

How to Achieve Better Sustainable Performance: The Role of Ethical Leadership and Green Employee Empowerment?

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This study aimed to investigate methods for encouraging employees' environmental behavior at the voluntary level to improve sustainability in China's manufacturing sector. This study proposed and evaluated a model in which ethical leadership and green employee empowerment led to employees' voluntary environmental behavior. It drew on the trickle-down effect model and social learning theory. Furthermore, a moral climate was added to this model as a moderator. The findings indicated that ethical climate moderates the indirect effect of ethical leadership on sustainable performance through employee voluntary environmental behavior and that ethical climate moderates the indirect effect of green employee empowerment. Voluntary environmental behavior mediates the relationship between ethical leadership and sustainable performance. Finally, this study's theoretical and practical ramifications were examined.

Key words: Ethical leadership; Green employee empowerment; Voluntary environmental behavior; Ethical climate; Sustainable performance

1. INTRODUCTION

Consensus on sustainability has spread around the world. Organizations now have the legal status of citizens and are regarded as having direct social effects on the society in which they operate, particularly on the environment. This is a new idea. For businesses to achieve sustainable development, environmental protection must be one of their duties. However, creating and maintaining sustainable business operations can be difficult because it calls for widespread agreement and teamwork from all stakeholders (Jawaad et al., 2020; Koirala et al., 2020). To increase sustainable performance and competitive advantage, managers should demonstrate sustainability ideas that might encourage employees' behavioral intentions toward environmental conservation (Rubel et al., 2021; Uddin et al., 2021). A firm's ability to dynamically achieve sustainable performance in financial, societal, and environmental aspects can be strengthened by appropriate leadership, which can foster mutual learning, create an environment of environmental responsibility within the organization, and encourage voluntary environmental behavior (Pureza et al., 2020; Tariq et al., 2020; Zhang et al., 2021).

Employees, who serve as an organization's front-line staff, also play a vital part in developing and implementing goals and objectives and substantially impact organizational success. Employees spend at least a third of their waking hours at work, and their environmental behaviors daily significantly reduce the detrimental effects of office activities on the corporate environment (Lülfs et al., 2013). Whatever executives and employees believe, it is important to consider ways to encourage employees' environmental behavior better to achieve sustainable performance. Investigating the combined effects of leadership, empowerment, and organizational climate is

essential to achieve the desired sustainable performance (Yusof et al., 2020). This study examines the influence of managers' ethical leadership on the long-term success of business organizations in light of their crucial role in establishing sustainable company performance. More detail, it looks at how ethical leadership affects voluntarily adopted environmental behavior that is in line with a supportive ethical environment and leads to long-term sustainable performance.

Despite the well-established impact of ethical leadership on several elements of employees' behavior, there has not been much empirical research on how ethical leadership affects long-term organizational success. By using employees' voluntary environmental behavior as a mediator and the moral climate as a moderator in the relationship between ethical leadership and sustainable performance through employees' environmental behavior, the study will assess the effects of ethical leadership on sustainable performance (Sanjay Sharma, 2021).

Employee empowerment is one of the most critical factors in attaining an organization's ecological goals (Kitazawa et al., 2000). Employees must feel empowered and have opportunities to provide solutions and make choices that will improve the environment (Zibarras et al., 2015). According to Paillé et al. (2022), feeling empowered is a prerequisite for workers to perform the necessary green task. According to Glavaš et al. (2018), employees need to derive meaning from both their work and the company as a whole because the latter cares about the interests of external stakeholders. Therefore, employees are expected to act pro-environment when they feel empowered, accepted, and have the authority to make decisions about their employment.

2. Theory and hypotheses development

2.1 Defining the variables

2.1.1 Voluntary Environmental Behavior

Environmental activity is divided into mandatory and optional environmental behavior, according to Norton et al. (2015). The degree to which employees carry out necessary responsibilities that save resources and protect the environment, such as adopting green practices or choosing eco-friendly alternatives, is referred to as mandated green behavior. In other words, the needed green conduct shows that environmental preservation is a part of the processes used to complete in-role activities. Employees' pro-environmental actions that are optional and go beyond the scope of in-role responsibilities are referred to as voluntary environmental behavior. Examples include turning off the electricity when leaving the office and recycling reusable materials at work. This study focuses on voluntarily adopting green workplace practices. Studies have shown that certain human and environmental factors may impact employee environmental behavior (A. Kim et al., 2017; Norton et al., 2015). Numerous research has investigated the effects of individual characteristics, such as environmental ideals, norms, attitudes, and enthusiasm, on employee environmental behavior (Andersson et al., 2005; Norton et al., 2017). Additionally, studies seem to indicate that some workplace variables may affect the environmental behaviors of employees. Examples of factors that have been shown to affect employee environmental behavior include job satisfaction (A. Kim et al., 2019), organizational commitment (Paillé et al., 2014), and support (Paillé et al., 2013).

2.1.2 Ethical Leadership.

Previous studies have shown that moral leadership favors encouraging employees' environmental behavior (Hay, 2010). According to Brown et al. (2005), an ethical leader has two distinguishing qualities, namely that they are both moral individuals and moral managers. Ethical leaders adhere to the code of ethics, laws, and regulations by exhibiting these traits. Endorsing norms, policies, methods, and behaviors fix ethical and moral resonance (Pasricha et al., 2018).

