



Linking Green Employee Behavior to Sustainability Performance: The Mediating Role of Green Organizational Culture in Manufacturing Firms in Jababeka Industrial Estate

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ABSTRACT

This study examines the relationship between green employee behavior (GEB) and sustainability performance (SP), with green organizational culture (GOC) serving as a mediating variable in manufacturing firms located in the Jababeka Industrial Estate, Indonesia. Specifically, the study investigates the direct relationships between GEB and GOC, GOC and SP, as well as the mediating role of GOC in linking employee green behavior to sustainability performance. A quantitative explanatory design was employed using data collected from 250 employees across seven manufacturing companies through validated Likert-scale questionnaires. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0 and bootstrapping procedures (5,000 subsamples). The findings indicate that green employee behavior is positively associated with green organizational culture, which in turn is positively related to sustainability performance. The mediation analysis further suggests that green organizational culture plays a significant mediating role in explaining the relationship between green employee behavior and sustainability performance. These findings contribute to the Green Human Resource Management (GHRM) literature by highlighting the importance of organizational culture as a mechanism through which employee environmental behavior supports organizational sustainability outcomes in manufacturing firms within an emerging economy. The study also provides practical implications for managers seeking to strengthen sustainability initiatives by fostering environmentally responsible employee behavior alongside a supportive organizational culture.

Keywords: green employee; sustainability performance; green organizational culture, industry.

INTRODUCTION

Manufacturing firms are increasingly expected to achieve sustainability while maintaining operational efficiency and competitiveness. In Indonesia, this challenge has become more prominent due to stricter environmental regulations, increasing stakeholder expectations, and global supply chain requirements that encourage environmentally responsible production practices. Government initiatives such as the Corporate Performance Rating Program (PROPER), together with mandatory waste and emission management policies, have encouraged manufacturing companies to strengthen their sustainability strategies. Although investments in cleaner technologies remain important, achieving sustainability performance also depends on employees' environmentally responsible behavior and the organizational

environment that supports such behavior. Consequently, understanding how green employee behavior contributes to organizational sustainability has become an important issue in Green Human Resource Management (GHRM) research (Yu & Li, 2025).

Green employee behavior (GEB) refers to employees' voluntary and task-related actions that support environmental sustainability within the workplace, including conserving energy, reducing waste, complying with environmental procedures, and participating in environmentally friendly initiatives. Previous studies have consistently shown that Green Human Resource Management practices, including green recruitment, environmental training, green performance appraisal, and reward systems, encourage employees to adopt environmentally responsible behaviors (Khan & Faisal, 2023; Perwira et al., 2025). Such behaviors have been associated with lower energy consumption, improved resource efficiency, waste reduction, and enhanced organizational environmental performance (Bakashaba et al., 2025). Nevertheless, empirical evidence indicates that the relationship between green employee behavior and sustainability performance varies across organizational contexts. In many organizations, environmentally responsible employee behavior alone does not necessarily generate organization-wide sustainability outcomes because its implementation often depends on organizational support, managerial commitment, and institutionalized environmental practices (Yu & Li, 2025).

One possible explanation for these inconsistent findings is the role of Green Organizational Culture (GOC). Green organizational culture represents the shared environmental values, norms, beliefs, and practices that encourage environmentally responsible behavior throughout the organization. Rather than functioning merely as a contextual factor, organizational culture institutionalizes individual environmental behavior into standardized organizational routines and collective practices. When organizations consistently communicate environmental values, recognize green initiatives, and integrate sustainability into operational procedures, employees are more likely to internalize environmental responsibility in their daily work. Consequently, Green Organizational Culture may function as an organizational mechanism through which individual green behavior is transformed into improved sustainability performance (Bakashaba et al., 2025; Yu & Li, 2025).

