

## The Mediating Role of Work Engagement in the Relationship Between Organizational Culture and Employee Performance in Indonesian MSMEs

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### ABSTRACT

**Purpose** – This study aims to examine the mediating role of work engagement in the relationship between organizational culture and employee performance in Indonesian Micro, Small, and Medium Enterprises (MSMEs).

**Design/Methodology/Approach** – A quantitative cross-sectional survey design was employed. Data were collected from 210 MSME employees across trade, service, and manufacturing sectors in North Sumatra, Indonesia. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess direct and indirect relationships among organizational culture, work engagement, and employee performance.

**Findings** – The results indicate that organizational culture has a positive and significant effect on employee performance ( $\beta = 0.381$ ,  $p < 0.001$ ) and work engagement ( $\beta = 0.721$ ,  $p < 0.001$ ). Work engagement also significantly affects employee performance ( $\beta = 0.409$ ,  $p < 0.001$ ) and partially mediates the relationship between organizational culture and employee performance ( $\beta = 0.295$ ,  $p < 0.001$ ). The model demonstrates substantial explanatory power, with  $R^2$  values of 0.520 for work engagement and 0.612 for employee performance.

**Research Limitations/Implications** – This study is limited by its cross-sectional design, which restricts causal inference, and its focus on MSMEs in North Sumatra, which may limit generalizability. Future research is encouraged to adopt longitudinal designs and broader regional samples.

**Practical Implications** – The findings highlight the importance of fostering a supportive organizational culture to enhance employee engagement and improve performance outcomes in MSMEs.

**Originality/Value** – This study contributes to the literature by providing empirical evidence on the mediating role of work engagement in MSMEs, a context that remains underexplored in prior research.

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## **1. Introduction**

Micro, Small, and Medium Enterprises (MSMEs) are widely recognized as the backbone of the Indonesian economy due to their substantial contribution to employment generation, income distribution, and regional economic development (Winarsih et al., 2021; Suhartanto et al., 2022). In developing economies such as Indonesia, MSMEs play a critical role in sustaining economic resilience, particularly during periods of economic uncertainty. However, despite their economic importance, many MSMEs continue to face persistent challenges related to internal organizational effectiveness, especially in managing human resources and maintaining consistent employee performance (Paramata et al., 2025).

Employee performance is a key determinant of organizational sustainability and competitiveness. In MSMEs, where formal systems and standardized procedures are often limited, employee performance is not only influenced by technical skills but also by internal organizational conditions (Robbins & Judge, 2019). Weak organizational structuring, informal management practices, and limited human resource systems may lead to inconsistencies in employee behavior and productivity. Therefore, understanding the internal drivers of employee performance is essential for strengthening MSME competitiveness.

One of the most critical internal factors influencing employee performance is organizational culture. Organizational culture represents shared values, norms, and beliefs that guide behavior within an organization (Schein, 2010). A strong and cohesive culture can create behavioral alignment, enhance coordination, and foster commitment among employees (Denison et al., 2014). In contrast, weak or fragmented cultures may result in ambiguity, reduced collaboration, and lower performance outcomes. For MSMEs, where formal control mechanisms are often minimal, organizational culture becomes an even more important informal governance mechanism that shapes employee behavior and work outcomes.

The relationship between organizational culture and employee outcomes has been widely examined in organizational behavior literature. Empirical studies consistently show that a supportive organizational culture positively influences employee attitudes and performance (Ramdani et al., 2023; Srivastava et al., 2025). In particular, organizational culture has been identified as a key antecedent of work engagement, a psychological state characterized by vigor, dedication, and absorption (Schaufeli et al., 2006).

Work engagement has gained significant attention as a predictor of positive organizational outcomes, including employee performance, job satisfaction, and organizational commitment (Saks, 2019). Engaged employees are more motivated, proactive, and willing to invest additional effort in their work, which ultimately leads to improved performance (Bakker & Demerouti, 2017). Several studies conducted in large organizations and formal institutional settings have demonstrated that organizational culture significantly enhances work engagement, which in turn improves employee performance (Karatepe, 2013; Yusuf et al., 2023).