2.1.3 Sustainable Performance

Sustainability is the driving force behind moral leaders' ability to deliver sustainable performance (Iqbal, Ahmad, & Halim, 2020; Iqbal, Ahmad, Nasim, et al., 2020). Morally responsible leaders create and put into practice organizational sustainable policies and practices to aid in preserving and enhancing the environment (Khan et al., 2019).

2.1.4 Green Employee Empowerment

According to Spreitzer (1995), four cognitions contribute to an employee's independence in decision-making. The four cognitions, according to Spreitzer, are meaning, competence, impact, and self-determination. According to Baird et al. (2010), employee empowerment is the transfer of authority and responsibility from a higher to a lower

level. According to Maynard et al. (2012), meaning is "an individual's extent of caring about a task," competence is "the belief individuals hold regarding their capability to perform their work activities skillfully," impact is "the degree to which individuals view their behavior as making a difference or the extent to which they influence operating outcomes." Self-determination is "one's sense of autonomy or control over immediate work behaviors and outcomes" (p. 1235). Employee empowerment is the key to achieving organizational ecological goals (Kitazawa et al., 2000). Companies must empower workers, claim Daily et al. (2001), if they want to see the sustained performance. In conclusion, businesses must strengthen employee capabilities and provide possibilities for independent decision-making concerning environmental challenges.

2.1.5 Ethical Climate.

Victor et al. (1988) defined an ethical atmosphere as the consensus regarding normal organizational behavior and practices that contain ethical meaning. The ethical atmosphere is confirmed as an unwritten set of guidelines for moral behavior in business contexts that employees must abide by Mohd Mustamil et al. (2020). Management is crucial in creating and executing a corporate ethical atmosphere (Deal et al., 1983).

Employees' working knowledge is more likely to be positively influenced by ethical standards and codes, which will then impact that person's ability to make moral decisions (Hegarty et al., 1979). Employees will act ethically when there is an ethical culture in the workplace. For instance, if leaders established an ethical workplace culture and implemented ethical regulations and procedures, their followers would act ethically.

2.2 Hypotheses Development

2.2.1 Ethical Leadership and Sustainable Performance

Sustainability is a moral concern, and moral leaders are crucial to achieving sustainable performance (Iqbal, Ahmad, & Halim, 2020). According to Iqbal, Ahmad, Nasim, et al. (2020), moral leaders follow environmental laws and principles, making it easier for their organizations to attain sustainable goals. Leaders who uphold moral principles see it as their duty to promote and engage in pro-environmental activities (Lee et al., 2017). Therefore, followers gain a strong feeling of ecological morality through observational learning from ethical leaders, which motivates them to engage in vivid voluntary environmental action. These actions aid in both environmental preservation and obtaining sustainable performance for businesses. As a result, the study put out the following theory.

H1. Employee voluntary environmental behavior mediates the relationship between ethical leadership and sustainable performance.

2.2.2 Green Employee Empowerment and Sustainable Performance

DuBois et al. (2013) state that one of the best methods to

empower employees is to enhance their talents. Employees that feel empowered are more likely to practice environmentally friendly habits at work. According to meta-analytic results published by Seibert et al. (2011), psychological empowerment at the individual level significantly improves task performance. More employees will have more power, more pro-environmental actions will be taken, and better work will be rewarded. Employees that are empowered and given authority are more likely to care about the environment, according to Daily et al. (2001). According to Daily et al. (2012)'s research, employee empowerment, and environmental performance indicators have a favorable link. As a result, empowered employees are more likely to engage in environmentally friendly actions.

H2. Employee voluntary environmental behavior mediates the relationship between green employee empowerment and sustainable performance.

2.2.3 The Moderating Role of Ethical Climate

According to earlier studies, people are responsible for 80% of the world's total carbon emissions. Promoting people's environmentally friendly behavior is vital for a firm to run sustainably. Iqbal, Ahmad, and Halim (2020) assert that sustainability is regarded as an ethical problem. Leaders and organizations are promoting more environmentally friendly practices, and as soon as employees recognize that the organization supports these behaviors, they are more ready to adopt them themselves. The organization will develop an ethical climate relating to the environment. The better sustainable performance will consequently be obtained.

Previous research found that ethical climate had a mediating or moderating effect on the relationships between ethical leadership and ethical conduct, organizational citizenship behavior, and employees' voluntary environmental activity (Al Halbusi et al., 2020;

Dey et al., 2022). A lack of research, however, obscures the part played by an ethical workplace in the connection between employees' voluntary environmental behavior and sustainable performance. This study aims to investigate the impact of the moral climate.

H3. Ethical climate moderates the influence of voluntary environmental behavior on sustainable performance.

Ethical leaders act as role models for moral behavior because they are both moral individuals and managers. The social exchange principles contend that employees will act as expected in response to their manager's empowerment, contrary to earlier theories (Keller et al., 1995). It is conceivable that the same problem would manifest in an environmental setting. Previous studies found psychological green climate, ethical climate (Biswas et al., 2021; Das et al., 2019), and pro-environmental climate (Hicklenton et al., 2019) all had a significant impact on employees' behavior. An earlier study found that the ethical climate-mediated or moderated the relationship between ethical leadership and employee behavior (Al Halbusi et al., 2020). They neglected the ethical climate's moderating influence on the relationship between moral leadership, worker empowerment, and long-term success. Thus, this study formulated the following hypotheses in light of the above mentioned.