The proposed relationship can be explained through the integration of the Ability–Motivation–Opportunity (AMO) framework and the Resource-Based View (RBV). According to the AMO framework, organizations achieve superior performance when employees possess the ability, motivation, and opportunity to perform desired behaviors. In the context of environmental management, green training enhances employees' environmental competencies, reward systems strengthen motivation, and organizational support creates opportunities for environmentally responsible actions (Yu & Li, 2025). Meanwhile, the Resource-Based View argues that organizational culture constitutes a valuable, rare, difficult-to-imitate, and non-substitutable intangible resource capable of generating sustainable competitive advantage (Fatoki, 2021). Combining these perspectives suggests that Green Organizational Culture enables organizations to transform individual green behavior into organizational capabilities that improve environmental, social, and economic performance (Fatoki, 2021).

Although previous studies have established positive relationships among Green Human Resource Management, green employee behavior, organizational culture, and sustainability performance, several important research gaps remain. First, prior research has predominantly examined the direct effects of Green Human Resource Management practices on sustainability performance, while comparatively fewer studies have investigated the organizational mechanisms through which employee green behavior contributes to sustainability outcomes (Perwira et al., 2025). Second, empirical findings regarding the mediating role of Green Organizational Culture remain limited and have produced inconsistent evidence across different industrial settings, suggesting that organizational culture may operate differently depending on

organizational characteristics and environmental contexts (Li et al., 2023; Bakashaba et al., 2025). Third, most empirical evidence has been generated from developed economies or service-oriented industries, whereas manufacturing firms in emerging economies such as Indonesia operate under different institutional pressures, regulatory environments, and production systems. Consequently, empirical evidence explaining how Green Organizational Culture mediates the relationship between Green Employee Behavior and Sustainability Performance within Indonesian manufacturing firms remains limited (Li et al., 2023).

This study addresses these gaps by examining the relationship between Green Employee Behavior and Sustainability Performance through the mediating role of Green Organizational Culture among manufacturing firms located in the Jababeka Industrial Estate, one of Indonesia's largest manufacturing clusters. Unlike previous studies that primarily emphasize Green Human Resource Management practices as organizational antecedents, this study focuses directly on Green Employee Behavior as the primary behavioral driver and investigates how organizational culture translates individual environmental behavior into organizational sustainability outcomes. By integrating the Ability–Motivation–Opportunity framework and the Resource-Based View, this study provides a more comprehensive explanation of the behavioral and organizational mechanisms underlying sustainability performance in manufacturing organizations.

The findings are expected to contribute to the Green Human Resource Management literature in several ways. Theoretically, this study provides empirical evidence regarding the mediating role of Green Organizational Culture in linking Green Employee Behavior and Sustainability Performance within an emerging economy context. Practically, the findings offer guidance for managers in manufacturing firms seeking to strengthen sustainability initiatives by integrating environmentally responsible employee behavior with organizational culture to improve sustainability performance.

Accordingly, this study addresses the following research questions:

RQ1. Does Green Employee Behavior positively influence Green Organizational Culture?

RQ2. Does Green Organizational Culture positively influence Sustainability Performance?

RQ3. Does Green Organizational Culture mediate the relationship between Green Employee Behavior and Sustainability Performance?

Based on these research questions, this study proposes that Green Employee Behavior positively influences Sustainability Performance through the mediating role of Green Organizational Culture.

METHOD

This study employed a quantitative explanatory research design to examine the relationships among Green Employee Behavior (GEB), Green Organizational Culture (GOC), and Sustainability Performance (SP) in manufacturing firms located in the Jababeka Industrial Estate, Indonesia. An explanatory approach was considered appropriate because the study aimed to test the proposed causal relationships and the mediating role of Green Organizational Culture using Partial Least Squares Structural Equation Modeling (PLS-SEM) (Becker et al., 2023). The target population consisted of operational employees, supervisors, and managers working in production, Occupational Safety, Health, and Environment (EHS), and supply chain departments of medium and large manufacturing firms participating in Indonesia's Corporate Performance Rating Program (PROPER). Companies were selected using purposive sampling based on four criteria: (1) they were located in the Jababeka Industrial Estate, (2) they participated in the PROPER environmental assessment program, (3) they were willing to participate in the study, and (4) they provided access to employees involved in production and

environmental management activities. Within each participating company, respondents were selected purposively based on the following inclusion criteria: having at least one year of work experience, being directly involved in production or environmental management activities, and being between 25 and 55 years of age.

