GIJEA
Greenation International Journal of Economics and Accounting
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GREENATION RESEARCH

DOI: https://doi.org/10.38035/gijea.v4i4.897
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Received: 05 May 2026 | **Revised:** 09 May 2026 | **Accepted:** 02 October 2026

The Impact of Industrial Relations Climate on Employee Engagement and Organizational Performance in the Digital Era

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Abstract: This study examines the impact of industrial relations climate on employee engagement and organizational performance in the digital era, focusing on members of Gapeksindo East Java. Using a quantitative approach, data were collected from 100 respondents and analyzed with SmartPLS based on the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique. The results indicate that industrial relations climate has a positive and substantial effect on employee engagement. Furthermore, employee engagement significantly influences organizational performance, highlighting its role as a key mediating variable. In addition, industrial relations climate also demonstrates a direct positive contribution to organizational performance, although the indirect effect through employee engagement appears more pronounced. The measurement model confirms that all constructs meet the criteria for reliability and convergent validity, with satisfactory outer loadings, composite reliability, and average variance extracted values. The structural model shows strong predictive capability in explaining endogenous variables within the context of construction industry organizations. These findings suggest that fostering a supportive industrial relations climate can enhance employee engagement and ultimately improve organizational performance, particularly in the rapidly evolving digital environment. The study contributes to the literature by providing empirical evidence from a professional association context and offers practical implications for organizational management strategies.

Keyword: Industrial Relations Climate, Employee Engagement, Organizational Performance, PLS-SEM, Digital Era.

INTRODUCTION

The rapid advancement of digital technology has significantly transformed organizational structures and work environments across industries. In particular, the construction sector faces increasing pressure to adapt to digital transformation while maintaining workforce stability and productivity. Within this context, the quality of industrial relations becomes a critical factor influencing organizational outcomes. Previous studies

highlight that effective industrial relations can enhance trust, communication, and cooperation between management and employees (Bah et al., 2024; Santos et al., 2023; Ren et al., 2024).

Industrial relations climate refers to employees' shared perceptions regarding management practices, fairness, and communication within an organization. A positive climate fosters mutual respect and reduces workplace conflict, which is essential in dynamic and high-risk industries such as construction. Research indicates that organizations with a supportive industrial relations climate tend to experience higher levels of employee satisfaction and organizational commitment (Tsoni et al., 2025; Quan et la., 2023). This highlights the importance of managing relationships effectively in the digital era.

Employee engagement has emerged as a key construct in organizational behavior, particularly in the context of digital transformation. Engaged employees are more likely to demonstrate higher levels of motivation, dedication, and performance. In the construction industry, where teamwork and coordination are essential, employee engagement plays a vital role in ensuring project success. Prior research suggests that engagement is strongly influenced by organizational climate and leadership practices (Hoxha & Ramadani, 2024).

The relationship between industrial relations climate and employee engagement has been widely discussed in the literature. A positive industrial relations climate can create a sense of psychological safety and fairness, which encourages employees to actively participate in organizational activities. Studies show that when employees perceive fair treatment and open communication, their level of engagement increases significantly (Cho et al., 2025; Elamin et al., 2024). This relationship is particularly relevant in industries undergoing digital disruption.

Organizational performance remains a primary goal for all organizations, including professional associations such as Gapeksindo East Java. Performance in this context is not only measured by financial outcomes but also by operational efficiency and stakeholder satisfaction. Research has consistently demonstrated that both employee engagement and organizational climate are strong predictors of performance outcomes (Dumitriu et al., 2025). Therefore, understanding the drivers of performance is crucial for organizational sustainability.

In the digital era, the interplay between industrial relations climate, employee engagement, and organizational performance becomes increasingly complex. Digital tools and systems can improve efficiency but may also create challenges such as job insecurity and communication gaps. As a result, organizations must balance technological advancement with human resource management practices. Scholars emphasize that a supportive work environment is essential to ensure successful digital transformation (Yang et al, 2025).

Despite the growing body of research, there is still limited empirical evidence examining these relationships within the context of construction associations in Indonesia. Gapeksindo East Java represents a unique organizational setting where diverse stakeholders interact in a rapidly evolving industry. Understanding how industrial relations climate influences engagement and performance in this context can provide valuable insights. Previous studies have largely focused on corporate environments, leaving a gap in association-based research (Mutua et al., 2025).

