ETHICAL LEADERSHIP AS A TOOL FOR EMPLOYEE GREEN BEHAVIOUR

Fatoki O.*

Abstract: The study explores the effects of ethical leadership on employee in-role and extra-role green behaviour through the mediating lens of green intrinsic motivation and organisational green work climate perception. In addition, the study examines the moderating role of green extrinsic motivation in the relationship between green intrinsic motivation and green behaviour. The study adopted the quantitative research method, and a structured questionnaire was used to collect data from hotel employees. The study sample was made up of supervisors and managers of functional departments in three, four and five-star hotels located in Pretoria and Johannesburg in the Gauteng Province of South Africa. Supervisors/ managers of various functional departments or work units were used as the study sample because they are more likely to be conversant with the environmental policies and strategies of their hotels. They are also more likely to have informed information about the ethical behaviour of top managers, and their jobs are more likely to have environmental performance elements built into them. The participants in the survey were selected using the convenience sampling method. In the study, 280 employees participated in the survey out of 450 contacted. The Partial Least Square Structural Equation Modelling was used to conduct data analysis. The findings of the study support the mediating role of green intrinsic motivation and organisational green work climate perception. The moderating effects of green extrinsic motivation were found to be insignificant. Additionally, the findings of the study show how leadership, employee and organisational factors can improve green behaviour. The study provides a new, previously untested theoretical model depicting green motivation and organisational green work climate perception as mechanisms through which ethical leadership can influence employee green behaviour.

Keywords: Ethical leadership, employee green behaviour, green motivation, organisational green work climate perception

DOI: 10.17512/pjms.2023.27.2.05

Article history:
Received April 21, 2023; *Revised* May 08, 2023*; Accepted* June 04, 2023

Introduction

Environmental challenges have been caused by rapid industrial growth and this has led to resource depletion, decrease of biodiversity and climate change. This status quo has thrust climate change to the centre of business conversations and practices in order to ensure the sustainability of the environment. Environmental sustainability is the responsible interaction with the environment to avoid depletion or degradation od natural resources and allow long-term environmental quality Gillapsy, 2022).

* **Olawale Fatoki**, Prof, PhD, Department of Business Management, University of Limpopo, South Africa; ✉ email: olawale.fatoki@ul.ac.za,
ORCID: 0000-0003-1539-8333

Environmental sustainability is a vital part of human and business survival (Fatoki, 2020). There is the recognition that environmental management must be included in a firm's management strategies in order to gain sustainable competitive advantage (Faisal and Naushad, 2020). Due to external pressure from customers and governments, many firms have aligned environmental functions with organisation performance (Faisal and Naushad, 2020).

Employees are one of the most important stakeholders in an organisation and their contribution and participation are vital to the effectiveness of a firm's environmental protection strategy (Mateen et al., 2022). Employee workplace green behaviour can be described as a series of behaviour that are implemented by employees to reduce negative environmental effects and promote ecological sustainability (Norton et al., 2016). Employee workplace green behaviour has in-role and extra-role dimensions and both can lead to positive organisational outcomes and help to create sustainable value for an organisation (Islam *et al.*, 2020). In-role green behaviour refers to green formal tasks that are included as a part of an employee's job description while extra-role green behaviour is voluntary (Aboramadan, 2022). Leaders can influence environmental performance in organisations through ecological commitment and the development of environmental strategies. Leadership is an essential element of organisational sucess (Wesselink et al., 2017; Amin et al. 2019). One leadership style that can positively impact on the environment is ethical leadership. Ethical leadership is a concept that upholds the rights of others through implementig practices that honour the dignity of employess in and outside the office (Zhang et al., 2018). Ethical leadership creates an ideal environment for employee commitment. This stimulates positive work outcomes from employees (Ahadiat and Dacko-Pikiewicz, 2020). Ahmad and Umrani (2019) and Islam *et al.* (2020) point out that there is need for future studies to advance knowledge on the mechanism through which ethical leadership can affect employee job related outcomes such as green behaviour. To address this call, this study draws on employee green motivation (intrinsic and extrinsic) and organisational green work climate perception. Green intrinsic motivation is an individual factor that describes the motivation that occurs within a person to engage in green behaviour (Li et al., 2020; Ali et al., 2020). Green extrinsic motivation comes from outside the individual and describes the motivation to protect the environment because of approval of others, reward or punishment avoidance (Li et al., 2020; Ali et al., 2020). Organisational green work climate perception focuses on the perception of employees about organisational attributes that support green behaviour (Norton et al., 2014). The study is premised on the following objectives (1) to examine if ethical leadership can positively influence hotel employee in-role and extra-role green behaviour (2) to investigate if green intrinsic motivation and organisational green climate perception can mediate the relationship between ethical leadership and in-role and extra-role green behaviour and (3) to determine if green extrinsic motivation can moderate the relationship between green intrinsic motivation and in-role and extra-role green behaviour.

Literature Review

The Social Learning Theory (SLT) by Bandura (1977) was used as the theoretical basis for the study. The SLT focuses on the significance of observing, modelling, and imitating the attitude and behaviours of others (Bandura, 1977). Brown et al. (2005) proposed the SLT as the theoretical basis for understanding ethical leadership. The SLT perspective of ethical leadership contends that a leader influences the ethical conduct and prosocial behaviour of subordinates through modelling (Brown et al., 2005). Furthermore, ethical leaders become credible, legitimate and attractive role models by engaging in behaviours that are evaluated by subordinates as appropriate and suggest altruistic rather than selfish motivation (Brown *e*t al., 2005).

