Jurnal Simki Economic, Volume 8 Issue 1, 2025, Pages 258-267
Available online at: https://jiped.org/index.php/JSE
ISSN (Online) 2599-0748

Enhanching Environmental Performance (EP) through Green Organizational Culture (GOC) and Green Transformational Leadership (GTL) with Workplace Pro-Environmental Behaviour (WPEB) as Mediating Variable

Anggit Waskita Nugraha[1*], Siti Sumiati[2]
waskito384@gmail.com[1*], sitisumiati@unisulla.ac.id[2]
[1,2]Program Studi Manajemen
[1,2]Universitas Islam Sultan Agung

Received: 10 04 2025. Revised: 29 04 2025. Accepted: 18 05 2025.

Abstract : The purpose of this study is to investigate the impact of Green Organizational Culture (GOC), Green Transformational Leadership (GTL), and Workplace Pro-Environmental Behaviour (WPEB) on Environmental Performance (EP) at Batik MSMEs in Semarang. A sample of 100 respondents was selected from a population of 331 employees at 117 MSMEs, selected through purposive sampling. The research focused on MSMEs that produce batik from raw materials to finished goods. Data analysis using SPSS version 25 with a significance of 5%. The findings indicate that Environmental Performance (EP) is significantly impacted by Green Organizational Culture (GOC), Green Transformational Leadership (GTL), and Workplace Pro-Environmental Behavior (WPEB). Green Organizational Culture (GOC) and Green Transformational Leadership (GTL) also affect Workplace Pro-Environmental Behaviour (WPEB). The relationship between the two variables and Environmental Performance (EP) was found to be mediated by Workplace Pro-Environmental Behavior (WPEB). The limitation of the study lies in the scope of the population, where out of 117 MSMEs only about 15 actually function as batik producers. Future research is recommended to add other variables Private Life, Environmental Awareness, Green Mindfulness, Pro-Environmental Identity, and expand the scope of objects so that the results are more representative.

Keywords : Green Organizational Culture, Green Transformational Leadership, Workplace Pro-Environmental Behaviour.

INTRODUCTION

Climate change and environmental degradation have heightened global awareness of sustainability. Organizations are increasingly shifting from reactive compliance to proactive adoption of green business practices. Research by (Daily et al., 2012; Govindarajulu & Daily, 2004; Sroufe & Melnyk, 1998) show that companies are increasingly aware of the environmental impacts of their business activities and are working to reduce them. ISO 14001 provides a framework for environmental management, aiming to minimize negative impacts, ensure regulatory compliance, and strengthen corporate commitment to environmental

How to cite: Nugraha, A. W., & Sumiati, S. (2025). Enhanching Environmental Performance (EP) through Green Organizational Culture (GOC) and Green Transformational Leadership (GTL) with Workplace Pro-Environmental Behaviour (WPEB) as Mediating Variable. *Jurnal Simki Economic*, 8 (1), 258-267.

sustainability. The MSME sector significantly contributes to Indonesia's economy, accounting for around 60.5%–61% of GDP and employing 97% of the national workforce. However, MSMEs also contribute to environmental issues, requiring strong leadership, regulatory support, social commitment, and effective human resource management to implement sustainable practices. The batik industry, particularly in Central Java, is economically significant and culturally valuable, employing over 200,000 people. However, batik MSMEs in Semarang face environmental challenges due to the use of hazardous materials and inadequate wastewater treatment, leading to pollution and threatening industry sustainability.

Environmental performance must be improved to achieve environmental sustainability. The factors influencing environmental performance include green organizational culture, green transformational leadership, and workplace pro-environmental behaviour. Previous research by (Chandra et al., 2021) found that green organizational culture positively affects corporate environmental performance. (Zhao & Huang, 2022) demonstrate that GTL has a significant and direct influence on sustainable business practices and EP in organizations. Research by (Nurulfadhilah & Emilisa, 2022) WPEB was found to have a favorable influence on EP in this study. GOC significantly influences to WPEB research by (Ahmad et al., 2023) and Research by (Nawangsari, 2019) found that GTL has a positive and significant effect on WPEB.