In the digital era, industrial relations climate becomes increasingly important because digital transformation does not only improve efficiency but also reshapes communication patterns, work coordination, and employee perceptions of fairness. In labor-intensive sectors such as construction, where teamwork and interpersonal trust remain essential, the quality of industrial relations can determine whether employees experience digital change as supportive or threatening. A positive industrial relations climate may therefore serve as a relational foundation that strengthens cooperation and reduces uncertainty, ultimately supporting

employee engagement in organizations undergoing rapid transformation (Bah et al., 2024; Santos et al., 2023; Yang et al., 2025).

This study contributes theoretically by positioning industrial relations climate not merely as a background organizational condition, but as a key driver of organizational performance through employee engagement as a mediating mechanism. While previous studies generally examine these relationships in corporate environments, empirical evidence remains limited in professional association contexts such as Gapeksindo East Java, where collective norms and stakeholder interdependence may intensify the influence of industrial relations climate on engagement. By testing this framework using PLS-SEM, this study provides a clearer explanation of how relational dynamics remain central for sustaining organizational performance in the digital era, particularly in construction-related organizational settings (Cho et al., 2025; Elamin et al., 2024; Dumitriu et al., 2025; Mutua et al., 2025).

Furthermore, this study is grounded in the perspective that organizational relationships function as an important psychological resource in the workplace. Drawing from Social Exchange Theory and Job Demands Resources Theory, employees who perceive supportive industrial relations, fair communication, and mutual trust are more likely to develop stronger emotional attachment and engagement toward the organization. In professional associations such as Gapeksindo East Java, where collaboration and collective interaction are highly emphasized, industrial relations climate may play a more central role in shaping employee engagement and organizational performance compared to highly formalized corporate environments. This perspective strengthens the argument that relational quality remains a critical organizational asset even amid rapid digital transformation.

Therefore, this study aims to analyze the impact of industrial relations climate on employee engagement and organizational performance, with employee engagement acting as a mediating variable. By employing a quantitative approach using PLS-SEM, this research seeks to provide empirical evidence relevant to both theory and practice. The findings are expected to contribute to the development of human resource strategies in the construction sector. Additionally, this study offers practical implications for organizational leaders in managing industrial relations effectively in the digital era (Nastase et al., 2025).

METHOD

This study employs a quantitative research design to examine the relationships between industrial relations climate, employee engagement, and organizational performance in Gapeksindo Jawa Timur. A cross-sectional approach was applied, where data were collected at a single point in time to capture respondents' perceptions. The unit of analysis is individual members who actively participate in organizational and operational activities within Gapeksindo Jawa Timur.

The population consists of members affiliated with Gapeksindo Jawa Timur. A total of 100 respondents were selected using purposive sampling, focusing on members who have sufficient involvement and experience in the organization to provide valid responses. Although the sample size is relatively limited, the use of PLS-SEM is considered appropriate because it is suitable for predictive research models and can accommodate smaller samples compared to covariance-based SEM. Data were collected using a structured questionnaire distributed both directly and online. All indicators were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

In addition, the operationalization of organizational performance in this study refers to respondents' perceptions regarding organizational effectiveness, work productivity, coordination quality, and the achievement of organizational objectives within Gapeksindo Jawa Timur. This construct was measured using several indicators adapted from previous

organizational performance studies in the context of human resource and organizational behavior research. The use of perceptual measures is considered appropriate because organizational performance in professional associations is often closely related to collective coordination, communication effectiveness, and stakeholder satisfaction rather than solely financial outcomes.

Furthermore, discriminant validity analysis was conducted carefully to ensure that industrial relations climate and employee engagement remained empirically distinct constructs despite their strong relationship. This step is important considering the potentially high conceptual proximity between both variables in collective organizational settings. The analysis confirmed that each construct measured different conceptual dimensions, allowing the structural relationships to be interpreted appropriately within the proposed research framework.

Data analysis was conducted using SmartPLS with the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. The analysis involved evaluating the measurement model (outer model) through convergent validity, discriminant validity, and reliability testing using outer loadings, composite reliability, and average variance extracted (AVE). The structural model (inner model) was evaluated using path coefficients, R-square values, and mediation testing. To minimize potential common method bias due to self-reported questionnaire data, procedural controls were applied during data collection, including ensuring respondent anonymity and reducing evaluation apprehension by emphasizing that there were no right or wrong answers.