Khan et al. (2019) ein a stusyd on ethical leadership and work behaviour and performance found that ethical leadership positively affects a lot of work related behavious and performance because its key features include altruism, honesty, fairness, and social responsiveness. The findings by Khan et al. (2019) indicate that a supervisor's ethical leadership is positively related to organisational citizenship behaviour for the environment. These findings are consistent with Dey et al. (2022)'s results. Dey's study examined the effects of ethical leadership on employee voluntary green behaviour using a data set of mid-level managerial employees from selected industries in Bangladesh. The findings showed that ethical leadership positively affects employee voluntary green behaviour and this in turn positively affects firm sustainable performance. An ethical leader works as a role model for employees, inspires and communicates environmental vision and strategy to employees. The study also found that ethical leadership positively affects in-role and extra-role pro-environmental behaviour. Consequently, the current study hypothesises that: H1a: Ethical leadership and employee in-role green behaviour are significantly positively related. H1b: Ethical leadership and employee extra-role green behaviour are significantly positively related.

Yidong and Xinxin (2013) found that ethical leadership can invoke employee intrinsic motivation in many ways and these include (1) an ethical leader gives meaning to work, highlights the importance of task accomplishment on organisational goals and embeds moral standards; and (2) an ethical leader provides subordinates with the opportunity to develop their abilities to accomplish their tasks and improves their competence and self-efficacy which in turn improves their intrinsic motivation (Yidong and Xinxin, 2013). Li et al. (2020) investigated the relationship between green transformational leadership and green intrinsic motivation. He found that a green transformational leader stimulates employees to be involved in green activities. The findings of the study indicated a significant positive relationship between green transformational leadership and green intrinsic motivation. This suggests that in the context of greening, an ethical leader highlights to employees the importance of green organisational goals, embeds green standards, and develops employee green self-efficacy. This in turn invokes green intrinsic

motivation. The study hypothesises that: H2: Ethical leadership is significantly positively related to employee green intrinsic motivation.

Ali et al. (2020) investigated the effects of green intrinsic motivation on green purchasing intention. The study argues that consumers that are intrinsically motivated for green environment are likely to purchase green electronic products. The study found that green intrinsic motivation positively influences the intention to purchase green electronic products. Norton et al. (2015) also found that there is a significant positive relationship between intrinsic motivation and employee pro-environmental behaviour. Li et al. (2020) also found that employee green creativity increases when they are intrinsically motivated to undertake tasks that protect the environment. This means thatthere is a significant positive relationship between green intrinsic motivation and employee green creativity. Therefore, the inherent interest in the protection of the environment can drive an employee to undertake activities that will protect the environment. It is hypothesised that: H3a: Green intrinsic motivation and employee in-role green behaviour are significantly positively related. H3b Green intrinsic motivation and employee extra-role green behaviour are significantly positively related.

The findings of the study by Danish et al. (2020) show that intrinsic motivation mediates the relationship between ethical leadership and organisational citizenship behaviour. The mediating role role of green intrinsic motivation is further supported by studies by Li et al. (2020) and Ali et al. (2020). It is hypothesised that H4a: Green intrinsic motivation positively mediates the relationship between ethical leadership and employee in-role green behaviour. H4b: Green intrinsic motivation positively mediates the relationship between ethical leadership and employee extra-role green behaviour.

Isci et al. (2015) examined the effects of leadership on organisational climate in a meta-analysis of ninety-nine studies and found that leadership has a significant positive effect on organisational climate. Mishra and Tikoria (2021) concurs that one of the most important factors affecting organisational climate is the daily behaviour of organisational leaders. Ethical leadership qualities such as integrity, fairness and ethical standards plays an important role in the formation of organisational climate. The findings of the study shows that ethical leadership positively influences organisational climate in Indian hospitals. Mateen et al. (2022) found that corporate environmental strategy is positively related to green psychological climate. Under an ethical leader, both the leader and follower participate in the development of an environmental strategy (Khan et al., 2019). It is hypothesised that: H5: Ethical leadership and organisational green climate perception are significantly positively related.

The study by Ng et al. (2019) found that green work climate positively influences extra-role green behaviour. Das *et al.* (2019) also noted that if employees observe that the protection of the natural environment is encouraged, rewarded and valued by their organisation, they generally develop a deep sense of green work climate and a strong sense of conviction to participate in voluntary green behaviour. The findings

of the study by Das et al. (2019) show that green work climate perception is positively related to voluntary pro-environmental behaviour. Dumont *et al.* (2017) and Mateen et al. (2022) found that at individual level, green work climate is positively related to both task and voluntary pro-environmental behaviour. It is hypothesised that:H6a: Organisational green climate perception and employee in-role green behaviour are significantly positively related. H6b: Organisational green climate perception and employee extra-role green behaviour are significantly positively related.

