further developed the argument for a uniquely digital culture. These arguments lead to the first hypothesis as follows:

- $H_1$: Digital organizational culture positively affects employee performance.

### 2.4. Digital Organizational Culture and Digital Literacy

Fahmi et al. (2023), drawing on Ribble (2015), describe Digital literacy as the capacity to judge when and how to apply technology appropriately to specific needs. It also focuses on the manipulation of digital information throughout the activities of accessing, managing, interpreting, integrating, communicating, evaluating, and creating information (Steinfeld et al., 2025 paraphrasing from UNESCO, 2026). In SCT, the environmental, personal, and cognitive factors are all interrelated with behavior (Wood and Bandura, 1989). This leads the model to present Digital Organizational Culture as an element of the organizational environment of an employee and Digital Literacy as a personal capacity. Fahmi et al. (2023) earlier identified a positive relation of Digital Culture, as well as Digital Literacy. It is implied that digital skills of employees can be cultivated both by personal effort and the digital culture of work. This logic leads to the second hypothesis, which states:

- $H_2$: Digital organizational culture positively affects digital literacy.

### 2.5. Digital Literacy and Employee Performance

Digital Literacy refers to an employee's capacity to choose, utilize, and implement digital technologies competently and suitably, as well as manage digital information efficiently (Fahmi et al., 2023; Ribble, 2015; Steinfeld et al., 2025 based on UNESCO, 2026). Meanwhile, Employee Performance is the actions and behaviors employees perform in the quest for organizational goals (Koopmans et al., 2013). Lyu and Luo (2024) previously supported this hypothesized link among the constructs, finding that Digital Literacy is related to Job Performance. There is a theoretical explanation for the relationship as personal capability is connected to environmental and behavioral factors (Wood and Bandura, 1989). In a digital work environment, workers with greater abilities to use digital information should have better capacity to fulfill work demands. This leads to the development of the third hypothesis as follows:

- $H_3$: Digital literacy positively affects employee performance.

### 2.6. The Mediating Role of Digital Literacy

This mediation argument is the same as the position of SCT where the Environment and personal/cognitive ability affect behavior and vice versa (Wood and Bandura, 1989). Personal agency is situated in this broader social and structural context according to Bandura (2001). In the proposed model, the work environment is represented by Digital Organizational Culture and the employee capability that can take a portion of the influence of the environment on the product or service is represented by Digital Literacy. The relevant empirical connections have been separately reported in previous studies. Fahmi et al. (2023) linked Digital Culture with Digital Literacy. The process focused on using Digital Literacy to describe the employee's reaction to the digital transformation. Meanwhile, Lyu and Luo (2024) correlated Digital Literacy to Job Performance. Both relationships are integrated into one "mediation test" in this study to evaluate whether part of the effect of Digital Organizational Culture on Employee Performance is mediated by Digital Literacy. The phenomenon leads to the fourth hypothesis:

- $H_4$: Digital literacy mediates the positive effect of digital organizational culture on employee performance.

### 2.7. The Moderating Role of Digital Leadership

Digitalization transforms the role of the leaders who are required to be aware of new technologies, foresee the effects on people and the organization, recognize and differentiate possible applications from potential issues, and where technology change causes uncertainty in addition to leading the employees in the digital world (Gilli et al., 2024). Wang et al. (2022) used the relationships among Digital Leadership, Digital Entrepreneurial Orientation, and Digital Organizational Culture to explain Exploratory Innovation. This finding did not directly use Digital Leadership as a mediation variable of Employee Performance. The aim was to determine possible differences between the Digital Organizational Culture - performance path when Digital Leadership was higher. This decision is based on three strands of prior evidence, with the first being the importance of leadership in digital transformation (Gilli et al., 2024). The second point addresses the relationship between Digital Leadership as well as Digital Organizational Culture (Wang et al., 2022), while the third highlights that leadership style affects employee performance (Pawirosumarto et al., 2017). This "moderation hypothesis" is then expressed as follows:

- $H_5$: Digital leadership positively moderates the effect of digital organizational culture on employee performance.

The hypothesized relationships are summarized in Figure 1.