The effectiveness of environmental performance can be assessed through the implementation of these three variables. Environmental challenges have driven companies to adopt green organizational culture, which encompasses shared values and norms supporting sustainability (Aggarwal & Agarwala, 2023; Schein, 2010). This culture fosters environmentally responsible behaviour essential for effective sustainability strategies (Galpin et al., 2015). Green transformational leadership plays a key role by integrating environmental goals into organizational vision and motivating employees to engage in pro-environmental actions and green creativity (Bass & Bass Bernard, 1985; Chen & Chang, 2013). Workplace pro-environmental behaviour involves employee actions to reduce environmental impacts, influenced by attitudes, norms, policies, and awareness (Kaiser et al., 2007; Nurulfadhilah & Emilisa, 2022). It includes both task-related and proactive initiatives aimed at sustainability (Steg & Vlek, 2009). Environmental performance measures how well a company minimizes negative environmental impacts, linking environmental management with corporate strategy to achieve competitive advantage and sustainable development (Claver-Cortés et al., 2007; Suratno et al., 2007).

The originality of this study resides in investigating the function of workplace pro-environmental behaviour as a mediating variable in enhancing environmental performance with the following research model.

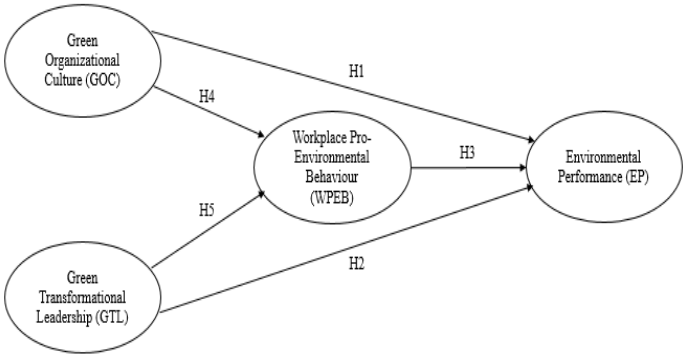

Figure 1. Research model

Hypothesis

H1 : GOC exerts a substantial influence on EP.

H2 : GTL exerts a substantial influence on EP.

H3 : WPEB exerts a substantial influence on EP

H4 : GOC exerts a substantial influence on WPEB.

H5: GTL exerts a substantial influence on WPEB.

RESEARCH METHOD

This research uses an explanatory quantitative approach with a positivistic paradigm, as described by (Sugiyono, 2013). This study employs a purposive sampling technique, with respondents selected based on specific criteria, namely business owners or employees of Batik MSMEs in Semarang City who are actively involved in the batik production process, starting from raw materials to finished products. The study population comprised 331 employees from 117 MSMEs. The required sample size was calculated using Slovin's formula with a 10% margin of error, resulting in 77 participants. To enhance the accuracy and representativeness of the data and reduce potential bias, a total of 100 respondents were selected. Primary data was collected using a structured questionnaire distributed directly (offline) to respondents. The questionnaire uses a Likert scale of 1-5 to measure respondents' perceptions of the variables studied. This study employed primary data collected from Batik MSME entrepreneurs in Semarang City through questionnaires utilizing a 1-5 Likert scale to assess respondents' perceptions of the examined variables. The data were analyzed using SPSS version 25 with a significance level of 5% ($\alpha = 0.05$). The statistical analyses conducted include validity and

reliability tests, classical assumption tests (normality, multicollinearity, and heteroscedasticity), multiple linear regression analysis, t-test, F-test, coefficient of determination (R^2), and the Sobel test to examine the mediating effect.

RESULTS AND DISCUSSION

Respondent demographics. A total of 100 respondents completed the distributed questionnaires. The respondents were categorized according to their demographic characteristics, including gender, age, education level, and work experience.