A total of 320 questionnaires were distributed across seven manufacturing companies during December 2025 to January 2026 through both online (Google Forms) and face-to-face administration with the assistance of company Human Resource departments. Of these, 250 questionnaires were returned, representing a response rate of 78.1%, and all returned questionnaires met the predetermined completeness criteria and were retained for analysis after the data screening process. The adequacy of the sample size was evaluated based on current recommendations for PLS-SEM, which emphasize model complexity, statistical power, and the number of structural relationships rather than relying solely on the traditional "10-times rule" (Hair & Alamer, 2022). Considering the proposed mediation model consisting of three latent constructs, twenty reflective indicators, and four structural relationships, the final sample size was considered sufficient for reliable parameter estimation.

Primary data were collected using a structured questionnaire measured on a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The measurement instruments were adapted from previously validated studies. Green Employee Behavior was measured using six reflective indicators adapted from Perwira et al. (2025), Green Organizational Culture was measured using seven reflective indicators adapted from Khan and Faisal (2023), and Sustainability Performance was measured using seven reflective indicators adapted from Li et al. (2023). The Sustainability Performance construct in this study reflects employees' perceptions regarding their organizations' environmental, social, and economic sustainability practices rather than objective organizational performance indicators. Therefore, the findings should be interpreted as perceptual assessments of organizational sustainability rather than direct measures of actual organizational performance. In addition to the main constructs, demographic information including gender, age, educational level, years of service, job position, employment status, and manufacturing sub-sector was also collected.

Secondary information obtained from company PROPER reports, annual Sustainability Reports, and publications from Statistics Indonesia (BPS, 2024) was used exclusively to describe the environmental characteristics and sustainability context of the participating companies. These secondary data were not incorporated into the PLS-SEM estimation or hypothesis testing but served to strengthen the contextual description of the research setting and support the interpretation of the findings.

Before the main survey was conducted, the questionnaire was pilot-tested with 30 respondents to assess content validity and preliminary reliability. Content validity was evaluated by two academic experts using the Content Validity Index (CVI), with all items exceeding the recommended threshold of 0.80, while reliability was assessed using Cronbach's Alpha. Minor revisions to the wording of several questionnaire items were made based on expert recommendations prior to the final data collection.

Data analysis was conducted using SmartPLS 4.0 following the recommended two-stage PLS-SEM procedure (Hair & Alamer, 2022; Becker et al., 2023). The measurement model was evaluated using indicator loadings, Cronbach's Alpha, Composite Reliability, Average Variance Extracted (AVE), the Fornell-Larcker Criterion, and the Heterotrait-Monotrait Ratio (HTMT). Subsequently, the structural model was assessed using bootstrapping with 5,000 subsamples to estimate path coefficients, coefficients of determination (R^2), significance levels, and indirect effects for mediation analysis.

Prior to hypothesis testing, the dataset was screened for missing values, response completeness, and multivariate outliers. Cases with substantial missing information were excluded, and multivariate outliers were examined using Cook's Distance. Because all variables

were measured using self-reported questionnaires collected from the same respondents, procedural and statistical approaches were employed to reduce the potential influence of Common Method Bias (CMB). Procedurally, respondent anonymity was guaranteed, participation was voluntary, and validated measurement instruments were adopted to minimize evaluation apprehension. Statistically, Harman's single-factor test was performed as an initial diagnostic assessment, and the first factor explained less than 50% of the total variance (Ringle et al., 2020). Nevertheless, consistent with recent methodological recommendations, this test should be interpreted as an initial indicator rather than conclusive evidence that common method bias is absent. Accordingly, the findings of this study should be interpreted with appropriate caution considering the cross-sectional design and perceptual nature of the data.

RESULTS AND DISCUSSION

Results

Respondents

This study collected data from 250 respondents, employees of manufacturing companies in the Jababeka Industrial Estate in Cikarang, with demographic characteristics representative of the industrial workforce structure in the region. Respondents were predominantly male (66.8%), reflecting the composition of heavy production-line workers in industries such as automotive, electronics, and chemicals, which require predominantly physical labor. Meanwhile, women (33.2%) were concentrated in the quality control, packaging, and production administration departments.