## 3. METHODOLOGY

The empirical study used an explanatory cross-sectional approach. A single time was used to collect the data from employees of a digitalized department within an Indonesian state-owned enterprise in the oil and gas sector. The function had 532 employees. The required sample was calculated with the Slovin formula, and Proportionate Stratified Random Sampling was used so that each job group was represented. After screening, 228 questionnaires were complete and usable for analysis.

Measurement used a five-point Likert scale and instruments adopted for the four constructs. At the start, each construct had five indicators: Digital Organizational Culture (DOC1-DOC5), Digital Literacy (DGL1-DGL5), Digital Leadership (DGLE1-DGLE5), and Employee Performance (EPF1-EPF5). DOC2 and DGL4 did not reach an outer loading of 0.70 and were removed during measurement model purification. The retained indicators were DOC1, DOC3, DOC4, DOC5, DGL1, DGL2, DGL3, DGL5, DGLE1-DGLE5, and EPF1-EPF5.

The Digital Literacy instrument represented operational, information navigation, social, creative, and mobile capabilities adapted from Fahmi et al. (2023). Digital Leadership incorporates the dimensions of, thinking and inquisition, creativity, curiosity, global vision, and collaboration, as well as deep knowledge from Wang et al. (2022). Employee Performance was captured through quality, quantity, timeliness, effectiveness, and work commitment following Silaen et al. (2021).

PLS-SEM analysis in SmartPLS followed Hair et al. (2022; 2024). Measurement quality was assessed using outer loadings, rho_A, Cronbach's alpha, composite reliability, average variance extracted (AVE), HTMT, the Fornell-Larcker criterion, and collinearity. Structural assessment used $R^2$, $f^2$, model-fit indices, path coefficients, specific indirect effects, and the product-term interaction. Bootstrapping provided the standard errors, t-statistics, confidence intervals, as well as P-values. Significance was determined at $P < 0.05$.

## 4. RESULTS AND DISCUSSION

### 4.1. Respondent Characteristics

The 228 respondents represented several job and demographic groups. Table 1 shows that 59.6% were male, 51.3% were 30-39 years old, 70.6% held a Bachelor's degree/D4, and 79.4% had at least 11 years of tenure. Finance was the largest work area, accounting for 50.4% of the sample. The remaining respondents came from other work areas and from different education, tenure, and position categories within the digitalized function.

**Table 1: Respondent characteristics (n=228)**

| Characteristics | Frequency | Percentage |
|---|---|---|
| Gender | | |
| Male | 136 | 59.6 |
| Female | 92 | 40.4 |
| Age | | |
| 21-29 years | 3 | 1.3 |
| 30-39 | 117 | 51.3 |
| 40-49 | 94 | 41.2 |
| ≥50 | 14 | 6.2 |
| Education | | |
| Senior high school/equivalent | 3 | 1.3 |
| Diploma (D1/D2/D3) | 29 | 12.7 |
| Bachelor's degree/D4 | 161 | 70.6 |
| Master's degree | 35 | 15.4 |
| Tenure | | |
| ≤5 years | 6 | 2.6 |
| 6-10 | 41 | 18.0 |
| ≥11 | 181 | 79.4 |
| Position | | |
| Vice president | 1 | 0.4 |
| Manager | 21 | 9.2 |
| Assistant manager | 59 | 25.9 |
| Senior supervisor/analyst/junior analyst or equivalent | 147 | 64.5 |
| Work area | | |
| Finance | 115 | 50.4 |
| Project | 33 | 14.5 |
| Human capital | 23 | 10.1 |
| Information and communication technology | 16 | 7.0 |
| Asset management | 13 | 5.7 |
| Procurement | 11 | 4.8 |
| Service performance and governance | 9 | 3.9 |
| Master data operation | 8 | 3.5 |

Source: Primary data processed by the authors, 2026

### 4.2. Measurement Model

Outer loadings for the indicators retained in the final model were between 0.719 and 0.912 (Table 2). These values were above the approximately 0.70 indicator-reliability benchmark commonly used in PLS-SEM (Hair et al., 2019). DOC2 and DGL4 were the two exceptions in the initial model and were removed because their loadings were below the benchmark.

