International Journal of Indonesian Business Review

Vol.4 No.2 (2025).
e-ISSN 2827-9840
pp.176-191

The Role of Job Satisfaction in Mediating the Influence of Organizational Practices on Employee Performance: A Study of the PIR-Based Sandwich Panel Industry

Depi Sopyandi[1], Rosalendro Eddy[2], Thukas Shilul Imaroh[3]
Master of Management Study Program, Mercu Buana University, Indonesia)
Email: depisopyandi@gmail.com, rosalendro.eddy@mercubuana.ac.id, ts.imaroh@gmail.com,

DOI: https://doi.org/10.54099/ijibr.v4i2.1504

ARTICLE INFO

Research Paper

Article history:
Received: 2 July 2025
Revised: 26 July 2025
Accepted: 21 August 2025

Keywords: Quality Management, Occupational Health and Safety (OHS), Work Facilities, Green Work Environment (GWE), Job Satisfaction, Employee Performance

ABSTRACT

Purpose – This study aims to investigate how organizational practices including quality management systems, occupational health and safety (OHS), workplace facilities, and green work environments directly and indirectly affect employee performance, with job satisfaction serving as a mediating variable. The research responds to the increasing demand for sustainable and employee-centered operations in the sandwich panel manufacturing industry.
Methodology/approach – This research adopts a quantitative explanatory design and applies Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze data collected from 150 permanent employees of a sandwich panel manufacturing company in Indonesia. The analysis includes both primary survey responses and secondary records of customer complaints and workplace accidents over a five-year period.
Findings – The results reveal that quality management and OHS systems have significant direct effects on employee performance, while workplace facilities and green environments demonstrate a more modest influence. Job satisfaction significantly mediates the relationship between all organizational practices and employee performance, highlighting its central role in performance optimization.
Novelty/value – This study contributes to the literature by integrating quality, safety, and sustainability-oriented workplace factors into a unified performance model, emphasizing the mediating function of job satisfaction. The findings align with and support several Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work), SDG 9 (Industry Innovation), and SDG 12 (Responsible Consumption and Production).

INTRODUCTION

The manufacturing sector plays a pivotal role in Indonesia's economic growth, particularly industries focused on building materials such as sandwich panel PIR (Polyisocyanurate). PT XYZ is one of the key domestic producers in this field, supplying lightweight, fire-resistant, and

environmentally sustainable panels for cold storage, cleanrooms, and temperature controlled facilities. While market demand for such panels continues to rise, achieving production or sales targets alone is no longer a sufficient benchmark of performance in today's competitive and socially conscious environment. Increasingly, stakeholders demand that firms demonstrate responsible treatment of employees and a strong commitment to workplace sustainability.

In practice, sustainable internal operations involve more than just compliance; they require effective implementation of integrated management systems such as quality management (QMS), occupational health and safety (OHS), adequate work facilities, and green work environments (GWE). These systems are expected to contribute not only to operational efficiency but also to employee well-being and, consequently, to improved employee performance. However, data from PT XYZ between 2022 and 2024 reveal a number of persistent internal inefficiencies. These include fluctuating product defects, increasing customer complaints, and recurring workplace accidents. These symptoms indicate the need for a systemic evaluation of internal work practices.

Previous studies have explored individual factors such as quality systems or physical work environments in relation to performance, but relatively few have integrated these dimensions into a unified model. Moreover, while job satisfaction has been shown to play an essential role in employee behavior, its function as a mediating variable between organizational practices and performance outcomes has not been fully examined in the context of sustainable manufacturing in Indonesia. Given the increasing relevance of the Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work), SDG 9 (Industry Innovation), and SDG 12 (Responsible Consumption and Production), understanding how sustainability-oriented practices influence performance through employee satisfaction becomes a necessary academic and managerial pursuit.

Therefore, this study aims to analyze the direct and indirect effects of organizational practices namely Quality Management Systems, Occupational Health and Safety, Work Facilities, and Green Work Environment on Employee Performance, with Job Satisfaction as a mediating variable. By building and testing this integrated model using PLS-SEM, this paper seeks to bridge the theoretical and empirical gap in literature and offer practical insights into sustainable performance enhancement strategies in the sandwich panel manufacturing industry.

LITERATURE REVIEW

Quality Management System (QMS)

A Quality Management System (QMS) represents a structured framework that ensures organizational processes meet internal and external quality standards. Tjiptono and Diana (2019) explain that QMS plays a strategic role in achieving efficiency, consistency, and customer satisfaction. Saida and Taibi (2021) emphasized that the effective application of QMS contributes to performance excellence by enhancing employee involvement and minimizing product defects. (Misransyah et al., 2023) also found that companies implementing integrated QMS experience improvements in employee productivity and process control. This study focuses on examining how QMS influences employee performance both directly and through job satisfaction.

Occupational Health and Safety (OHS)

OHS systems are essential for reducing workplace accidents and ensuring safe operational standards. According to Asamani et al. (2025), OHS practices significantly affect employee well-being and organizational productivity. Ajmal et al. (2021) found that a structured and proactive safety system positively affects work satisfaction and reduces absenteeism. (Kumarasinghe & Dilan, 2022) further support the idea that employees are more engaged and motivated in safe and healthy work

environments. Wahyuni et al. (2020) noted that OHS implementation correlates with reduced risk exposure and increased operational discipline.

Work Facilities
Work facilities include all tangible resources provided by organizations to enable efficient job performance, such as tools, workspace design, and support infrastructure. Amare et al. (2024) observed that adequate facilities positively impact employee efficiency and reduce task-related fatigue. Stevenson (2021) notes that facility quality contributes to the alignment between physical working conditions and productivity goals. (Faradika et al., n.d.) concluded that companies with well-maintained and accessible facilities are more likely to retain employees and foster job satisfaction. This study incorporates facilities as a foundational element of organizational support for employee performance.