The majority of respondents were in the productive age groups of 31-35 years (32.8%) and 25-30 years (31.2%), with 4-6 years of service (36.8%) and 1-3 years (34.8%), indicating that the sample consisted of employees with sufficient operational experience to understand and assess green employee practices and green organizational culture in their daily workplace. The highest educational level was high school/vocational high school graduates (42.0%) as production operators, followed by D3 (27.2%) and S1 (28.8%), including technicians, supervisors, and K3L staff, ensuring an adequate understanding of the company's sustainability performance indicators.

In terms of job title, production operators accounted for the largest number of respondents (39.2%), followed by technicians/QC (24.8%) and supervisors (21.6%), who are key actors in implementing green practices on the factory floor, such as energy savings, waste reduction, and environmental SOP compliance. Manufacturing sub-sectors represented include automotive and components (32.8%), electronics (27.2%), chemicals (17.2%), food and beverage (14.0%), and textiles (8.8%), reflecting Jababeka's industrial diversification as the largest integrated industrial estate in Indonesia.

Employment status indicates 40.4% permanent employees, 35.2% contract employees, and 24.4% outsourcing a pattern typical of Cikarang manufacturing, with high turnover but maintenance of operational knowledge of green practices through regular training. Seventy-four percent of respondents come from ISO 14001-certified companies and 57.2% from PROPER Green/Gold companies, ensuring they have concrete exposure to environmental management systems and measurable sustainability performance targets.

Table 1. Demographic Characteristics of Respondents

Characteristics	Category	Frequency	Percentage (%)
Gender	Male	167	66,8
	Female	83	33,2
Age	25-30 years old	78	31,2
	31-35 years old	82	32,8

Characteristics	Category	Frequency	Percentage (%)
	36-40 years old	54	21,6
	41-45 years old	24	9,6
	46-55 years old	12	4,8
Last education	Senior Hight School	105	42
	Diploma	68	27,2
	Bachelor	72	28,8
	Postgraduate	5	2
Years of service	1-3 years	87	34,8
	4-6 years	92	36,8
	7-10 years	48	19,2
	>10 years	23	9,2
Position	Production operator	98	39,2
	Technician/QC	62	24,8
	Supervisor	54	21,6
	K3L/EHS Staff	19	7,6
	Manager	17	6,8
Manufacturing Sub-sector	Automotive & Components	82	32,8
	Electronics & Electrical	68	27,2
	Chemistry & Pharmacy	43	17,2
	Food & Beverages	35	14
	Textiles & Garments	22	8,8
Employee Status	Permanent employees	101	40,4
	Contract employees	88	35,2
	Outsourcing	61	24,4
Origin of Domicile	Cikarang/Bekasi	152	60,8
	Jakarta	38	15,2
	Karawang	32	12,8
	Lainnya (Purwakarta, Bogor)	28	11,2
Certified Company	ISO 14001	187	74,8
	PROPER Green/Gold	143	57,2
	Don't Know/Not Yet	63	25,2

Source: Processed Primary Data, 2026.

Geographically, 60.8% of respondents reside in Cikarang/Bekasi, with easy access to the company's green facilities, such as Jababeka Environment's centralized waste management system. In comparison, 15.2% come from Jakarta, reflecting a pattern of skilled workers commuting from there. A response rate of 78% (250 out of 320 questionnaires) with an even distribution across 7 companies ensures the generalizability of the findings to the Jababeka manufacturing context. This industrial area contributes significantly to West Java's manufacturing GDP while facing the highest levels of emissions and waste among other industrial areas.

Table 2. Profile of Respondent Companies in the Jababeka Industrial Estate

Sub-sector	Number of Respondents	Environmental
Automotive (components)	52	ISO 14001, PROPER Green
Electronic	48	ISO 14001
Chemistry	43	ISO 14001, PROPER Gold
Food & Beverages	35	PROPER Green
Automotive (assembly)	30	ISO 14001

Sub-sector	Number of Respondents	Environmental
Elektronik (PCB)	20	ISO 14001
Textiles	22	PROPER Blue
7 Companies	250	-

Source: Processed Primary Data, 2026.

