GREEN TRANSFORMATIONAL LEADERSHIP IN IMPROVING GREEN WORK BEHAVIOUR OF EMPLOYEE, WITH GREEN ORGANIZATIONAL CITIZENSHIP BEHAVIOUR AS MEDIATION

Tony Harisinta

Program Studi Doktor Ilmu Manajemen Fakultas Ekonomi dan Bisnis Universitas Palangka Raya

tonyharisinta@gmail.com

https://doi.org/10.37715/rmbe.v4i1.4805

Abstract— It is important to raise awareness about environmentally-friendly behaviour in organizations, especially organizations in government offices, which has begun expanding research related to green staff behavior. The aim of this study is to test green organizational citizenship behavior (GOCB) in mediating the influence between Green Transformation Leadership (GTL) and Employee Green Behavior (EGB). By using the survey method on 163 respondents who were willing to fill in the survey. By using the upsilon (v) statistical value test method to see the power of mediation influence in this model. The research findings explain that GOCB strongly mediates the relationship between Green Transformational Leadership (GTL) and Green Work Behavior (GWB) of employees.

Keyword*: green transformation leadership, green organizational citizenship behavior, Green Work Behavior*

1. Introduction

Concerns about the current environment have increased in recent years, thus impacting on environmental disasters. Because of the relocation of production facilities by multinational corporations owned by entrepreneurs in developed countries to developing countries, developing nations are more vulnerable to this challenge. (Habib et al., 2020). The environment has been affected by rapid globalization, which has resulted in global warming, air pollution, water contamination, and chemical and toxic explosions. (Geng et al., 2017). Therefore, it becomes important to raise awareness about environmentally friendly behaviour (Chen & Chang, 2013a). As time passes, environmentally friendly activities are becoming increasingly popular due to global warming and extreme weather conditions. (Abbas, 2020). Environmental management systems in organizations depend on the development and maintenance of their competences and capabilities (Biscotti et al., 2018), where the largest violation of environmental sustainability is committed by small and medium-sized enterprises. (UKM). It is due to the lack of skills and motivation of employees and the organizational capacity needed to address complex challenges in environmental sustainability. (Boiral et al., 2014). Top management has the ability to influence the green behavior of its employees, as described by (Yen & Yen, 2012); (W. Zhang et al., 2020) and (Cahyadi et al., 2023). Similarly, employees can demonstrate responsible behaviour towards the environment at their workplace (Francoeur et al., 2021; Paillé & Raineri, 2015).

Some research findings that comment on green behavior (Young et al., 2015; Aboramadan, 2022; Dumont et al., 2017; Francoeur et al., 2021). Regardless of different approaches, whether critical or systematic, these reviews all have one common characteristic, they provide a comprehensive analysis of the chosen themes aimed at understanding the nature of green behavior, determining the causes and effects of such behaviors, and describing techniques and methods of appropriate intervention in an organizational context. Interestingly, not a single study deals with the operationalization of green behavior, even how the role of leaders to bring change into green behaviour at work. Leadership and human resource management play an important role in the development of the company's internal competence and capabilities, but from a different perspective. (Cahyadi et al., 2023; Chen et al., 2014; Sambung, 2022). Leadership that emphasizes on understanding, predicting and controlling personal and

interpersonal dynamics of how employees influence each other to common goals (Northouse, 2021) and MSDM practices that focus on systems and processes to influence employees in a systematic way on a larger scale can be predictors in improving green performance in an organization.

Transformational leadership is a style of leadership that is widely studied in governmental organizations as well as in business organizations. (Alrowwad et al., 2020; Augi et al., 2020; Hartati et al., 2023; Priyadarshini et al., 2023; Sambung, 2020). In an effort to support green environments, green behavior, and green resource management practices, there's begun to flourish about green leadership styles, especially the green transformational leadership style. (Singh et al., 2020; Siyal et al., 2022; W. Zhang et al., 2020). Organizational leaders must be able to practice Green Transformation Leadership (GTL) (Y. Zhang & Chen, 2013) and Green Human Resource Management (GHRM) (Aboramadan, 2022b; Ali et al., 2022; Dumont et al., 2017b). The role of the leader is vital in the organization, because it will be able to change and control the behavior of employees within the organization and can create a working climate that affects the commitment and satisfaction of employees. (Sambung et al., 2022). According to (Singh et al., 2020) the increased GTL shown by organizational leaders can improve GHRM practices, such as increased green ability, green motivation, and green opportunity. However, there is no test of the direct relationship between GTLs to green employment behavior of officials. It encourages researchers to study the relationship. Green Working Behavior (GWB) is an environmental management concept for employee work behavior. Green work behaviour can be formulated as an employee's conduct dedicated to producing, promoting and realizing green or environmentally friendly ideas. Employee Green Behavior refers to environmental behavior that favours the individual (Norton et al., 2015). Green behavior in roles refers to the inclusion of green formal duties as a fundamental component of an employee's performance assessment. Green extra role behaviors refer to environmentally friendly actions of volunteerism that go beyond the employees' formal work responsibilities and are not evaluated in their performance assessments (Paillé, 2013).