H4. Ethical climate moderates the indirect effect of ethical leadership on sustainable performance through employee voluntary environmental behavior such that the indirect effect is stronger at a high level of ethical climate.

H5. Ethical climate moderates the indirect effect of green employee empowerment on sustainable performance through employee voluntary environmental behavior such that the indirect effect is stronger at a high level of ethical climate.

In summary, Fig. 1 describes the research model.

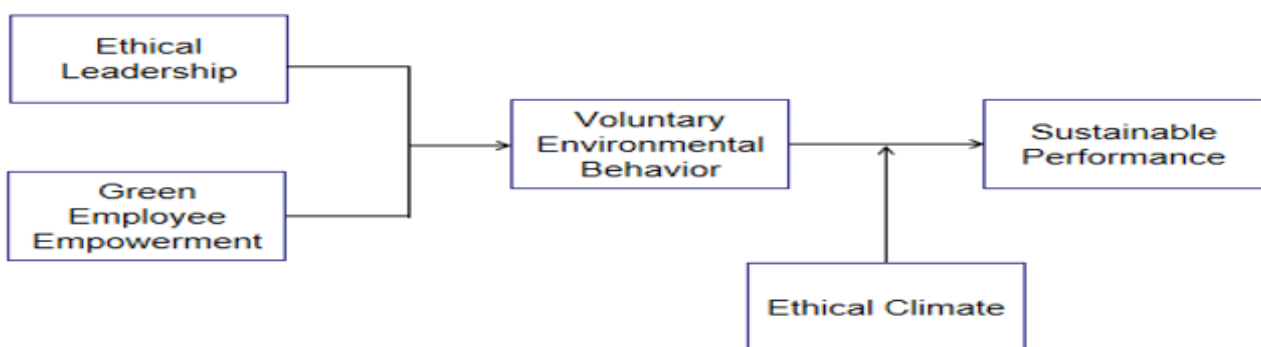


Figure 1. Theoretical Model

3. Methods

3.1 Sample and Procedures

Our primary sample, which included mid-level managers from five Chinese cities' financial, manufacturing, communication, and service sectors, was used to test our hypothesis. We used the translation-back-translation technique to convert the English surveys into Chinese

because the respondents were Chinese (Brislin, 1970). We kept back-translating until there was no discernible difference between the original English and the native tongue (M. J. Kim et al., 2021). Various industries and locations were chosen to circumvent contextual restrictions related to any particular organization or place.

Through a three-step Web-based survey method, data were

gathered. First, we got in touch with the HR managers of those companies and let them know what our research's goal was and what the questionnaires would cover. We reassured them that the poll was conducted for academic research reasons, was anonymous, did not contain any secret firm information, and would not be shared or leaked. At the same time, we agreed to give the business any comment on valid data discovered through an examination of the survey results. Then, we explained the survey's objectives and methodology to HR managers, assuring them that no personal information would be revealed in the questionnaire. With the aid of HR managers, we sent a brief message to each responder, ensuring them that their participation was optional, that their privacy would be respected, and that the survey's primary goal was academic

research. The mid-level managers were given the online questionnaire in the third step. The obtained data were sorted and examined once each respondent had finished the survey to create the final dataset.

After the final dataset was evaluated, 27 surveys were determined to be invalid because they contained no or only partially consistent information. The last valid data were acquired by erasing these complex data. Out of the 212 surveys that were distributed, 185 were complete and useable, translating to an overall response rate of 87.3%. 117 of the 185 employees were men. The respondents' average age was 40.37 years old (SD: 0.91), and they had worked for their organizations for an average of 8.35 years (SD: 0.72 years).

Table 1: Demographic Profile of Respondents (n=185)

Characteristics	Classifications	Frequencies	Percentage
Gender	Male	117	63
	Female	68	37
Age	30-35 years	9	5
	36-40 years	58	31
	41-45 years	80	44
	46-50 years	30	16
	More than 50 years	8	4
Tenure experience	1-5 years	11	6
	6-10 years	89	49
	11-15 years	76	41
	16-20 years	7	3
	More than 20 years	2	1
Education	Bachelor degrees	76	41
	Master's and higher degrees	53	29
	Others	56	30

3.2 Measures

In earlier research done in Chinese or Eastern contexts, the scales to measure five essential dimensions: ethical leadership, green employee empowerment, ethical climate, voluntary environmental behavior, and sustainable performance have shown desirable reliabilities and validities. A 5-point Likert scale (1=strongly disagree to agree 5=strongly) was used to score each variable.

3.2.1 Ethical Leadership

Ten questions created by [Brown et al. \(2005\)](#) Brown and Trevino were used to evaluate ethical leadership. Such statements include "My reporting boss leads by ethical example" and "My reporting boss conducts his/her personal life ethically." For this scale, Cronbach's alpha was 0.96.

3.2.2 Green Employee Empowerment

The 12-item scale created by [Spreitzer \(1995\)](#) was used to gauge the level of green employee empowerment. The full scale was determined to have acceptable internal reliability according to Cronbach's alpha ($= 0.94$). The four aspects of employee empowerment—meaning, self-determination, competence, and impact—were looked at separately. Examples of such statements include "I have a great deal of autonomy in how I carry out my work" and "The work I do is significant to me."