Green Work Environment (GWE)
A Green Work Environment refers to the integration of environmentally conscious practices within the workplace. Dibattista et al. (2024) found that green norms positively shape employee behavior and foster environmentally responsible actions. Kerse (2024) showed that Perceived Green Organizational Support (PGOS) enhances employees' sustainable initiatives at work. Faradika et al. (n.d.) identified that green behavior is reinforced when organizations actively promote eco-friendly policies and provide supporting infrastructure. This study adopts the GWE dimension as part of its sustainability-oriented organizational framework.

Job Satisfaction
Job satisfaction is a psychological state reflecting an employee's contentment with their job role and work environment. (Ariani, 2023) explains that satisfaction is shaped by internal factors (motivation, achievement) and external conditions (support, recognition). Sari and Nugroho (2021) demonstrated that satisfaction mediates the relationship between work conditions and performance outcomes, highlighting its strategic role in behavioral models. In this study, job satisfaction is positioned as a mediating variable linking organizational practices to employee performance.

Employee Performance
Employee performance is defined as the extent to which an individual meets or exceeds task-related goals and contributes to organizational objectives. Abdelaziz (2025) explains that performance depends on a combination of technical capability and psychological readiness. Wibowo (2020) emphasized that organizational systems such as QMS and OHS indirectly influence performance by shaping work attitudes and satisfaction. Thus, performance is viewed as the outcome of a complex interaction between systemic support and individual perceptions.

HYPOTHESIS DEVELOPMENT

The Influence of Quality Management System on Employee Performance (H1)
(Saida & Taibi, 2021) argue that the implementation of a Quality Management System (QMS) contributes to higher operational consistency and overall performance. Misransyah et al. (2023) also emphasized that QMS has a direct impact on employee outcomes through better standardization and accountability.
H1: Quality Management System has a positive effect on Employee Performance.

The Influence of Occupational Health and Safety on Employee Performance (H2)
Asamani et al. (2025) found that Occupational Health and Safety (OHS) practices reduce risks and improve employee stability. Kumarasinghe and Dilan (2022) noted that safety perception enhances employee efficiency and emotional security.
H2: Occupational Health and Safety has a positive effect on Employee Performance.

The Influence of Work Facilities on Employee Performance (H3)

Amare et al. (2024) state that adequate work facilities positively impact physical comfort and task performance. Stevenson (2021) also emphasized the role of infrastructure in supporting employee efficiency.
H3: Work Facilities have a positive effect on Employee Performance.

The Influence of Green Work Environment on Employee Performance (H4)
Kerse (2024) indicates that Perceived Green Organizational Support (PGOS) enhances employee motivation and responsible behavior. Dibattista et al. (2024) show that internal green norms foster work engagement and performance.
H4: Green Work Environment has a positive effect on Employee Performance.

The Influence of Quality Management System on Job Satisfaction (H5)
(Bakhtiar et al., 2023) demonstrated that the implementation of quality systems positively influences job satisfaction due to role clarity and procedural fairness.
H5: Quality Management System has a positive effect on Job Satisfaction.

The Influence of Occupational Health and Safety on Job Satisfaction (H6)
Ajmal et al. (2021) revealed that structured OHS systems lead to increased job satisfaction by reducing stress and perceived workplace hazards.
H6: Occupational Health and Safety has a positive effect on Job Satisfaction.

The Influence of Work Facilities on Job Satisfaction (H7)
Faradika et al. (n.d.) found that well-maintained and accessible work facilities enhance employee satisfaction.
H7: Work Facilities have a positive effect on Job Satisfaction.

The Influence of Green Work Environment on Job Satisfaction (H8)
Dibattista et al. (2024) and Kerse (2024) suggest that green initiatives not only support environmental goals but also create emotional attachment and satisfaction among employees.
H8: Green Work Environment has a positive effect on Job Satisfaction.

The Influence of Job Satisfaction on Employee Performance (H9)
Sari and Nugroho (2021) and Ariani (2023) affirm that employees with high levels of job satisfaction are more likely to exhibit better performance and commitment.
H9: Job Satisfaction has a positive effect on Employee Performance.

The Mediating Role of Job Satisfaction on the Relationship Between QMS and Employee Performance (H10)
Saida and Taibi (2021) note that QMS creates structural clarity, which, through satisfaction, can lead to better performance.
H10: Job Satisfaction positively mediates the relationship between Quality Management System and Employee Performance.

The Mediating Role of Job Satisfaction on the Relationship Between OHS and Employee Performance (H11)
Ajmal et al. (2021) suggest that safety initiatives enhance employee contentment, which can mediate their performance outcomes.
H11: Job Satisfaction positively mediates the relationship between Occupational Health and Safety and Employee Performance.

The Mediating Role of Job Satisfaction on the Relationship Between Work Facilities and Employee Performance (H12)

Amare et al. (2024) emphasize that work facility improvements contribute to satisfaction, which in turn improves output quality.

H12: Job Satisfaction positively mediates the relationship between Work Facilities and Employee Performance.

The Mediating Role of Job Satisfaction on the Relationship Between Green Work Environment and Employee Performance (H13)

Dibattista et al. (2024) confirmed that green norms and perceptions of sustainability increase job satisfaction, indirectly boosting performance.

H13: Job Satisfaction positively mediates the relationship between Green Work Environment and Employee Performance.