**Table 2: Outer loadings of the final measurement model**

| Construct | Indicator | Outer loading |
|---|---|---|
| Digital organizational culture | DOC1 | 0.817 |
| Digital organizational culture | DOC3 | 0.826 |
| Digital organizational culture | DOC4 | 0.832 |
| Digital organizational culture | DOC5 | 0.833 |
| Digital literacy | DGL1 | 0.719 |
| Digital literacy | DGL2 | 0.829 |
| Digital literacy | DGL3 | 0.814 |
| Digital literacy | DGL5 | 0.744 |
| Digital leadership | DGLE1 | 0.892 |
| Digital leadership | DGLE2 | 0.888 |
| Digital leadership | DGLE3 | 0.900 |
| Digital leadership | DGLE4 | 0.887 |
| Digital leadership | DGLE5 | 0.907 |
| Employee performance | EPF1 | 0.804 |
| Employee performance | EPF2 | 0.909 |
| Employee performance | EPF3 | 0.912 |
| Employee performance | EPF4 | 0.908 |
| Employee performance | EPF5 | 0.740 |

Source: Primary data processed by the authors, 2026. DOC2 and DGL4 were eliminated during measurement model purification

Reliability as well as convergent validity were supported across the four constructs. Cronbach's alpha from 0.781 to 0.938, rho_C from 0.859 to 0.953, and AVE from 0.605 to 0.801 (Table 3), satisfying the relevant PLS-SEM criteria (Hair et al., 2019). The HTMT coefficients in Table 4 ranged from 0.495 to 0.744. Because each value was lower than 0.85, the discriminant-validity criterion was also met (Henseler et al., 2015).

### 4.3. Structural Model and Hypothesis Testing

The structural model explained 37.5% of the variance in Digital Literacy ($R^2 = 0.375$; adjusted $R^2 = 0.372$), as well as 49.7% of the variance in Employee Performance ($R^2 = 0.497$; adjusted $R^2 = 0.488$). The estimated model found an SRMR of 0.066 and an NFI of 0.866. These indices are reported as additional model-fit information; the PLS-SEM evaluation itself relies mainly on measurement quality, explanatory power, effect sizes, and the importance of the structural paths (Hair et al., 2019).

The explanatory power, model-fit indices, and effect sizes are summarized in Table 5.

**Table 3: Reliability and convergent validity**

| Construct | Cronbach α | rho_A | rho_C | AVE |
|---|---|---|---|---|
| Digital leadership | 0.938 | 0.939 | 0.953 | 0.801 |
| Digital literacy | 0.781 | 0.790 | 0.859 | 0.605 |
| Digital organizational culture | 0.846 | 0.850 | 0.896 | 0.684 |
| Employee performance | 0.908 | 0.913 | 0.932 | 0.735 |

Source: Primary data processed by the authors, 2026

**Table 4: Discriminant validity (HTMT)**

| Construct pair | HTMT |
|---|---|
| Digital literacy↔digital leadership | 0.495 |
| Digital organizational culture↔digital leadership | 0.572 |
| Digital organizational culture↔digital literacy | 0.744 |
| Employee performance↔digital leadership | 0.588 |
| Employee performance↔digital literacy | 0.701 |
| Employee performance↔digital organizational culture | 0.680 |

Source: Primary data processed by the authors, 2026

**Table 5: Explanatory power, model fit, and effect size**

| Indicator | Value | Interpretation |
|---|---|---|
| $R^2$ Digital literacy | 0.375 | Adjusted $R^2$=0.372 |
| $R^2$ Employee performance | 0.497 | Adjusted $R^2$=0.488 |
| SRMR - estimated model | 0.066 | <0.08 |
| NFI | 0.866 | Additional information |
| $f^2$ DOC→Digital literacy | 0.600 | Large |
| $f^2$ Digital literacy→Employee performance | 0.120 | Small-to-moderate |
| $f^2$ DOC→Employee performance | 0.079 | Small |
| $f^2$ DGLE×DOC→Employee performance | 0.002 | Negligible |

Source: Primary data processed by the authors, 2026

Bootstrap estimates supported hypotheses $H_1$-$H_3$. The DOC-Employee Performance path was β = 0.286 (t = 3.827; P < 0.001), the DOC-Digital Literacy path was β = 0.612 (t = 15.582; P < 0.001), and the Digital Literacy-Employee Performance path was β = 0.315 (t = 4.634; P < 0.001). $H_5$ was not supported: The Digital Leadership interaction with Digital Organizational Culture produced β = 0.033 (t = 0.523; P = 0.601), indicating no statistically supported moderation of Employee Performance. The complete hypothesis-testing results are presented in Table 6.