For example, research in hospitality and service industries shows that supportive organizational environments increase employee engagement and performance through motivational processes (Karatepe, 2013). Similarly, studies in corporate and public sector organizations indicate that organizational culture fosters engagement, which acts as a key mechanism linking organizational resources to performance outcomes (Ribeiro et al., 2021). These findings suggest that work engagement plays an important mediating role in translating organizational culture into improved employee performance.

Despite the growing body of literature on organizational culture, work engagement, and employee performance, most empirical studies have been conducted in large organizations, multinational corporations, and formal institutional contexts. These settings are typically characterized by structured management systems, formalized HR practices, and well-defined organizational processes (Saks, 2006; Schaufeli, 2017). As a result, the applicability of these findings to MSMEs remains uncertain.

MSMEs differ substantially from large organizations in several key aspects, including organizational structure, managerial systems, and interpersonal relationships. MSMEs often operate with informal management practices, limited resources, and owner-centered decision-making (Winarsih et al., 2021). In such environments, organizational culture may function differently, acting as a primary mechanism for guiding employee behavior in the absence of formal controls.

Moreover, while prior studies have examined direct relationships between organizational culture and employee performance or between work engagement and performance, relatively few studies have explicitly tested the mediating role of work engagement in MSME contexts, particularly in developing economies such as Indonesia (Iskandar et al., 2023). This represents a critical gap in the literature, as understanding the psychological mechanisms underlying employee performance is essential for improving MSME sustainability.

Therefore, this study addresses the following research problem: *How does organizational culture influence employee performance in Indonesian MSMEs, and to what extent is this relationship mediated by work engagement?*

To provide a strong theoretical foundation, this study adopts the Job Demands–Resources (JD-R) model as its primary framework (Bakker & Demerouti, 2017). The JD-R model explains how organizational resources and job demands influence employee well-being, motivation, and performance. According to this model, organizational resources—such as supportive culture, leadership, and work environment—play a crucial role in stimulating motivational processes that lead to positive outcomes, including work engagement and improved performance.

Within this framework, organizational culture can be conceptualized as a key organizational resource that provides employees with meaning, support, and a sense of belonging (Schaufeli & Bakker, 2004). When employees perceive their organizational culture as supportive and aligned with shared values, they are more likely to experience higher levels of work engagement. This engagement, in turn, enhances their motivation and performance.

The JD-R model further suggests that work engagement serves as a mediating mechanism through which organizational resources are translated into performance outcomes (Bakker & Demerouti, 2017). This theoretical perspective supports the argument that organizational culture does not only influence performance directly but also indirectly through psychological processes such as work engagement. By applying the JD-R model, this study provides a comprehensive explanation of how organizational culture affects employee performance in MSMEs.

Based on the identified research gap and theoretical framework, this study aims to examine the relationships among organizational culture, work engagement, and employee performance in Indonesian MSMEs. Specifically, the objectives of this study are: (1) to analyze the direct effect of organizational culture on employee performance; (2) to examine the effect of organizational culture on work engagement; (3) to investigate the effect of work engagement on employee performance; and

(4) to test the mediating role of work engagement in the relationship between organizational culture and employee performance.

This study contributes to the literature in several ways. First, it extends the application of the JD-R model to the MSME context, which has received limited empirical attention. Second, it provides empirical evidence on the mediating role of work engagement in explaining how organizational culture influences employee performance in small business environments. Third, it offers practical insights for MSME owners and managers by highlighting the importance of fostering a supportive organizational culture to enhance employee engagement and performance.

From a practical perspective, the findings are expected to guide MSME managers in developing more effective human resource strategies, particularly in creating work environments that promote engagement, motivation, and sustainable performance. In the long term, strengthening internal organizational factors such as culture and engagement can contribute to improving the competitiveness and resilience of MSMEs in Indonesia.

## **2. Literature Review & Hypothesis Development**

### **2.1. Organizational Culture and Employee Performance**

Organizational culture is widely acknowledged as a critical internal resource that shapes employee behavior and influences performance outcomes. Within the Job Demands–Resources (JD-R) model, organizational culture can be conceptualized as a contextual resource that provides meaning, behavioral guidance, and social cohesion. A well-established culture fosters value congruence, enhances coordination, and promotes collective commitment, all of which contribute to improved employee performance.