To expand the GWB literature in public sector organizations, the study proposes a model of how green transformational leadership (GTL) is able to enhance or influence employee green behavior. Where Green Organization Citizenship Behavior (OCB) is supposed to be able to mediate the relationship between GTL and GWB. It extends HRM research (Aboramadan et al., 2020b) and Green HRM study (Fawehinmi, 2020) in public sector organizations, government. This study contributes to the OCB's green working behavior for the GHRM literature, making it unique. These research contributions also help us understand how GTL affects employee green work behavior in the workplace. (Cahyadi et al., 2023). This study contributed to advancing the theoretical lens of the ability-motivation-opportunity (AMO) in the context of public sector organizations on how green transformation leadership and voluntary behavior or green OCBs create green work behaviors. We believe that AMO provides a paradigm of guidance to better utilize the theory, predict and control human resources within organizations. Second, this study shows that green transformation leadership directly and indirectly through green OCBs affects the process of green work behavior. Our study offers an empirical explanation of why and how green GTL styles are needed to shape and influence green employee work behaviour in the workplace.

2. Literature Review

We examined the relationship between HRM and performance using the ability-motivation-possibility theory (AMO), which shows that the abilities, motivations, and opportunities of employees influence organizational performance. This integrated perspective shows why and how strategic HRM leaders and practitioners improve company performance. The Ability-Motivation-Opportunity Theory (AMO) (Appelbaum et al., 2000) is often used in HRM performance studies. (Bos-Nehles et al., 2013). According to the AMO hypothesis, HRM strategies affect employee abilities (recruitment & selection, training & development), motivation (reward, incentive, and remuneration), and opportunities (teamwork, empowerment) to contribute to business performance. (Gerhart, 2005). (Appelbaum et al., 2000; Guest, 2011). According to the AMO theory, GHRM practices in organizations aim to motivate and reward employees to management goals through environmentally friendly processes and product innovation, which leads to superior green company performance. (Boselie et al., 2005). Using the AMO Theory (Appelbaum et al. 2000), G HRM helps companies with extensive architecture attract, train, motivate, and maintain

green human talent to enhance the performance of green companies through sustainable innovation in processes, products, and services. (Gerhart, 2005).

Green Transformation Leadership (GTL)

The relationship between transformative leadership and organizational performance is well established, but the specific factors that moderate this relationship are still unknown and very interesting to academics (Para-González et al., 2018; Singh et al. 2020). Transformational Leadership is the behavior of a leader that enables them to be a foundation for his followers, to be admired, respected and trusted, and to make followers admire him. (Bass et al., 2006). In this study, we define the concept of Green Transformational Leadership (GTFL) as a leadership style that focuses on providing clear vision, inspiration, motivation, and support to employees to help them their organizational environmental goals. This definition is supported by the works (Chen & Chang, 2013a; Mittal & Dhar, 2016). Leaders who demonstrate green transformational leadership behavior can act as a booster for employees by sharing environmental values, discussing the importance of sustainability and showing commitment to environmental issues. Green transformational leadership is an important element in improving the green performance of a company. (Zafar et al., 2019). Northouse (2015) defines Green Transformation Leadership (GTL) as a leadership style that inspires and motivates its followers to shared goals related to environmental sustainability. This definition becomes one of the underlying concepts of GTL. The European Union has implemented various policies and regulations that encourage organizations to adopt GTL, such as the European Green Deal and Taxonomy Regulation, as well as the United States government providing various educational and training programmed on GTL through Small Business Administration and the Environmental Protection Agency, while the Chinese government has funded research on the GTL and supported organizations that implement GTL via grants and loans. GTL motivates employees to acquire new knowledge (Le and Lei, 2018) and makes them engage and engage in process and green product innovation related activities that enable companies to introduce environmentally friendly products and/or services to the market (Andriopoulos, and Lewis, 2010) and to improve their environmental performance (Dranev et al., 2018).Research results Wang et al. (2023) show that GTL improves green employee behavior through green psychological empowerment. GTL creates a work environment that supports and encourages employees to behave in an environmentally friendly manner. GTL enhances Organizational Citizenship Behaviour (OCB) which supports a sustainable organization culture (Ardianto, 2022). GTL also improves sustainable organizational performance through green Innovation and organizational support (Ren et al, 2022).GTL refers to actions taken by leaders to encourage their followers to environmental goals and beyond the expected levels of environmental performance. (Chen & Chang, 2013b; Siyal et al., 2022). Green transformation leaders influence employees by implementing environmentally friendly strategies, articulating clear visions for sustainability, setting goals in line with green initiatives, promoting mutual trust, and introducing innovative ideas. (Chen & Chang, 2013b). The relationship between GTL and EGB is directly affected, as shown by Al-Swidi et al. (2021). According to Ones and Dilchert (2012), EGB refers to extendable employee activities and behaviour that are associated and/or contribute to or hinder environmental sustainability. Therefore, academics often define EGB as pro-ecological employee behavior, employee green work behaviors, EGB at work, and green employee conduct. Based on the EGB's defense, it can be explained that there is a direct relationship between the style of green transformational ownership in improving employee environmentally friendly behaviors at work. So that the interim answers can be compiled in this study are:

Hypothesis 1: Green transformative leadership enhances green employee behavior.