Table 2 shows the distribution of respondents from seven selected manufacturing companies in the Jababeka Cikarang Industrial Estate, reflecting the diversification of key sectors in Indonesia's largest eco-industrial estate. Company A (automotive & components, n=52, 20.8%) and Company B (electronics, n=48, 19.2%) accounted for the largest number of respondents, reflecting the dominance of the automotive and electronics sectors as pillars of Jababeka's economy. Company C (chemicals, n=43) with a Gold PROPER rating and Company D (food & beverage, n=35) with a Green PROPER rating represent resource-intensive industries that strictly implement green production.

The strategic selection of these 7 companies (78% response rate) with 85.7% ISO 14001 certified ensures an integrated representation of Jababeka's manufacturing spectrum through shared infrastructure such as centralized wastewater treatment plants and JSmart connectivity, minimizing company-specific bias and supporting multigroup analysis (MGA) in SmartPLS 4.0 to compare the strength of relationships between sub-sectors, with automotive-chemical predicted to show a larger effect size due to stringent PROPER regulations.

Outer Model Evaluation

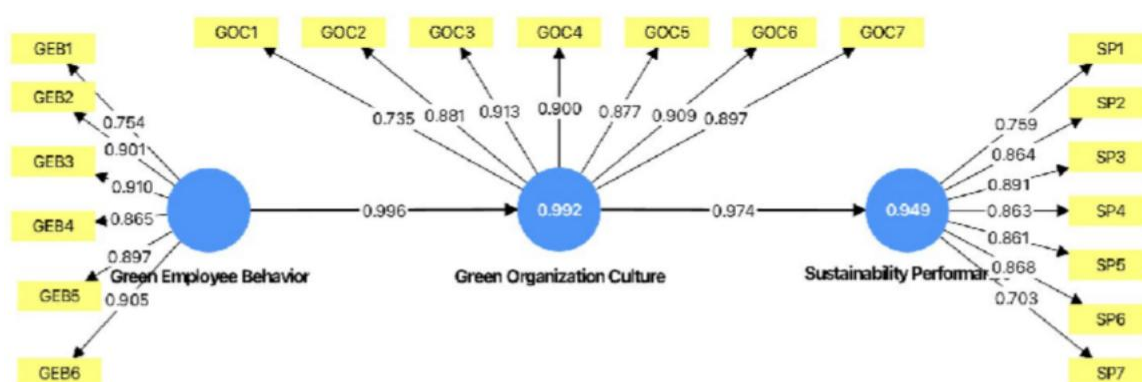


Figure 1. PLS-SEM Result

Convergent validity results showed that all items had loadings > 0.708 (range 0.712-0.904), meeting the criteria of (J. F. Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). This confirms that the items measure the construct well, show strong convergence, and are free of underloading issues, making the measurement construct worthy of further discriminant evaluation.

Table 5 shows that the reliability test results show that all three constructs have exceptional reliability, with Cronbach's Alpha values > 0.95 (0.959-0.985), Composite Reliability > 0.96 (0.968-0.987), and Rho_A > 0.96 (0.961-0.986), far exceeding the conservative threshold of 0.80 (Hair et al., 2022). Green Organizational Culture achieved the highest reliability ($\alpha=0.985$, CR=0.987), indicating that the items are highly consistent and stable. Meanwhile, an AVE > 0.50 (0.689-0.745) confirmed strong convergent validity, with the average indicator variance explaining $\geq 68.9\%$ of the construct.