For $H_4$, the specific indirect effect from Digital Organizational Culture through Digital Literacy to Employee Performance was 0.193 (t = 4.314; P < 0.001). The direct DOC-Employee Performance effect remained significant at β = 0.286 (P < 0.001). In the terminology of Nitzl et al. (2016), this pattern reflects partial mediation. The total DOC effect on Employee Performance was 0.479, so the model contains both a direct contribution and an additional contribution carried through Digital Literacy.

## 4.4. Discussion

### *4.4.1. Digital organizational culture and employee performance*

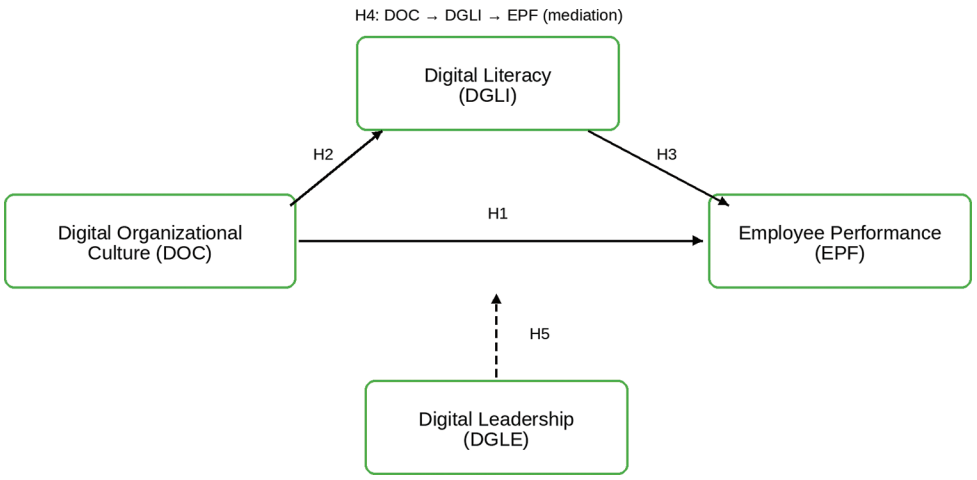
$H_1$ was supported because Digital Organizational Culture was related to Employee Performance at β = 0.286 (t = 3.827; P < 0.001). The results are summarized through the practical implications where respondents with a higher score on the Digital Organizational Culture dimension also had a higher score on Employee Performance. Pangarso et al. (2022) reported a comparable pattern in a digital organizational context. The trend also aligns with broader evidence linking Organizational Culture and Human Resource Performance (Raharjo et al., 2018) as well as Risk Culture and Employee Performance (Rahim et al., 2024).

**Table 6: Hypothesis tests**

| Hypothesis | Path | O | M | STDEV | t | P | Decision |
|---|---|---|---|---|---|---|---|
| $H_1$ | DOC→EPF | 0.286 | 0.282 | 0.075 | 3.827 | <0.001 | Accepted |
| $H_2$ | DOC→DGLI | 0.612 | 0.618 | 0.039 | 15.582 | <0.001 | Accepted |
| $H_3$ | DGLI→EPF | 0.315 | 0.317 | 0.068 | 4.634 | <0.001 | Accepted |
| $H_4$ | DOC→DGLI→EPF | 0.193 | 0.196 | 0.045 | 4.314 | <0.001 | Accepted; partial mediation |
| $H_5$ | DGLE×DOC→EPF | 0.033 | 0.028 | 0.063 | 0.523 | 0.601 | Rejected |

Source: Primary data processed by the authors, 2026. O: Original sample, M: Sample mean, STDEV: Standard deviation

**Figure 1:** Study model



OCT shows that culture offers members shared assumptions and familiar interpretations of organizational situations (Schein, 2010). A digitalized workplace has repeated assumptions on the use of digital systems and communication via technology, collaboration through a digital method, and completing work in line with common digital processes. Therefore, the contribution of Digital Organizational Culture to Employee Performance can be associated with the shared patterns of work becoming the norm.