Khan et al. (2019) in line with previous scholars found out that organisational green climate depicts shared perception by employees about an organisation's environmental policies, procures and strategy. In addition, that an ethical leader establishes ethical standards and encourages employees to follow these standards. Khan *et al.* (2019)'s finding show that green organisational climate mediates the relationship between ethical leadership and organisational citizenship behaviour for the environment. Norton et al. (2014) also found that green work climate perceptions at the organisational and co-employee levels mediate the relationship between the perceived availability of a sustainability policy and proactive and task employee green behaviour. Rubel et al. (2021) found that green work climate perception mediates the relationship between green human resource management and employee pro-environmental behaviour. This suggests that green organisational climate may be a mechanism through which ethical leadership can influence both in-role and extra-role employee green behaviour. It is therefore hypothesised that: H7a: Organisational green climate perception mediates the relationship between ethical leadership and employee in-role green behaviour. H7b: Organisational green climate perception mediates the relationship between ethical leadership and employee extra-role green behaviour.

According to Pugno and Sarracino (2021), extrinsic motivations such as financial incentives can influence sustainable consumption and behaviour. Green behaviour can be encouraged through incentives and rewards or discouraged through disincentives and penalties (Bolderdiyk et al., 2012). However, as pointed out by Ali e*t al.* (2020) extrinsic motivation may negatively affect intrinsic motivation to engage in green behaviour. Individuals may be less willing to engage in green behaviour when they are offered rewards rather than when they motivated intrinsically without external rewards (Moser, 2015). It is hypothesised that: H8a: Green extrinsic motivation negatively moderates the effect of green intrinsic motivation on employee in-role green behaviour. H8b: Green extrinsic motivation negatively moderates the effect of green intrinsic motivation on employee extra-role green behaviour.

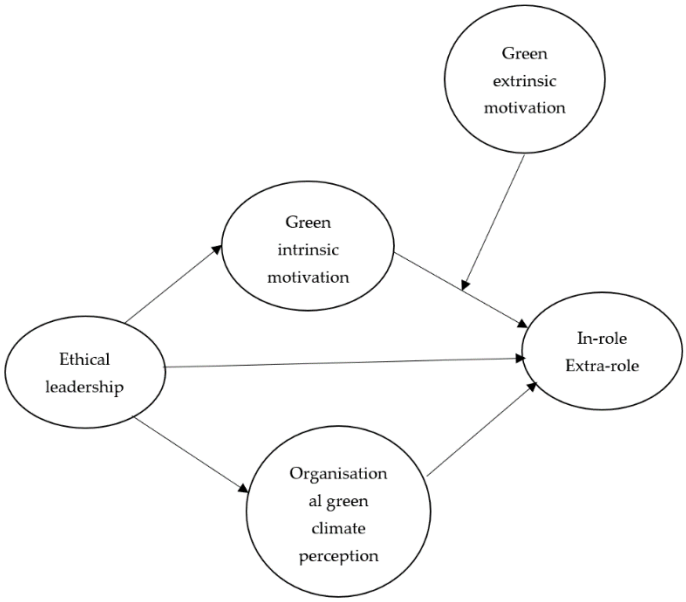

Figure 1: Conceptual model
Source: Author's conceptualisation

Research Methodology

The study adopted a quantitative research design. The research was conducted in three, four- and five-star hotels that were graded by the Tourism Grading Council of South Africa. The study areas were Pretoria and Johannesburg in the Gauteng Province of South Africa. The target population was all supervisors and managers of work units or functional departments of hotels graded as three, four- and five-star hotels by the Tourism Grading Council of South Africa. Before data collection, the General Managers or Human Resource Managers of identified hotels were contacted to explain the purpose and significance of the research and to request for the participation of their hotels and employees in the study. This process helped to identify 450 supervisors/ managers that are employees of the hotels. This was done through the convenience sampling method.

Supervisors/ managers of various functional departments or work units were selected because they are more likely to be conversant with the environmental policies and strategy of their hotels. Mid-level managers who work closely with top managers are also more likely to have informed information about the ethical behaviour of top managers and their jobs are more likely to have environmental performance built into them (Khan et al., 2019; Islam et al., 2020). Hair et al. (2019) explains that the ten times rule can be used to determine the minimum sample size when PLS-SEM is used. Data was collected from the respondents through the use of the cross-sectional survey method. Structured questionnaires were administered to the

respondents for data collection. Before the actual survey, a pilot study was conducted with ten hotels and thirty supervisor managers to help improve the content of the questionnaire. In addition, two experts on leadership and sustainability evaluated the questionnaire. A three-item scale that was adapted from Bissing-Olson et al. (2013), Islam et al. (2020) was used to measure in-role green behaviour and extra-role green behaviour. A ten-item scale was adopted from Brown et al. (2005) and it was used to measure ethical leadership. A four-item scale adapted from Norton et a. (2014) it was used to measure organisational green work climate perception. A four-item scale adapted from Ali *et al.* (2020); Li et al. (2020) and was used to measure green intrinsic motivation. A three-item scale was adapted from Ali et al. (2020); Li et al. (2020) was used to measure green extrinsic motivation. The study applied the Partial Least Square Structural Equation Modelling (PLS SEM) using the Smart 3 software for data analysis.