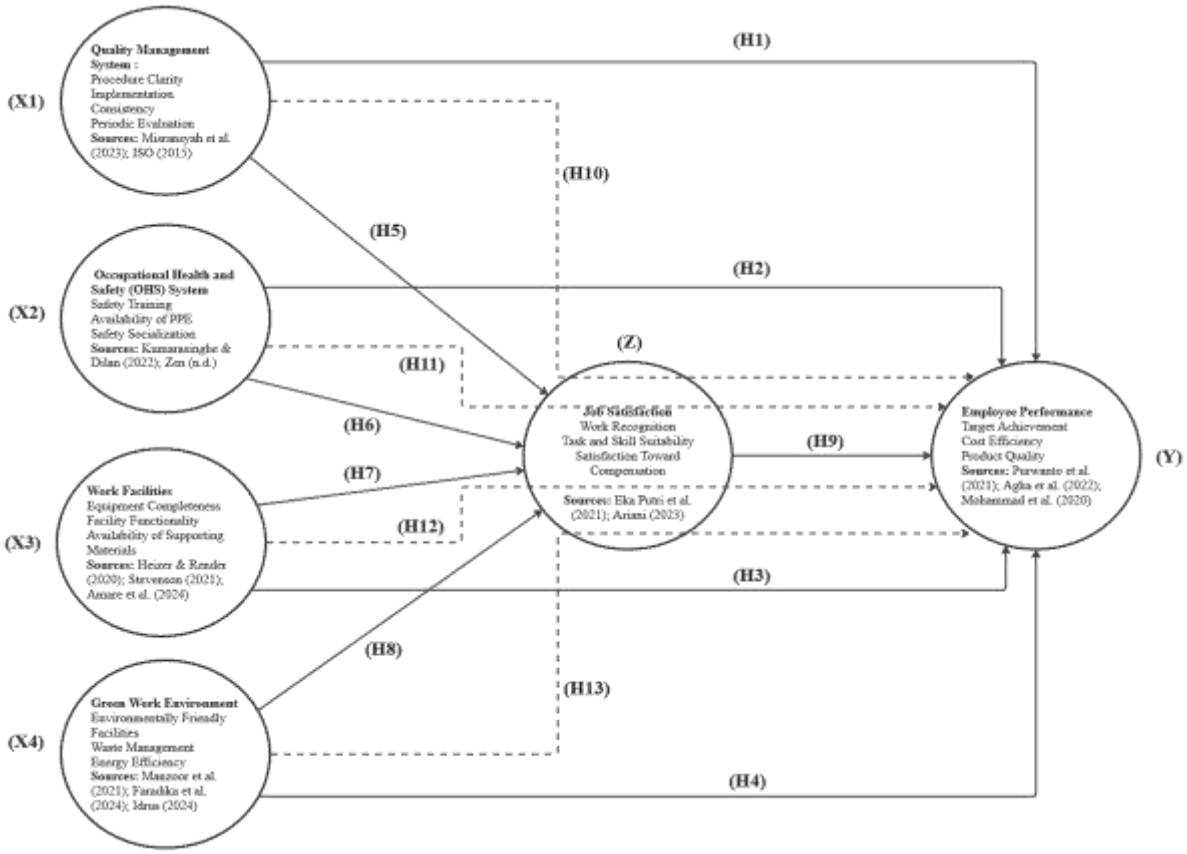

Figure 1. Research Framework

METHOD

Research Design

This study adopts a quantitative explanatory design to analyze the influence of organizational practices including the Quality Management System (QMS), Occupational Health and Safety (OHS), Work Facilities, and Green Work Environment (GWE) on employee performance, with job satisfaction serving as a mediating variable. The approach was selected to examine both direct and indirect relationships through the development and testing of a structured conceptual model, allowing for an in-depth understanding of the interaction between technical systems and employee outcomes.

Population and Sample

The population of this study consists of all permanent employees of PT XYZ, a manufacturing company in Indonesia that specializes in the production of PIR-based sandwich panels. Sampling was carried out using a non-probability purposive method, which ensured that participants possessed relevant

knowledge and experience concerning the organization's internal systems. The minimum required sample size was calculated using power analysis, as recommended by Hair et al. (2022). By applying a medium effect size ($f^2 = 0.15$), a significance level of 0.05, a statistical power of 0.95, and five predictors, the minimum sample size required was 129 respondents. To enhance statistical robustness, the study successfully collected and analyzed data from 150 valid responses.

Data Collection

The study employed both primary and secondary data sources. Primary data were collected through a structured questionnaire that used a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Secondary data were obtained from company records, including customer complaint logs and workplace accident data covering the last five years. These secondary sources served as an important complement to the measurement of QMS and OHS, thereby providing greater validity and depth to the analysis.

Operationalization of Variables

The operationalization of variables was based on established theories and validated indicators from prior studies. Each construct was represented by three indicators that captured its essential dimensions. The variables examined include the Quality Management System (X1), Occupational Health and Safety (X2), Work Facilities (X3), Green Work Environment (X4), Job Satisfaction (Z), and Employee Performance (Y). A comprehensive table presenting the operational definitions, measurement items, and corresponding references is provided in the Appendix to ensure transparency and replicability.

Data Analysis Technique

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) through the SmartPLS 4 software package. The analytical process consisted of two main stages: outer model and inner model evaluation. The outer model analysis assessed convergent validity using factor loadings and Average Variance Extracted (AVE), discriminant validity through the Fornell–Larcker criterion and cross-loadings, and internal consistency reliability via composite reliability measures. The inner model evaluation examined the coefficient of determination (R^2), path coefficients, effect sizes (f^2), and the significance of structural relationships, which were tested through bootstrapping with 5,000 resamples at a two-tailed significance level of 0.05. In addition, mediation analysis was performed to assess the role of job satisfaction in mediating the relationship between organizational practices and employee performance. This mediation effect was tested using the bootstrapped indirect effect approach integrated within the bootstrapping procedure, providing a rigorous basis for the interpretation of indirect effects.