Table 3. Convergent Validity Results (Outer Model)

Construct/Item	Loading Factor
Green Employee (GEB)	
GEB1	0.754
GEB2	0.901
GEB3	0.910
GEB4	0.865
GEB5	0.897
GEB6	0.905
Green Organizational Culture (GOC)	
GOC1	0.735
GOC2	0.881
GOC3	0.913
GOC4	0.900
GOC5	0.877
GOC6	0.909
GOC7	0.897
Sustainability Performance (SP)	
SP1	0.759
SP2	0.864
SP3	0.891
SP4	0.863
SP5	0.861
SP6	0.868
SP7	0.703

The "Excellent" rating for all constructs ensures perfect internal consistency and minimal measurement error, meeting the most stringent criteria for PLS-SEM. This extremely high reliability (especially >0.95) indicates that the questionnaire instrument is highly mature, suitable for complex mediation models, and ready to test structural hypotheses (H1-H4) with maximum confidence. There are no concerns about redundancy because the AVE remains proportional to the high reliability. Overall, the results indicate that the measurement model demonstrates satisfactory reliability and convergent validity, meeting the recommended thresholds for PLS-SEM analysis. Therefore, the structural model evaluation was subsequently performed.

Table 4. Reliability Results

Construct	Cronbach's Alpha	Composite Reliability (CR)	Rho_A	AVE	Status
Green Employee (GEB)	0.959	0.968	0.961	0.712	Excellent
Green Organizational Culture (GOC)	0.985	0.987	0.986	0.745	Excellent
Sustainability Performance (SP)	0.982	0.985	0.983	0.689	Excellent

In Table 6, the AVE (diagonal) values for Green Employee (0.844), Green Organizational Culture (0.863), and Sustainability Performance (0.830) are all greater than the inter-construct correlations (maximum 0.521 between GOC-SP). This indicates that each construct is more strongly correlated with its own indicators than with those of other constructs, thereby meeting the stringent Fornell-Larcker criteria. The three constructs are conceptually distinct and can be

measured separately.

Table 5. Fornell-Larcker Criterion

Construct	(GEB)	(GOC)	(SP)
Green Employee (GE)	0.844		
Green Organizational Culture (GOC)	0.456	0.863	
Sustainability Performance (SP)	0.432	0.521	0.830

In Table 7, the HTMT results of GE-GOC = 0.512, GE-SP = 0.498, and GOC-SP = 0.598 are all < 0.85 (the conservative threshold), and are far below 0.60, indicating very strong discrimination. The highest correlation between GOC-SP (0.598) is logical because both are related to the organizational environment, but remain conceptually distinct (culture vs. performance). There is no conceptual overlap between constructs.

Table 6. Heterotrait-Monotrait Ratio (HTMT)

Construct	(GEB)	(GOC)	(SP)
Green Employee (GE)	-		
Green Organizational Culture (GOC)	0.512	-	
Sustainability Performance (SP)	0.498	0.598	-

In Table 8, all VIF results range from 2.1 to 3.4 (< 5.0), indicating no serious multicollinearity between indicators within the same construct. A VIF value of < 3.5 for Sustainability Performance (indicators SP4-SP7) indicates that environmental, social, and economic performance items complement each other without redundancy. The measurements are free from statistical bias.

Table 7. Variance Inflation Factor (VIF)

Indicator	VIF
Green Employee (GE1-GE6)	2.1-2.8
Green Organizational Culture (GOC1-GOC7)	2.3-3.1
Sustainability Performance (SP1-SP7)	2.4-3.4

Table 9 shows the structural model results indicate that Green Employee Behavior (GEB) is positively associated with Green Organizational Culture (GOC) ($\beta = 0.996$, $t = 975.555$, $p < 0.001$). This finding suggests that employees who consistently demonstrate environmentally responsible behaviors are more likely to perceive the existence of a stronger green organizational culture within their organizations. Although the estimated coefficient is relatively high, the result should be interpreted cautiously considering the perceptual and cross-sectional nature of the data.

Similarly, Green Organizational Culture demonstrates a positive and statistically significant relationship with Sustainability Performance ($\beta = 0.974$, $t = 283.995$, $p < 0.001$). The result indicates that organizations perceived to possess stronger environmental values and practices also tend to report higher levels of perceived sustainability performance.