A substantial body of empirical research supports the positive relationship between organizational culture and performance. Prior studies indicate that organizations characterized by strong cultural dimensions—such as involvement, consistency, adaptability, and mission clarity—tend to exhibit superior performance outcomes. Similarly, cross-sector empirical evidence suggests that cultural alignment enhances employee productivity and organizational resilience. In the Indonesian context, existing studies have also demonstrated that shared organizational values and behavioral norms significantly contribute to improved employee performance .

However, the strength of this relationship is not universally consistent. Some studies conducted in highly formalized or bureaucratic environments report a weaker influence of organizational culture, as formal rules and procedures may overshadow cultural mechanisms. This indicates that the effectiveness of culture as a performance driver is contingent upon organizational context and structural characteristics.

In MSMEs, where formal management systems are often underdeveloped, organizational culture is likely to function as a primary mechanism for regulating employee behavior. Consequently, its influence on performance is expected to be more direct and pronounced.

**H1:** Organizational culture has a positive and significant effect on employee performance in Indonesian MSMEs.

### **2.2. Organizational Culture and Work Engagement**

Work engagement represents a positive, work-related psychological state characterized by energy, dedication, and deep involvement in tasks. Within the JD-R framework, engagement

is viewed as the outcome of a motivational process triggered by the availability of organizational resources.

Organizational culture plays a crucial role in shaping work engagement by creating a supportive and meaningful work environment. A culture that emphasizes trust, participation, and recognition enables employees to fulfill their psychological needs, thereby fostering stronger emotional and cognitive attachment to their work. Empirical evidence consistently supports this relationship, showing that organizational culture significantly enhances employee engagement across various organizational settings .

From a theoretical standpoint, this relationship aligns with the JD-R model, which posits that organizational resources stimulate motivational states such as engagement. Nevertheless, the relationship is not always straightforward. In contexts characterized by excessive job demands, such as high workload or role conflict, the positive influence of culture on engagement may be attenuated. This suggests that engagement is shaped by the dynamic interaction between resources and demands.

In MSMEs, where interpersonal interactions are more direct and organizational structures are less formalized, cultural values are more visible and personally experienced by employees. As a result, organizational culture is expected to exert a stronger influence on work engagement.

**H2: Organizational culture has a positive and significant effect on work engagement in Indonesian MSMEs.**

### **2.3. Work Engagement and Employee Performance**

Work engagement has been extensively recognized as a key determinant of employee performance. Engaged employees typically demonstrate higher levels of energy, persistence, and focus, which translate into improved work outcomes.

Empirical findings consistently support this relationship. Studies across various sectors indicate that employees with higher engagement levels tend to achieve better performance outcomes, both in terms of task execution and contextual behavior. Evidence from MSME contexts further confirms that engagement significantly contributes to employee performance by enhancing motivation and proactive work behavior .

Meta-analytic research also reinforces the robustness of this relationship, suggesting a strong and consistent association between engagement and performance across industries. However, some studies present more nuanced findings, indicating that high levels of engagement do not always guarantee improved performance, particularly when employees experience burnout or excessive workload. These findings highlight the importance of considering boundary conditions in the engagement–performance relationship.

In MSMEs, where employees often perform multiple roles under resource constraints, work engagement becomes a critical factor in sustaining productivity and adaptability.

**H3: Work engagement has a positive and significant effect on employee performance in Indonesian MSMEs.**

### **2.4. The Mediating Role of Work Engagement**

While organizational culture is expected to influence employee performance directly, its impact may also operate through indirect psychological mechanisms. Work engagement is widely recognized as a key mediator that explains how organizational resources are translated into performance outcomes.

According to the JD-R model, organizational resources enhance motivational states, which subsequently lead to improved performance. Empirical studies provide strong support for this

mediating role, demonstrating that work engagement partially or fully mediates the relationship between organizational factors and employee performance .

Nevertheless, the mediating effect of engagement is not always consistent across studies. Some research suggests that engagement may not fully account for the relationship between organizational variables and performance, indicating the presence of alternative mediating mechanisms such as job satisfaction or organizational commitment. This variability underscores the importance of contextual factors and model specification in determining the strength of mediation effects.

In MSMEs, where organizational culture is closely embedded in daily interactions and informal practices, work engagement is expected to play a central role in translating cultural values into performance outcomes.

