



# Can environmental transformational leadership shape organizational citizenship behavior toward the environment in Indonesia?

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## Abstract

This research examines the influence of environmental transformational leadership on organizational citizenship behavior toward the environment. In testing this relationship, other aspects were involved, including green human resources management, a moderating variable, and green employee empowerment, a mediating variable. To achieve their environmental goals, company employees must care about the environment, however motivating them is challenging. Research into environmental transformational leadership and green human resources management is needed in Indonesia. Research there focuses on the impact of companies' environmentally friendly practices, seen from an external perspective. This study's data came from an online survey of Indonesian company employees. This was processed using SmartPLS. The results show environmental transformational leadership positively influences organizational citizenship behavior toward the environment, and green employee empowerment. Green employee empowerment partially mediates the relationship between green human resources management and organizational citizenship behavior toward the environment. Green human resources management is a moderator variable in the relationship between environmental transformational leadership and green employee empowerment. Companies must have environmental transformational leadership, green employee empowerment, and green human resources management to achieve green goals. Companies must pay attention to those aspects, so their employees will show organizational citizenship behavior toward the environment to support the company's success.

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## Introduction

The current environmental crisis poses threats to both ecological sustainability and human well-being (Bian et al., 2020). A particularly alarming issue is plastic waste, which, if not intensively managed, is projected to amass 600 million metric tons in our oceans by 2040 (Parker, 2021). The decline air quality is another indicator of environmental degradation, which can adversely affect human health (Darçın, 2014).

In response to these pressing challenges, there has been a noticeable increase in environmental consciousness. Such awareness is catalyzing behavioral changes geared toward environmental conservation (Zeng et al., 2021). Now consumer preferences are shifting toward products that are less damaging to the environment (Alamsyah et al., 2020). This eco-consciousness is not only confined to consumers, but also extends to governmental policymakers.

The environment is clearly deteriorating, which, in part, is attributable to corporate activities (Mi et al., 2019). Companies cause environmental degradation by producing waste,

including plastic packaging that is difficult to break down (Phelan et al., 2022). Recognizing their impact on the environment's quality, companies have begun to adopt more eco-friendly business practices (Boiral et al., 2015).

The stakeholders' concerns about the sustainability of the environment increasingly influence companies' strategies, including the implementation of green human resource management (GHRM) (Boiral et al., 2015). GHRM incorporates environmentally friendly practices that apply to all the various aspects of HR, from recruitment to training (Renwick et al., 2013). Businesses are also integrating green supply chains and production systems (Jermsittiparsert et al., 2019), and introducing environmentally friendly products and packaging to meet their consumers' demands, and to minimize waste (Lee, 2020; Zeng et al., 2021). Recycling now makes a greater contribution to waste reduction (Pardo Martínez & Piña, 2017).

The green idea is being adopted by businesses based in developing Asian countries. This is reflected in their environmentally friendly standard operating procedures (SOPs) (Niazi et al., 2023). Chinese and Malaysian manufacturing firms have already adopted green SOPs, and are benefitting from the resulting increase in their environmental performance (Hameed et al., 2020). Multinational, and private, Indonesian companies are implementing GHRM systems into their HR management, in the hope that these practices will yield greater outputs and a competitive advantage (Singh et al., 2020).

In realizing sustainability goals, companies need the role of employees who have pro-environmental behavior (Peng et al., 2021). Specifically, environmentally friendly employee behavior can impact sustainability performance (Lee, 2020). This is because employees are stakeholders who carry out and execute the plans and programs determined by the company to achieve sustainability.

The behavior of employees who consciously and voluntarily seek to improve environmental quality is referred to as pro-environmental behavior (Khan et al., 2021). Despite being two different terms, pro-environment behavior is closely related to organizational citizenship behavior toward the environment (OCBE) (Boiral et al., 2015). The two behaviors are similar, and are both carried out on a volunteer basis to impact the environment positively.

The fundamental difference between pro-environmental behavior and OCBE is the broader pro-environmental scope of OCBE. This is because pro-environmental behavior refers to the behavior of individuals who care about the environment in general (Robertson & Barling, 2017). Meanwhile, OCBE is a new construct that can explain an employee's pro-environmental behavior in a focused manner at work that aims to realize organizational goals to achieve sustainability (Boiral & Paille, 2012).

OCBE is a critical aspect needed by companies that want to achieve sustainability goals. The root of OCBE is organizational citizenship behavior (OCB), namely the behavior of employees who voluntarily support goals and fulfill the company's interests (Khan et al., 2021). OCBE is a vital aspect because employee activities that are attached to OCBE are such as waste management so as not to pollute the environment, recycling programs, saving energy and carbon use, and other things that involve employee contributions to have a positive impact on the environment (Robertson & Barling, 2017). With OCBE of the employees, implementing the company's sustainability programs and goals is more effective and efficient (Boiral et al., 2018; Cheema et al., 2020).

Apart from employees, a leader's role is vital to realizing sustainability goals (Priyankara et al., 2018). In this case, a leader's role is to create a strategy that integrates environmental sustainability goals with company goals (Galpin & Lee Whittington, 2012). Furthermore, the same study also said that a leader must ensure that their human resources have pro-environment principles that can support company goals. In addition, it takes the role of a leader who can inspire, motivate, and set an example so that employees participate in realizing sustainability goals (Robertson & Barling, 2017).