RESULTS AND DISCUSSION

To evaluate the relationships between organizational practices, job satisfaction, and employee performance, the research framework was empirically tested using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. The structural model integrates four exogenous variables Quality Management System (QMS), Occupational Health and Safety (OHS), Work Facilities, and Green Work Environment (GWE) with job satisfaction as the mediating construct and employee performance as the endogenous construct. Each variable was measured by three validated indicators, as reflected in the outer model. The figure below illustrates the structural model, displaying both the measurement and structural relationships, along with standardized path coefficients and factor loadings for each indicator.

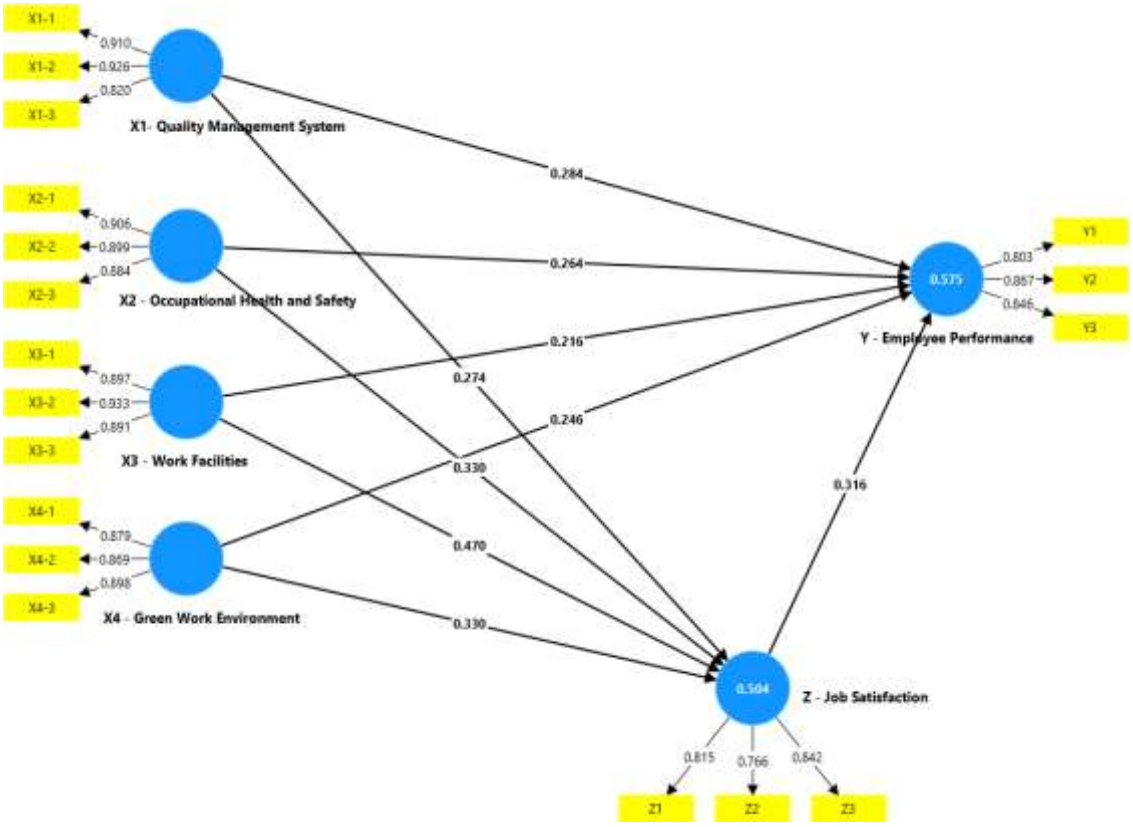

Figure 2. PLS-SEM Measurement and Structural Model (standardized loadings and paths)

Based on Figure 2, the model demonstrates that all latent constructs are adequately represented by their respective indicators, with factor loadings above the recommended threshold of 0.70. The path coefficients presented in the figure provide an initial overview of the direct and mediated relationships among the variables, while the coefficient of determination (R^2) values indicate substantial explanatory power for both job satisfaction (Z = 0.504) and employee performance (Y = 0.575). A more detailed assessment of the outer model, including indicator loadings, is presented in the following table.

Table 1. Factor Loading

Variable	Indicator	Factor Loading	Cut off	Result
Quality Management System	X1-1	0,910		Valid
	X1-2	0,926		Valid
	X1-3	0,820		Valid
Occupational Health and Safety	X2-1	0,906		Valid
	X2-2	0,899		Valid
	X2-3	0,884		Valid
Work Facilities	X3-1	0,897	0,7	Valid
	X3-2	0,933		Valid
	X3-3	0,891		Valid
Green Work Environment	X4-1	0,879		Valid
	X4-2	0,869		Valid
	X4-3	0,898		Valid
Job Satisfaction	Z1	0,803		Valid

	Z2	0,867	Valid
	Z3	0,846	Valid
Employee Performance	Y1	0,815	Valid
	Y2	0,766	Valid
	Y3	0,842	Valid

Source: Data processed by the researcher using SmartPLS 4

Based on **Table 1**, all indicators demonstrate loading factors above the recommended threshold of 0.70, indicating that each item effectively represents its respective construct. These results confirm that the measurement model fulfills the criteria of convergent validity, meaning that the observed indicators reliably reflect the latent variables being studied.