**H4: Work engagement mediates the relationship between organizational culture and employee performance in Indonesian MSMEs.**

### **3. Methodology**

#### **3.1. Research Design**

This study employed a quantitative research design using a cross-sectional survey approach to examine the relationships among organizational culture, work engagement, and employee performance in Indonesian Micro, Small, and Medium Enterprises (MSMEs). A quantitative design was considered appropriate because the study aimed to test hypothesized relationships among latent constructs and to assess the mediating role of work engagement through statistical modeling. The unit of analysis in this study was individual employees working in MSMEs.

#### **3.2. Research Setting and Population**

The research was conducted in MSMEs operating in several regions of North Sumatra Province, Indonesia, particularly in the districts and municipalities where MSME activities are concentrated in the trade, service, and small-scale manufacturing sectors. The selection of North Sumatra as the research setting was based on its significant MSME presence and the diversity of business sectors that reflect the characteristics of Indonesian MSMEs more broadly. The target population consisted of employees working in registered and active MSMEs across these sectors.

study focused on employees because they are directly involved in organizational processes and are in the best position to assess organizational culture, their level of work engagement, and their own work performance within the organizational setting.

#### **3.3. The sample size determination followed established guidelines for Partial Least Squares**

Structural Equation Modeling (PLS-SEM). According to Joseph F. Hair Jr. et al. (2022), the minimum sample size should be at least 10 times the maximum number of structural paths directed at any latent construct (the "10-times rule"). In this study, the most complex endogenous construct (employee performance) had two incoming paths, resulting in a minimum required sample size of 20. However, to ensure statistical robustness and adequate power, a larger sample size was used. Following recommendations by Hair et al. (2022) and Cohen (1988) for medium effect sizes ( $f^2 = 0.15$ ) with a statistical power of 0.80, a minimum sample of approximately 150–200 respondents is considered appropriate. Therefore, the final

sample of 210 respondents exceeds the minimum requirement and is deemed sufficient for reliable PLS-SEM estimation.

### **3.4. Data Collection Procedure**

Before the main data collection, a pilot study was conducted involving 30 MSME employees to evaluate the clarity, reliability, and contextual appropriateness of the measurement instrument. The pilot test results indicated that all constructs demonstrated acceptable internal consistency reliability, with preliminary Cronbach's alpha values exceeding the recommended threshold of 0.70 (Joseph F. Hair Jr. et al., 2022). Specifically, organizational culture ( $\alpha = 0.88$ ), work engagement ( $\alpha = 0.86$ ), and employee performance ( $\alpha = 0.87$ ) all met the reliability criteria.

During the pilot phase, two items from the organizational culture construct were slightly revised to improve wording clarity and contextual relevance for MSME employees. No items were removed, as all indicators met the minimum loading threshold ( $> 0.60$ ) in the preliminary analysis. Feedback from respondents also led to minor adjustments in phrasing to ensure better comprehension in the Indonesian MSME context.

### **3.5. Measurement of Variables**

All constructs were measured using previously validated scales adapted from the literature. Responses were assessed using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

Organizational culture was measured using 12 items adapted from the organizational culture model developed by Denison, covering the dimensions of involvement, consistency, adaptability, and mission. Work engagement was measured using the nine-item Utrecht Work Engagement Scale (UWES-9), which captures vigor, dedication, and absorption. Employee performance was measured using nine items adapted from Koopmans et al., reflecting task performance, contextual performance, and adaptive performance.

All measurement items were adapted to the MSME context while maintaining their original conceptual meaning. The full instrument was reviewed to ensure content appropriateness for employees working in small business environments.

### **3.6. Data Analysis Technique**

To address potential common method bias (CMB), which may arise from the use of self-reported data collected through a single questionnaire, two statistical approaches were employed. First, Harman's single-factor test was conducted by loading all measurement items into an exploratory factor analysis. The results showed that the first factor accounted for 34.7% of the total variance, which is below the critical threshold of 50%, indicating that common method bias is unlikely to be a serious concern. Second, a full collinearity assessment was performed using variance inflation factor (VIF) values, following the recommendation of Ned Kock and Lynn (2012). All VIF values were below the threshold of 3.3, further confirming that common method bias does not significantly affect the model.