Leadership style is vital in changing employee behavior (Wang et al., 2016). More specifically, the leadership style that is considered vital for meeting sustainability goals is called environmental transformational leadership (ETL). Those leaders that demonstrate ETL can

motivate and inspire the employees to care more about the environment (Gurmani et al., 2021), potentially meaning that ETL can have a significant influence on OCBE (Khan et al., 2021). Through pro-environmental values that are shared and exemplified by the leaders in a company, its employees will indirectly adopt these values, causing them to eventually have greater OCBE (Li et al., 2023).

A positive influence on OCBE is green employee empowerment (GEE), as this acts as a catalyst to inspire employees to actively contribute to achieving their company's environmental goals (Hameed et al., 2020; Muisyo et al., 2022). GEE has two purposes, these are to increase environmental awareness and foster a sense of responsibility among the employees (Hameed et al., 2020). In this context, ETL leadership plays an important role in enhancing GEE in organizations (Priyadarshini et al., 2023). In addition, GEE acts as a link between ETL and OCBE (Zaki & Norazman, 2019; Priyadarshini et al., 2023). Leaders who display ETL inspire and empower the employees to become more engaged in environmentally friendly practices. Hence, when are faced with environmental decisions, the employees are more likely to implement sustainability measures, this then increases their level of OCBE.

Then, to support its goals and strategies, green companies create GHRM. In GHRM, human resources management functions, from recruitment to providing training, are based on environmentally friendly principles (Zaki & Norazman, 2019; Muisyo et al., 2022). This system makes the ecosystem within the company more concerned about the environment (Muisyo et al., 2022). With environmental management practices, incentives for environmentally friendly performance, and other things specified in the GHRM regulatory system, it will strengthen ETL's influence with GEE.

Research into GHRM and ETL still needs to be further developed (Farrukh et al., 2022). Research into these two aspects still needs to be undertaken in Indonesia. Previous studies have discussed environmental sustainability in a company, but these focused on the programs and business processes used to improve sustainability performance (Tjahjadi et al., 2021; Jermisittiparsert et al., 2019). Apart from that, previous research also found a lot about the impact of environmentally friendly business processes when viewed from the consumer's point of view (Alamsyah et al., 2020). Existing research rarely looks at the impact of environmentally friendly business processes on employee pro-environmental behavior. Thus, further research is still needed, especially in Indonesia, regarding environmental transformational leadership and GHRM as factors forming OCBE.

## Literature Review and Hypotheses Development

### Environmental Transformational Leadership (ETL)

ETL is an evolution of traditional transformational leadership, which aims to guide, inspire, and motivate followers to achieve specific objectives (Peng et al., 2021). ETL refines this focus by zeroing in on environmental sustainability goals. Leaders employing this style engage their followers in a collective effort to achieve sustainability (Chen & Chang, 2013). This shift towards ETL is driven by a corporate understanding that reaching sustainability milestones involves everyone in the organization, not just the leadership (Robertson & Carleton, 2018). Therefore, ETL serves as an enhanced form of transformational leadership, designed to elevate employee engagement in the pursuit of environmental objectives.

Someone with a ETL style has the following characteristics (Chen & Chang, 2013; Robertson & Carleton, 2018):

- a. Idealized influence: Leaders serve as role models, guiding employees in the right direction, particularly in environmental matters. Their actions are fueled by a moral commitment to ecological concerns and a vision for future generations.
- b. Inspirational motivation: Leaders inspire employees to exceed standard expectations for the greater good. Rather than relying on extrinsic rewards or formal organizational controls, these leaders tap into the intrinsic motivation of their team. When employees are intrinsically motivated, they willingly go beyond their basic job responsibilities.

- c. Intellectual stimulation: Leaders actively promote a culture of creativity around environmental tasks. They challenge employees intellectually, empowering them to devise innovative approaches to environmental practices, procedures, and systems.
- d. Individualized consideration: Leaders must focus on developing strong relationships with the employees concerning environmental matters. This involves attending to their individual needs, addressing their questions, and providing the necessary support to help them excel in their eco-friendly practices.

### **Green Human Resources Management (GHRM)**

GHRM is an evolving corporate strategy that combines HRM with environmental management to achieve sustainability (Amjad et al., 2021). It incorporates environmental priorities across all HR's functions, from hiring to training, and focuses on fulfilling the businesses sustainability objectives (Renwick et al., 2013). Employees undertake tasks that echo these goals, such as energy-saving, minimizing waste, and utilizing recycled materials. Periodic assessments are employed to intensify this green-oriented HRM strategy. The integral elements of GHRM comprise green hiring methods, eco-centric training, employee engagement in sustainability projects, eco-friendly compensation schemes, and green performance assessment metrics (Mehta, 2024; Chaudhary, 2019).

- a. Green recruitment and selection focuses on hiring environmentally conscious individuals who can fulfill the organization's eco-friendly objectives (Renwick et al., 2013). The recruitment process is structured to align the values and beliefs of new hires with the organization's environmental ethos. By doing this, the organization builds a team committed to environmentally responsible behavior, both in its tasks and voluntary actions.
- b. Green training and development seeks to improve the employees' understanding of environmental issues (Renwick et al., 2013). The training sessions infuse the employees with green values, and enhance their skills for implementing eco-friendly practices at work.
- c. Green involvement encourages the employees to engage in their organization's eco-friendly initiatives (Liebowitz, 2010). This requires their active participation in energy-saving programs, waste reduction, and lowering carbon emissions. They may also find themselves involved in the development and execution of the organization's green policies.
- d. Green compensation and rewards include eco-friendly incentives into traditional HRM reward systems (Chaudhary, 2019). This model motivates employees, through financial or other rewards, to demonstrate sustainable and environmentally friendly behavior. Such rewards could be in the form of reimbursements or additional benefits for contributing to the organization's goals of reducing its environmental footprint.
- e. Green performance management evaluates employees' contributions, based on their alignment with their employer's sustainability and environmental conservation beliefs (Ahmad, 2015). The performance metrics include factors such as the adoption of eco-friendly practices, the responsible use of resources, and how these actions contribute to the long-term sustainable goals of the organization.