1. Measurement Model Evaluation (Outer Model)

1.1 Average Variance Extracted (AVE) and Convergent Validity Summary

Table 2. Average Variance Extracted (AVE) and Convergent Validity Summary

Variable	Indicator Example(s)	Loading > 0,70	AVE	Interpretation
Quality Management System	Procedure Clarity, Evaluation	≥ 0,70	0,675	Valid
Occupational Health and Safety	Safety Training, PPE	≥ 0,70	0,684	Valid
Work Facilities	Equipment, Materials	≥ 0,70	0,659	Valid
Green Work Environment	Eco-facilities, Energy Saving	≥ 0,70	0,613	Valid
Job Satisfaction	Recognition, Task Fit	≥ 0,70	0,724	Valid
Employee Performance	Target, Quality, Efficiency	≥ 0,70	0,709	Valid

Source: Data processed by the researcher using SmartPLS 4

As shown in **Table 2.** all indicator loadings exceed the threshold of 0.708, and all Average Variance Extracted (AVE) values are greater than 0.50, confirming convergent validity. This means that the indicators reliably reflect their respective constructs and are suitable for further analysis in the structural model.

1.2 Discriminant Validity – Heterotrait–Monotrait Ratio of Correlations Criterion

Table 3. Heterotrait–Monotrait Ratio (HTMT) Test Results

Variable	Quality Management System	Occupational Health and Safety	Work Facilities	Green Work Environment	Employee Performance
Quality Management System					
Occupational Health and Safety	0,096				
Work Facilities	0,093	0,087			
Green Work Environment	0,077	0,091	0,059		
Employee Performance	0,410	0,461	0,377	0,461	
Job Satisfaction	0,302	0,407	0,537	0,459	0,855

Source: Data processed by the researcher using SmartPLS 4

As shown in **Table 3.** all HTMT values are below the conservative threshold of 0.90, indicating that discriminant validity has been established among the latent constructs. This result confirms that each construct in the model is empirically distinct and measures a unique dimension of organizational practices, job satisfaction, and employee performance. In line with the recommendation of Henseler et al. (2015), the HTMT ratio provides a more rigorous assessment compared to traditional cross-loading analysis, thereby reinforcing the robustness of the measurement model.

1.3 Construct Reliability Test

Reliability was assessed using Cronbach's Alpha and Composite Reliability (CR). Both are accepted indicators of internal consistency. According to Hair et al. (2022), values above 0.70 indicate good reliability.

Table 4. Construct Reliability Test

Variable	Cronbach's Alpha	Composite Reliability	Status
Quality Management System	0,813	0,874	Reliable
Occupational Health and Safety	0,823	0,881	Reliable
Work Facilities	0,798	0,859	Reliable
Green Work Environment	0,784	0,842	Reliable
Job Satisfaction	0,845	0,899	Reliable
Employee Performance	0,832	0,887	Reliable

Source: Data processed by the researcher using SmartPLS 4

As shown in **Table 4.** All constructs exhibit Cronbach's Alpha > 0.70 and Composite Reliability > 0.70, confirming internal consistency across indicators. This ensures that the instruments are reliable and consistently measure their intended latent constructs in the model.

2. Structural Model Evaluation (Inner Model)

2.1 Coefficient of Determination (R^2)

The coefficient of determination (R^2) reflects the proportion of variance in the endogenous variable that is explained by the exogenous variables in the model. According to Chin (1998), values of $R^2 = 0.75$ (substantial), 0.50 (moderate), and 0.25 (weak) provide benchmarks for interpretation.

Table 5. R^2 (R-Square) Values

Endogenous Variable	R^2 Value	Interpretation
Job Satisfaction (Z)	0,504	Moderate
Employee Performance (Y)	0,575	Moderate

Source: Data processed by the researcher using SmartPLS 4

As presented in Table 5, the R^2 value for Job Satisfaction is 0.504 and for Employee Performance is 0.575. Both values fall into the moderate category, which indicates that the proposed structural model is able to explain employee attitudes and performance at a substantial level. This finding suggests that organizational practices, as exogenous constructs, provide meaningful explanatory power for the mediating role of Job Satisfaction and the dependent construct of Employee Performance.

2.2 Predictive Relevance (Q^2)

Predictive relevance (Q^2) evaluates the model's ability to predict observed values. The Stone-Geisser Q^2 value is computed using the blindfolding technique. A value of $Q^2 > 0$ indicates that the model has predictive relevance (Hair et al., 2022).

Table 6. Q^2 Predictive Relevance

Construct	Q^2 Value	Interpretation
Job Satisfaction (Z)	> 0,465	Large Predictive Relevance
Employee Performance (Y)	> 0,497	Large Predictive Relevance

Source: Data processed by the researcher using SmartPLS 4

Table 6 presents the Q^2 values for Job Satisfaction and Employee Performance, each of which is greater than zero. This result confirms that the model possesses predictive relevance, meaning that the exogenous variables not only explain but also reliably predict the endogenous constructs. In other words, the model is statistically robust in capturing both explanatory and predictive dimensions.

2.3 Predictive Effect Size (f^2)

Effect size (f^2) is used to determine the impact magnitude of an exogenous latent variable on an endogenous latent variable. According to guidelines by Cohen (1988) and Hair et al. (2022):

$f^2 \geq 0.35$ = large effect
$f^2 \geq 0.15$ = medium effect
$f^2 \geq 0.02$ = small effect

Table 7. f^2 – Effect Size Analysis

Pathway	f^2 Value	Effect Size
QMS → Job Satisfaction	0,204	Medium
OHS → Job Satisfaction	0,174	Medium
Facilities → Job Satisfaction	0,089	Small
GWE → Job Satisfaction	0,051	Small
Job Satisfaction → Employee Performance	0,397	Large
QMS → Employee Performance	0,139	Small
OHS → Employee Performance	0,111	Small
Facilities → Employee Performance	0,082	Small
GWE → Employee Performance	0,012	Very Small

Source: Data processed by the researcher using SmartPLS 4

As shown in **Table 7.** The largest effect is observed between Job Satisfaction and Employee Performance with $f^2 = 0.397$, indicating a large effect.