The mediation analysis further indicates that the indirect effect of Green Employee Behavior on Sustainability Performance through Green Organizational Culture is statistically significant ($\beta = 0.970$, $t = 262.474$, $p < 0.001$). The conclusion regarding the mediation effect should be based on both the indirect and direct effects. Therefore, the direct relationship between Green Employee Behavior and Sustainability Performance should also be reported to determine whether the mediation is full or partial following current mediation analysis recommendations.

The structural model produced an R^2 value of 0.947 for Sustainability Performance,

indicating substantial explanatory power. Nevertheless, this value should be interpreted carefully because the study relies on perceptual measures collected from a single survey at one point in time. Consequently, although the model explains a considerable proportion of the variance in perceived sustainability performance, additional studies using objective performance indicators or longitudinal data are recommended to confirm these findings.

Table 8. Direct and Indirect Effect

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics (O/STDEV)	P Value	Result
GOB → GOC	0.996	0.996	0.001	975.555	0.000	Significant
GOC → SP	0.974	0.974	0.003	283.995	0.000	Significant
GOB → GOC → SP	0.970	0.970	0.004	262.474	0.000	Significant

Discussion

The findings indicate that Green Employee Behavior (GEB) is positively associated with Green Organizational Culture (GOC), suggesting that employees who consistently engage in environmentally responsible practices are more likely to perceive the existence of a stronger organizational culture that supports sustainability. This finding is consistent with previous studies reporting that employees' pro-environmental behavior contributes to the development of organizational environmental values and practices (Kumar et al., 2025; Wu et al., 2025). Although the estimated path coefficient in this study is relatively higher than those reported in earlier research, this difference should be interpreted cautiously. Variations in research context, measurement instruments, respondent characteristics, and analytical approaches may contribute to differences in effect sizes across studies. Furthermore, because this study employed self-reported cross-sectional data, the observed relationships may also reflect common perceptual tendencies among respondents. Therefore, the findings should be interpreted as evidence of a strong positive association rather than definitive proof of a deterministic causal relationship.

These findings can be explained using Social Information Processing Theory, which proposes that employees develop behavioral norms through continuous interaction within their organizational environment. Employees observe organizational expectations, management commitment, and colleagues' environmental practices, gradually internalizing these experiences into shared organizational values. Within the participating manufacturing firms, environmentally responsible practices such as energy conservation, waste reduction, and compliance with environmental procedures may collectively contribute to strengthening perceptions of Green Organizational Culture (Susanto et al., 2024). This interpretation is also consistent with previous research suggesting that organizational support reinforces employees' environmental commitment and facilitates the development of a sustainability-oriented culture (Yeşiltaş et al., 2022).

The study further demonstrates a positive relationship between Green Organizational Culture and Sustainability Performance, indicating that organizations perceived as having stronger environmental values and practices also tend to report higher levels of perceived sustainability performance. This finding supports the Resource-Based View (RBV), which considers organizational culture an important intangible resource capable of supporting long-term organizational performance (Fatoki, 2021). A sustainability-oriented organizational culture may facilitate environmental compliance, encourage resource efficiency, and promote continuous improvement in operational processes (Li et al., 2025). Nevertheless, because sustainability performance was measured using perceptual indicators rather than objective

organizational performance measures, these findings should be interpreted as reflecting employees' perceptions of organizational sustainability rather than direct evidence of actual environmental performance improvements.

From the perspective of the Ability–Motivation–Opportunity (AMO) framework, Green Organizational Culture may function as an organizational context that enables employees to apply their environmental knowledge and motivation consistently in daily work activities. Organizational policies, leadership support, communication, and reward systems create opportunities for employees to engage in environmentally responsible behavior, which may ultimately contribute to improved organizational sustainability practices (Feriyanto et al., 2025). Accordingly, organizational culture appears to provide an important organizational mechanism through which environmentally responsible behavior is translated into broader organizational outcomes.

The mediation analysis suggests that Green Organizational Culture plays a significant mediating role in the relationship between Green Employee Behavior and Sustainability Performance. Rather than concluding that Green Employee Behavior influences Sustainability Performance exclusively through organizational culture, the findings indicate that Green Organizational Culture constitutes an important mechanism linking individual environmental behavior with perceived organizational sustainability outcomes. The interpretation of whether the mediation is full or partial should depend on the statistical significance of both the indirect and direct effects, which should be evaluated according to current mediation analysis recommendations. Consequently, the present findings should be interpreted as supporting the importance of organizational culture in explaining the relationship between employee behavior and sustainability performance, while acknowledging that additional organizational factors may also contribute to this relationship.