### **Green Employee Empowerment (GEE)**

Employee empowerment is a process that fully involves human resources to achieve the organizational goals (Jackson et al., 2014). The company is aware that its goals will only be realized with the active involvement of its employees. Therefore, companies must increase the employees' awareness, to realize their sustainability goals through GEE (Daily et al., 2012). GEE is a process that actively engages with the employees to achieve the company's green goals (Tariq et al., 2016). To obtain the required level of GEE, the employees must demonstrate the knowledge, skills, and resources to support their ability to achieve sustainability goals and environmental responsibility (Hameed et al., 2020). With GEE, companies seek ways to have a more positive impact on the environment, and at the same time, reduce their negative environmental impacts, in order to achieve their sustainability goals.

### **Organizational Citizenship Behavior toward the Environment (OCBE)**

A specific form of OCB is OCBE, which lays emphasis on environmental sustainability in organizations (Boiral, 2009). This reflects the voluntary actions of employees supporting environmental goals without expecting anything in return. In addition to benefiting the organizations, this also helps address the broader environmental issues they face (Lamm et al., 2013; Pham et al., 2019).

Employees who are oriented toward OCBE should be considered as very valuable by companies that are committed to sustainability. Their behavior supports the three main goals of a company, namely its social, environmental, and financial performance (Khan et al., 2021). Such behavior usually improves the overall performance of the company (Azam et al., 2022).

OCB has numerous dimensions, including eco-helping, eco-initiatives, and eco-civic engagement (Boiral & Paille, 2012). Eco-helping consists of employees who assist each other to solve environmental problems, which can include sharing their knowledge about sustainable practices and encouraging their coworkers to behave in a more environmentally friendly manner. Meanwhile, eco-initiatives include the employees' efforts to achieve the stated sustainability goals, through such means as water and energy conservation, emissions' reductions, and encouraging recycling. Finally, eco-civic engagement deals with the employees' involvement in environmental programs that are supported by their organization, such as their participation in green events, supporting the company's mission, and volunteering to take part in environmental projects.

### **The Effect of Environmental Transformational Leadership on Green Employee Empowerment**

GEE is the key element of GHRM. This seeks to empower employees, so they will engage in sustainable practices, such as waste reduction and energy conservation (Hameed et al., 2020). The level of the employees' engagement, along with the perceived value of their roles, determine the effectiveness of GEE (Adi et al., 2021). On the other hand, ETL is a leadership style that stresses the need for environmental awareness (Li et al., 2023). Unlike traditional forms of leadership that often rely on coercive tactics or material incentives, ETL's focus is on inspiring employees to adopt environmentally friendly practices, including recycling and the use of renewable energy supplies (Niazi et al., 2023; Kura, 2016). This leadership style is known to be effective as it encourages environmentally friendly behavior within organizations.

ETL's impact on GEE is noteworthy because it has been known to inspire employees to innovate in their sustainable practices (Priyadarshini et al., 2023; Singh et al., 2020). By creating a supportive environment, and providing the necessary resources, including training and emotional support, ETL assists in increasing the employees' pro-environmental behavior. In addition, the effectiveness of GEE largely depends on how responsible and valued the employees feel within the organization (Adi et al., 2021).

Based on these theoretical considerations, the following hypothesis can be derived:

H<sub>1</sub>: Environmental transformational leadership has a positive influence on green employee empowerment.

### **The Effect of Green Employee Empowerment on Organizational Citizenship Behavior toward the Environment**

The voluntary actions by employees that support organizational sustainability, such as energy conservation, waste reduction, and minimizing hazardous materials is usually referred to as OCBE (Zhao et al., 2021). These actions benefit organizations greatly, by helping them to achieve their sustainability goals, which may include reducing their environmental impacts, enhancing their resource efficiency, and bolstering their reputations as responsible entities (Muisyo et al., 2022). However, GEE's aim, as a human resource management strategy, is to promote environmental sustainability (Amrutha & Geetha, 2023). This strategy includes training, the allocation of resources, and rewards that encourage environmentally responsible behavior by the employees (Tariq et al., 2016). The ultimate aim is to enhance their ecological awareness and practices.

GEE and OCBE are closely entwined (Amrutha & Geetha, 2023). If employees are empowered through GEE, their employers can increase OCBE through the training and resources they provide (Hameed et al., 2020). This empowerment increases the employees' motivation and commitment, and develops a culture that supports sustainable development (Muisyo et al., 2022). Research indicates that GEE is crucial for enhancing OCBE, as empowered employees tend to feel more involved and responsible for conserving the environment.

The next hypothesis in this study posits that:

H<sub>2</sub>: Green employee empowerment positively influences organizational citizenship behavior toward the environment.

### **Environmental Transformational Leadership on Organizational Citizenship Behavior towards the Environment**

The style of leadership plays a vital role in shaping the employees' behavior. One successful leadership style is called transformational leadership, which is known to have the ability to foster voluntary, positive behavior among employees (Öğretmenoğlu et al., 2021; Chen & Chang, 2013). This approach is recognized as a significant catalyst for motivating employees, so they will align with their organization's goals and interests (Priyankara et al., 2018). One specific form of transformational leadership is ETL. This style of leadership focuses on inspiring employees to contribute to their organization's goals (Niazi et al., 2023).