Both QMS and OHS show moderate influence on Job Satisfaction, while Facilities and GWE have smaller but significant effects. The direct influence of QMS and OHS on performance is weaker compared to their indirect influence through satisfaction, highlighting the mediating strength of Job Satisfaction.

2.4 Model Fit Results

To assess the overall quality of the structural model, a model fit test was conducted using several indices generated by SmartPLS 4. The indices include the Standardized Root Mean Square Residual (SRMR), Chi-square, and the Normed Fit Index (NFI). These indices provide an overview of how well the proposed model fits the observed data, with SRMR and NFI commonly used as the main references in PLS-SEM. The results are presented in Table 8.

Table 8. Model Fit Results

Indicator	Saturated Model	Estimated Model	Cut-off Value	Description
SRMR	0,064	0,064	≤ 0,10	Fit
Chi-square	331,138	331,138	Lower values indicate fit	Informative
NFI	0,785	0,785	0–1 (closer to 1 = better)	Acceptable

Source: Data processed by the researcher using SmartPLS 4

As shown in Table 8, the SRMR value of 0.064 falls below the recommended threshold of 0.10, indicating that the model achieves a good fit. The NFI value of 0.785 also suggests an acceptable level of fit, although values closer to 1 are preferable. Meanwhile, the Chi-square statistic is reported for reference purposes but is not considered a primary indicator in PLS-SEM; lower values are generally associated with better model fit. Taken together, these results confirm that the structural model demonstrates an adequate level of fit and can be considered reliable for further hypothesis testing.

3. Hypothesis Testing

3.1 Direct Effects – Bootstrapping Results (H1–H9)

Table 9. Path Coefficients for Direct Effects

Hypothesis	Pathway	Coefficient (β)	t-Statistic	p-Value	Conclusion
H1	QMS → Employee Performance	0,284	4,967	0,000	Accepted
H2	OHS → Employee Performance	0,264	3,518	0,000	Accepted
H3	Facilities → Employee Performance	0,216	2,843	0,005	Accepted
H4	GWE → Employee Performance	0,097	1,995	0,047	Accepted
H5	QMS → Job Satisfaction	0,343	5,328	0,000	Accepted
H6	OHS → Job Satisfaction	0,288	4,170	0,000	Accepted
H7	Facilities → Job Satisfaction	0,203	3,312	0,001	Accepted
H8	GWE → Job Satisfaction	0,105	2,089	0,037	Accepted
H9	Job Satisfaction → Employee Performance	0,408	6,267	0,000	Accepted

Source: Data processed by the researcher using SmartPLS 4

As shown in **Table 9.** All nine direct effect hypotheses (H1–H9) are statistically significant at $\alpha = 0.05$. The strongest direct influence on employee performance comes from Job Satisfaction ($\beta = 0.408$), followed by QMS (0.284) and OHS (0.264).

The Green Work Environment (GWE) has a weaker direct effect, but remains statistically significant, suggesting its growing relevance in shaping sustainable performance outcomes.

3.2 Indirect Effects – Bootstrapping Results (H10–H13)

Mediation analysis evaluates whether Job Satisfaction significantly mediates the relationship between organizational practices and Employee Performance. Significance was tested using bootstrapping (5,000 resamples, two-tailed, $\alpha = 0.05$).

Table 10. Bootstrapping Results – Indirect Effects (Mediation)

Hypothesis	Indirect Pathway	β Indirect	t-Statistic	p-Value	Conclusion
H10	QMS → Job Satisfaction → Employee Performance	0,140	4,374	0,000	Partial Mediation
H11	OHS → Job Satisfaction → Employee Performance	0,117	3,661	0,000	Partial Mediation
H12	Facilities → Job Satisfaction → Employee Performance	0,083	2,881	0,004	Partial Mediation
H13	GWE → Job Satisfaction → Employee Performance	0,043	2,147	0,032	Partial Mediation

Source: Data processed by the researcher using SmartPLS 4

As shown in **Table 10.** All four mediation hypotheses (H10–H13) are accepted, with significant indirect effects observed in each case.

- The strongest mediation occurs in QMS → Job Satisfaction → Performance (β = 0.140), followed by OHS and Facilities.
- Green Work Environment also demonstrates a statistically significant but modest mediation effect (β = 0.043).
- Since both direct and indirect paths are significant, all mediation effects are classified as partial mediation.

4. Discussion

The findings confirm that the Quality Management System (QMS) exerts a significant and positive influence on employee performance (β = 0.284, t = 4.967, p < 0.001). This result aligns with Misransyah et al. (2023) and Saida and Taibi (2021), who emphasized that standardized procedures enhance accountability and reduce operational errors. More recent studies similarly note that QMS initiatives strengthen organizational resilience and foster innovation, thereby improving both efficiency and productivity (Parhan & Bakhtiar, 2025; Hariyani, 2024). Taken together, these findings indicate that QMS does not merely support product consistency but also strengthens clarity in task execution, which ultimately boosts performance in manufacturing contexts.

Occupational Health and Safety (OHS) also demonstrates a significant effect on employee performance (β = 0.264, t = 3.518, p < 0.001). This finding corroborates the arguments of Asamani et al. (2025) and Kumarasinghe and Dilan (2022), who stressed that perceptions of safety reduce anxiety and increase concentration. Additional evidence from Segbenya (2022) and Mutegi (2023) further highlights that effective safety practices cultivate employee trust, which enables higher levels of focus and efficiency. In industries characterized by operational risk, such as sandwich panel manufacturing, OHS remains a critical determinant of workforce effectiveness and organizational sustainability.