RESULT AND DISCUSSION

Measurement Model Evaluation (Reliability and Validity)

The evaluation of the measurement model demonstrates that all constructs satisfy the recommended criteria for reliability and validity. The outer loadings of all indicators exceed the threshold of 0.70, indicating that each indicator is able to adequately represent its respective latent construct. In addition, the values of Cronbach's alpha and composite reliability (rho_a and rho_c) are above 0.70, confirming a high level of internal consistency among the measurement items. These results are aligned with the guidelines of Partial Least Squares Structural Equation Modeling (PLS-SEM).

Furthermore, the Average Variance Extracted (AVE) values for all constructs are above 0.50, indicating that more than 50% of the variance of the indicators is explained by their respective latent variables. This confirms that the constructs meet the requirement of convergent validity and are appropriate for further structural model analysis. The findings are consistent with previous studies emphasizing the importance of AVE as a key indicator of convergent validity (Kamranfar et al., 2025).

Overall, the measurement model exhibits strong reliability and validity, providing a solid foundation for testing the hypothesized relationships in the structural model. The consistency and adequacy of the measurement instruments ensure that the constructs are measured accurately and meaningfully. This level of methodological rigor enhances the credibility of the research findings and supports the robustness of subsequent analysis.

Table 1. Construct Reliability and Validity

	Cronbach's Alpha	Composite Realibility (rho_a)	Composite Realibility (rho_c)	Average Variance Extracted
EE	0.0937	0.938	0.952	0.799
IRC	0.941	0.942	0.955	0.810
OP	0.940	0.941	0.955	0.808

Structural Model Assessment (Path Model and Result)

The structural model illustrates the relationships among industrial relations climate (IRC), employee engagement (EE), and organizational performance (OP). Based on the SmartPLS output using Partial Least Squares Structural Equation Modeling (PLS-SEM), all hypothesized paths show positive relationships. The path from industrial relations climate to employee engagement demonstrates a very strong coefficient of 0.993, indicating that improvements in organizational climate are closely associated with increased employee engagement. This finding highlights the importance of maintaining a supportive and fair work environment (Geraldes et al., 2024; Rasool et al., 2025; Ispiryan et al., 2024).

However, the exceptionally high path coefficient (β = 0.993) between industrial relations climate and employee engagement should be interpreted cautiously. Such a strong relationship may indicate that both constructs are conceptually very close in this research context, potentially reflecting overlapping perceptions of fairness, communication, and mutual support experienced by members. This finding may also suggest the possibility of multicollinearity or limited construct distinctiveness, which requires careful interpretation through discriminant validity evidence. Nevertheless, within a professional association such as Gapeksindo Jawa Timur—where collective interaction, cooperation, and relational norms are highly dominant—the industrial relations climate may function as a direct psychological foundation that strongly shapes engagement behavior. This indicates that in association-based settings, engagement may emerge primarily from relational quality rather than from individual motivational factors alone.

Furthermore, employee engagement has a positive effect on organizational performance, with a path coefficient of 0.535. This suggests that employees who are more engaged tend to contribute more effectively to organizational outcomes, including productivity and efficiency. In the context of construction organizations, engagement plays a crucial role in ensuring coordination and successful project execution. This result is consistent with previous studies emphasizing engagement as a key driver of performance (Jum'a et al., 2025).

In addition, industrial relations climate also directly influences organizational performance with a coefficient of 0.465. Although this direct effect is moderate compared to its influence on employee engagement, it still indicates that a positive organizational climate contributes to better performance outcomes. The presence of both direct and indirect effects suggests that employee engagement partially mediates the relationship between industrial relations climate and organizational performance (Wu et al., 2023).