Green Organizational Citizenship Behavior (GOCB)

In-role behavior refers to the act of performing the job in accordance with the tasks outlined in the job description. A business should have assessed employee performance based on more than just the activities outlined in their job descriptions. In order to successfully complete these duties, additional roles are required. (Sambung et al., 2012). Organizational Citizenship Behavior (OCB) refers to the additional contributions made by workers that go beyond the requirements of their formal job description (Smith et al., 1983). Chou (2014) posits that green employee behavior exhibits pro-social characteristics. In addition, Ramus and Killmer (2007) contend that

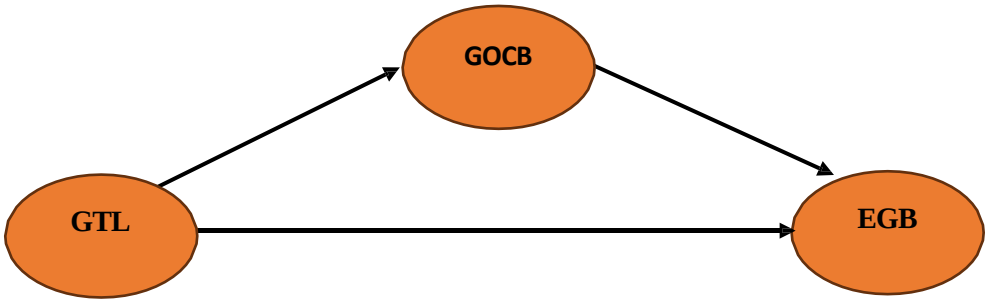
integrating green behavior into both internal and external responsibilities within the ordinary workplace is crucial, as it generates value and improves organizational outcomes. The manner in which a business organizes and sets expectations for its personnel plays a crucial impact in shaping their behavior, encompassing both in-role and extra-role conduct. According to Paillé (2013). In order to cultivate accurate and well-informed perceptions of the firm, it is imperative for organizations to proficiently convey their green policies and environmental principles to both current and prospective personnel. (Dumont et al., 2017). The impact of green transformative leadership on Green Organization Citizenship Behavior (GOCB) is found to be beneficial. Furthermore, the study conducted by ÝÈretmenoğlu, Akova, and Göktepe (2022) suggests that there is a partial mediating effect of green organizational citizenship behavior on the association between green transformative leadership and green creativity. The findings of the study indicate that there exists a mediating role of GTL and GOCB in the relationship between GTL and staff creativity

Hypothesis 2: Green transformational leadership increases green organizational citizenship behaviors
Hypothesis 3: Green organizational citizenship behaviors mediate the relationship between green transformative leadership and green employee behavior.

Employees' Green Behavior (EGB)

The concept of EGB emerged from the reflection of scientists on the environmental issues of life in the 1960s. (Omarova & Jo, 2022). Ones and Dilchert (2012) define EGB as "measured actions and behaviour carried out by associated employees and contributing to or reducing environmental sustainability." Therefore, scholars often describe EGB to be employee behaviours that are pro-environmental, employee conduct that is environmentally friendly, EGB in the workplace, and employee attitude that is eco-friendly. GTL is capable of raising green employment behavior officers (Cahyadi et al., 2023). Green Employee Behavior (EGB) includes a series of actions aimed at minimizing the negative environmental impact of the organization. These actions include saving energy, using resources efficiently, minimizing waste, practicing water conservation (Adriana et al. 2020), prioritizing environmental concerns, implementing programmes and policies, engaging in lobbying and activism, and promoting sustainable practices to others. (Faeq et al. 2021). The importance of EGP in concern for environmental sustainability has become an important thing to be constantly examined in a study these days. Based on the results of some of these studies, it is explained that there is a relationship between GTL and EGP, so the hypothesis of this study is:
Hypothesis 4: Green transformational leadership enhances green employee behavior

Research Framework. The study aims to present a model that tests the impact of green transformative leadership (GTL) in government organizations on environmentally friendly employee work behavior at the individual level. Specifically, he focuses on the citizenship behavior of the green organization. (GOCB). Figure 1 shows that the GOCB is proposed to function as an intermediary mechanism between the connections mentioned above.



Note; Green Transformational Leadership (GTL); Green Organizational Citizenship Behavior (GOCB); Employee Green Behavior (EGB)

3. Research Methods

3.1 Participants and Procedures

Data collected from civil government officials who work in the government offices of Pulang Pisau, including functional and non-functional PNS. A total of 225 questionnaires were distributed, 163 returned, and a total of 163 can be used for statistical analysis using SmartPLS 4.0. Respondents were characterized by 99 (60.7%) males and 64 (39.3%) females, with an education level of 63 (38.7%) undergraduate/diploma 4, 49 (30.1%) S2, 31 (19%) high school degrees and 19 (11.7%) diplomas. Job experience of 44 respondents (27%) 10-15 years, 35 (21,5%) 5-10 years, 31 (19%) over 21 years, and 24 (14.7%) with less than 5 years of work experience. Respondents aged over 46 years were 48 (29.4%), aged between 41-45 years were 32 (19.6%), age between 36 – 40 years 28 (17.2%), age from 31 to 35 years 28 (17.2%) and age between 26-30 years 17 (10.4%) and under 25 years 10 (6.1%).