3.2.3 Voluntary Environmental Behavior

[Bissing-Olson et al. \(2013\)](#) created a three-item scale for measuring voluntary environmental activity. "I take the chance to get actively involved in environmental protection at work" was one such item. For this scale, Cronbach's alpha was 0.90.

3.2.4 Ethical Climate

Seven items were used to gauge the ethical climate and were first created by [Schwepker Jr \(2001\)](#). Examples of such statements include "Any unethical behavior not tolerated" and "Organization has policies regarding ethical behavior." For this scale, Cronbach's alpha was 0.91.

3.2.5 Sustainable Performance

Using a scale created by [Lee et al. \(2017\)](#), sustainable performance was graded. The three components of the eight-item scale for sustainable performance are financial performance, environmental performance, and social performance. For the environmental performance, sample responses included "I am aware that my company has the initiative to reduce, reuse, and recycle," "I am aware that our company has a competitive advantage in cost saving and efficiency," and "I am aware that my company has the policy to strive to be a good corporate citizen." For this scale, Cronbach's alpha was 0.94.

3.2.6 Control Variables

Gender, age, education, and tenure were developed as

control variables to minimize the impact of unrelated variables on the study variables in this paper and to

effectively ensure the explanatory validity of the empirical test results on the theoretical framework of this paper.

Table 2: Descriptive Statistics and Correlations Among Study Variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
Gender	1.37	.48	1								
Age	2.84	.91	.71	1							
TE	2.46	.72	.75	.85**	1						
Education	1.89	.84	.85	.85**	.79**	1					
EC	3.99	.91	.07	-.02	.00	.02	(.91)				
EL	3.91	.93	.04	.01	.01	.05	.69**	(.96)			
GEE	3.99	.74	-.05	-.03	-.03	-.05	.58**	.76**	(.94)		
VEB	3.89	.93	-.01	-.04	.03	-.03	.62**	.64**	.67**	(.90)	
SP	3.73	.95	-.06	-.15	-.13	-.14	.63**	.72**	.75**	.71**	(.94)

Note. N=185 respondents. Gender was coded as 1=male, 2=female. TE=Tenure experience. Organization tenure is in years. Reliabilities of the study variables are listed in parentheses. EC=Ethical climate; EL=Ethical leadership; GEE= Green employee empowerment; VEB=Voluntary environmental behavior; SP=Sustainable performance. ** p<0.01 (Two-tailed).

4. Statistical Analysis and Results

4.1 Confirmatory Factor Analyses

Confirmatory factor analyses were conducted to examine the validity of discriminant among ethical leadership, green employee empowerment, voluntary environmental behavior, moral climate, and sustainable performance. The 5-factor measurement model provided an excellent fit to the data ($\chi^2 [730] = 2509.45, p < .001; CFI = .85; SRMR = .07; RMSEA = .06$). Then, the hypothesized measurement model was compared to alternative models by collapsing measures with the most conceptual overlap. The model in this study had a superior fit to a 4-factor model that collapsed ethical leadership and green employee empowerment into one factor ($\chi^2 [730] = 3057.54, p < .001; CFI = .75; SRMR = .07; RMSEA = .09$).

4.2 Results

The study used the PROCESS approach to examine the

direct impact of moral leadership and employee empowerment on long-term sustainability. Table 3 displays the outcomes of a Bootstrap 5000 test. The direct correlation between ethical leadership and long-term success is estimated to be 0.45 (95% CI: 0.33, 0.57). Similarly, the direct impact of employee empowerment on sustainability is estimated to be 0.63 (95% CI: 0.48, 0.78). Once the mediating role of voluntary environmental behavior has been taken into account, the indirect impact of ethical leadership on sustainable performance is evaluated at 0.28 (95% CI: 0.20, 0.40), demonstrating that it is significant and validating Hypothesis 1. The indirect effect of green employee empowerment on sustainable performance is estimated to be 0.33 (95% confidence interval: 0.21, 0.45), indicating that it is significant and confirming Hypothesis 2.

Table 3: Direct Effects

Model pathways	Direct effect	Standard errors	BC95%CI Lower Upper
EL to SP	0.45	0.06	(0.33, 0.57)
GEE to SP	0.63	0.08	(0.48, 0.78)

Notes: EL=Ethical leadership; GEE=Green employee empowerment; SP=Sustainable performance; CI=Confidence intervals

Table 4: Indirect Effects

Model pathways	Indirect effect	Boot SE	Boot BC95%CI Lower Upper
Mediating effect of VEB between EL and SP	0.28	0.05	(0.20, 0.40)
Mediating effect of VEB between GEE and SP	0.33	0.06	(0.21, 0.45)

Notes: VEB=Voluntary environmental behavior; EL=Ethical leadership; GEE=Green employee empowerment; SP=Sustainable performance; SE=Standard errors; CI=Confidence intervals

The moderating role of the ethical atmosphere in the link between voluntary environmental behavior and sustainable performance was also examined using the PROCESS technique. Table 5 displays the outcomes of a Bootstrap 5000 test. As shown in Table 5, Hypothesis 3 is supported by the fact that the moderating effect of the ethical atmosphere on voluntary environmental behavior and sustainable performance is 0.11 (95% CI: 0.20, 0.21).

