

## The Influence of Pro-Environmental Behavior and Green Organizational Culture on Sustainable Performance: Evidence from Cafés in Ternate City

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### ABSTRACT

**Purpose** - This study examines the effect of pro-environmental behavior and green organizational culture on the sustainable performance of cafés in Ternate City. **Design/methodology /approach** - The study employed a quantitative explanatory design. Data were collected through structured questionnaires distributed to 29 operational employees of cafés that had implemented environmentally oriented practices. The data were analyzed using validity and reliability testing, classical assumption testing, and multiple linear regression in SPSS. **Findings** - The regression results indicate that pro-environmental behavior has a positive but statistically non-significant effect on sustainable performance ( $B = 0.170$ ;  $p = 0.238$ ). In contrast, green organizational culture has a positive and significant effect on sustainable performance ( $B = 1.063$ ;  $p = 0.001$ ). The simultaneous test confirms that pro-environmental behavior and green organizational culture jointly influence sustainable performance ( $F = 21.541$ ;  $p = 0.001$ ), with an estimated coefficient of determination of 0.624. **Originality/value** - The study extends sustainability management research by focusing on small service businesses in an island-city context, where resource efficiency, waste reduction, and environmentally responsible work routines are directly relevant to business continuity. The findings suggest that individual green behavior may not be sufficient unless it is embedded in a supportive green organizational culture.

**Keywords:** Pro-environmental behavior; green organizational culture; sustainable performance; cafés; Ternate City; small service businesses

DOI: <https://doi.org/10.56442/ijble.v7i1.1493>

### INTRODUCTION

Environmental sustainability has become a central issue in contemporary organizational management. Firms are increasingly expected to create economic value while reducing ecological harm and contributing to social well-being. This broader view of performance is consistent with the triple bottom line perspective, which argues that organizational success should be evaluated through economic, environmental, and social outcomes rather than financial indicators alone (Elkington, 1997; Elshaer et al., 2023). In this context, sustainable performance refers to an organization's ability to maintain long-term competitiveness while managing resources responsibly, reducing waste, and contributing to the welfare of stakeholders.

The café industry is especially relevant for sustainability research because cafés interact directly with environmental resources through daily energy use, water consumption, raw material processing, packaging, and waste generation. In growing urban and island-city economies such as Ternate City, cafés may contribute to local

economic activity while also creating environmental pressures. Therefore, café owners and managers need organizational practices that align routine service operations with sustainability objectives.

One important antecedent of sustainable performance is employee pro-environmental behavior. Pro-environmental behavior refers to workplace actions intended to reduce negative environmental impact, including conserving energy, minimizing waste, recycling materials, and complying with environmental procedures (Robertson & Barling, 2013; Norton et al., 2015). Such behavior is often voluntary and depends on employee awareness, motivation, and perceived organizational support. However, individual behavior does not automatically translate into measurable organizational performance if it is not supported by systems, routines, and managerial commitment (Dumont et al., 2017; Kim et al., 2017).

A second important antecedent is green organizational culture. Green organizational culture reflects shared values, norms, assumptions, and work practices that encourage environmental responsibility across the organization (Harris & Crane, 2002; Zientara & Zamojska, 2018). A strong green culture can institutionalize environmental values into daily operations, strengthen employee commitment, and align individual behavior with organizational sustainability goals. For small service businesses, culture may be particularly important because formal environmental management systems are often limited, while employee routines and managerial examples strongly shape practice.

Although previous studies have examined environmental behavior and green management in manufacturing, tourism, and hospitality settings, empirical evidence from small café businesses in developing island-city contexts remains limited. This creates a research gap because cafés operate with different resource constraints, workforce structures, and customer interactions compared with large hotels or manufacturing firms. Accordingly, this study analyzes the partial and simultaneous effects of pro-environmental behavior and green organizational culture on sustainable performance among cafés in Ternate City. The findings are expected to contribute to sustainability management literature and provide practical recommendations for café managers seeking to improve economic, environmental, and social performance.