3.2 Statistical Strategy

The author uses PLS-SEM to evaluate the study hypothesis (Hair et al., 2018). PLS-SEM is commonly used in a wide range of scientific fields, including human resources management, marketing, strategic management, and hospitality. (Ringle et al., 2018; Hair et al., 2012; Ali et al., 2018). SEM PLS is a multivariate statistical analysis to estimate the influence between variables performed simultaneously with reference to the study of exploration/prediction/ development of structural models. This is because the algorithm built in the SEM PLS is to maximize the value of the R square of endogenous variables. On the basis of such an algorithm then the SEM pls is called SEM with the flow of study of exploration/prediction/ development of structural models or SEM based on variance.

3.3 Variable measurement

Green Transformational Leadership

'Green transformational leadership', and referring to Bass (1998) and Gardner and Avolio (Chen & Chang, 2013) define it as "the behavior of a leader who motivates his followers to environmental goals and inspires his supporters to do environmental performance beyond the level expected." Furthermore, we refer to Podsakoff dkk (1996) to measure environmentally friendly transformational Leadership, and his measurement includes six items on a scale of 5 namely 1 very dissatisfied, 5 very satisfied.

Green Organizational Citizenship Behavior (OCB)

Green behavior in the role. It was measured using a three-item scale developed by (Bissing-Olson et al., 2013). One sample item was "I completed the assigned task in an environmentally friendly way." The Cronbach alpha for this construction was 0.667. This is measured using a three-item scale developed by (Bissing-Olson et al., 2013), to assess voluntary green behavior. One sample item is "I take the initiative to act in an environmentally friendly way at work." Alpha Cronbach for this construction is 0.667

Green employee work behavior

GWB is defined as "measured actions and behaviors carried out by employees associated with and contributing to or reducing environmental sustainability." Employee Green Working Behavior refers to a six-item scale developed by Cott & Bruce, (1994) and modified by adding 1 item used to measure employee green work behavior. However, in this study the items were modified with green work behavior in the district to adapt to the research purposes. One sample item is "I Investigate, and secure the funds needed to implement the new green ideas" Alpha Cronbach for this construction is 0.866. with green behavior.

4. Result and Discussion

Model evaluation in the PLS is carried out with two step approach which is two steps where evaluates the measurement model to obtain qualifying conditions and continues with structural model evaluation to evaluation of model quality.

Table 1. Result of model constructs

Construct	Indicator	Item reliability	Convergent validity		
		Loadings	CR	Alpha	AVE
Green Transformasional Leadership	GTL1	0,950			
	GTL2	0,959			
	GTL3	0,974	0,979	0,948	0,794
	GTL4	0,967			
	GTL5	0,937			
Green Organizatioanl Citizenship	GeR1	0,887			
Behavior (OCB)	GeR2	0,881			
	GeR3	0,829	0,955	0,977	0,917
	GiR1	0,893			
	GiR2	0,927			
	GiR3	0,925			
Green Work Behavior	GWB1	0,906			
	GWB2	0,928			
	GWB3	0,949	0,963	0,959	0,805
	GWB4	0,860			
	GWB5	0,787			
	GWB6	0,891			
	GWB7	0,947			

Note: CR = Composite Reliability; AVE = average variance extracted

Loading Factor (LF) or outer loading is a correlation between a set of measurement items with a variable. Rule of thumb, Hair et al (2021), Henseler et al (2009) using LF ≥ 0.70 is acceptable. LF results are all above 0.7. Internal reliability consistencies shown by composite reliability (CR) are all with values greater than 0.7. In addition to Composite Reliability, other measurements that describe the level of reliability or internal consistency are Cronbach's Alpha and Rho A. The results of all studies have values above 0.7. Average variance extracted (AVE) is the rate of variation of each measurement item contained by the variable. How far the overall variable can explain the variation of the measurement item, the research results AVE value ≥ 0.50.

Table 2. Discriminant Validity of Constructs

Variables	GOCB	GTL	GWB
Discriminant Validity: Fornel–Larcker Criterion			
GOCB	**0,891**		
GTL	0,792	**0,957**	
GWB	0,767	0,709	**0,897**
Heterotrait–Monotrait Criterion			
GOCB			
GTL	0,815		
GWB	0,794	0,728	

Note: GTL = Green Transformational Leadership; GOCB = Green Organizatioanl Citizenship Behavior; GWB = Green Work Behaviour

We also discriminatory validity (DV) based on the Fornell-Larcker criteria and the Heterotrait-Monotrait criteria. The Fornel-Lalker criteria indicate that the AVE square root of any structure is higher than the highest correlation of the structure with the other structure in the model. The results show that the correlation between structures has a greater value than other structures. Compared to the Heterotrait-Monotrait (HTMT) correlation criteria ratio, it is better than the traditional approach to discriminatory validity assessment because the values are much lower than both the Fornel-Larcker criteria and cross-loading using 0.85 as the corresponding threshold level. (Hair et al., 2017). Although this method is often used in applied research, it is not possible to reliably detect issues

of discriminatory validity. (Hair et al., 2017) stated that this HTMT measurement is better used than the fornell and lacker criterion methods in detecting discriminatory validity. Therefore, the Discriminant Validity (DV) is better assessed using the HTTMT (Henseler et al. 2015). The DV is used to measure how different other constructions use empirical standards. To a satisfactory level of DV, the results showed that all constructions have a HTMT score <0.90, and the 97.5% bootstrap confidence interval shows all the corresponding values, thereby suggesting that the entire research constructions (GOCB, GTL and GWB) differ conceptually and empirically from each other.