There are both direct and indirect effects in the promotion of environmentally conscious behavior among employees from ETL, due to its transformative nature (Asghar et al., 2022). One noticeable outcome of an effect of ETL is OCBE, which can be characterized as the acts that are carried out by employees, which benefit the environment, and are beyond their job requirements (Mi et al., 2019; Althnayan et al., 2022).

The social exchange theory (SET) provides a strong theoretical foundation for understanding the relationship between ETL and OCBE (Nohe & Hertel, 2017). SET posits that relationships, including those in organizational settings, are built on reciprocal exchanges where employees engage in positive behavior, in return for perceived fairness and benefits from their leaders. In this context, ETL can be considered "fair" and "beneficial" when it fosters an eco-friendly organizational culture, provides support, and shows genuine commitment to the environmental goals. Those leaders who display ETL inspire and engage the employees through transparent communication, shared decision-making, and recognition of their contributions, thus motivating the employees to reciprocate by voluntarily engaging in environmentally responsible behavior. The reciprocal nature of SET is reflected in the way employees, who have been motivated by the leadership's fairness and environmental commitment, adopt OCBE both within the organization and the broader community (Chen et al., 2014).

Based on the comprehensive review of the relevant literature, a further research hypothesis can be posited:

H<sub>3</sub>: Environmental transformational leadership exhibits a positive impact on organizational citizenship behavior toward the environment.

### **The Mediating Role of Green Employee Empowerment in the Relationship between Environmental Transformational Leadership and Organizational Citizenship Behavior toward the Environment**

OCBE comprises of the voluntary actions taken by employees that are not in their job descriptions, which positively impact the environment (Li et al., 2023). Such actions are crucial if companies want to achieve their sustainability goals, as the employees' high environmental awareness enhances the companies' green performance (Chang et al., 2019).

ETL is a leadership style that motivates people to actively participate in conserving the environment (Liu & Yu, 2023). Its leaders articulate a compelling vision centered on eco-friendly practices and it creates opportunities for employees to contribute to sustainability. GEE also fosters an organizational environment that empowers the employees to help reduce the damage caused to the environment (Hameed et al., 2020). This starts by providing the necessary knowledge

and skills for effective environmental management, increasing the likelihood of positive impacts within organizations.

Literature indicates that GEE acts as a mediator between ETL and OCBE (Zaki & Norazman, 2019; Priyadarshini et al., 2023). When leaders inspire and guide employees to prioritize environmental issues, OCBE tends to develop (Luu, 2019). This phenomenon occurs because employees, empowered by a focus on green goals, are motivated to exceed basic expectations and engage in conservation efforts.

In light of the above discussion, another hypothesis for further research is posited:

H<sub>4</sub>: Green employee empowerment serves as a mediator in the relationship between environmental transformational leadership and organizational citizenship behavior toward the environment.

### The Moderating Role of Green Human Resources Management in the Relationship between Environmental Transformational Leadership and Green Employee Empowerment

GEE empowers employees, so they can help in realizing their company's sustainability goals (Saeed et al., 2019). When the employees are authorized and given the facilities and resources to be fully involved in environmental management, they will be motivated to care about the environment (Tariq et al., 2016). GEE is an essential aspect for companies because GEE can improve the employees' performance, which has an impact on the company's green performance (Rashid et al., 2023).

One of the factors that can increase GEE is ETL (Priyadarshini et al., 2023). ETL is a leadership style that focuses on the development and implementation of environmentally friendly practices in the company (Niazi et al., 2023). The goal is to inspire employees to support the achievement of the company's sustainability goals. ETL is considered effective in increasing GEE because it motivates and provides opportunities for employees to be actively involved in achieving green goals (Priyadarshini et al., 2023).

GHRM acts as a moderator that strengthens the relationship between leaders and employees (Tuan, 2022). Based on AMO theory, employee performance is influenced by ability, motivation, and opportunity (Kellner et al., 2019). GHRM can moderate the relationship between ETL and GEE through functions such as recruitment, training, and compensation, which support the company's sustainability goals (Saeed et al., 2019). In addition, GHRM improves employee motivation and well-being through training and sustainability programs, which have a positive impact on engagement and the environment.

Referring to the discussion, the hypothesis is:

H<sub>5</sub>: Green human resources management moderates the relationship between environmental transformational leadership and green employee empowerment.