In addition, Table 5 shows that the association between ethical leadership and sustainable performance through voluntary environmental behavior has a moderating effect

of 0.47 (95% CI: -0.01, 0.11). As a result, Hypothesis 4 was not verified. Table 5 also supported Hypothesis 5 by demonstrating that the association between green employee empowerment and sustainable performance through voluntary environmental behavior has a moderating effect of 0.76 (95% CI: 0.01, 0.15). Conclusion: When the ethical climate was high, the indirect impact of green employee empowerment through sustainable performance through voluntary environmental behavior was more substantial, and when it was low, it was weaker.

Table 5: Moderating Effects of Ethical Climate

Model Pathways	Coeffect	SE	BC95%CI Lower Upper
Moderating effect of EC between VEB and SP	0.11	0.48	(0.20, 0.21)
Model Pathways	Index	SE	Boot BC95%CI Lower Upper
Moderating effect of EC between EL and SP through VEB	0.47	0.30	(-0.01, 0.11)
Moderating effect of EC between GEE and SP through VEB	0.76	0.35	(0.01, 0.15)

Notes: EC=Ethical climate; VEB=Voluntary environmental behavior; EL=Ethical leadership; GEE=Green employee empowerment; SP=Sustainable performance; SE=Standard errors; CI=Confidence intervals

5. Discussion

We contend that ethical leadership and green employee empowerment foster employees' voluntary environmental behavior by communicating to employees that environmental sustainability is supported by organizations, which results in sustainable performance, in light of the social information processing theory (Salancik et al., 1978). The findings showed that ethical climate moderates the relationship between ethical leadership, employee green empowerment, and sustainable performance through voluntary environmental behavior. Voluntary environmental behavior mediates ethical leadership, employee green empowerment, and sustainable performance.

5.1 Theoretical Contributions

The current study adds to the knowledge of organizations' sustainable performance. The findings show that for leaders to be regarded as ethical leaders, they must be dedicated to upholding environmental protection as a moral duty and as a means of setting an example for their workforce (Zhang et al., 2021). Therefore, in line with the social learning theory, the results clearly show that a company that considers the environment to be one of its responsibilities should have moral leaders who can foster an environment where employees can engage in environmental action and advance sustainability (Shafique et al., 2020). More specifically, the environmental behaviors of leaders and employees can contribute to sustainable growth, and the social impact on company leaders encourages them to administer their operations ethically (Ruiz-Pérez et al., 2021).

The study emphasizes the role of ethical leadership, employee empowerment, and voluntary environmental behavior impacted by the moral climate for sustainable development to achieve the long-term sustainable performance of the firms from the standpoint of stakeholder theory (Pasricha et al., 2018). The results strengthen the position of ethical leaders in the leadership literature by demonstrating that they are crucial stakeholders in any company and that their behavior and influence have a significant impact on the sustainability of the firm's performance (Khan et al., 2019; Lee et al., 2017; Pasricha et al., 2018). To improve sustainable performance, the findings suggested an integrated framework of ethical leadership, voluntary environmental behavior, and moral climate (Eisenbeiss, 2012; Graves et al., 2018).

According to an earlier study, all the elements and sources of support for employee empowerment are present when the required green job performance is achieved. This study determined how employee empowerment affects their voluntarily engaged environmental behavior. Since it was present in both routes for green performance, regardless of whether it is essential or not, this indicates that feeling empowered is necessary. The results provide new knowledge by demonstrating how employee empowerment makes it possible to use employee voluntary environmental behavior as a prerequisite for achieving sustainable performance on an individual level.

5.2 Practical Contributions

The study's conclusions also have potential applications for managers who want to encourage employees' voluntary environmental behavior in workplace settings. It will demonstrate to managers the benefits of utilizing employee empowerment. Management will be aware that one of the key factors encouraging employees to adopt green behavior is employee empowerment. Another significant practical application is that leadership can design and create an atmosphere that supports employees, from top management to immediate supervisors. Creating a green environment within the company could help to promote sustainable performance.

Employee green behavior, whether mandated or voluntary, is essential since environmental sustainability at the organizational level results from individual activities taken (Manika et al., 2015). Typically, management is persuaded of the benefits of utilizing employee empowerment. Kitazawa et al. (2000) demonstrated how empowered personnel could improve environmental performance. Additionally, according to Zibarras et al. (2015), human resource professionals believe that employee empowerment is one of the best strategies for encouraging staff to act friendly to the environment. Managers should note that empowering employees to make environmentally friendly decisions is another essential factor.

5.3 Limitations and Future Research

Although this study produced some results, several limitations will still need to be addressed in follow-up research.

On the one hand, although a sizable sample size was chosen for this study, the samples are concentrated in China's manufacturing sectors, allowing future research to further focus on other sectors and nations, such as the service industry, to investigate the factors promoting

environmental behavior and performance. Verification of the results across scales and cultures is necessary.

On the other hand, the mid-level managers in the manufacturing industries were the study's sample. Therefore, future research must include a cross-level study or a multi-group analysis. To increase the generalizability of results, later studies might use larger samples or investigate the relationships over time.