Research Results

A total of 450 questionnaires were distributed to the survey respondents and only 280 questionnaires were returned and deemed usable in the study. The analysis of demographic details shows that there were 146 female and 134 male respondents. In addition, 52 respondents belonged to the 21-30 age bracket, 188 respondents to the 31-40 age bracket, 32 respondents to the 41-50 age bracket and 8 respondents to the 51-60 years age bracket. In terms of education, 78 respondents had Matric or high school qualifications qualification and 202 respondents had Post Matric qualifications (diplomas and degrees)

Hair et al. (2019) point out the assessment of the measurement model should include the factor loading, average variance extracted (AVE), Cronbach's alpha (CA) and composite reliability (CR). Factor loading depicts how well an item signifies the underlying construct and a loading over 0.70 is recommended and this was adhered to in this study. The establishment of convergent and discriminant validity can be used to assess construct validity. Convergent validity is statistically established when the Average Variance Extracted (AVE) is greater than 0.50. Discriminant validity is established by the Fornell and Larcker Criterion and Heterotrait-Monotrait (HTMT) Ratio. The AVE is an important indicator of discriminant validity and values above 0.50 are acceptable. The heterotrait-monotrait ratio of correlations (HTMT) criterion measures the similarity between latent variables and is also used to assess discriminant validity in PLS-SEM. According to Henseler et al. (2015), the HTMT is superior to the Fornell-Larcker criterion. The recommended threshold of the HTMT is below 0.9 (Henseler et al., 2015). Composite reliability and the Cronbach's alpha are a measure of reliability and values from 0.70 are acceptable (Hair et al. 2019). The measurement model and the HTMT are depicted by Tables 1 and 2. Table 1 shows that the factor loadings of all the items used to measure the constructs are above 0.7 except for one item under ethical leadership with a loading of 0.295. The item is deleted in line with the recommendation of Hair et al. (2019), that factor loadings below 0.5 should be deleted. In addition, the AVEs for all the constructs

are above 0.5 indicating adequate convergent validity. Composite reliability and the Cronbach's alpha are a measure of reliability and values from 0.70 are acceptable for each. Table 1 shows that all the composite reliability and Cronbach's alpha values are above 0.7 indicating the reliability of the scales used to measure the constructs of the study. Based on the suggestion by Henseler et al. (2015) that the HTMT is superior to the Fornell-Larcker criterion, the study used the HTMT as a measure of discriminant validity. The HTMT values for the constructs are below 0.9 suggesting an acceptable level of discriminant validity.

Table 1. Measurement model

Construct	Construct	FL	CA	CR	AVE
In role green behaviour (INR) (Mean 3.95; SD 0.95	INR1	0.814	0.820	0.832	0.622
	INR2	0.799			
	INR3	0.752			
Extra role green behaviour (EXR) Mean 4.02, 0.94	EXR1	O.785	0.808	0.834	0.626
	EXR2	0.819			
	EXR3	0.769			
Green intrinsic motivation (GRI) (Mean 3.52, 1.01)	GRI1	0.801	0.774	0.889	0.587
	GRI2	0.752			
	GRI3	0.735			
	GRI4	0.773			
Green extrinsic motivation (GRE) 2.08 0.99	GRE1	0.780	0.742	0.823	0.609
	GRE2	0.809			
	GRE3	0.752			
Organisational green work climate perception (ORG) Mean 4.24,SD 0.89)	ORG1	0.804	0.814	0.865	0.617
	ORG2	0.775			
	ORG3	0.812			
	ORG4	0.749			
Ethical leadership (Mean 3.60, SD 0.82	ETH1	0.788	0.810	0.927	0.584
	ETH2	0.802			
	ETH3	0.295 D			
	ETH4	0.744			
	ETH5	0.736			

	ETH6	0.771			
	ETH7	0.815			
	ETH8	0.751			
	ETH9	0.738			
	ETH10	0.729			

Table 2. Heterotrait-monotrait ratio of correlations

Construct	INR	EXR	GRI	GRE	ORG	ETH
INR						
EXR	0.599					
GRI	0.601	0.573				
GRE	0.701	0.659	0.538			
ORG	0.529	0.601	0.619	0.703		
ETH	0.635	0.574	0.608	0.644	0.698	

According to Hair *et al.* (2019)), the assessment of the structural model should include the following factors (1) the common method bias (CMB) (2), the goodness of fit, (3) the R^2, (4) the Q^2, and (5) the effect size and (6) the model fit. (Common method bias (CMB), however, is a threat because bias through systematic errors can affect findings. The full collinearity test based on variance inflation factors (VIFs) was used to evaluate both vertical and lateral collinearity. If VIF has a value greater than 3.3, pathological collinearity can be assumed and this suggests that the model may be contaminated by CMB (Hair *et al.*, 2019). The VIF values for the six constructs of this study (ethical leadership behaviour, green intrinsic motivation, green extrinsic motivation, organisation green climate perception, in-role green behaviour and extra-role green behaviour are 1.52, 1.84, 1.99, 2.04, 1.93 and 2.15, respectively. All the VIFs of this study are below 3.3 suggesting that the model is free of CMD. In addition, the Harman's one-factor test, the single factor accounted for 33.501%. This is below the 50% threshold suggested for the Harman's one-factor test thereby suggesting the negligible effect of CMV. The R^2 is a significant factor in model evaluation using the PLS-SEM. The R^2 is also known as the coefficient of determination and depicts the proportion of variation in the dependent variable that is explained by one or more predictor variables. When PLS-SEM is used, R^2 value of 0.26 is considered weak, 0.50 moderate and 0.75 substantial (Hair *et al.*, 2019). The R^2 obtained in this study is 0.509 which can be considered as moderate.