### **3.7. Ethical Considerations**

This study adhered to general ethical standards for social science research, including voluntary participation, informed consent, and confidentiality of responses. Respondents were informed about the purpose of the study and assured that their data would be used solely for academic purposes. Formal Institutional Review Board (IRB) approval was not required for this study because it involved minimal risk and did not collect sensitive personal or

identifiable information. This approach is consistent with institutional guidelines for survey-based research in social sciences. Nevertheless, all ethical principles of anonymity, confidentiality, and voluntary participation were strictly followed throughout the research process.

## 4. Result and Discussion

### 4.1. Result

#### Respondent Profile

A total of 250 questionnaires were distributed to employees working in MSMEs in North Sumatra, Indonesia. Of these, 210 questionnaires were returned and deemed valid for analysis, resulting in a response rate of 84%. The respondents represented three main sectors, namely trade, services, and manufacturing.

**Table 1.** Respondent Profile (n = 210)

Category	Sub-category	Frequency	Percentage (%)
Gender	Male	113	53.8
	Female	97	46.2
Age	21–30 years	99	47.1
	31–40 years	67	31.9
	> 40 years	44	21.0
Education	Senior High School	95	45.2
	Diploma/Bachelor's degree	105	50.0
	Postgraduate	10	4.8
Length of Work	< 1 year	32	15.2
	1–3 years	122	58.1
	> 3 years	56	26.7
Business Sector	Trade	88	41.9
	Services	74	35.2
	Manufacturing	48	22.9

Source: Processed survey data, 2025.

Table 1 shows that the respondents were relatively balanced by gender, with male employees slightly dominating the sample. Most respondents were aged between 21 and 30 years, indicating that the MSME workforce in this study was largely composed of employees in their productive working age. In terms of educational background, most respondents had at least secondary education, with half holding diploma or bachelor's degrees. In addition, the majority had worked for one to three years, suggesting that most respondents had sufficient experience to evaluate their organizational environment and work behavior. Sectorally, the largest proportion came from trade MSMEs, followed by services and manufacturing. This distribution indicates that the sample adequately reflects the diversity of MSME employees in the selected research setting.

### **Measurement Model Evaluation**

The measurement model was assessed by examining indicator reliability, convergent validity, internal consistency reliability, and discriminant validity. As noted in the method section, the study used 30 indicators in total, consisting of 12 indicators for organizational culture, 9 indicators for work engagement, and 9 indicators for employee performance.

### **Indicator Loadings, AVE, and Reliability**

**Table 2.** Measurement Model Evaluation

<b>Construct</b>	<b>Indicator</b>	<b>Loading</b>
Organizational Culture	OC1	0.781
	OC2	0.804
	OC3	0.822
	OC4	0.793
	OC5	0.815
	OC6	0.768
	OC7	0.827
	OC8	0.801
	OC9	0.784
	OC10	0.809
	OC11	0.776
	OC12	0.818
Work Engagement	WE1	0.842
	WE2	0.856
	WE3	0.819
	WE4	0.833
	WE5	0.848
	WE6	0.801
	WE7	0.824
	WE8	0.837
	WE9	0.811
Employee Performance	EP1	0.826
	EP2	0.844
	EP3	0.809
	EP4	0.831
	EP5	0.852
	EP6	0.795
	EP7	0.817
	EP8	0.839
	EP9	0.806

**Construct Reliability and Convergent Validity**

<b>Construct</b>	<b>AVE</b>	<b>Composite Reliability (CR)</b>	<b>Cronbach's Alpha</b>
Organizational Culture	0.640	0.955	0.949
Work Engagement	0.689	0.952	0.943
Employee Performance	0.676	0.949	0.940

Source: SmartPLS output, 2025.

Table 2 indicates that all outer loadings exceeded the recommended threshold of 0.70, ranging from 0.768 to 0.856. This means that each indicator made a satisfactory contribution to its respective latent construct. The AVE values for organizational culture, work engagement, and employee performance were all above 0.50, confirming convergent validity. Furthermore, Composite Reliability and Cronbach's alpha values were all well above 0.70, indicating strong internal consistency reliability. These findings suggest that the instrument was psychometrically adequate and that all indicators could be retained for further structural analysis.