6. Conclusion

This study's primary goal was to investigate the connections between moral leadership, green employee empowerment, sustainable performance, and the mediating role that voluntary environmental behavior had in these relationships. According to our expectations, ethical leadership and green employee empowerment both favor sustainable performance, with voluntary environmental behavior as a mediating factor. A moral climate further amplifies the influence of voluntary environmental behavior on sustainable performance. The moral atmosphere moderates the indirect impact of ethical leadership on sustainable performance through voluntary environmental behavior. This study also looked at the indirect effect of empowerment on sustainable performance through voluntary environmental behavior constrained by moral context. Despite its limits, this study's findings add to the knowledge of environmental sustainability performance, enrich management methods, and improve workers' environmental behaviors.

REFERENCES

- Al Halbusi, H., Williams, K. A., Ramayah, T., Aldieri, L., & Vinci, C. P. (2020). Linking ethical leadership and ethical climate to employees' ethical behavior: the moderating role of person-organization fit. *Personnel Review*, *50*(1), 159-185. doi: <https://doi.org/10.1108/PR-09-2019-0522>
- Andersson, L., Shivarajan, S., & Blau, G. (2005). Enacting ecological sustainability in the MNC: A test of an adapted value-belief-norm framework. *Journal of Business Ethics*, *59*(3), 295-305. doi: <https://doi.org/10.1007/s10551-005-3440-x>
- Baird, K., & Wang, H. (2010). Employee empowerment: extent of adoption and influential factors. *Personnel Review*, *39*(5), 574-599. doi: <https://doi.org/10.1108/00483481011064154>
- Bissing-Olson, M. J., Iyer, A., Fielding, K. S., & Zacher, H. (2013). Relationships between daily affect and pro-environmental behavior at work: The moderating role of pro-environmental attitude. *Journal of Organizational Behavior*, *34*(2), 156-175. doi: <https://doi.org/10.1002/job.1788>
- Biswas, S. R., Dey, M., Bhattacharjee, S., & Uddin, M. A. (2021). How does corporate environmental strategy contribute to voluntary environmental behavior? Influence of psychological green climate, firms' size, and employees' age. *SAGE Open*, *11*(1), 21582440211006054. doi: <https://doi.org/10.1177/21582440211006054>
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, *1*(3), 185-216. doi: <https://doi.org/10.1177/135910457000100301>
- Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, *97*(2), 117-134. doi: <https://doi.org/10.1016/j.obhdp.2005.03.002>
- Daily, B. F., Bishop, J. W., & Massoud, J. A. (2012). The role of training and empowerment in environmental performance. *International Journal of Operations & Production Management*, *32*(5), 631-647. doi: <https://doi.org/10.1108/01443571211226524>
- Daily, B. F., & Huang, S. c. (2001). Achieving sustainability through attention to human resource factors in environmental management. *International Journal of Operations & Production Management*, *21*(12), 1539-1552. doi: <https://doi.org/10.1108/01443570110410892>
- Das, A. K., Biswas, S. R., Abdul Kader Jilani, M. M., & Uddin, M. A. (2019). Corporate environmental strategy and voluntary environmental behavior—Mediating effect of psychological green climate. *Sustainability*, *11*(11), 3123. doi: <https://doi.org/10.3390/su11113123>
- Deal, T. E., & Kennedy, A. A. (1983). *Corporate cultures: The rites and rituals of corporate life*: Addison-Wesley, 1982. ISBN: 0-201-10277-3. \$14.95. *Business Horizons*, *26*(2), 82-85. doi: [https://doi.org/10.1016/0007-6813\(83\)90092-7](https://doi.org/10.1016/0007-6813(83)90092-7)
- Dey, M., Bhattacharjee, S., Mahmood, M., Uddin, M. A., & Biswas, S. R. (2022). Ethical leadership for better sustainable performance: Role of employee values, behavior and ethical climate. *Journal of Cleaner Production*, *337*, 130527. doi: <https://doi.org/10.1016/j.jclepro.2022.130527>
- DuBois, C. L., Astakhova, M. N., & DuBois, D. A. (2013). Motivating behavior change to support organizational environmental sustainability goals. *Green Organizations: Driving Change with IO Psychology*, 186-207. Retrieved from https://books.google.ae/books?hl=en&lr=&id=ip_cN8e6ZE-MC&oi=fnd&pg
- Eisenbeiss, S. A. (2012). Re-thinking ethical leadership: An interdisciplinary integrative approach. *The Leadership Quarterly*, *23*(5), 791-808. doi: <https://doi.org/10.1016/j.leaqua.2012.03.001>
- Glavaš, G., Franco-Salvador, M., Ponzetto, S. P., & Rosso, P. (2018). A resource-light method for cross-lingual semantic textual similarity. *Knowledge-Based Systems*, *143*, 1-9. doi: <https://doi.org/10.1016/j.knosys.2017.11.041>
- Graves, L. M., & Sarkis, J. (2018). The role of employees' leadership perceptions, values, and motivation in employees' proenvironmental behaviors. *Journal of Cleaner Production*, *196*, 576-587.