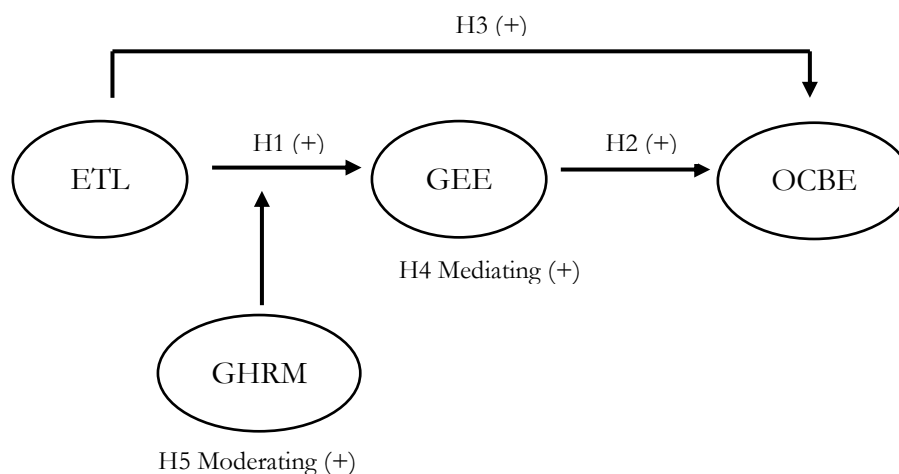


Figure 1. Research Model

## **Research Methods**

### **Sampling**

This research's focus was not on a particular industry, as it aimed to observe how GHRM exists in Indonesia, in general. The organizations targeted in this study were companies based in Java, private and public companies. Although the study focused on this region, the results are considered to represent Indonesia as a whole, since Java is the country's economic hub. These companies implement GHRM practices in significant ways. They include environmentally-friendly policies in their human resources' management. The sampling method used was purposive sampling, where the respondents were selected based on a specific criterion, namely having at least one year of work experience. This criterion was chosen to ensure that the respondents had an adequate knowledge and understanding of their workplaces' dynamics (Creswell, 2014).

The study undertook a pilot test beforehand, conducted on a small sample of 30 respondents who were employees working in companies in Indonesia for at least one year. The result of the pilot test indicated that the questionnaire was statistically validated and proven to be reliable.

### **Data Collection**

Data collected through online surveys distributed across various social media platforms, taking advantage of the efficiency and geographical reach of this method (Wright, 2005). The size or measurements to be used in this survey will include a Likert scale from 1 (strongly disagree) until 5 (strongly agree).

## **The Definition of Operational Variable and Measurement**

### **Environmental Transformational Leadership (ETL)**

ETL refers to "leader behavior that motivates followers to achieve environmental goals and inspires them to perform beyond expected environmental performance levels" (Chen and Chang, 2013). Leaders who focus on environmental transformation specifically seek to create and shape corporate environmental responsibility (Robertson & Carleton, 2018). Leadership behavior includes environmental idealistic influences, environmental inspirational motivation, environmental intellectual stimulation, and environmental individual considerations (Robertson & Carleton, 2018). This research adopts a six-item scale to measure ETL developed by Chen and Chang (2013). The ETL scale has been widely used and validated in previous studies. As a concrete example of a variable item is "Leaders provide a clear vision regarding environmental sustainability for employees to follow".

### **Green Human Resources Management (GHRM)**

The study conducted by Renwick et al. (2013) took three different perspectives in GHRM related to environmental management. First, they suggest that GHRM should integrate and encourage green behavior in employee recruitment, selection, and training processes. The second perspective involves stimulating and encouraging employees by evaluating and rewarding them for the green behavior they demonstrate. No less important, effective GHRM must also ensure that environmentally friendly practices are implemented within the organization to support green innovation initiatives carried out by employees. The GHRM approach to changing organizational culture, structure, strategy and policies for environmental protection plays a crucial role in contributing to the organization's sustainable development, as stated by (Ahmad, 2015). To measure GHRM practices, a scale adapted from previous research by Tariq et al. (2016). Examples of variable items include "My organization sets environmental sustainability goals for its employees".

### **Green Employee Empowerment (GEE)**

GEE refers to when empowered employees use this to achieve their environmental goals (Tariq et al., 2016). The environmental goals included in GEE involve practices such as double-sided



photocopying, recycling, using energy-efficient equipment, and recycling old office furniture (Hameed et al., 2020). Organizations are able to achieve their sustainable green goals with GEE. For example, the managers can provide development support and feedback to empower the employees, which helps them when carrying out their green tasks (Daily et al., 2012; Tariq et al., 2016). GEE was measured with an adapted version of the employee psychological empowerment scale (Spreitzer, 1995). To measure GEE, we reformulated the wording to include green behavior or green jobs when the original wording only referred to work or work. An example of a variable item is “The environmentally friendly work I do is very important to me”.

### **Organizational Citizenship Behavior toward the Environment (OCBE)**

OCBE is a form of voluntary behavior that can be defined as “individual social behavior that is discretionary and not explicitly recognized by formal reward systems, but contributes to more effective environmental management by organizations” (Boiral, 2009, p. 223). Lamm et al. (2013) stated that OCBE involves feelings of sustainability inside and outside the organization, which can help it achieve its environmental goals (Azam et al., 2022).

Boiral and Paille (2012) categorize OCBE into three more inclusive dimensions: (1) eco-initiatives that include environmentally friendly actions by workers, such as recycling, saving water, saving energy, and other voluntary activities to maintain an environmentally friendly environment; (2) eco-helping assumes that employees will cooperate with their colleagues when they have to deal with environmental problems; and (3) eco-civic engagement represents a sense of participation and action by the employees, which relates to environmental improvements such as workshops and seminars organized by the companies or other entities. Seven items that were developed by Boiral and Paille (2012) are used to assess how workers carry out innovative and spontaneous behavior aimed at environmental improvement. An example of a variable item is “I suggest new practices that can improve my organization’s environmental performance”.

### **Data Collection Result**

In the process of collecting quantitative data, several important demographic aspects were identified. First, regarding gender, respondents consisted of 84 men (58.7%) and 59 women (41.3%). Second, the age distribution revealed that 23 people (16.1%) were in the age range of 10-25 years old, 85 people (59.4%) were in the range of 26-41 years old, 32 people (22.4%) were in the range of 42-57 years old, and 3 people (2.1%) aged 58-67 years old. Third, the respondents’ domicile covers various regions, namely Banten (10.5%), West Java (14%), DKI Jakarta (34.7%), Central Java (6.4%), DIY (25.7%), East Java (5.7%), and other regions (2.9%). The educational attainment of the respondents in descending order is as follows: 2 individuals (1.5%) graduated from high school or vocational school, 3 individuals (2.2%) are Associate degree graduates, 111 individuals (77.3%) hold a Bachelor’s degree, and 27 individuals (19%) have obtained a Master’s degree.