Assessment of Structural Modelling Path Coefficients

Table 2. Testing for Potential CMB Based on Full Collinearity

Construct	Inner VIF
Green OCB	2,681
Green Transformational Leadership	1,000
Green Work Behavior	2,681

Note. VIF = variance inflation factor.

If the inner VIF >5 then there's a multicollinear assumption. Nevertheless, in (Hair et al., 2017) VIF values between 3-5 there is a potential occurrence of a multicollinear and the ideal is when VIF < 3.

Assessment of Structural Modeling Path Coefficients

Table 3. Path Coefficients for Direct Effects.

Hypotheses	Original sample (O)	T statistics	P values	Report
Green TransformasionalLeadership -> Green OCB	0,792	15,710	0,000*	Supported
Green OCB -> Green Work Behavior	0,553	4,001	0,000*	Supported
Green Transformasional Leadership -> Green Work _Behavior	0,271	1,754	0,080	Not Supported

Note P values < 0,01*

The results in the table above show that our path coefficient is significant. The results showed that all tracks were statistically significant except GTL versus GWB. The structural tracks of the remaining construction were significantly based on two-tail tests at $p < 0.05$. In Hypothesis 1, we estimate that GTL has a positive effect on GWBs. As shown in the table above, this is not statistically significant in GWB ($t = 1,754$, $p < 0,080$). This suggests that the GTL cannot directly affect GWB and the hypothesis is unacceptable. The hypothesis 2 also estimates that there is a positive and statistically significant relationship between GTL and GOCB. It is also proven to be determined at ($t = 15,710$, $p <0,000$) that supports the effect proposed in the hypotheses 2; therefore, GTL is capable of increasing the accepted GOCB hypothesis. Hypothesis 4 is also estimated that GOCB has a statistically and significantly positive influence on GWB. It is also proven to be determined at ($t = 4,001$, $p <0,000$) that supports the effect put forward in Hypothermia 4; therefore, GOCB is capable of increasing GWB, the hypothesis is accepted.

Table 4. Path Coefficients for Indirect Effects.

Hypotheses	Original sample (O)	T statistics	P values	Report
Green _Transformational Leadership -> Green OCB -> Green _Work _Behavior	0,438	4,241	0,000*	Supported

Note P values < 0,01*

Table 4 above shows that t values and p values respectively ($t = 4,241$, $p <0,000$); therefore, the estimate that GOCB mediates the relationship between GTL and GWB proved positive and significant, this means the hypothesis was accepted. To see whether the influence of the exogenous latent variable on the endogenic late variable has mediated influence i.e. with the values recommended by Cohen in (Ogbeibu et al., 2021) that are values of 0.175 (high mediation), 0.075 (mediation moderate), and 0.01 (low mediation).

Tabel 5. Statistic upsilon (v)

f-square (Direct effect)		Mediation effect	
GTL -> GOCB	1,681		
GTL-> GWB	0,071	GTL ->GOCB -> GWB	0,192
GOCB -> GWB	0,297		

Note: GTL = Green Transformational Leadership; GOCB = Green Organizational Citizenship Behavior; GWB = Green Work Behaviour

Based on the mediation value above GTL -> GOCB -> GWB with a value of 0.192 (high mediation effect), Cohen in (Ogbeibu & Gaskin, 2023) is 0.01 (low mediation effect), 0.075 (mediation impact) and 0.175 (High mediation effect).

The assessment of the model's quality can be observed using various metrics: According to Hair et al. (2019), the R square value The square R values of 0.75, 0.50, and 0.25 correspond to the concepts of substantive influence (high), moderate influence, and weak influence, respectively. Chin (1998) states in Henseler et al (2009) that the R Square values are 0.67 (high), 0.33 (moderate), and 0.19 (weak). The study results indicate that the R2 value for GOCB is 0.627 (62.7%), suggesting that the influence of GTL is significant. The representative GTL and GOCB have a high influence of 0.616 (61.5%) on GWB. The Q square, which represents the predictive accuracy of the PLS path model, is quantified by the Q Square redundancy, often known as Q Square. This metric quantifies the extent to which a model is predictively relevant. A Q-squared value greater than zero suggests that the external variable possesses predictive significance in relation to the endogenous variable. This value is acquired by a methodology known as a blindfolding technique. The results indicated that the Q2 values for GOCB, GTL, and GWB were 0.480, 0.00, and 0.481, respectively. GTLs exhibit poor predictive values, whereas GOCBs and GWBs demonstrate moderate values. According to Hair et al (2019), a Q square value of 0 (low), 0.25 (mid), or 0.50 (high) indicates the predictive accuracy of the model. The F Square, also known as the f2-effect size, quantifies the magnitude of the variable's impact within a structural model. The study findings indicate that the impact of GTL on GOCB was 1,681 (significant), GOCB on GWB was 0.297 (current), and GTL on GWB is 0.071 (big). The f2 effect size in Hair et al (2021) and Henseler (2009) is interpreted as follows: 0.02 (low), 0.15 (high), and 0.35 (big). The effect size of f^2 alone accounts for the extent of the direct impact. According to the Standardized Root Mean Square Residual (SRMR), a metric used to assess model fit, a standardized average of all residuals of 0.056 within the range of 0.08 indicates a favourable level of model matching. Yamin (2021).