Table 1. Respondent demographics

	Subcategory	Quantity	%
Gender	Male	21	21%
	Female	79	79%
Range Of Ages (Years)	20-30	13	13%
	31-40	21	21%
	41-50	37	37%
	> 50	29	29%
Education Level	Elementary School	8	8%
	Junior High School	7	7%
	Senior High School	68	68%
	Associate Degree	10	10%
	Bachelor's Degree	7	7%
Length of service (Years)	1-5	22	22%
	6-10	50	50%
	More Than 10	28	28%

In this study, 100 employees of UMKM Batik Semarang participated. Data on gender, age, work experience, and education were collected through a structured questionnaire. Most respondents were female (79%), aged 49-50 years (37%), held a high school diploma (68%), and had 6-10 years of work experience (68%).

That all variable indicators confirm the validity of each indicator.

Table 2. Validity Test Results

Variable	Indicator	r count	Description
Green Organizational Culture	GOC.1	0.901	Valid
	GOC.2	0.895	
	GOC.3	0.863	
	GOC 4	0.841	
Green Transformational Leadership	GTL.1	0.752	Valid
	GTL.2	0.786	
	GTL.3	0.864	
	GTL.4	0.831	
	GTL.5	0.825	
Workplace Pro- Environmental Behaviour	WPEB.1	0.713	Valid

	WPEB.2	0.698	
	WPEB.3	0.801	
	WPEB.4	0.790	
	WPEB.5	0.813	
	WPEB.6	0.713	Valid
	EP.1	0.872	
Environmental Performance	EP.2	0.750	Valid
	EP.3	0.688	
	EP.4	0.728	

Based on Table 2, all variables have calculated R values exceeding the critical value of 1.97, indicating their validity.

Table 3. Reliabilty Test Results

Variable	Cronbach's α	Description
Green Organizational Culture	0.898	Reliable
Green Transformational Leadership	0.869	
Workplace Pro Environmental Behaviour	0.849	
Environmental Performance	0.756	

The results for all variables exceed 0.7, indicating that the instrument meets the required reliability criteria.

Classical Assumption Tests. The normality, multicollinearity, and heteroscedasticity tests are among the traditional assumption tests used in this study.

Table 4. Normality Test Results

Regression Model	Significance	Interpretation
Regression Model 1 (Workplace Pro-Environmental Behaviour)	0.06	Data are normally distributed
Regression Model 2 (Environmental Performance)	0.07	

Based on Table 4, the significance values are greater than 0.05, indicating that all variables are normally distributed.

Table 5. Multicollinearity Test Results

Independent Variable	Tolerance	VIF	Remarks
Model 1			No Multicollinearity
GOC	0.598	1.67	
GTL	0.598	1.67	
Model 2			
GOC	0.540	1.85	
GTL	0.492	2.03	
WPEB	0.540	1.86	

Based on Table 5, multicollinearity is absent, as all variables have VIF values below 10 and tolerance values above 0.10, indicating low correlation among independent variables in the regression model.

Table 6. Heteroscedasticity Test Results

Independent Variable	p-value	Remarks
Model 1		
GOC	0.087	No Heteroscedasticity
GTL	0.186	
Model 2		
GOC	0.540	
GTL	0.807	
WPEB	0.730	

Based on the Glejser test results in Table 6, all variables have significance values greater than 0.05, which indicates that the model in this study does not exhibit heteroscedasticity.

Table 7. Multiple Linear Regression Test Results

Regression	Dependent Variable	Independent Variable	Beta Coefficient	t-value	Sig. (p-value)
Regresion 1	WPEB	GOC	0.309	3.202	0.002
		GTL	0.439	4.522	0.000
Regresion 2	EP	GOC	0.074	12.299	0.000
		GTL	0.031	5.016	0.000
		WPEB	0.933	156.949	0.000

The regression analysis shows that GOC and GTL significantly influence. In turn, workplace pro-environmental behaviour strongly affects environmental performance, alongside the direct but smaller positive effects of green organizational culture and green transformational leadership. These findings highlight the mediating role of pro-environmental behaviour and the importance of green culture and leadership in improving environmental performance among Batik MSMEs.