- doi:
<https://doi.org/10.1016/j.jclepro.2018.06.013>
- Hay, R. (2010). The relevance of ecocentrism, personal development and transformational leadership to sustainability and identity. *Sustainable Development*, 18(3), 163-171. doi: <https://doi.org/10.1002/sd.456>
- Hegarty, W. H., & Sims, H. P. (1979). Organizational philosophy, policies, and objectives related to unethical decision behavior: A laboratory experiment. *Journal of Applied Psychology*, 64(3), 331. doi: <https://psycnet.apa.org/doi/10.1037/0021-9010.64.3.331>
- Hicklenton, C., Hine, D. W., & Loi, N. M. (2019). Can work climate foster pro-environmental behavior inside and outside of the workplace? *PLOS ONE*, 14(10), e0223774. doi: <https://doi.org/10.1371/journal.pone.0223774>
- Iqbal, Q., Ahmad, N. H., & Halim, H. A. (2020). How does sustainable leadership influence sustainable performance? Empirical evidence from selected ASEAN countries. *Sage Open*, 10(4), 2158244020969394. doi: <https://doi.org/10.1177/2158244020969394>
- Iqbal, Q., Ahmad, N. H., Nasim, A., & Khan, S. A. R. (2020). A moderated-mediation analysis of psychological empowerment: Sustainable leadership and sustainable performance. *Journal of Cleaner Production*, 262, 121429. doi: <https://doi.org/10.1016/j.jclepro.2020.121429>
- Jawaad, M., & Zafar, S. (2020). Improving sustainable development and firm performance in emerging economies by implementing green supply chain activities. *Sustainable Development*, 28(1), 25-38. doi: <https://doi.org/10.1002/sd.1962>
- Keller, T., & Dansereau, F. (1995). Leadership and empowerment: A social exchange perspective. *Human Relations*, 48(2), 127-146. doi: <https://doi.org/10.1177/001872679504800202>
- Khan, M. A. S., Jianguo, D., Ali, M., Saleem, S., & Usman, M. (2019). Interrelations between ethical leadership, green psychological climate, and organizational environmental citizenship behavior: A moderated mediation model. *Frontiers in Psychology*, 10, 1977. doi: <https://doi.org/10.3389/fpsyg.2019.01977>
- Kim, A., Kim, Y., & Han, K. (2019). A cross level investigation on the linkage between job satisfaction and voluntary workplace green behavior. *Journal of Business Ethics*, 159(4), 1199-1214. doi: <https://doi.org/10.1007/s10551-018-3776-7>
- Kim, A., Kim, Y., Han, K., Jackson, S. E., & Ployhart, R. E. (2017). Multilevel influences on voluntary workplace green behavior: Individual differences, leader behavior, and coworker advocacy. *Journal of Management*, 43(5), 1335-1358. doi: <https://doi.org/10.1177/0149206314547386>
- Kim, M. J., & Hall, C. M. (2021). Do perceived risk and intervention affect crowdfunder behavior for the sustainable development goals? A model of goal-directed behavior. *Journal of Cleaner Production*, 311, 127614. doi: <https://doi.org/10.1016/j.jclepro.2021.127614>
- Kitazawa, S., & Sarkis, J. (2000). The relationship between ISO 14001 and continuous source reduction programs. *International Journal of Operations & Production Management*, 20(2), 225-248. doi: <https://doi.org/10.1108/01443570010304279>
- Koirala, B. S., & Pradhan, G. (2020). Determinants of sustainable development: Evidence from 12 Asian countries. *Sustainable Development*, 28(1), 39-45. doi: <https://doi.org/10.1002/sd.1963>
- Lee, S. H., & Ha-Brookshire, J. (2017). Ethical climate and job attitude in fashion retail employees' turnover intention, and perceived organizational sustainability performance: A cross-sectional study. *Sustainability*, 9(3), 465. doi: <https://doi.org/10.3390/su9030465>
- Lülfes, R., & Hahn, R. (2013). Corporate greening beyond formal programs, initiatives, and systems: A conceptual model for voluntary pro-environmental behavior of employees. *European Management Review*, 10(2), 83-98. doi: <https://doi.org/10.1111/emre.12008>
- Manika, D., Wells, V. K., Gregory-Smith, D., & Gentry, M. (2015). The impact of individual attitudinal and organisational variables on workplace environmentally friendly behaviours. *Journal of Business Ethics*, 126(4), 663-684. doi: <https://doi.org/10.1007/s10551-013-1978-6>
- Maynard, M. T., Gilson, L. L., & Mathieu, J. E. (2012). Empowerment—fad or fab? A multilevel review of the past two decades of research. *Journal of Management*, 38(4), 1231-1281. doi: <https://doi.org/10.1177/0149206312438773>
- Mohd Mustamil, N., & Najam, U. (2020). Servant Leader and Ethical Climate: An Integrative Approach to Employee Ethical Behavior. In *Ethics, Governance and Risk Management in Organizations* (pp. 21-33): Springer, 21-33. doi: https://doi.org/10.1007/978-981-15-1880-5_2
- Norton, T. A., Parker, S. L., Zacher, H., & Ashkanasy, N. M. (2015). Employee green behavior: A theoretical framework, multilevel review, and future research agenda. *Organization & Environment*, 28(1), 103-125. doi: <https://doi.org/10.1177/1086026615575773>
- Norton, T. A., Zacher, H., Parker, S. L., & Ashkanasy, N. M. (2017). Bridging the gap between green behavioral intentions and employee green behavior: The role of green psychological climate. *Journal of Organizational Behavior*, 38(7), 996-1015. doi: <https://doi.org/10.1002/job.2178>
- Paillé, P., & Boiral, O. (2013). Pro-environmental behavior at work: Construct validity and determinants. *Journal of Environmental*