The goodness of fit test (GOF) was used to determine if the empirical data was sufficiently captured by the model. In the study, the GOF has values from 0 to 1. Henseler *et a*l. (2015) point out that GOF values of 0.10 is considered small, 0.25 is considered medium) and 0.36 is considered large and expresses the global validation of the model. The goodness of fit value is 0.5556. This suggests that the model has a significant predictive power, and that the empirical data satisfactorily fits the

model. A supplementary assessment test recommended when using PLS-SEM is the predictive relevance of the model. The Q^2 can be used to assess the predictive model. The model is predictive if the Q^2 value is greater than zero (Hair *et al.,* 2019). The Q^2 of this model is 0.508. This suggests an adequate predictive power of the model. The effect size (f^2) shows the extent of the effect of each exogenous latent construct on the endogenous latent construct. Values of 0.02, 0.15, and 0.35 depict small, medium, and large effects respectively. In addition, values less than 0.02 indicate that there is no effect. The effect sizes of the constructs range from 0.237 to, 0.294. The model fit is measured by the standardised root mean square residual (SRMR). According to Hair *et al.,* (2019), the SRMR depicts the average of the standardised residuals between the observed and hypothesised matrices. The values for the SRMR range from zero to 1.0 with well-fitting models obtaining values less than 0.05. A lower SRMR indicates a better fit. The SRMR value obtained in this study is 0.02 which shows that the model has a good fit. In the assessment of the structural model, the bootstrapping method was used, and the path coefficients (β) and T-statistics were evaluated. The t-value is expected to be above 1.96 at 5% level of significance two-tailed. The greater the value of (β), the greater the effect on the endogenous variable. The result of the structural model is depicted in Table 3.

Table 3. Hypothesis testing for direct paths

Path	Coefficient	T-statistics	Decision
H1a ETH→INR	0.188	4.082**	Supported
H1b ETH→EXR	0.262	11.147*	Supported
H2 ETH—GRI	0.174	3.969*	Supported
H3a GRI→INR	0.199	4.948**	Supported
H3b GRI —EXT	0.206	9.407 *	Supported
H5 ETH —ORG	0.148	3.301*	Supported
H6a ORG —INR	0.174	5.641**	Supported
H6b ORG —EXR	0.248	8.839*	Supported

Note: *p<0.01; ** <0.05

The results as depicted by Table 3 show that ($\beta = 0.188$, $t = 4.082$, $p<0.05$) H1a is accepted. This implies that ethical leadership and employee in-role green behaviour are significantly positively related. The results ($\beta = 0.262$, $t = 11.147$, $p<0.01$). H1b are accepted. This indicates that ethical leadership and employee extra-role green behaviour are significantly positively related. An ethical leader works as role model for employees and s/he inspires and communicates the environmental vision and strategy to employees. Thus ethical leadership can help employees to adopt both in-role and extra-role green behaviour and contribute to organisational sustainability. The results ($\beta = 0.174$, $t = 3.969$, $p<0.01$) support hypothesis two. This implies that ethical leadership and employee green intrinsic motivation are significantly

positively related. The results suggest that in the context of greening, an ethical leader highlights to employees the importance of green organisational goals, embeds green standards, and develops employee green self-efficacy. Thus ethical leadership can invoke green intrinsic motivation in employees. The results ($\beta = 0.199$, $t = 4.948$, $p<0.05$). H3a are accepted. This indicates that green intrinsic motivation and employee in-role green behaviour are significantly positively related. The results ($\beta = 0.206$, $t = 9.407$, $p<0.01$). H3b are accepted. This implies that green intrinsic motivation and extra-role green behaviour are significantly positively related. The results indicate that when employees are intrinsically motivated for green environment, they are likely to engage in activities that will support the environment at work. The results ($\beta = 0.148$, $t = 3.301$, $p<0.05$) supports H5. This indicates that ethical leadership and organisational green climate are significantly positively related. The results indicate that an ethical leader is likely to develop organisational policies, strategies and standards that will protect the environment. In addition, an ethical leader is likely to communicate the existence of such policies to employees which in turn leads to organisational green climate perception. The results ($\beta = 0.174$, $t = 5.641$, $p<0.05$) also indicate that there is a significant positive relationship between organisational green climate perception and in-role green behaviour. The results ($\beta = 0.248$, $t = 8.839$, $p<0.01$) support hypothesis 6b. This indicates that there is a significant positive relationship between organisational green climate perception and extra-role green behaviour. The results also indicate that when employees perceive that an organisation has a supportive organisational climate, they are likely to develop both in-role and extra-role green behaviour.

Table 4. Mediation effects

Path	Indirect effects	Total effects and T-statistics	Confidence interval	Decision	VAF
			LL UL		
H4a ETH→GRI→INR	0.153**	0.246** (2.709)	0.063 0.259	Accepted (partial mediation)	62..19%
H4b ETH→GRI→EXR	0.168*	0.208* (7.397)	0.078 0.273	Accepted (full mediation)	80..77%

H7ba ETH→ORG→EXR	0.199*	0.284** (3.096)	0.052 0.235	Accepted (partial mediation)	70.07%
H7b ETH→ORG→EXR	0.178*	0.276* (2.476)	0.064 0.232	Accepted (partial mediation)	64.49.%