## **Literature Review and Hypotheses Development**

### **1. Theoretical Foundation**

This study is grounded in the triple bottom line and organizational culture perspectives. The triple bottom line frames sustainable performance as the integration of economic, environmental, and social value creation (Elkington, 1997). In addition, organizational culture theory suggests that shared values and norms shape employee behavior and influence organizational outcomes. Within environmental management, green culture provides a social and normative context that encourages employees to transform environmental awareness into consistent work practices (Harris & Crane, 2002; Zientara & Zamojska, 2018).

The link between employee behavior and sustainability performance is also consistent with research on employee green behavior. Norton et al. (2015) distinguish between required green behavior, which is formally prescribed by the organization, and

voluntary green behavior, which employees perform beyond formal requirements. In cafés, both forms may appear through energy conservation, waste sorting, reduced plastic usage, and efficient resource handling. However, these behaviors are more likely to influence performance when reinforced by green policies, leadership, peer norms, and organizational routines.

## **2. Sustainable Performance**

Sustainable performance is the capacity of an organization to achieve long-term outcomes by balancing financial viability, environmental stewardship, and social responsibility. In service businesses, sustainable performance may include cost efficiency, customer trust, resource efficiency, reduced waste, employee welfare, and positive community contribution. Prior research in small and medium-sized hospitality businesses shows that green management practices can improve environmental, economic, and social performance, particularly when employees are involved in green initiatives (Elshaer et al., 2023).

## **3. Pro-Environmental Behavior**

Pro-environmental behavior refers to employee actions that intentionally minimize environmental damage or support environmental sustainability at work. Examples include switching off unused electrical equipment, reducing excessive water use, separating waste, using materials efficiently, and supporting organizational environmental initiatives (Robertson & Barling, 2013; Norton et al., 2015). In the workplace, such behavior may be shaped by leadership influence, coworker advocacy, psychological green climate, and individual green values (Dumont et al., 2017; Kim et al., 2017).

From a performance perspective, pro-environmental behavior can support operational efficiency and environmental outcomes by reducing waste and unnecessary resource consumption. Nevertheless, its effect may be weak if employee actions remain informal, inconsistent, or disconnected from organizational procedures. This is particularly relevant in small cafés, where environmental practices may depend heavily on daily habits rather than formal sustainability systems.

## **4. Green Organizational Culture**

Green organizational culture is a set of shared assumptions, values, and norms that support environmental responsibility in organizational life. It is reflected in management commitment, environmental communication, employee participation, green work routines, and collective awareness of sustainability issues. Harris and Crane (2002) argue that the greening of organizational culture depends on the depth, degree, and diffusion of environmental values. Similarly, research in hospitality shows that green organizational climate can encourage employee pro-environmental behavior and strengthen environmental citizenship behavior (Zientara & Zamojska, 2018).

In cafés, green organizational culture may be observed when managers consistently promote waste reduction, encourage efficient resource use, provide reusable or environmentally friendly materials, and make sustainability part of daily service routines. Such a culture can transform individual environmental concern into stable organizational practice, thereby supporting sustainable performance.

## 5. Hypotheses Development

Employees who engage in pro-environmental behavior can reduce operational waste, improve resource efficiency, and support the achievement of sustainability goals. Previous studies suggest that workplace green behavior is associated with environmental outcomes and may strengthen organizational sustainability initiatives (Robertson & Barling, 2013; Norton et al., 2015; Elshaer et al., 2023). Therefore, the first hypothesis is proposed as follows:

**H1:** Pro-environmental behavior has a positive and significant effect on sustainable performance.

Green organizational culture provides a collective context that embeds environmental responsibility into organizational values and routines. When environmental values are shared and supported by management, employees are more likely to participate in green practices and contribute to sustainable outcomes (Harris & Crane, 2002; Zientara & Zamojska, 2018). Therefore, the second hypothesis is proposed as follows:

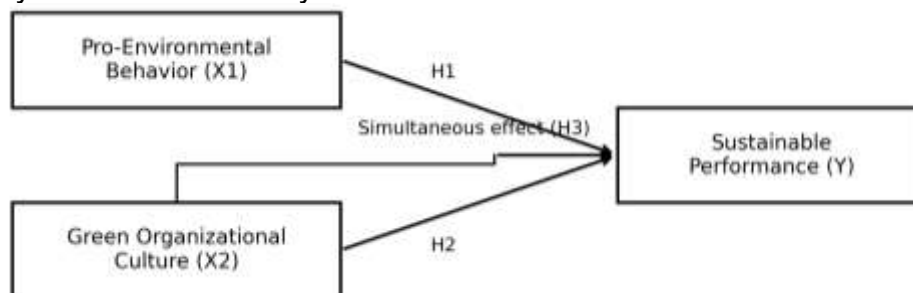
**H2:** Green organizational culture has a positive and significant effect on sustainable performance.

Sustainable performance is more likely to occur when individual behavior and organizational culture operate together. Pro-environmental behavior contributes through daily actions, while green organizational culture provides the norms, support, and consistency required to convert those actions into performance outcomes. Therefore, the third hypothesis is proposed as follows:

**H3:** Pro-environmental behavior and green organizational culture simultaneously have a positive and significant effect on sustainable performance.

## 6. Conceptual Framework

The conceptual framework positions pro-environmental behavior and green organizational culture as independent variables that influence sustainable performance both partially and simultaneously.



**Figure 1. Conceptual framework of the study**

## METHOD

This study employed a quantitative explanatory research design to test the influence of pro-environmental behavior and green organizational culture on sustainable performance. The research setting was cafés in Ternate City that had adopted environmentally oriented practices in their operations.

The population consisted of operational employees working in cafés that implement environmentally friendly practices. A total of 29 employees were selected using purposive sampling. The inclusion criteria were: (1) active operational employees, (2) employees

who had worked for at least three months, and (3) employees who were willing to participate voluntarily. Because the sample is relatively small, the statistical findings should be interpreted cautiously and viewed as contextual evidence rather than broad generalization.

Data were collected using a structured questionnaire distributed through Google Forms. All constructs were measured using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Table 1 summarizes the operational definitions of the study variables.

**Table 1. Operational definitions of the variables**

Variable	Code	Operational definition	Indicative dimensions
Pro-environmental behavior	X1	Employee actions intended to reduce negative environmental impact in daily café operations.	Energy conservation; efficient water/material use; waste reduction; recycling; compliance with environmental procedures.
Green organizational culture	X2	Shared organizational values, norms, and routines that support environmental responsibility.	Management support; green values; employee participation; environmentally friendly work norms; sustainability communication.
Sustainable performance	Y	The café's ability to balance economic, environmental, and social outcomes over time.	Resource efficiency; cost efficiency; waste reduction; social contribution; long-term business continuity.

Questionnaires were distributed online through Google Forms. Respondents participated voluntarily, and the study did not report personal identifiers. Participation in the survey indicated consent to use the responses for academic analysis. The final manuscript should include additional institutional ethics information if required by the target journal.

The data were analyzed using SPSS. The analysis included instrument validity testing, reliability testing, classical assumption testing, and multiple linear regression. Classical assumption tests were used to evaluate whether the regression model met the assumptions required for linear regression analysis, including normality, multicollinearity, and heteroscedasticity. Hypotheses were tested at a significance level of 0.05. Because the analysis is based on cross-sectional self-reported questionnaire data, the possibility of common method bias should be acknowledged and minimized in future research through procedural and statistical remedies (Podsakoff et al., 2003).

The regression model used in this study is expressed as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

where Y denotes sustainable performance, X1 denotes pro-environmental behavior, X2 denotes green organizational culture,  $\alpha$  denotes the constant,  $\beta_1$  and  $\beta_2$  denote regression coefficients, and  $\varepsilon$  denotes the error term.