#### *4.4.2. Digital organizational culture and digital literacy*

$H_2$ produced the strongest effect in the structural model. Digital Organizational Culture is significantly associated with Digital Literacy, indicated by $f^2 = 0.600$, $t = 15.582$, and $P < 0.001$. The size of this path suggests that employee digital capability is connected not only with individual characteristics but also with the cultural setting in which employees work. Fahmi et al. (2023) reported a comparable positive correlation between Digital Culture and Digital Literacy ($\beta = 0.57$; $t = 9.89$). SCT is useful here because it treats personal capability and environmental conditions as reciprocally connected (Wood and Bandura, 1989; Bandura, 2001). The result therefore supports treating Digital Organizational Culture as an environmental factor and Digital Literacy as an employee capability.

#### *4.4.3. Digital literacy and employee performance*

$H_3$ was also supported. The path from Digital Literacy to Employee Performance was $\beta = 0.315$ ($t = 4.634$; $P < 0.001$), with $f^2 = 0.120$. Employees with higher Digital Literacy levels generally reported better Employee Performance. Lyu and Luo (2024) likewise found a relationship between Digital Literacy as well as Job Performance. From the SCT perspective, this result is plausible because employee capability operates together with the surrounding environment and actual work behavior (Wood and Bandura, 1989). Bandura's (2001) concept of agency also places the employee's capacity to act within a wider social and structural context.

#### *4.4.4. The mediating role of digital literacy*

The mediation test provides another route through which Digital Organizational Culture is linked with Employee Performance. The indirect effect through Digital Literacy was 0.193 ($t = 4.314$; $P < 0.001$), and the direct DOC-Employee Performance effect was statistically significant. This is complementary partial mediation under the classification of Nitzl et al. (2016). In other words, Digital Organizational Culture is linked with Employee Performance both on its own and by supporting the Digital Literacy that employees use in their work. The two parts of this mechanism are consistent with Fahmi et al. (2023) and Lyu and Luo (2024).

The overall impact of Digital Organizational Culture on Employee Performance is 0.479. This value reflects the combination of the direct DOC-performance path and the route that passes through Digital Literacy. OCT accounts for the first route by emphasizing shared cultural patterns in work behavior, whereas SCT explains why an organizational environment may also influence behavior through employee capability (Wood and Bandura, 1989). Read together, the two theories give different but compatible explanations for the same overall relationship.

#### *4.4.5. Digital leadership as a moderator*

$H_5$ was rejected because Digital Leadership and Digital Organizational Culture interaction resulted in $t = 0.523$ and $P = 0.601$. This indicated that data could not confirm the hypothesis that Digital Leadership impacts the effectiveness of the relationship between Digital Organizational Culture and Employee Performance. The result was focused on moderation and not to the importance of Digital Leadership in digital transformation. Gilli et al. (2024) reported that the role of leadership was becoming more crucial to grasp technological change, opportunities, risks, and organizational consequences. Wang et al. (2022) also identified a connection between Digital Leadership and Digital Organizational Culture. The study further positioned Digital Organizational Culture in the path of Exploratory Innovation.

This distinction matters: Digital Leadership may help an organization manage digital transformation without necessarily making the influence of Digital Organizational Culture on Employee Performance stronger in this sample.

Organizations may still develop Digital Leadership to communicate technological change, direct implementation, and manage the transformation process (Gilli et al., 2024). The present model, however, gives no statistical basis for assuming that stronger Digital Leadership will amplify the DOC-Employee Performance path. The supported evidence points instead to Digital Organizational Culture and Digital Literacy as the two variables with direct or indirect links to Employee Performance in this model.