Note: *P<0.01; ** <0.05

Table 4 depicts the results of mediation. The indirect effect has to be significant after testing using the bootstrapping procedure. The strength of the mediation can be determined from the value of Variance. Accounted For (VAF). VAF value represents the ratio of the Beta Coefficient of the indirect effect to the total effect. A VAF value bigger than 80% represents full mediation, a VAF value of between 20% and 80% means a partial mediation, while a value below 20% means no mediation (Nitzl *et al.*, 2016). The indirect paths between ETH→GRI→INR and ETH→GRI→EXR are positive and significant and the VAFs are 62.19% and 80.77%. The results indicate complementary partial mediation and complementary full mediation. Thus 4a and H4b are accepted. The results indicate that green intrinsic motivation partially mediates the relationship between ethical leadership and employee in-role but fully mediates the relationship between ethical leadership and extra role green behaviour. In addition, the support complementary partial mediation and indicates that organisational green climate perception partially mediates the relationship between ethical leadership and in-role and extra-role green behaviour supporting hypotheses H7a and H7b. The results as indicatedin Table 4 show that the direct effects and indirect effecst are significant. Hypotheses four and seven, therefore, are supported.

Table 5. Moderation results

Path	Coefficient	T-statistics	Decision
H7a	-0.162	2.079	Rejected
H7b	-0.204	3.108	Rejected

Table 5 depicts the moderation results. The study used the product indicator method to assess if green extrinsic motivation moderates the relationships between green intrinsic motivation and in-role and extra-role green behaviour. The results of the interaction (β- 0.162 T 2.079, $p > 0.05$) and (β -0.204 T 3.108, $p > 0.05$) are insignificant. Hypotheses H8a and H8b are rejected.

Discussion

The results of the study indicated that ethical leadership and employee in-role and extra-role green behaviour are significantly positively related. The findings are

supported by previous studies like Islam *et al.* (2020) who indicate that ethical leadership positively affects both task and voluntary green behaviour. The findings indicated that ethical leadership is significantly positively related to green intrinsic motivation. The findings suggest that an ethical leader can invoke green intrinsic motivation by setting green goals, displaying support for green behaviour and helping employees to obtain the necessary skills and self-efficacy to engage in green behaviour (Yidong and Xinxin, 2013; Li et al., 2020). The findings indicated that green intrinsic motivation is significantly positively related to employee in-role and extra-role green behaviour. Ali et al. (2020) find that green intrinsic motivation positively affects the intention to purchase green electronic products. Norton et al. (2015) found a significant positive relationship between intrinsic motivation and employee pro-environmental behaviour. These findings indicate that green intrinsic motivation mediates the relationship between ethical leadership and employee in-role and extra-role green behaviour. Other studies have confirmed the mediating effect of green intrinsic motivation in the context of green behaviour. Ali et al. (2020) found that green intrinsic motivation mediates the relationships between green thinking and green altruism and the intention to purchase green products. Danish et al. (2020) found that intrinsic motivation mediates the relationship between ethical leadership and organisational citizenship behaviour. Khan et al. (2019) also noted that ethical leadership is significantly positively related to green organisational climate perception. The findings suggest that an ethical leader can create an organisational climate that promotes green behaviour through behaviour, policies and strategy. Mishra and Tikoria (2021) found that ethical leadership qualities such as integrity, fairness and ethical standards have an important role to play in the formation of organisational climate. The findings indicate that organisational green work climate perception positively influences employee in-role and extra-role green behaviour. Ng et al. (2019) and Das et al. (2019) found that green work climate positively influences extra-role green behaviour. Dumont et al. (2017) discovered that green work climate perception is positively related to both task and voluntary pro-environmental behaviour. The findings indicate that organisational green climate perception positively mediates the relationship between ethical leadership and in-role and extra-role green behaviour. Khan et al. (2019) also found that green organisational climate mediates the relationship between ethical leadership and organisational citizenship behaviour for the environment. Norton et al. (2014) came to similar conclusions that green work climate perceptions at the organisational and co-employee levels mediate the relationship between the perceived availability of a sustainability policy and proactive and task employee green behaviour. The findings of the study indicated that green extrinsic motivation does not significantly moderate the relationship between green intrinsic motivation and employee in-role and extra-role green behaviour.

Conclusion

The findings of the current study supported the mediating role of green intrinsic mediation and organisational green work climate perception. However, the moderating effect of green extrinsic motivation was statistically insignificant. Based on the findings of the study, hotel management must promote an ethical leadership style in order to promote green behaviour. This can be done by ensuring that both management and employees attend training and seminars on leadership. Furthermore, the development of policies and strategies on green behaviour by hotels will help to improve organisational green climate perception and employee green behaviour. Also, ethical leaders must understand their role as role models and behave in ways that will encourage subordinates to engage in green behaviour. In addition, an ethical leader must promote employee self-efficacy in green behaviour. This can be done by training employees on green behaviour. Hotels should continue to create awareness through internal communication messages about the negative effects of the industry, especially in the areas of resource overuse, in order to develop green intrinsic motivations by employees. In addition, the appointment, promotion and other reward structures in hotels should take green behaviour into consideration in order to improve green extrinsic motivation. An ethical leader in order to promote organisational green work climate perception needs to establish and implement green organisation policies, standards and strategies and communicate these to employees. The generalisability of the findings is limited because data were collected from hotel employees in only two South African cities. Also, the study used employee self-report data and this can create self-report bias. Other studies can reserach on the perception of managers on the in-role and extra-role green behaviour of employees. The study utilised the cross-sectional research design. This limits cause-and-effect relationships and other studies can adopt a longitudinal research design. The study used the convenience sampling method and this may have led to sampling bias. In addition, the use of time-lagged data in which data is collected in different rounds separated by some months as time lag will help to reduce common method bias.