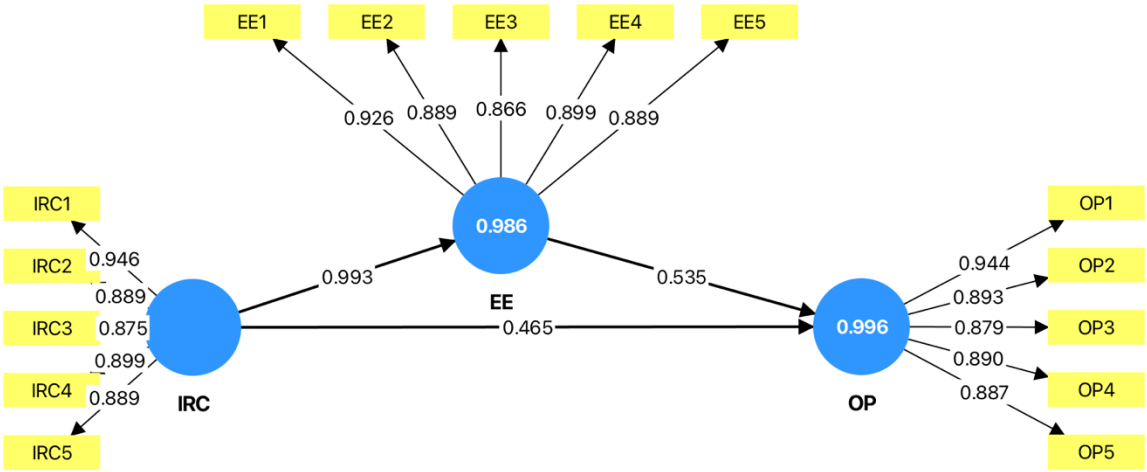


Figure 1. Structural Model Results

Effect Size Analysis (f-square Interpretation)

The effect size analysis provides further insight into the contribution of each exogenous variable to the endogenous constructs. The results indicate that industrial relations climate has a substantial effect on employee engagement. This suggests that improving workplace relationships and communication can significantly enhance employee involvement. Such findings are consistent with prior studies emphasizing the importance of organizational climate in shaping employee attitudes (Pham et al., 2024).

The effect of employee engagement on organizational performance is also found to be considerable. This implies that engagement not only influences individual behavior but also contributes to overall organizational outcomes. In practice, organizations that invest in engagement initiatives are more likely to achieve higher levels of performance. This supports the growing body of literature linking engagement to productivity and effectiveness (Popovac et al., 2025).

Meanwhile, the direct effect of industrial relations climate on organizational performance is relatively smaller compared to its indirect pathway. This highlights the mediating role of employee engagement in translating organizational climate into performance improvements. The findings underscore the importance of considering both direct and indirect effects in structural models.