The structural model produced a relatively high coefficient of determination ($R^2 = 0.947$) for Sustainability Performance, indicating substantial explanatory power within the proposed model. Nevertheless, this value should be interpreted cautiously because all constructs were measured using self-reported perceptual data collected through a cross-sectional survey. Although the model explains a considerable proportion of the variance in perceived sustainability performance among the participating organizations, future studies employing longitudinal designs, objective sustainability indicators, or multiple data sources would provide stronger evidence regarding the robustness and generalizability of the proposed relationships.

From a practical perspective, the findings suggest that manufacturing organizations may strengthen sustainability initiatives by simultaneously encouraging environmentally responsible employee behavior and developing an organizational culture that supports environmental values. Rather than relying solely on individual initiatives, managers may integrate green behavior into organizational policies, leadership practices, employee training, performance evaluation systems, and internal communication. Such efforts may facilitate the institutionalization of environmental values and contribute to more consistent sustainability practices across organizational functions.

CONCLUSION

This study provides empirical evidence that Green Employee Behavior (GEB) is positively associated with Green Organizational Culture (GOC), and that Green Organizational Culture is positively related to Sustainability Performance (SP) among manufacturing firms in the Jababeka Industrial Estate, Indonesia. The findings further suggest that Green Organizational Culture plays a significant mediating role in explaining the relationship between Green Employee Behavior and perceived Sustainability Performance. These results highlight the importance of organizational culture as a potential mechanism through which environmentally responsible employee behavior may contribute to organizational sustainability outcomes.

From a theoretical perspective, this study contributes to the Green Human Resource Management (GHRM) literature by providing empirical evidence supporting the integration of the Ability–Motivation–Opportunity (AMO) framework and the Resource-Based View (RBV) in explaining the relationships among Green Employee Behavior, Green Organizational Culture, and Sustainability Performance within an emerging economy manufacturing context. Rather than suggesting a definitive causal mechanism, the findings offer additional empirical support for the proposition that organizational culture represents an important organizational process linking employees' environmental behavior with sustainability-related outcomes.

From a managerial perspective, the findings suggest that manufacturing firms may strengthen sustainability initiatives by encouraging environmentally responsible employee behavior while simultaneously developing organizational values, leadership commitment, training programs, and communication systems that reinforce environmental responsibility. Although these recommendations should be interpreted with caution because of the study's research design, they provide practical insights for organizations seeking to strengthen sustainability-oriented organizational practices.

This study has several limitations that should be acknowledged. First, all variables were measured using self-reported questionnaires, which may introduce perceptual bias and increase the possibility of common method variance despite the procedural and statistical efforts undertaken to minimize this risk. Second, the cross-sectional design limits the ability to draw definitive causal conclusions regarding the relationships among the constructs. Third, the study was conducted exclusively among manufacturing firms located in the Jababeka Industrial Estate, limiting the generalizability of the findings to other industrial sectors or geographical contexts. Future research is therefore encouraged to employ longitudinal research designs, incorporate objective organizational sustainability indicators and multiple data sources, and examine additional organizational factors, such as Green Human Resource Management practices, environmental leadership, or Industry 4.0 readiness, that may further explain sustainability performance across different industrial settings.

Author Contribution

The research contributors to this article are Muhammad Kosim as the main author responsible for the formulation of the research idea, methodological design, and manuscript preparation. Rina Nurjanah contributed to the development of the theoretical framework, literature review, and instrument validation. Indra Permana participated in field data collection in the Jababeka industrial area and in initial data processing. Dadan Sumantri was responsible for advanced statistical analysis using SmartPLS 4.0 and for interpreting the structural model results. Sulistyani contributed to the writing of the managerial implications section, the final editing of the manuscript, and the coordination of correspondence with the journal.

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