The study involved a total of 143 respondents, 63 were employees from state-owned enterprises (SOEs) based in the finance, telecommunications, and construction sectors. This represented approximately 44.1% of the total respondents. The other 80 respondents, accounting for the remaining 55.9%, were private sector employees working in the financial, service, telecommunications, retail, and construction industries. All the respondents who completed the questionnaire had been working in their companies for at least one year.

## **Results and Discussion**

### **Data Analysis**

This study investigates the relationships among the hidden variables in the proposed model. Data analysis was performed using SmartPLS version 4.0.9.5 with the PLS-SEM approach. This is effective for exploratory research, relevant for forecasting, and it is suitable for use with small sample sizes (Hair et al., 2017). As outlined by Hair et al. (2017), applying PLS-SEM involves two key stages: First, validating the measurement model to ensure the indicators are valid and reliable;

Second, validating the structural model to test the hypotheses regarding the relationships between the hidden variables, which measures the model’s explanatory power. Additionally, this study considers the potential for common method bias (CMB) influencing the results (Podsakoff et al., 2003). To address this matter, the researchers clarified that there are no right or wrong answers and maintained the questions’ clarity. A full collinearity test using PLS-SEM was conducted to identify any potential CMB, this followed Podsakoff et al. (2003)’s guidelines. The results in Table 2 show that all the VIF values are below the threshold, indicating that CMB has no significant effect in this study.

**Table 1.** Outer Model Results

Construct	Item	Outer Loadings	CR	AVE	Cronbach’s Alpha
Environmental transformational leadership	ETL1	0.872	0.946	0.842	0.962
	ETL2	0.932			
	ETL3	0.932			
	ETL4	0.950			
	ETL5	0.936			
	ETL6	0.879			
Green human resource management	GHRM1	0.863	0.943	0.770	0.940
	GHRM2	0.892			
	GHRM3	0.928			
	GHRM4	0.827			
	GHRM5	0.898			
	GHRM6	0.853			
Green employee empowerment	GEE1	0.848	0.915	0.645	0.907
	GEE2	0.847			
	GEE3	0.831			
	GEE4	0.730			
	GEE5	0.839			
	GEE6	0.807			
	GEE7	0.708			
Organizational citizenship behavior toward the environment	OCBE1	0.836	0.943	0.739	0.941
	OCBE2	0.878			
	OCBE3	0.860			
	OCBE4	0.884			
	OCBE5	0.844			
	OCBE6	0.895			
	OCBE7	0.819			

Source: Primary data processed, 2023

**Table 2.** Evidence for Discriminant Validity

	Fornell-Larcker Criterion				HTMT Ratio				
	GEE	GHRM	OCBE	ETL	GEE	GHRM	OCBE	ETL	GHRM x ETL
GEE	<b>0.803</b>				GEE				
GHRM	0.541	<b>0.877</b>			GHRM	0.577			
OCBE	0.727	0.611	<b>0.860</b>		OCBE	0.776	0.649		
ETL	0.680	0.820	0.654	<b>0.917</b>	ETL	0.723	0.860	0.683	0.507
					GHRM x ETL	0.140	0.364	0.104	

Note. GEE: Green employee empowerment; GHRM: Green human resource management; OCBE: Organizational citizenship behavior toward the environment; ETL: environmental transformational leadership.

Source: Primary data processed, 2023

**Table 3.** Result of Structural Model

Relationship	Path Coefficient (CI 95%)	t-value	p-value	VIF	f <sup>2</sup>	R <sup>2</sup>	Q <sup>2</sup>	Supported?
H1 ETL → GEE	0.914 (0.681 – 1.146)	7.961	0.000***	3.577	0.502	0.576	0.459	Yes
H2 GEE → OCBE	0.525 (0.320 – 0.713)	5.153	0.000***	1.860	0.349			Yes
H3 ETL → OCBE	0.298 (0.131 – 0.481)	3.261	0.001**	1.860	0.112			Yes
H4 ETL → GEE → OCBE (GEE mediating)	0.480 (0.257 – 0.717)	3.905	0.000***					Yes
H5 GHRM x ETL → GEE (GHRM moderating)	0.233 (0.080 – 0.374)	3.253	0.001**	1.343	0.153			Yes

Note. GEE: Green employee empowerment; GHRM: Green human resource management; OCBE: Organizational citizenship behavior toward the environment; ETL: environmental transformational leadership.

\*p<0.05; \*\*p<0.01; \*\*\*p<0.000.

Source: Primary data processed, 2023

### Outer Model

In the outer model test, there are several statistical indicators that support the reliability and validity of the model. First, as seen in Table 1, the outer loading of all variable items is above 0.7, indicating that each item is valid as an indicator of its construct. Second, the composite reliability (CR) value for the ETL construct is 0.964, GHRM 0.943, GEE 0.915, and OCBE 0.943, all above the threshold of 0.7, indicating a very good level of reliability. The same thing also happens with Cronbach's alpha. All the constructs have a value of more than 0.7, which indicates that all the constructs are reliable. In addition, the average variance extracted (AVE) value for each construct is also above 0.5, with ETL having an AVE of 0.842, GHRM 0.770, GEE 0.645, and OCBE 0.739, indicating good convergent validity.