## RESULTS AND DISCUSSION

### 1. Multiple Linear Regression Results

The multiple linear regression results are presented in Table 2. The estimated regression equation is:

$$\text{Sustainable Performance} = -4.472 + 0.170(\text{Pro-Environmental Behavior}) + 1.063(\text{Green Organizational Culture})$$

**Table 2. Regression coefficients**

Predictor	B	Std. Error	Beta	t	p-value
Constant	-4.472	6.004	-	-0.745	0.463
Pro-environmental behavior (X1)	0.170	0.141	0.146	1.208	0.238
Green organizational culture (X2)	1.063	0.168	0.765	6.336	0.001

The coefficient for pro-environmental behavior is positive but not statistically significant (B = 0.170; t = 1.208; p = 0.238). Therefore, H1 is rejected. The coefficient for green organizational culture is positive and statistically significant (B = 1.063; t = 6.336; p = 0.001). Therefore, H2 is accepted.

### 2. Model Fit and Simultaneous Effect

The simultaneous test results indicate that pro-environmental behavior and green organizational culture jointly have a significant effect on sustainable performance. Based on the corrected ANOVA components, the model explains approximately 62.4% of the variance in sustainable performance.

**Table 3. Model fit and simultaneous test**

Model statistic	Value	Source	df	p-value
R	0.790	Regression	2	0.001
R <sup>2</sup>	0.624	Residual	26	-
Adjusted R <sup>2</sup>	0.595	Total	28	-
F-statistic	21.541	Mean square residual	5.019	-

Note. R<sup>2</sup> was calculated from the reported regression and residual sums of squares: 216.253 / (216.253 + 130.506) = 0.624. The source manuscript reported total df and total sum of squares inconsistently; the values above follow n = 29 and residual df = 26.

The F-statistic is 21.541 with a significance value of 0.001, which is lower than 0.05. Therefore, H3 is accepted. This indicates that pro-environmental behavior and green organizational culture simultaneously contribute to sustainable performance among cafés in Ternate City.

### 3. Hypothesis Testing Summary

**Table 4. Hypothesis testing summary**

Hypothesis	Relationship	Result	Decision
H1	Pro-environmental behavior -> sustainable performance	Positive but not significant (p = 0.238)	Rejected
H2	Green organizational culture -> sustainable performance	Positive and significant (p = 0.001)	Accepted
H3	Pro-environmental behavior and green organizational culture -> sustainable performance	Simultaneously significant (p = 0.001)	Accepted

#### Discussion

##### 1. Pro-Environmental Behavior and Sustainable Performance

The results show that pro-environmental behavior has a positive but non-significant effect on sustainable performance. This means that employee actions such as saving energy, reducing waste, and recycling have not yet produced a statistically measurable improvement in café sustainability performance. This finding does not imply that pro-environmental behavior is unimportant. Rather, it suggests that individual environmental actions may remain fragmented when they are not embedded in formal routines, managerial monitoring, green standards, or reward systems.

This interpretation is consistent with employee green behavior literature, which emphasizes that workplace green behavior is shaped by multiple levels of influence, including leadership, coworker norms, organizational policies, and psychological green climate (Norton et al., 2015; Dumont et al., 2017; Kim et al., 2017). In the context of small cafés, employees may be willing to act in environmentally responsible ways, but these actions may not be systematic enough to improve economic, social, and environmental indicators. The small sample size may also reduce statistical power, making it more difficult to detect the individual effect of pro-environmental behavior.

##### 2. Green Organizational Culture and Sustainable Performance

Green organizational culture has a positive and significant effect on sustainable performance. This finding confirms that shared environmental values, managerial support, and sustainability-oriented routines are important determinants of café performance. A strong green culture can make environmental responsibility part of the organization's identity, thereby encouraging employees to behave consistently and aligning operational practices with sustainability objectives.