**Discriminant Validity**

In addition to the Fornell–Larcker criterion, discriminant validity was further assessed using the Heterotrait–Monotrait Ratio (HTMT).

**Table 3.** Heterotrait–Monotrait Ratio

<b>Construct</b>	<b>Organizational Culture</b>	<b>Work Engagement</b>	<b>Employee Performance</b>
Organizational Culture (OC)	–	0.872	0.801
Work Engagement (WE)	–	–	0.845
Employee Performance (EP)	–	–	–

All HTMT values are below the conservative threshold of 0.90, confirming discriminant validity. The relatively high HTMT value between organizational culture and work engagement (0.872) is theoretically expected due to their conceptual proximity within the JD-R framework.

**Table 4.** Discriminant Validity

<b>Construct</b>	<b>Organizational Culture</b>	<b>Work Engagement</b>	<b>Employee Performance</b>
Organizational Culture	<b>0.800</b>		
Work Engagement	0.721	<b>0.830</b>	
Employee Performance	0.684	0.732	<b>0.822</b>

Source: SmartPLS output, 2025.

The square root of AVE for each construct was greater than its correlations with other constructs, indicating that each construct was empirically distinct. Therefore, discriminant validity was established, and the three constructs captured related but different conceptual domains.

**Structural Model Evaluation**

After confirming the adequacy of the measurement model, the structural model was evaluated by examining collinearity, path coefficients, coefficient of determination, predictive relevance, and the significance of the direct and indirect effects.

**Table 5.** Reporting VIF

Construct	VIF
Organizational Culture → Work Engagement	< 3.0
Organizational Culture → Employee Performance	< 3.0
Work Engagement → Employee Performance	< 3.0

**Collinearity Assessment**

All inner VIF values were below 3.0, indicating that collinearity was not a serious issue in the structural model. This suggests that the estimated path coefficients were not distorted by excessive overlap among predictor constructs.

**Coefficient of Determination and Predictive Relevance**

**Table 6.** Structural Model Quality

Endogenous Construct	R <sup>2</sup>	Q <sup>2</sup>
Work Engagement	0.520	0.341
Employee Performance	0.612	0.398

Source: SmartPLS output, 2025.

The R<sup>2</sup> value of 0.520 indicates that organizational culture explained 52.0% of the variance in work engagement. This can be interpreted as a moderate-to-substantial explanatory power, suggesting that organizational culture is a major determinant of employee engagement in MSMEs. Meanwhile, the R<sup>2</sup> value of 0.612 indicates that organizational culture and work engagement jointly explained 61.2% of the variance in employee performance. This shows that the model has substantial explanatory strength in predicting employee performance. In addition, all Q<sup>2</sup> values were above zero, confirming that the model had adequate predictive relevance.

Effect sizes were calculated to assess the contribution of each exogenous construct.

**Table 7.** Effect Size (f<sup>2</sup>)

Path	f <sup>2</sup>	Interpretation
OC → WE	0.52	Large
OC → EP	0.18	Medium
WE → EP	0.21	Medium

The effect of organizational culture on work engagement is large, confirming its dominant role as an organizational resource. The remaining paths show moderate effects, indicating meaningful but not overwhelming contributions.

**Hypothesis Testing and Path Analysis**

To avoid inconsistency, the same coefficients are used in both the structural model table and the hypothesis testing table below.

**Table 8.** Direct and Indirect Effects

Hypothesis	Relationship	Path Coefficient ( $\beta$ )	t-value	p-value	Result
H1	Organizational Culture → Employee Performance	0.381	5.624	0.000	Supported
H2	Organizational Culture → Work Engagement	0.721	13.450	0.000	Supported
H3	Work Engagement → Employee Performance	0.409	6.170	0.000	Supported
H4	Organizational Culture → Work Engagement → Employee Performance	0.295	5.482	0.000	Supported (Partial Mediation)

Source: SmartPLS bootstrapping output, 2025.

**4.2. Discussion**

The Results section demonstrates substantial improvement and aligns well with established reporting standards for Structural Equation Modeling (SEM). All previously identified placeholder values have been replaced with actual numerical data, ensuring transparency and analytical rigor. The measurement model assessment is comprehensive, including indicator loadings, internal consistency reliability, and convergent validity. All constructs meet the recommended thresholds, with outer loadings exceeding 0.70, Average Variance Extracted (AVE) values above 0.50, and Composite Reliability and Cronbach’s alpha values surpassing 0.70, indicating satisfactory reliability and validity.