Table 2 confirms that our model meets Fornell and Larcker's criteria for discriminant validity. The square root of the average variance extracted (AVE) for each construct is higher than its correlation with the other constructs. This shows that each construct is unique and measures something different. In addition, all Heterotrait-Monotrait ratio (HTMT) values are below 0.9, which eliminates concerns about multicollinearity. These results strengthen the reliability and validity of the model in analyzing the relationship between GHRM and ETL, as well as the impact of GEE and OCBE, in the context of organizations in Indonesia, in accordance with the support of Hair et al. (2017).

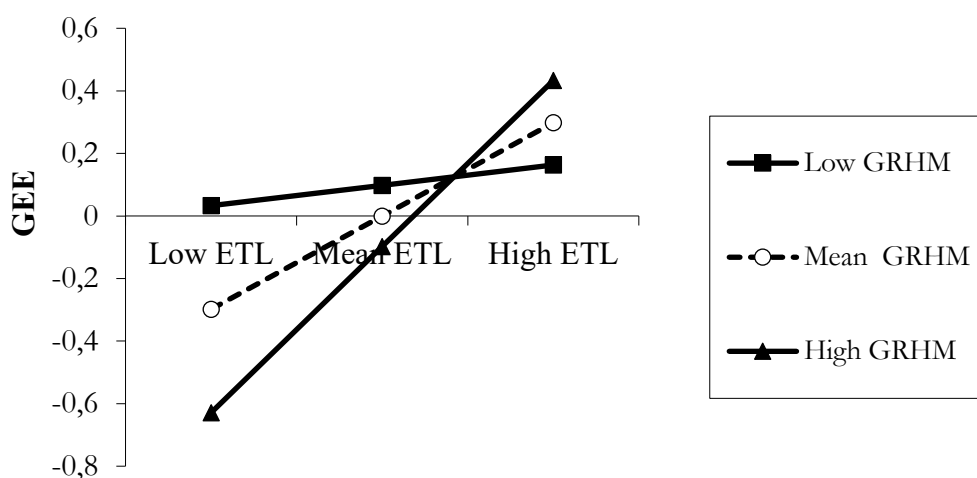
### Inner Model

Based on the data in Table 3, the hypotheses are overall strongly supported. Hypothesis 1 shows that ETL has a significant effect on GEE, with a path coefficient of 0.914 and a p-value of 0.000. Other metrics such as VIF of 3.577 and f<sup>2</sup> of 0.502 confirm the significance of this result (Hair et al., 2017). Hypothesis 2 is also accepted, where GEE has a significant effect on OCBE with a path coefficient of 0.525, a t-value of 5.153, and a p-value of 0.000. The VIF value of 1.860 and f<sup>2</sup> of 0.349 further confirm the significance of the effect. Hypothesis 3, which states that ETL has a direct effect on OCBE, is accepted with a path coefficient of 0.298, t-values of 3.261, and p-values of 0.001. Although this effect is significant, the f<sup>2</sup> value of 0.112 indicates a moderate effect. This could be due to the presence of other variables that also affect OCBE or because ETL affects OCBE through a more complex mechanism.

Based on the mediation test criteria by Baron and Kenny (1986), hypothesis 4 meets all the requirements. However, it is important to note that mediation by GEE was partial. This means that even though ETL influences GEE and OCBE, and GEE influences OCBE, the direct effect from ETL to OCBE remains significant. This indicates the existence of other mechanisms or variables that also affect the relationship between ETL and OCBE. This phenomenon requires further exploration to understand the variables or other mechanisms that may be involved (Baron & Kenny, 1986). In addition, the results of this indirect effect obtained a t-value of 3.905 and a p-

value of 0.000 which indicates that the indirect effect is concluded to be significant. In addition, the path coefficient value of 0.480 is in the confidence interval range of 0.257 to 0.717 does not pass zero which means the effect is significant. The nature of the mediation between ETL → GEE → OCBE is partial mediation which is based on the calculation results of Variance Accounted For (VaF) of  $0.480 / 0.777 = 0.618$  where the value is in the range of 20% to 80% (Hair et al, 2017).

Hypothesis 5 explores the role of GHRM as a moderating variable. The findings show that the effect from ETL to GEE fluctuated, based on the level of GHRM, with a path coefficient of 0.233, t-values of 3.253, and p-values of 0.000. This shows that GHRM does act as a driver that strengthens or weakens the effect of ETL in increasing GEE. In addition, the path coefficient value for the interaction variable GHRM and ETL of 0.233 is in the confidence interval range of 0.080 to 0.374 does not pass zero, which means its influence is significant. Based on the theory by Sharma et al. (1981), the moderation nature of GHRM on the relationship between ETL and GEE is pure moderation because the influence between GHRM and GEE is concluded to be insignificant ( $p$ -value  $0.467 > 0.05$ ).



**Figure 2.** Moderation Plot ETL\*GHRM → GEE

In Figure 2 above, it can be stated that the higher the GHRM value, the higher the GEE value, which is indicated by a sharply increasing line. In other words, the influence of ETL on GEE will be stronger when the GHRM value is low and the GHRM value is high, so that a line crossing is obtained at low GHRM, mean GHRM, and high GHRM along the observed ETL value.

With an  $R^2$  of 0.576 and a  $Q^2$  of 0.459, this model has good predictive power and explains a large enough variation. This confirms the reliability and validity of this model, in the context of organizations in Indonesia (Hair et al., 2017). As such, this analysis offers a more complex and layered insight into the interactions between ETL, GEE, OCBE, and GHRM, all of which are relevant in the context of sustainable organizations in Indonesia.