Table 6. *PLS Predict*

Indicators	PLS-SEM_RMSE	PLS-SEM_MAE	LM_RMSE	LM_MAE
GeR1	0,700	0,509	0,719	0,512
GeR2	0,679	0,515	0,709	0,531
GeR3	0,826	0,638	0,825	0,653
GiR1	0,628	0,471	0,632	0,438
GiR2	0,660	0,503	0,679	0,498
GiR3	0,640	0,500	0,654	0,490
GWB1	0,802	0,516	0,761	0,477
GWB2	0,841	0,602	0,833	0,606
GWB3	0,802	0,594	0,810	0,564
GWB4	0,841	0,606	0,857	0,616
GWB5	0,996	0,760	1,032	0,792
GWB6	0,812	0,606	0,835	0,598
GWB7	0,814	0,605	0,823	0,579

The predictive accuracy of the model is considered high when the relative mean squared error (RMSE) or mean absolute error (MAE) value of the Partial Least Squares (PLS) model is lower than that of the Naive Linear Regression Model comparator. If the majority of the RMSE and MAE values of PLS models are lower than those of the NAIVE LM comparator, it indicates that the model has a moderate level of predictive potential. Based on the

data processing, the majority of measurements (10 out of 26) indicate that the RMSE, MAE, and PLS values are lower than those of the linear regression model. This suggests that the model has a moderate level of predictive potential.

5. Conclusions and Practical Implication

The objective of this study is to investigate the impact of green transformational leadership variables on the prediction of green work shifts among employees, both through direct and indirect means. Consistent with prior scholarly investigations, we have constructed a theoretical framework that elucidates the causal connection between green transformational leadership, Green Organizational Citizenship Behavior (both in the position of green and in additional roles), and Green Work Behavior (GWB). Partial Least Square Structural Equation Modeling (PLS-SEM) version 4 is employed in this study based on compelling justifications and in accordance with current guidelines for the evaluation and assessment of the proposed model. Subsequently, model validity tests are conducted in order to address the issue of endogen. This assessment entails the identification of factors and the determination of nonlinear effects.

In order to prioritize the execution of directives that promote environmentally-friendly work behaviour by encouraging improved employee-organizational conduct, policymakers in the district government should address the policy implications of the findings. The primary responsibility of a leader is to serve as a role model and promote the adoption of environmentally friendly practices in the workplace. It will contribute to environmental conservation. Government district leaders are recommended to initiate efforts to enhance environmentally friendly practices in the workplace, including conserving room lighting, minimizing plastic trash, and adopting information systems or technology to minimize work-related waste. The regulation should specifically promote the adoption of environmentally-friendly practices in the workplace by fostering the establishment of an ecologically sustainable working environment. The model we have created examines the influence of GOCB in mediating the links between leadership style and the promotion of environmentally-friendly work behaviour. The ramifications of these discoveries may extend beyond the confines of the academic setting. In the framework of green transformational leadership (Siyal et al., 2022), leadership plays a crucial role in setting an example and promoting caring behavior within a group. Hence, it is crucial to offer executives training to cultivate a compassionate mindset towards the natural environment and endorse initiatives for Green Environment Conservation, thereby aiding in the mitigation of global warming.The route coefficient in our model holds practical value, indicating that leaders can indirectly influence the development of green employment behaviors among staff by enhancing the citizenship behavior of staff organizations (OCBs). Government organizations will incorporate Green Human Resource Management and Employee Green Behavior as executives develop environmentally-friendly plans, objectives, initiatives, and principles. Furthermore, the efficacy of the green workplace behavior notion is contingent upon the pivotal role played by the leader within the organizational setting.

Limitation

The data gathering period in this study spans around one month. The present evaluation pertains to a governmental entity situated within a district in the Middle Kalimatan region. Additional data could be collected over extended durations, encompassing regions where land is utilized for fertilization or reproduction, in order to assess GTL, GOCB, and EGB. Models without moderation solely focus on three variables, hence limiting the scope of further investigation to encompass the notion of Green HRM inside a single study model, serving as a mediator.