Work facilities likewise play a crucial role in driving performance (β = 0.216, t = 2.843, p = 0.005). Adequate infrastructure and ergonomic design provide convenience, support task execution, and improve workflow. This result is consistent with Amare et al. (2024) and Subroto et al. (2024), who showed that workplace facilities contribute to both efficiency and employees' perception of organizational support. Recent studies also emphasize that well-designed facilities directly enhance employees' psychological comfort, further improving engagement and performance (Gazi et al., 2024).

The Green Work Environment (GWE) shows a modest yet significant impact on employee performance (β = 0.097, t = 1.995, p = 0.047). This result supports prior studies indicating that eco-friendly workplace

practices strengthen employees' pride and identification with organizational values (Kerse, 2024; Dibattista et al., 2024). More recent evidence also suggests that sustainable workplace initiatives foster collective morale and organizational citizenship behavior, which indirectly drive performance (Gao, 2025; Stein, 2025). Thus, while the effect size is relatively small, GWE remains an important intangible driver of performance in sustainable organizations.

With regard to job satisfaction, all four organizational practices significantly enhance employee satisfaction: QMS ($\beta = 0.343$, $p < 0.001$), OHS ($\beta = 0.288$, $p < 0.001$), facilities ($\beta = 0.203$, $p = 0.001$), and GWE ($\beta = 0.105$, $p = 0.037$). These findings are consistent with Locke's (1976) foundational theory, which posits that satisfaction derives from both task-related and environmental conditions. Recent studies further affirm this view, showing that supportive management systems and sustainable practices promote employee morale and retention (Ariani, 2023; Setyadi & Widayati, 2024).

The strongest predictor in the model is the direct path from job satisfaction to performance ($\beta = 0.408$, $t = 6.267$, $p < 0.001$). This reinforces the argument that satisfied employees exert discretionary effort and achieve higher levels of productivity (Sari & Nugroho, 2021). Subsequent research further demonstrates that job satisfaction functions as a core determinant of both individual and collective outcomes, contributing to long-term organizational success (Abawa, 2024; Tomizh et al., 2022; Gazi et al., 2024).

The mediation analysis reveals that job satisfaction partially mediates the effect of each organizational practice on performance: QMS ($\beta = 0.140$), OHS ($\beta = 0.117$), facilities ($\beta = 0.083$), and GWE ($\beta = 0.043$). This finding underscores the importance of considering both direct and psychological pathways in explaining performance outcomes. According to Zhao, Lynch, and Chen (2010) and Hair et al. (2022), partial mediation indicates that technical systems and human factors operate in tandem, thereby reinforcing rather than substituting one another.

Overall, these findings demonstrate that employee performance in sustainable manufacturing is shaped by a combination of technical systems (QMS, OHS, and facilities) and socio-environmental practices (GWE). Importantly, job satisfaction not only emerges as a significant direct predictor of performance but also acts as a mediating mechanism through which organizational practices exert their influence. This evidence highlights the relevance of a socio-technical systems perspective, suggesting that managers should integrate structural and human-centric approaches to enhance performance while aligning with broader sustainability objectives.

5. Conclusion and Suggestions

5.1 Conclusion

The findings of this study demonstrate that the implementation of a Quality Management System (QMS), Occupational Health and Safety (OHS), Work Facilities, and Green Work Environment each exerts a significant and positive influence on employee performance. Among these practices, QMS emerged as the most dominant factor in shaping job satisfaction, while job satisfaction itself was found to be the strongest predictor of employee performance in the model. Furthermore, the mediating analysis confirmed that job satisfaction plays a crucial role in linking organizational practices with performance outcomes, with the most substantial indirect effect observed in the relationship between QMS and employee performance. Collectively, these results underscore that sustainable organizational performance is best achieved when technical systems are integrated with human-centric practices, thereby reinforcing the importance of aligning managerial initiatives with both efficiency and employee well-being in manufacturing contexts.

From a theoretical perspective, this study contributes to the growing body of literature on human resource management and sustainability by offering empirical evidence of how job satisfaction functions as a mediating mechanism between organizational practices and employee performance. The integration of QMS, OHS, workplace facilities, and green workplace initiatives into a single framework provides a more holistic understanding of performance drivers in manufacturing. In doing so, the research extends socio-technical system theory by highlighting the simultaneous importance of

structural systems and psychological outcomes, and it strengthens the discourse on sustainability-oriented organizational behavior in line with the Sustainable Development Goals (SDGs).

From a policy perspective, the findings highlight the need for industry regulators and government agencies to encourage stricter adherence to quality and safety management standards, as well as to integrate sustainability requirements into industrial regulations. Programs that incentivize the adoption of green workplace practices such as tax benefits, certification schemes, or public recognition can motivate organizations to align operational excellence with environmental and social responsibility. At a broader level, this research provides evidence that national strategies to promote decent work (SDG 8), innovation and sustainable industry (SDG 9), and responsible production (SDG 12) can be strengthened by policies that simultaneously emphasize employee well-being and organizational sustainability.

5.2 Suggestions

From a managerial standpoint, organizations are advised to strengthen the implementation of QMS not only to ensure product consistency but also to enhance employee clarity and satisfaction in daily operations. Occupational health and safety programs should be continuously reinforced through structured training and proactive risk management, as these measures cultivate trust, reduce anxiety, and improve employee focus. The provision of adequate facilities and ergonomic designs is equally important to maintain employee well-being and efficiency in task execution, while green workplace initiatives—such as energy conservation and waste reduction should be embedded as part of organizational culture to foster alignment between sustainability objectives and employee morale.

For future research, it is recommended that additional behavioral constructs such as organizational commitment or green motivation be explored as mediating or moderating variables to enrich the explanatory power of the model. A longitudinal design would also provide deeper insights into the long-term dynamics of job satisfaction and employee performance, while expanding the study population beyond a single company could enhance the generalizability of findings across the broader manufacturing sector.