### 4.5. Theoretical and Practical Implications

The theoretical results clarify each theory's contribution. OCT (Schein, 2010) is used for the direct DOC-Employee Performance relationship: Shared assumptions and repeated practices provide a cultural basis for how members perceive situations and perform work. In the digital setting studied here, the significant DOC-Employee Performance path is consistent with that logic and with Pangarso et al. (2022).

SCT is used for the capability pathway rather than the direct cultural pathway (Wood and Bandura, 1989). Digital Organizational Culture represents the environmental condition, Digital Literacy the employee capability, and Employee Performance the behavioral outcome. Fahmi et al. (2023) provides evidence for the Digital Culture-Digital Literacy link, while Lyu and Luo (2024) provides evidence for the Digital Literacy-Job Performance link. The significant mediation integrates those two relationships in one model.

Digital Leadership is in a different place and considered particularly important in the digitalization period (Gilli et al., 2024) in addition to Digital Organizational Culture and Exploratory Innovation (Wang et al., 2022). However, the variable did not have significant interaction with Digital Organizational Culture in this study. The ineffectiveness of Digital Leadership is not the point of the contribution but rather the ability to differentiate its established moderating function from the supported capability of Digital Literacy.

The take-home message is that culture, capability, and leadership are interconnected but present distinct management issues. Digital Organizational Culture needs to be sustained in the daily work habits of available employees. Digital Literacy is also required to be developed towards enabling employees to effectively utilize digital systems. Digital Leadership is continuously significant for managing technological change (Gilli et al., 2024). However, the present study provides no evidence that stronger Digital Leadership strengthens the Digital Organizational Culture–Employee Performance relationship.

## 5. CONCLUSION

The model produced four supported relationships and one unsupported moderation. Digital Organizational Culture was related to Employee Performance ($\beta = 0.286$; $P < 0.001$) and Digital Literacy ($\beta = 0.612$; $P < 0.001$). Digital Literacy was related to Employee Performance ($\beta = 0.315$; $P < 0.001$) and carried a specific indirect effect of 0.193 ($P < 0.001$) from Digital Organizational Culture to Employee Performance. The total DOC effect on Employee Performance was 0.479. These results support both a direct route and a Digital Literacy route to Employee Performance, consistent with Pangarso et al. (2022), Fahmi et al. (2023), and Lyu and Luo (2024). The Digital Leadership interaction was not supported ($\beta = 0.033$; $t = 0.523$; $P = 0.601$).

The unsupported moderation limits how the role of Digital Leadership should be interpreted. Prior studies show that leadership remains relevant to technological change and to Digital Organizational Culture (Gilli et al., 2024; Wang et al., 2022). The present result adds that such relevance does not necessarily mean that Digital Leadership will strengthen the DOC-Employee Performance relationship.

The theoretical contribution comes from assigning different functions to OCT and SCT within the same model. OCT explains the direct cultural route from Digital Organizational Culture to Employee Performance (Schein, 2010). SCT explains the route in which an environmental condition is connected with behavior through personal capability (Wood and Bandura, 1989; Bandura, 2001). Digital Literacy is the capability mechanism supported by the data, whereas Digital Leadership was tested in a moderating role and was not significant. The two roles should therefore not be treated as interchangeable.

The results showed that digitalized organizations were required to focus on Digital Organizational Culture and Digital Literacy for practice. Culture should be part of the daily routine in digital work in addition to the implementation of Digital Literacy to prepare the employees for the utilization of available systems and information. Digital Leadership remains necessary for directing and communicating technological change, but its contribution should be managed as a distinct agenda rather than assumed to raise both Digital Organizational Culture and Employee Performance at the same time.

Three limitations delimit the scope of the findings. First, the cross-sectional design captures variables at a single time point, as well as does not establish causal relationships. Second, all constructs were assessed via self-reported data from one source, which may lead to common method bias (Podsakoff et al., 2003). Third, the sample was drawn from one digitalized function in one Indonesian state-owned enterprise in the oil and gas industry, restricting generalization beyond that setting. Future studies can address these limitations through longitudinal or time-lagged designs, supervisor or objective performance measures, and replication across organizations, sectors, and levels of digital maturity.

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