The results of the analysis using G\*Power obtained the minimum sample results for the research conceptual framework of 119. In this study, a sample size of 143 was used, which is greater than the minimum sample that must be met. The actual power value that can be produced with a minimum sample size of 119 is 0.9516, which means that the statistical test carried out has a very large power value and is free from type II statistical errors.

## Discussion

This research examines the influence the variables ETL, GEE, OCBE, and GHRM as a moderator. The first hypothesis, which states that ETL positively influences GEE, is supported. This result shows that GEE is influenced by leaders who demonstrate ETL. This finding agrees with the result of research conducted by Priyadarshini et al. (2023). This positive influence may be a transformational leader who can communicate to the employees about the importance of sustainability. One of the characteristics of an ETL leader is being able to motivate and invite

people who are willing to be empowered and actively become involved in meeting the company's green goals.

The second hypothesis in this study shows that GEE can positively influence OCBE. These results are similar to previous research (Hameed et al., 2020; Muisyo et al., 2022). This finding shows that when an employee is empowered to fulfill the company's green goals, OCBE will be able to grow in the employee. Employees are empowered, and the company gives them the authority and responsibility to care more about the environment and apply it in their work. The sense of responsibility for the environment is in their work and outside. In other words, employees are willing to positively influence the environment outside of work without expecting rewards because they care about the environment.

The third hypothesis stating that ETL has a positive impact on OCBE is proven, in line with previous studies (Mi et al., 2019; Althnayan et al., 2022). Based on social exchange theory, employees who get positive things from leaders will try to give their best for the company (Nohe & Hertel, 2017). In this study, the positive relationship between ETL and OCBE arises because leaders are able to provide inspiration, motivation, and be role models for employees, while supporting the company's goals related to environmental sustainability. When a company has environmentally friendly goals, a leader must encourage the employees to support these goals. Then, when the employees show they are willing to contribute to realizing these environmentally friendly goals, they will demonstrate environmentally friendly behavior when carrying out their work. When ETL encourages environmentally friendly behavior, the employees will make their leaders their role models. When exemplary behavior is firmly ingrained in the employees' minds, they will be willing to apply environmentally friendly principles inside and outside of work. Their behavior is not based on rewards but on their participation in preserving the environment.

The fourth hypothesis in this study was accepted. This shows that GEE can partially play a role as a mediator in the relationship between ETL and OCBE. This partial mediation occurs because the relationship between ETL and OCBE in this study is known to be significantly positive, so GEE only partially helps to link the relationship between ETL and OCBE. These results are in accordance with research previously conducted by (Priyadarshini et al., 2023). GEE is a situation where employees are empowered and given authority and responsibility to contribute to achieving green goals through their work at the company. An ETL leader can empower employees to create a more environmentally friendly company. This empowerment not only gives rise to environmentally friendly employee behavior but can also give rise to OCBE. OCBE is a situation where employees realize the importance of environmentally friendly behavior, which is carried out in the context of the company and the environment outside the company. In this way, employees will not hesitate to show behavior that cares about the environment wherever they are.

The fifth hypothesis is that GHRM moderates the relationship between ETL and GEE, which is proven to be accepted. These results are in accordance with previous research conducted by (Tuan, 2022). The fifth hypothesis that is approved is in line with the AMO theory. According to this theory, an employee's performance is influenced by the abilities they have, the motivation they get, and the opportunities provided by the company (Kellner et al., 2019). If these three elements are met, an individual can achieve optimal performance. It is assumed that these three factors are implemented in GHRM. The ability to undertake environmentally friendly work is realized through training and development, and the motivation to be more environmentally friendly is obtained from a performance appraisal system based on the company's green goals. Meanwhile, the third factor in AMO, opportunity, is strengthened by empowering employees with the responsibility and authority to do environmentally friendly work. Thus, GHRM can be a moderator of the influence of ETL on GEE.

## Implication and Conclusion

Employee behavior in environmental conservation is essential for companies focused on sustainability. Known as OCBE, these voluntary pro-environmental actions play a vital role in achieving a company's green goals. Therefore, fostering OCBE among employees is a priority for organizations. One way to encourage OCBE is through GEE. By actively involving employees in

green practices and giving them relevant responsibilities, they will be more involved in environmental conservation efforts. This kind of empowerment in the workplace also impacts their environmental awareness outside the work environment.

In addition, ETL strengthens OCBE among employees. Leaders who implement ETL can motivate and guide employees towards sustainable practices, which in turn improves the company's green performance. Therefore, cultivating ETL traits in leadership is essential to strengthening OCBE. GHRM also plays a role in strengthening the effects of ETL on GEE. Key functions of GHRM, such as green training programs, can increase employee awareness of environmental issues, encouraging their involvement in green initiatives. Therefore, companies need to implement GHRM strategies such as green recruitment, training, and performance-based rewards to create a workforce committed to sustainability.

This study has several limitations that provide opportunities for future research. First, it does not account for individual environmental values among employees, suggesting that subsequent studies could include variables like 'environmentalism value'. Second, the study encompasses a multi-generational workforce rather than focusing on a specific age group like Generation Z. Future research could zoom in on this emerging demographic. Third, the research is confined to the Indonesian context, and extending it to other regions, such as Southeast Asia, could provide a more comprehensive view. Lastly, the study is not industry-specific, offering a generalized discussion. Future research could target particular industrial sectors for a more focused and detailed analysis.

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