6. References

Abbas, J. (2020). Impact of total quality management on corporate green performance through the mediating role of corporate social responsibility. *Journal of Cleaner Production, 242.* https://doi.org/10.1016/j.jclepro.2019.118458

Aboramadan, M. (2022a). The effect of green HRM on employee green behaviors in higher education: the mediating mechanism of green work engagement. *International Journal of Organizational Analysis*, *30*(1), 7–23. https://doi.org/10.1108/IJOA-05-2020-2190

Aboramadan, M. (2022b). The effect of green HRM on employee green behaviors in higher education: the mediating mechanism of green work engagement. *International Journal of Organizational Analysis*, *30*(1), 7–23. https://doi.org/10.1108/IJOA-05-2020-2190

Ali, M., Puah, C. H., Ali, A., Raza, S. A., & Ayob, N. (2022). Green intellectual capital, green HRM and green social identity toward sustainable environment: a new integrated framework for Islamic banks. *International Journal of Manpower*, *43*(3), 614–638. https://doi.org/10.1108/IJM-04-2020-0185

Alrowwad, A., Abualoush, S. H., & Masa'deh, R. (2020). Innovation and intellectual capital as intermediary variables among transformational leadership, transactional leadership, and organizational performance. *Journal of Management Development*, *39*(2), 196–222. https://doi.org/10.1108/JMD-02-2019-0062

Augi, G. G., Sambung, R., & Panjaitan, O. W. O. (2020). Pengaruh Gaya Kepemimpinan Demokratik Terhadap Kinerja Karyawan Dengan Menggunakan Motivasi Sebagai Variabel Moderator. *Jurnal Manajemen Sains Dan Organisasi*, *1*(1), 1–15. https://doi.org/10.52300/jmso.v1i1.2366

Biscotti, A. M., D'Amico, E., & Monge, F. (2018). Do environmental management systems affect the knowledge management process? The impact on the learning evolution and the relevance of organisational context. *Journal of Knowledge Management*, *22*(3), 603–620. https://doi.org/10.1108/JKM-08-2017-0344

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. https://doi.org/10.1002/job.1788

Boiral, O., Baron, C., & Gunnlaugson, O. (2014). Environmental Leadership and Consciousness Development: A Case Study Among Canadian SMEs. *Journal of Business Ethics*, *123*(3), 363–383. https://doi.org/10.1007/s10551-013-1845-5

Bos-Nehles, A. C., Van Riemsdijk, M. J., & Kees Looise, J. (2013). Employee perceptions of line management performance: Applying the AMO theory to explain the effectiveness of line managers' HRM implementation. *Human Resource Management*, *52*(6), 861–877. https://doi.org/10.1002/hrm.21578

Cahyadi, A., Natalisa, D., Poór, J., Perizade, B., & Szabó, K. (2023). Predicting the Relationship between Green Transformational Leadership, Green Human Resource Management Practices, and Employees' Green Behavior. *Administrative Sciences*, *13*(1). https://doi.org/10.3390/admsci13010005

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

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

Chen, Y. S., Chang, C. H., & Lin, Y. H. (2014). Green transformational leadership and green performance: The mediation effects of green mindfulness and green self-efficacy. *Sustainability (Switzerland)*, *6*(10), 6604–6621. https://doi.org/10.3390/su6106604

Chou, C. J. (2014). Hotels' environmental policies and employee personal environmental beliefs: Interactions and outcomes. *Tourism Management*, *40*, 436–446. https://doi.org/10.1016/j.tourman.2013.08.001

Dumont, J., Shen, J., & Deng, X. (2017a). Effects of Green HRM Practices on Employee Workplace Green Behavior: The Role of Psychological Green Climate and Employee Green Values. *Human Resource Management*, *56*(4), 613–627. https://doi.org/10.1002/hrm.21792

Dumont, J., Shen, J., & Deng, X. (2017b). Effects of Green HRM Practices on Employee Workplace Green Behavior: The Role of Psychological Green Climate and Employee Green Values. *Human Resource Management*, *56*(4), 613–627. https://doi.org/10.1002/hrm.21792

Francoeur, V., Paillé, P., Yuriev, A., & Boiral, O. (2021). The Measurement of Green Workplace Behaviors: A Systematic Review. *Organization and Environment*, *34*(1), 18–42. https://doi.org/10.1177/1086026619837125

Geng, R., Mansouri, S. A., & Aktas, E. (2017). The relationship between green supply chain management and performance: A meta-analysis of empirical evidences in Asian emerging economies. *International Journal of Production Economics*, *183*, 245–258. https://doi.org/10.1016/j.ijpe.2016.10.008

Habib, M. A., Bao, Y., & Ilmudeen, A. (2020). The impact of green entrepreneurial orientation, market orientation and green supply chain management practices on sustainable firm performance. *Cogent Business and Management*, *7*(1). https://doi.org/10.1080/23311975.2020.1743616

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, Marko. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (second edtion). Sage.

Hartati, I., Sambung, R., & Siolemba Patiro, S. P. (2023). Pengaruh Gaya Kepemimpinan Transformasional dan Kepercayaan Terhadap Kepuasan Kerja yang Dimediasi oleh Motivasi Kerja Pegawai Negeri Sipil Kabupaten Lamandau. *Syntax Literat; Jurnal Ilmiah Indonesia*, *8*(3), 2037–2054. https://doi.org/10.36418/syntax-literate.v8i3.11538

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Mittal, S., & Dhar, R. L. (2016). Effect of green transformational leadership on green creativity: A study of tourist hotels. *Tourism Management*, *57*, 118–127. https://doi.org/10.1016/j.tourman.2016.05.007

Northouse, P. G. (2021). *Leadership; Theory and Practice* (Ninth Edition). SAGE Publications, Inc.