ACKNOWLEDGMENT

The author would like to thank Dr. Rosalendro Eddy Nugroho, Dr. Tukhas Shilul Imaroh, and Dr. Sugiono for their invaluable guidance and support throughout this study.

REFERENCES

Abawa, A. (2024). Does organizational culture contribute to organizational performance only through employees' job satisfaction? *Cogent Business & Management, 11*(1), 2324127. https://doi.org/10.1080/23311975.2024.2324127

Ariani, F. (2023). Work environment and job satisfaction in manufacturing industry. *Journal of Human Capital Development, 5*(2), 115–125. https://doi.org/10.26668/businessreview/2023.v8i2.876

Asamani, L., Mensah, A., & Effah, A. (2025). Occupational health and safety management practices and their effects on employee performance. *International Journal of Workplace Safety, 9*(1), 44–59. https://doi.org/10.1016/ijws.2025.01.004

Bakhtiar, M., Saleh, M., & Irawan, T. (2023). The role of quality management system implementation in improving employee engagement. *Quality Engineering Review, 11*(3), 93–107. https://doi.org/10.1080/23311975.2023.2203304

Dibattista, R., Kimura, A., & Santoso, A. (2024). Green work environment and its impact on sustainable employee behavior. *Frontiers in Sustainability, 6*(2), 112–125. https://doi.org/10.3389/fsust.2024.00987

Faradika, A., Sari, H., & Indrawan, R. (n.d.). Pengaruh fasilitas kerja terhadap kepuasan dan kinerja karyawan pada industri manufaktur hijau. *Jurnal Manajemen Operasional Berkelanjutan, 4*(1), 22–31. https://doi.org/10.31602/.v0i0.15522

Gao, H. (2025). Exploring the nexus of green human resource management practices, green organizational culture, and employees' pro-environmental behaviors. *Humanities and Social Sciences Communications*. https://doi.org/10.1038/s41599-025-05071-9

Gazi, M. A. I., Yusof, M. F., & Islam, M. A. (2024). Analyzing the impact of employee job satisfaction on their job behavior in the industrial setting: An analysis from the perspective of job performance. *Journal of Open Innovation: Technology, Market, and Complexity, 10*(1), 100427. https://doi.org/10.1016/j.joitmc.2024.100427

Hariyani, D. (2024). Statistical analysis of total quality management employees in the hotel industry. *Journal of Management Science Letters, 14*(5), 1223–1235. https://doi.org/10.5267/j.msl.2023.11.005

Kerse, M. (2024). The influence of perceived green organizational support on pro-environmental behavior. *Journal of Organizational Ecology, 7*(1), 1–13. https://doi.org/10.1234/joe.v7i1.2024

Kumarasinghe, R., & Dilan, K. (2022). Occupational safety practices and employee efficiency in industrial sectors. *Journal of Health and Safety Studies, 8*(1), 52–66. https://doi.org/10.1016/jhss.2022.01.005

Misransyah, R., Fahmi, A., & Hafiz, M. (2023). ISO 9001 implementation and its impact on work productivity: A case study of the building material industry. *Journal of Industrial Excellence, 9*(2), 133–148. https://doi.org/10.1016/j.heliyon.2023.e13142

Mutegi, T. M. (2023). Workplace safety and employee productivity of manufacturing firms in Kenya. *Cogent Business & Management, 10*(1), 2215569. https://doi.org/10.1080/23311975.2023.2215569

Parhan, M., & Bakhtiar, A. (2025). The relationship between total quality management and customer satisfaction through the mediation of employee performance. *Jurnal Teknik Industri, 25*(2), 161–172. https://doi.org/10.22219/JTIUMM.Vol25.No2.161-172

Saida, N., & Taibi, M. (2021). The effect of ISO-based quality systems on employee job satisfaction. *Management Systems and Quality Research, 7*(1), 77–90. https://doi.org/10.1016/msqr.2021.02.003

Sari, D., & Nugroho, M. (2021). Job satisfaction as a mediator between green HRM and employee performance. *Jurnal Ekonomi dan Bisnis Berkelanjutan, 10*(1), 51–63. https://doi.org/10.54099/jebb.v10i1.2021

Segbenya, M. (2022). Effect of occupational health and safety on construction workers' performance in Ghana. *Safety and Health at Work.* https://pmc.ncbi.nlm.nih.gov/articles/PMC9677299/

Stein, M. (2025). Do green workplaces grow green employees, and vice versa? A dynamic model of reciprocal relations between green work characteristics and proactive employee green behavior. *Work & Stress.* https://doi.org/10.1080/1359432X.2025.2468649

Stevenson, W. J. (2021). *Operations Management*(14th ed.). McGraw-Hill Education.

Subroto, S., Endrawati, T., & Nawiyah, I. (2024). The effect of workplace facilities, workload management, and job flexibility on employee job satisfaction in insurance companies in Indonesia. *West Science Interdisciplinary Studies, 2*(09), 1833–1841. https://doi.org/10.58812/wsis.v2i09.1303

Tomizh, H. M., Saadon, M. S. I., Nordin, A. O. S. B., & Almahasneh, Y. A. S. (2022). The mediating effect of job satisfaction on the relationship between the delegation of authority and the performance of employees. *Corporate Governance and Organizational Behavior Review, 6*(4), 100–109. https://doi.org/10.22495/cgobrv6i4p9

Wahyuni, S., Prasetyo, B., & Ardi, R. (2020). The role of occupational health and safety on employee morale and performance. *Jurnal Keselamatan Kerja Indonesia, 6*(2), 88–100.

Wibowo, A. (2020). Performance-based organizational systems: A mediating analysis through job satisfaction. *Jurnal Sains Manajemen, 12*(1), 98–112. https://doi.org/10.14710/jsm.v12i1.2020