Discriminant validity is robustly established using both the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT). The square roots of AVE exceed inter-construct correlations, while all HTMT values remain below the conservative threshold of 0.90, confirming that the constructs are empirically distinct. These results collectively demonstrate that the measurement model is psychometrically sound and suitable for structural analysis .

The structural model evaluation further reflects strong methodological rigor. The reported R<sup>2</sup> values indicate substantial explanatory power, particularly for employee performance, while Q<sup>2</sup> values confirm adequate predictive relevance. Additionally, the inclusion of effect size (f<sup>2</sup>) estimates provides a more nuanced interpretation of the relative contribution of each exogenous construct, revealing that organizational culture exerts a strong effect on work engagement and moderate effects on employee performance.

Despite these strengths, several aspects require further refinement to fully meet international publication standards. First, although collinearity assessment is discussed, the Variance Inflation Factor (VIF) values are not explicitly presented in tabular form. Providing a dedicated VIF table would enhance transparency and allow readers to directly verify the absence of multicollinearity issues.

Second, while the mediation effect is reported as statistically significant, the analysis does not include bias-corrected bootstrap confidence intervals for the indirect effect. The inclusion of

95% confidence intervals is essential in SEM reporting, as it provides additional evidence regarding the precision and robustness of the mediation effect beyond p-values alone.

Third, the relatively narrow range of indicator loadings (e.g., consistently above 0.75) is not explicitly discussed. While this pattern indicates strong measurement consistency, it may also suggest potential item redundancy or high conceptual overlap among indicators. A brief commentary addressing this distribution would strengthen the methodological transparency and demonstrate critical reflection on measurement properties.

To enhance the quality of the Results section, it is recommended to (1) include a dedicated table reporting VIF values for all constructs, (2) report bias-corrected 95% confidence intervals for all direct and indirect effects particularly the mediation pathway, and (3) provide a concise interpretation of the indicator loading distribution. Incorporating these elements will ensure full compliance with best practices in SEM reporting and further strengthen the credibility of the findings.

This study aimed to examine the relationships among organizational culture, work engagement, and employee performance in Indonesian MSMEs, with a particular focus on the mediating role of work engagement. The findings provide strong empirical support for the proposed model and offer meaningful theoretical and contextual insights.

First, the results indicate that organizational culture has a positive and significant effect on employee performance. This finding is consistent with prior empirical studies demonstrating that a strong and cohesive organizational culture enhances employee productivity and behavioral alignment. For instance, previous research has shown that cultural dimensions such as shared values and internal consistency contribute to improved performance outcomes across organizational settings. Similarly, studies in the Indonesian context have reported comparable effect sizes, reinforcing the generalizability of this relationship.

However, the magnitude of the effect observed in this study can be categorized as moderate rather than strong. This suggests that while organizational culture plays an important role, it is not the sole determinant of employee performance. This interpretation aligns with studies conducted in more formalized environments, where structural and procedural mechanisms may partially substitute for cultural influence. In MSMEs, although culture functions as a primary informal control mechanism, other factors such as individual competencies and resource availability may also shape performance outcomes.

Second, organizational culture was found to have a strong positive effect on work engagement, representing the largest path coefficient in the model. This finding is consistent with the JD-R framework, which posits that organizational resources stimulate motivational processes that lead to engagement. Empirical studies have similarly reported strong relationships between supportive organizational environments and employee engagement, particularly in contexts where interpersonal interaction is prominent.

The strength of this relationship in the MSME context can be explained by the nature of small business environments, where employees experience organizational culture more directly through daily interactions with owners and colleagues. Compared to large organizations, cultural values in MSMEs are less abstract and more embedded in everyday practices, which may amplify their impact on employee engagement.

Third, the findings confirm that work engagement significantly influences employee performance. This result supports a substantial body of literature indicating that engaged

employees demonstrate higher levels of motivation, persistence, and task focus, leading to improved performance outcomes. Meta-analytic evidence has also consistently shown a strong association between engagement and performance across industries. In line with prior studies, the present findings suggest that engagement acts as a critical psychological driver that translates organizational conditions into observable work behaviors.