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 and Environment*, *28*(1), 103–125. https://doi.org/10.1177/1086026615575773

Ogbeibu, S., & Gaskin, J. (2023). Back from the Future: Mediation and Prediction of Events Uncertainty through Event-Driven Models (EDMs). *FIIB Business Review*, *12*(1), 10–19. https://doi.org/10.1177/23197145221121084

Ogbeibu, S., Jabbour, C. J. C., Gaskin, J., Senadjki, A., & Hughes, M. (2021). Leveraging STARA competencies and green creativity to boost green organisational innovative evidence: A praxis for sustainable development. *Business Strategy and the Environment*, *30*(5), 2421–2440. https://doi.org/10.1002/bse.2754

Omarova, L., & Jo, S. J. (2022). Employee Pro-Environmental Behavior: The Impact of Environmental Transformational Leadership and GHRM. *Sustainability (Switzerland)*, *14*(4). https://doi.org/10.3390/su14042046

Paillé, P. (2013). Organizational citizenship behaviour and employee retention: how important are turnover cognitions? *The International Journal of Human Resource Management*, *24*(4). https://doi.org/10.1080/09585192.2012.697477

Paillé, P., & Raineri, N. (2015). Linking perceived corporate environmental policies and employees eco-initiatives: The influence of perceived organizational support and psychological contract breach. *Journal of Business Research*, *68*(11), 2404–2411. https://doi.org/10.1016/j.jbusres.2015.02.021

Para-González, L., Jiménez-Jiménez, D., & Martínez-Lorente, A. R. (2018). Exploring the mediating effects between transformational leadership and organizational performance. *Employee Relations*, *40*(2), 412–432. https://doi.org/10.1108/ER-10-2016-0190

Priyadarshini, C., Chatterjee, N., Srivastava, N. K., & Dubey, R. K. (2023). Achieving organizational environmental citizenship behavior through green transformational leadership: a moderated mediation study. *Journal of Asia Business Studies*, *17*(6), 1088–1109. https://doi.org/10.1108/JABS-05-2022-0185

Ramus, C. A., & Killmer, A. B. C. (2007). Corporate greening through prosocial extrarole behaviours - A conceptual framework for employee motivation. *Business Strategy and the Environment*, *16*(8), 554–570. https://doi.org/10.1002/bse.504

Sambung, R. (2020). Pelatihan dan Kepemimpinan Visioner dalam meningkatkan Kreativitas Pegawai di Kalimantan Tengah. *Matrik : Jurnal Manajemen, Strategi Bisnis Dan Kewirausahaan*, 169. https://doi.org/10.24843/matrik:jmbk.2020.v14.i02.p04

Sambung, R. (2022). The role of leadership style in improving organizational performance. *Jurnal Inovasi Ekonomi*, *07*, 127–140. https://doi.org/10.22219/jiko.v7i02.22050

Sambung, R., Ekonomi dan Bisnis, F., & Hermawati, A. (2022). Analyzing The Role Of Organizational Commitment And Job Satisfaction In Minimizing Turnover Intention. *Universitas Brawijaya. Journal of Applied Management (JAM)*, *20*(3), 461–476. https://doi.org/10.21776/ub.jam.2022

Sambung, R., Thoyib Armanu, Troena, E. A., & Surachman. (2012). Pengaruh Kepuasan Kerja, Komitmen Organisasional, Kepribadian dan Profesionalisme Dosen terhadap Organizational Citizenship Behavior serta Dampaknya terhadap Kinerja Dosen (Studi pada Universitas Palangka Raya). *JAM: Jurnal Aplikasi Manajemen*, *10*(1), 12–20. https://doi.org/http://dx.doi.org/10.18202/jam.v10i1.396

Scott, S. G., & Bruce, R. A. (1994). Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace. In *Source: The Academy of Management Journal* (Vol. 37, Issue 3).

Singh, S. K., Giudice, M. Del, Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological Forecasting and Social Change*, *150*. https://doi.org/10.1016/j.techfore.2019.119762

Siyal, S., Salamzadeh, Y., Cerchione, R., & Gelaidan, H. M. (2022). *Green transformational leadership and green creativity? The mediating role of green thinking and green organizational identity in SMEs*.

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational Citizenship Behavior: Its Nature and Antecedents. In *Journal of Applied Psychology* (Vol. 68, Issue 4).

Yen, Y. X., & Yen, S. Y. (2012). Top-management's role in adopting green purchasing standards in high-tech industrial firms. *Journal of Business Research*, *65*(7), 951–959. https://doi.org/10.1016/j.jbusres.2011.05.002

Young, W., Davis, M., McNeill, I. M., Malhotra, B., Russell, S., Unsworth, K., & Clegg, C. W. (2015). Changing Behaviour: Successful Environmental Programmes in the Workplace. *Business Strategy and the Environment*, *24*(8), 689–703. https://doi.org/10.1002/bse.1836

Zhang, W., Xu, F., & Wang, X. (2020). How green transformational leadership affects green creativity: Creative process engagement as intermediary bond and green innovation strategy as boundary spanner. *Sustainability (Switzerland)*, *12*(9). https://doi.org/10.3390/su12093841

Zhang, Y., & Chen, C. C. (2013). Developmental leadership and organizational citizenship behavior: Mediating effects of self-determination, supervisor identification, and organizational identification. *Leadership Quarterly*, *24*(4). https://doi.org/10.1016/j.leaqua.2013.03.007