Table 8. Partial t Test Results

Relationship Between Variables	Sig. t-Test Value	Interpretation
GOC → WPEB	0.002	H1 accepted ($p < 0.05$)
GTL → WPEB	0.000	H2 accepted ($p < 0.05$)
GOC → EP	0.000	H3 accepted ($p < 0.05$)
GTL → EP	0.000	H4 accepted ($p < 0.05$)
WPEB → EP	0.000	H5 accepted ($p < 0.05$)

Based on the t-test results in Table 8, all hypotheses are validated at the 5% level of significance ($p < 0.05$). These findings suggest that, within Batik MSMEs in Semarang City, a

GOC and GTL significantly foster WPEB. In turn, these behaviours make a substantial contribution to enhancing the environmental performance of Batik enterprises.

Table 9. F-Test Results

Model	ANOVA (F-Test)	F-Statistic	Significance (p-value)	Interpretation
Model 1	F-Test Model	41.394	0.000	Significant
Model 2	F-Test Model 2	17,440.31	0.000	Significant

Model 1 shows that GOC and GTL simultaneously have a significant effect on WPEB, indicating that the model is valid and statistically reliable for Batik MSMEs in Semarang City. Model 2 confirms that these two variables, along with WPEB, significantly influence EP, supporting the model's relevance in explaining environmental outcomes in this context.

Table 10. Coefficient of Determination Test (R^2-test) Results

Model	R Squared (R^2)	Adjusted R^2
Model 1	0.460	0.449
Model 2	0.577	0.563

Based on Table 14, the Adjusted R^2 accounts for the number of independent variables, offering a more accurate model fit. In Model 1, an Adjusted R^2 of 0.449 indicates that 44.9% of the variance in workplace pro-environmental behaviour is explained by the model. Model 2 has an Adjusted R^2 of 0.563, meaning 56.3% of the variance in environmental performance is accounted for after adjustment.

In this study, mediation was assessed using the Sobel test formula.

$$\boldsymbol{Z} = \frac{a.b}{\sqrt{b^2.SEa^2 + a^2.SEb^2}}$$

Sobel Test 1: The Effect of GOC on EP Through WPEB.

Table 11. Path Coefficients and Standard Errors

Variable	(β)	(SE)
GOC → WPEB (a)	0.390	0.070
WPEB → EP (b)	0.462	0.053

Table 11 shows a Sobel test Z-value of 4.69 (>2.58) indicating a significant mediating effect of WPEB in the relationship between GOC and EP.

Sobel Test 2: The Effect of GTL on EP Through WPEB.

Table 12. Path Coefficients and Standard Errors

Variable	(β)	(SE)
GTL → WPEB (a)	0.346	0.059
WPEB → EP (b)	0.467	0.055

Based on Table 12, the Sobel test result shows a Z-value of 4.83 (> 2.58). This indicates that the relationship between Green Transformational Leadership and Environmental Performance through Workplace Pro-Environmental Behaviour is significant. In other words, Workplace Pro-Environmental Behaviour serves as a significant mediator in the relationship between Transformational Leadership and Environmental

CONCLUSION

Based on the analysis conducted, the conclusion of this research: 1) The results indicate that Green Organizational Culture significantly influences Environmental Performance among Batik MSMEs in Semarang; 2) The research shows that Green Transformational Leadership significantly influences Environmental Performance among Batik MSMEs in Semarang City); 3) The research demonstrates that Workplace Pro-Environmental Behaviour significantly affects Environmental Performance among Batik MSMEs in Semarang City; 4) The results indicate that Green Organizational Culture significantly influences Workplace Pro-Environmental Behaviour among Batik MSMEs in Semarang City; 5) The results show that Green Transformational Leadership significantly influences Workplace Pro-Environmental Behaviour among Batik MSMEs in Semarang City; 6) The Sobel Test results indicate that Workplace Pro-Environmental Behaviour mediates the association between both Green Transformational Leadership and Green Organizational Culture with Environmental Performance.

REFERENCE

Aggarwal, P., & Agarwala, T. (2023). Relationship of green human resource management with environmental performance: mediating effect of green organizational culture. *Benchmarking*, *30*(7), 2351–2376. https://doi.org/10.1108/BIJ-08-2021-0474

Ahmad, J., Al Mamun, A., Masukujjaman, M., Mohamed Makhbul, Z. K., & Mohd Ali, K. A. (2023). Modeling the workplace pro-environmental behavior through green human resource management and organizational culture: Evidence from an emerging economy. *Heliyon*, *9*(9). https://doi.org/10.1016/j.heliyon.2023.e19134

Bass, B. M., & Bass Bernard, M. (1985). *Leadership and performance beyond expectations*.