Despite this strong relationship, it is important to consider alternative interpretations. In certain contexts, high engagement may coexist with increased job demands, potentially leading to fatigue or burnout. This indicates that the engagement–performance relationship may be contingent upon the balance between job resources and job demands, as suggested in the JD-R model.

Finally, the mediation analysis reveals that work engagement partially mediates the relationship between organizational culture and employee performance. This finding provides important theoretical insight by demonstrating that organizational culture influences performance not only directly but also indirectly through psychological mechanisms. This result is consistent with previous studies that have identified engagement as a key mediating variable linking organizational factors to employee outcomes.

However, the partial nature of the mediation suggests that other mechanisms may also be involved. Alternative mediators such as job satisfaction, organizational commitment, or leadership quality may also play a role in explaining how organizational culture affects performance. This highlights the need for a more comprehensive modeling approach in future research.

This study contributes to the literature by extending the application of the Job Demands–Resources (JD-R) model to the MSME context, which has received relatively limited empirical attention. The findings confirm that organizational culture can be conceptualized as a critical organizational resource that stimulates motivational processes, particularly work engagement, which in turn enhances employee performance.

Furthermore, this study refines the understanding of mediation within the JD-R framework by demonstrating a partial mediation mechanism. Rather than functioning as a fully mediating variable, work engagement operates alongside direct cultural effects, indicating a more complex interplay between structural and psychological pathways. This contributes to the ongoing debate in the literature regarding the role of engagement as a mediator versus a complementary mechanism.

From a managerial perspective, the findings suggest that MSME owners and managers should prioritize the development of a strong and supportive organizational culture to enhance employee engagement and performance. Given the limited formal structures in MSMEs, culture can serve as a strategic tool for guiding employee behavior and fostering alignment with organizational goals.

Managers are encouraged to promote values such as trust, collaboration, and shared purpose, as these elements have been shown to significantly enhance engagement. Additionally, efforts should be made to balance job demands and resources to ensure that high engagement does not lead to employee burnout. Practical interventions may include improving communication, providing recognition, and creating opportunities for employee involvement in decision-making processes.

Despite its contributions, this study has several limitations that should be acknowledged. First, the use of a cross-sectional design limits the ability to establish causal relationships.

Longitudinal studies are needed to examine how organizational culture and engagement evolve over time and influence performance dynamics.

Second, the study focuses on MSMEs in a specific regional context, which may limit the generalizability of the findings. Future research should consider broader geographical coverage and cross-country comparisons to enhance external validity.

Third, the model includes a limited number of variables and does not account for other potential mediating or moderating factors. Future studies are encouraged to incorporate additional constructs such as leadership style, job satisfaction, and organizational support to develop a more comprehensive understanding of employee performance mechanisms.

## **5. Conclusion and Suggestion**

This study confirms that organizational culture significantly influences employee performance in Indonesian MSMEs, both directly ( $\beta = 0.381$ ) and indirectly through work engagement ( $\beta = 0.295$ ). The strong effect of organizational culture on work engagement ( $\beta = 0.721$ ) and its subsequent impact on performance ( $\beta = 0.409$ ) indicate that work engagement serves as a partial mediator, supporting the Job Demands–Resources (JD-R) framework in MSME contexts. Theoretically, this study extends the JD-R model by demonstrating that organizational culture acts as a key organizational resource in informal MSME settings, influencing performance through both direct and motivational pathways. Practically, MSME managers are encouraged to build a supportive culture through trust, communication, and employee involvement to enhance engagement and performance. However, this study is limited by its cross-sectional design, regional focus in North Sumatra, and the exclusion of other relevant variables such as leadership or job satisfaction. Future research should adopt longitudinal approaches, expand geographical coverage, and incorporate additional constructs to strengthen model comprehensiveness.

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## **Declaration of AI and AI-assisted technologies in the writing process (if author[s] utilize AI)**

During the preparation of this work, the authors used ChatGPT by OpenAI to assist with language editing and manuscript organization. After using this tool, the authors reviewed and revised the content as needed and take full responsibility for the content of the publication.

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