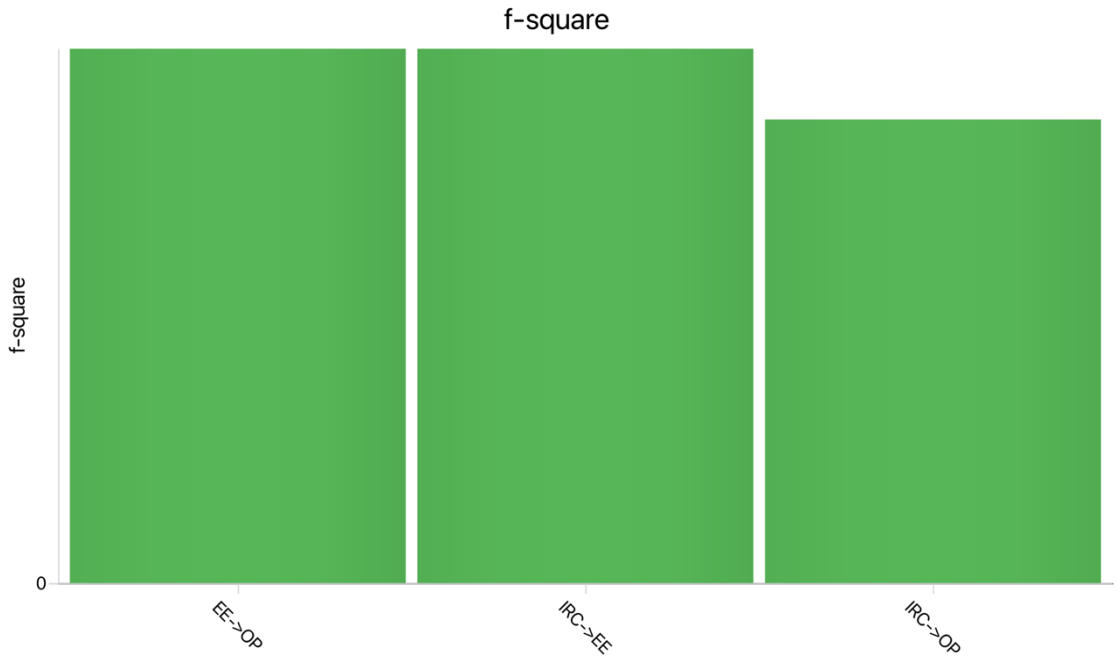


Figure 2. Effect Size (f-square) Graph

The Role of Employee Engagement as a Mediator

The results suggest that employee engagement plays a crucial mediating role in the relationship between industrial relations climate and organizational performance. A positive industrial relations climate fosters engagement, which in turn enhances performance outcomes. This highlights the importance of psychological and emotional factors in organizational success. Previous studies have also identified engagement as a key mediating variable in organizational research (Ramadani et al., 2020).

From a practical perspective, organizations should focus on improving communication, fairness, and employee involvement to strengthen engagement. In the digital era, where technological changes can create uncertainty, maintaining strong employee engagement becomes even more critical. Engaged employees are more adaptable and resilient, which is essential for organizational sustainability.

Overall, the findings emphasize that employee engagement serves as a bridge between organizational climate and performance. By enhancing engagement, organizations can maximize the benefits of a positive industrial relations climate. This insight is particularly relevant for professional associations such as Gapeksindo Jawa Timur in navigating the challenges of digital transformation.

Industrial Relations Climate as a Psychological Infrastructure in the Digital Era

The findings of this study indicate that industrial relations climate functions not only as an organizational environment factor but also as a psychological infrastructure that shapes employee behavior and organizational effectiveness. In the context of Gapeksindo Jawa Timur, the extremely strong relationship between industrial relations climate and employee engagement suggests that employees' perceptions of fairness, communication quality, and organizational support become central drivers of engagement formation. This condition reflects the importance of relational dynamics in professional associations, where collective interaction and mutual trust strongly influence organizational participation and commitment (Rasool et al., 2025; Geraldes et al., 2024).

In the digital era, organizations often prioritize technological adaptation, automation, and operational efficiency. However, the results of this study demonstrate that human relationships remain a fundamental element in sustaining organizational performance. The presence of supportive industrial relations may reduce uncertainty, strengthen psychological safety, and encourage employees to remain actively engaged despite organizational changes caused by digital transformation. This finding supports organizational behavior perspectives emphasizing that technological advancement alone is insufficient without strong relational and social support systems within organizations (Yang et al., 2025; Pham et al., 2024).

Furthermore, the mediating role of employee engagement confirms that organizational climate influences performance not only directly but also through psychological and emotional mechanisms. Employees who perceive supportive industrial relations are more likely to develop stronger emotional attachment, dedication, and willingness to contribute to organizational objectives. This insight expands previous studies by showing that in association-based organizations, engagement emerges primarily through collective relational experiences rather than solely through formal organizational systems. Therefore, industrial relations climate can be understood as a strategic organizational resource that supports both employee well-being and long-term organizational sustainability in the digital era.

CONCLUSIONS AND RECOMMENDATIONS

This study examines the relationships between industrial relations climate, employee engagement, and organizational performance in the digital era within the context of Gapeksindo Jawa Timur. The findings confirm that industrial relations climate significantly influences employee engagement, indicating that a supportive environment characterized by fairness, trust, and effective communication strengthens employees' involvement and commitment. In addition, employee engagement positively affects organizational performance, demonstrating its strategic role in improving organizational effectiveness.

Moreover, industrial relations climate also directly influences organizational performance, although the indirect effect through employee engagement appears more dominant. This confirms that employee engagement functions as an important mediating mechanism that translates industrial relations climate into improved performance outcomes. The key theoretical contribution of this study lies in highlighting industrial relations climate as a relational foundation that strengthens engagement and supports organizational performance, particularly in a professional association setting where collective interaction and cooperation are central.

Practically, the results suggest that organizational leaders should prioritize strengthening industrial relations practices through transparent communication, participatory decision-making, and fair treatment to sustain engagement and performance during digital transformation. However, this study has limitations, including the relatively small sample size, the use of purposive sampling, and reliance on self-reported cross-sectional data, which may limit generalizability and causal interpretation. Future research is recommended to involve larger samples, apply longitudinal designs, and explore additional variables such as leadership style, digital readiness, or organizational culture to enrich understanding of employee engagement mechanisms in the digital era.

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