- Psychology*, 36, 118-128. doi: <https://doi.org/10.1016/j.jenvp.2013.07.014>
- Paillé, P., & Francoeur, V. (2022). Enabling employees to perform the required green tasks through support and empowerment. *Journal of Business Research*, 140, 420-429. doi: <https://doi.org/10.1016/j.jbusres.2021.11.011>
- Paillé, P., & Mejía-Morelos, J. H. (2014). Antecedents of pro-environmental behaviours at work: The moderating influence of psychological contract breach. *Journal of Environmental Psychology*, 38, 124-131. doi: <https://doi.org/10.1016/j.jenvp.2014.01.004>
- Pasricha, P., Singh, B., & Verma, P. (2018). Ethical leadership, organic organizational cultures and corporate social responsibility: An empirical study in social enterprises. *Journal of Business Ethics*, 151(4), 941-958. doi: <https://doi.org/10.1007/s10551-017-3568-5>
- Pureza, A. P., & Lee, K. H. (2020). Corporate social responsibility leadership for sustainable development: An institutional logics perspective in Brazil. *Corporate Social Responsibility and Environmental Management*, 27(3), 1410-1424. doi: <https://doi.org/10.1002/csr.1894>
- Rubel, M. R. B., Kee, D. M. H., & Rimi, N. N. (2021). Green human resource management and supervisor pro-environmental behavior: The role of green work climate perceptions. *Journal of Cleaner Production*, 313, 127669. doi: <https://doi.org/10.1016/j.jclepro.2021.127669>
- Ruiz-Pérez, F., Lleo, A., & Ormazabal, M. (2021). Employee sustainable behaviors and their relationship with Corporate Sustainability: A Delphi study. *Journal of Cleaner Production*, 329, 129742. doi: <https://doi.org/10.1016/j.jclepro.2021.129742>
- Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 23(2), 224-253. doi: <https://doi.org/10.2307/2392563>
- Sanjay Sharma, A. T., B B Verma, Sachin Kumar. (2021). An Inventory Control Model for Deteriorating Items Under Demand Dependent Production with Time and Stock Dependent Demand. *International J. of Oper. and Quant. Management*, 27(4), 321-336. doi: <https://doi.org/10.46970/2021.27.4.2>
- Schwepker Jr, C. H. (2001). Ethical climate's relationship to job satisfaction, organizational commitment, and turnover intention in the salesforce. *Journal of Business Research*, 54(1), 39-52. doi: [https://doi.org/10.1016/S0148-2963\(00\)00125-9](https://doi.org/10.1016/S0148-2963(00)00125-9)
- Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: a meta-analytic review. *Journal of Applied Psychology*, 96(5), 981. doi: <https://psycnet.apa.org/doi/10.1037/a0022676>
- Shafique, I., Ahmad, B., & Kalyar, M. N. (2020). How ethical leadership influences creativity and organizational innovation. *European Journal of Innovation Management*, 23(1), 114-133. doi: <https://doi.org/10.1108/EJIM-12-2018-0269>
- Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, 38(5), 1442-1465. doi: <https://doi.org/10.5465/256865>
- Tariq, M., Yasir, M., & Majid, A. (2020). Promoting employees' environmental performance in hospitality industry through environmental attitude and ecological behavior: Moderating role of managers' environmental commitment. *Corporate Social Responsibility and Environmental Management*, 27(6), 3006-3017. doi: <https://doi.org/10.1002/csr.2019>
- Uddin, M. A., Biswas, S. R., Bhattacharjee, S., Dey, M., & Mahmood, M. (2021). Inspiring employees' ecological behaviors: The roles of corporate environmental strategy, biospheric values, and eco-centric leadership. *Business Strategy and the Environment*, 30(5), 2367-2381. doi: <https://doi.org/10.1002/bse.2751>
- Victor, B., & Cullen, J. B. (1988). The organizational bases of ethical work climates. *Administrative science quarterly*, 33(1), 101-125. doi: <https://doi.org/10.2307/2392857>
- Yusof, N. A., Tabassi, A. A., & Kamal, E. M. (2020). Do environmental, economic and reputational advantages strengthen green practices' impact on environmental performance? *Corporate Social Responsibility and Environmental Management*, 27(5), 2081-2093. doi: <https://doi.org/10.1002/csr.1948>
- Zhang, J., Ul-Durar, S., Akhtar, M. N., Zhang, Y., & Lu, L. (2021). How does responsible leadership affect employees' voluntary workplace green behaviors? A multilevel dual process model of voluntary workplace green behaviors. *Journal of Environmental Management*, 296, 113205. doi: <https://doi.org/10.1016/j.jenvman.2021.113205>
- Zibarras, L. D., & Coan, P. (2015). HRM practices used to promote pro-environmental behavior: a UK survey. *The International Journal of Human Resource Management*, 26(16), 2121-2142. doi: <https://doi.org/10.1080/09585192.2014.972429>