This result supports prior research showing that green organizational culture or climate strengthens environmental citizenship behavior and supports sustainable outcomes (Harris & Crane, 2002; Zientara & Zamojska, 2018). In cafés, culture may be expressed through practical routines such as minimizing single-use packaging, controlling electricity and water use, sorting waste, and communicating environmental values to employees and customers. Because cafés are small service organizations, cultural consistency can be more influential than formal bureaucracy in shaping daily operations.

### **3. Simultaneous Effect of Pro-Environmental Behavior and Green Organizational Culture**

The simultaneous test confirms that pro-environmental behavior and green organizational culture jointly influence sustainable performance. This finding suggests that sustainability performance is not produced by individual behavior alone but by the interaction between individual actions and organizational context. Pro-environmental behavior contributes through daily operational practices, while green organizational culture provides the shared meaning, managerial support, and routine consistency needed to convert behavior into performance.

The result also clarifies why pro-environmental behavior was not significant as an individual predictor. Employee behavior may become performance-relevant only when reinforced by a supportive organizational culture. This finding is important for café managers because it suggests that sustainability initiatives should not be limited to encouraging employees to “be green.” Instead, managers should build green work systems, establish clear procedures, provide visible leadership support, and make environmental responsibility part of the café's identity.

### **4. Theoretical and Managerial Implications**

The study contributes to sustainability management literature by providing empirical evidence from small café businesses in Ternate City. The findings support the argument that green organizational culture is a strategic organizational resource for sustainable performance. The study also adds nuance to employee green behavior theory by showing that pro-environmental behavior may not independently affect performance when organizational systems and cultural support are not sufficiently strong.

For café owners and managers, the findings indicate that sustainability should be institutionalized through culture and routines. Managers should create clear environmental procedures, communicate sustainability values, provide simple training on waste and resource management, encourage employee participation, and monitor operational practices. Examples include separating organic and non-organic waste, reducing single-use plastics, using energy-efficient equipment, tracking water and electricity use, and involving employees in continuous improvement discussions.

Because green organizational culture has the strongest effect in this study, managers should model environmentally responsible behavior and make sustainability visible in daily operations. Green behavior can be strengthened through informal recognition, peer support, clear job expectations, and customer-facing practices that communicate the café's environmental commitment.

### **7. Limitations and Future Research**

This study has several limitations. First, the sample consisted of 29 employees, which limits statistical power and generalizability. Future research should use larger samples and include cafés from multiple cities or regions. Second, the study used cross-sectional self-reported questionnaire data, which limits causal inference and may be affected by common method bias. Future studies should combine survey data with objective indicators such as energy consumption, waste volume, sales performance, or customer sustainability perception. Third, the study tested direct effects only. Future research may examine mediating or moderating variables such as green leadership,

green training, environmental commitment, psychological green climate, employee engagement, and customer green orientation.

## CONCLUSION

This study examined the influence of pro-environmental behavior and green organizational culture on sustainable performance among cafés in Ternate City. The findings show that pro-environmental behavior has a positive but non-significant effect on sustainable performance, while green organizational culture has a positive and significant effect. The simultaneous test confirms that both variables jointly affect sustainable performance.

The findings indicate that sustainable performance in cafés depends not only on individual employee behavior but also on the organizational culture that supports and reinforces sustainability practices. Therefore, café managers should prioritize the development of a strong green organizational culture while continuing to encourage pro-environmental behavior among employees. Strengthening environmental values, managerial commitment, and sustainability-oriented routines can improve resource efficiency, reduce waste, support social responsibility, and enhance the long-term competitiveness of cafés in Ternate City.

## Declarations

Funding: Funding information was not reported in the source manuscript.

Conflict of interest: The authors should confirm the conflict-of-interest statement according to the target journal requirements.

Ethical statement: Participation was voluntary, and no personal identifiers are reported in this manuscript. Additional institutional ethics approval information should be inserted if required by the target journal.

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