Chandra, K., Arafah, W., & Basri, Y. Z. (2021). Analysis of the Effect of Green Organizational Culture on Organizational Performance and Competitive Advantages of Green through Green Innovation in Manufacturing Industries. *Journal of Hunan University Natural*

Sciences). (Vol. 48, Issue 6). https://www.jonuns.com/index.php/journal/article/view/596

Chen, Y. S., & Chang, C. H. (2013). The Determinants of Green Product Development Performance: Green Dynamic Capabilities, Green Transformational Leadership, and Green Creativity. *Journal of Business Ethics*, *116*(1), 107–119. https://doi.org/10.1007/s10551-012-1452-x

Claver-Cortés, E., Molina-Azorín, J. F., Pereira-Moliner, J., & López-Gamero, M. D. (2007). Environmental strategies and their impact on hotel performance. *Journal of Sustainable Tourism*, *15*(6), 663–679. https://doi.org/10.2167/jost640.0

Daily, B. F., Bishop, J. W., & Massoud, J. A. (2012). The role of training and empowerment in environmental performance: A study of the Mexican maquiladora industry. *International Journal of Operations and Production Management*, *32*(5), 631–647. https://doi.org/10.1108/01443571211226524

Galpin, T., Whittington, J. L., & Bell, G. (2015). Is your sustainability strategy sustainable? Creating a culture of sustainability. *Corporate Governance (Bingley)*, *15*(1), 1–17. https://doi.org/10.1108/CG-01-2013-0004

Govindarajulu, N., & Daily, B. F. (2004). Motivating employees for environmental improvement. *Industrial Management and Data Systems*, *104*(3), 364–372. https://doi.org/10.1108/02635570410530775

Kaiser, F. G., Oerke, B., & Bogner, F. X. (2007). Behavior-based environmental attitude: Development of an instrument for adolescents. *Journal of Environmental Psychology*, *27*(3), 242–251. https://doi.org/10.1016/j.jenvp.2007.06.004

Nawangsari, L. C. (2019). Pengaruh Green Transformational Leadership dan Green Training Terhadap Sustainable Corporate Performance Melalui Employee Green Behaviour: Pendekatan Konsep. *Seminar Nasional Peningkatan Mutu Perguruan Tinggi*, 219–226. https://publikasi.mercubuana.ac.id/index.php/snpmpt/article/view/7963

Nurulfadhilah, L., & Emilisa, N. (2022). Pengaruh GHRM, Task-Related Pro-Environmental Behavior, Proactive Pro-Environmental Behavior, Green Innovation Practices Terhadap Environmental Performance. *Cakrawala Repositori IMWI*, *5*(2), 312–331. https://www.cakrawala.imwi.ac.id/index.php/cakrawala/article/view/135

Schein, E. H. (2010). *Organizational culture and leadership*. www.josseybass.com

Sroufe, R. P., & Melnyk, S. A. (1998). *Environmental Management Systems As A Source of Competitive Advantage*.

Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology*, *29*(3), 309–317. https://doi.org/10.1016/j.jenvp.2008.10.004

Sugiyono, D. (2013). *Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D*.

Suratno, I. B., Darsono, D., & Mutmainah, S. (2007). Pengaruh Environmental Performance Terhadap Environmental Disclosure dan Economic Performance (Studi Empiris pada Perusahaan Manufaktur yang terdaftar di BEJ Periode 2001-2004). *The Indonesian Journal of Accounting Research*, *10*(2). https://ijar-iaikapd.or.id/index.php/ijar/article/view/174

Zhao, W., & Huang, L. (2022). The impact of green transformational leadership, green HRM, green innovation and organizational support on the sustainable business performance: evidence from China. *Economic Research-Ekonomska Istrazivanja* , *35*(1), 6121–6141. https://doi.org/10.1080/1331677X.2022.2047086