References

Aboramadan, M., (2022). The effect of green HRM on employee green behaviours in higher education: the mediating mechanism of green work engagement. *International Journal of Organizational Analysis, 30*(1), 7-23.

Ahadiat A., Dacko-Pikiewicz Z., (2020). Effects of ethical leadership and employee commitment on employees' work passion. *Polish Journal of Management Studies, 21*(2), 24-35.

Ahmad, I., Umrani, W., (2019). The impact of ethical leadership style on job satisfaction: the mediating role of perception of Green HRM and psychological safety. *Leadership and Organization Development Journal,.40*(5), 534-547.

Ali, F., Ashfaq, M., Begum, S. and Ali, A., (2020). How "Green" thinking and altruism translate into purchasing intentions for electronics products: The intrinsic-extrinsic motivation mechanism. *Sustainable Production and Consumption*, *24*, 281-291.

Amin B., Hakimah Y., Madjir S. and Noviantoro D., (2019). The role of transformation leadership in enhancing corporate sustainability capabilities and sustainable supply chain management. *Polish Journal of Management Studies*, *20*(2) 83-91.

Bandura, A., (1977). *Social learning theory*. Prentice-Hall.

Bissing‐Olson, M. J., Iyer, A., Fielding, K.S. and 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.

Brown, M. E., Trevino, N. K. and Harrison, D. A., (2005). Ethical Leadership: A Social Learning Perspective for Construct Development and Testing. *Organizational Behavior and Human Decision Processes*, *97*(2), 117-134.

Danish, R. Q., Hafeez, S., Ali, H. F. and Mehta, A. M., (2022). Impact of Ethical Leadership on Organizational Commitment and Organizational Citizenship Behavior with Mediating Role of Intrinsic Motivation. *International Review of Management and Marketing*, *10*(4), 25-30.

Deci, E. L., Ryan, R. M., (2000). The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychology. Inquiry*, *11*, 227–268.

Dumont, J., Shen, J. and Deng, X., (2017). Effects of green HRM practices on employee workplace green behaviour: The role of psychological green climate and employee green values. *Human Resource Management*, *56*(4), 613–627.

Faisal, S., Naushad, M., (2020).An overview of green HRM practices among SMEs in Saudi Arabia. *Entrepreneurship and Sustainability Issues, 8*(2), 1228-1244.

Fatoki, O., (2020). Determinants of hotel employees' electricity saving intention: Extending the theory of planned behaviour. *Entrepreneurship and Sustainability Issues, 8*(2), 86-97.

Hair, J. F., Risher, J. J., Sarstedt, M. and Ringle, C. M., (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 1-24.

İşçi, S., Çakmak, E. and Karadağ, E., (2015). **T**he Effect of Leadership Leadership on Organizational Climate Organizational climate. *Leadership and Organizational Outcomes*, *127*, 123-141.

Islam, T., Khan, M. M., Ahmed, I. and Mahmood, K., (2020). Promoting in-role and extra-role green behaviour through ethical leadership: mediating role of green HRM and moderating role of individual green values. *Journal of Manpower*, *42*(6), 1102-1123.

Khan, MAS., Jianguo, D., Ali, M., Saleem, S. and Usman, M., (2019). Interrelations between ethical leadership, green psychological climate, and organizational environmental citizenship behaviour: A moderated mediation model. *Frontiers in Psychology, 10*, 1-15.

Lenzen, M., Sun Y., Faturay F., Ting Y., Geschike, A. and Malik, A., (2018). The carbon footprint of global tourism. *Nature Climate Change, 8*, 544-460.

Li, W., Bhutto, T. A., Xuhui, W., Maitlo, Q., Zafar, A. U. and Bhutto, N. A., (2020). Unlocking employees' green creativity: The effects of green transformational leadership, green intrinsic, and extrinsic motivation. *Journal of Cleaner Production*, *255*, 1-12.

Mateen, A., Nisar, Q. A. and Nasir, N., (2022). Fostering pro-environmental behaviours in the healthcare organizations: An empirical analysis of psychological and strategic factors. *Asia Pacific Management Review*, *1*, 1-11.

Mishra, B., Tikoria, J., (2021). Impact of ethical leadership on organizational climate and its subsequent influence on job commitment: a study in hospital context. *Journal of Management Development, 40*(5), 438-452.

Moser, A. K., (2015). Thinking Green, Buying Green? Drivers of Pro-Environmental Purchasing Behavior. *Journal of Consumer Marketing, 32*, 167-175.

Ng, L. P., Choong, Y. O., Tee, C. W., Kuar, L. S., Teoh, S. Y. and Chen, I. C. (2019). Green work climate and pro-environmental behaviour among academics: The mediating role of harmonious environmental passion. *International Journal of Management Studies, 26*, 77-97.

Nitzl, C., Roldán, J. L., and Cepeda Carrión, G., (2016). Mediation analysis in partial least squares path modelling. *Industrial Management and Data Systems, 119*(9), 1849–1864.

Norton, T. A., Zacher, H. and Ashkanasy, N. M., (2014). Organisational sustainability policies and employee green behaviour: The mediating role of work climate perceptions. *Journal of Environmental Psychology, 38*, 49–54.

Norton, T. A, Zacher, H, Parker, S. T and Ashkanasy, N. M., (2016). Bridging the Gap between Green Behavioral Intentions and Employee Green Behavior: The Role of Green Psychological Climate. *Journal of Organizational Behaviour, 38*(7), 1-48.

Pugno, M., Sarracino, F., (2021). Intrinsic vs extrinsic motivation to protect the environment: correlational and causal evidence. Working Papers 2021-01, Universita' di Cassino, Dipartimento di Economia e Giurisprudenza.

Rubel, M. R., Kee, D. and Rimi, N., (2021). Green human resource management and supervisor pro-environmental behaviour: The role of green work climate perception. *Journal of Cleaner Production, 313*(1), 127669.

Wesselink, R., Blok, V. and Ringersma, J., (2017). Pro-environmental behaviour in the workplace and the role of managers and organisation. *Journal of Cleaner Production, 168*, 1679 -1687.

Yidong, T., Xinxin, L., (2013). How ethical leadership influences employees' innovative work behaviour: A perspective of intrinsic motivation. *Journal of Business Ethics, 116*(2), 441–455.

Zhang, Y., Zhou, F. and Mao, J., (2018). Ethical Leadership and Follower Moral Actions: Investigating an Emotional Linkage. *Frontiers in Psychology, 5*, 1-18.

ETYCZNE PRZYWÓDZTWO JAKO NARZĘDZIE EKOLOGICZNEGO ZACHOWANIA PRACOWNIKÓW

Streszczenie: W badaniu zbadano wpływ etycznego przywództwa na proekologiczne zachowania pracowników w ramach pełnionej roli i poza nią poprzez pośredniczącą soczewkę zielonej motywacji wewnętrznej i postrzegania zielonego klimatu pracy w organizacji. Ponadto badanie analizuje moderatorską rolę zielonej motywacji zewnętrznej w związku między zieloną motywacją wewnętrzną a zachowaniami proekologicznymi. W badaniu przyjęto ilościową metodę badawczą, a do zebrania danych od pracowników hotelu wykorzystano ustrukturyzowany kwestionariusz ankiety. Próbę badawczą stanowią przełożeni i kierownicy działów funkcjonalnych w trzy, cztero i pięciogwiazdkowych hotelach zlokalizowanych w Pretorii i Johannesburgu w prowincji Gauteng w RPA. Jako próba badawcza użyto przełożonych/kierowników różnych działów funkcjonalnych lub jednostek roboczych, ponieważ jest bardziej prawdopodobne, że będą oni zaznajomieni z polityką i strategią środowiskową swoich hoteli. Jest również bardziej prawdopodobne, że

będą w posiadaniu informacji na temat etycznego zachowania menedżerów najwyższego szczebla, a ich praca z większym prawdopodobieństwem będzie miała wbudowaną efektywność środowiskową. Osoby biorące udział w badaniu dobierane są metodą wygodnego doboru próby. W ankiecie wzięło udział 280 pracowników spośród 450, z którymi się skontaktowano. Do przeprowadzania analizy danych użyto modelowania równań strukturalnych metodą cząstkowych najmniejszych kwadratów. Odkrycia potwierdzają pośredniczącą rolę zielonej motywacji wewnętrznej i postrzegania klimatu organizacyjnej zielonej pracy. Pośredniczący efekt zielonej motywacji zewnętrznej jest nieznaczny. Wyniki badania pokazują, w jaki sposób kierownictwo, pracownicy i czynniki organizacyjne mogą poprawić proekologiczne zachowanie. Badanie przedstawia nowy, wcześniej nie sprawdzony model teoretyczny, przedstawiający zieloną motywację i postrzeganie klimatu zielonej pracy w organizacji jako mechanizmy, za pośrednictwem których etyczne przywództwo i może wpływać na ekologiczne zachowanie pracowników.

Słowa kluczowe: Etyczne przywództwo, ekologiczne zachowania pracowników, zielona motywacja, postrzeganie klimatu zielonej pracy w organizacji

道德领导作为员工绿色行为的工具

摘要：本研究通过绿色内在动机和组织绿色工作氛围感知的中介视角，探讨伦理领导对员工在职和职外绿色行为的影响。 **此外**，该研究还考察了绿色外在动机在绿色内在动机与绿色行为之间关系中的调节作用。 **本研究采用定量研究方法**，**采用**结构化问卷的方式收集酒店员工的数据。 **研究**样本由位于南非豪登省比勒陀利亚和约翰内斯堡的三星级、四星级和五星级酒店的职能部门主管和经理组成。 **各**职能部门或工作单位的主管/经理被用作研究样本，因为他们更可能熟悉其酒店的环境政策和战略。 **他**们也更有可能了解有关高层管理人员道德行为的知情信息，并且他们的工作更有可能将环境绩效纳入其中。 调查对象采用便利抽样法选取。 **在所**联系的 450 **名**员工中，有 280 **名**员工参与了调查。 **偏最小二乘**结构方程模型用于进行数据分析。 **研究**结果支持绿色内在动机和组织绿色工作氛围感知的中介作用。 绿色外在动机的调节作用不显着。 该研究的结果显示了领导力、员工和组织因素如何改善绿色行为。 该研究提供了一个新的、以前未经检验的理论模型，将绿色动机和组织绿**色工作氛**围感知描述为道德领导力可以影响员工绿色行为的机制。

关键词：道德领导、员工绿色行为、绿色动机、组织绿色工作氛围感知。