



## Green transformational leadership influences green work engagement and green creativity to drive environmental sustainability

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### ABSTRACT

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The purpose of the study is to address an unexplored aspect of environmental sustainability as the concerns towards the environment is burgeoning to conserve and protect the environment to have an ecological balance with the environment. The study identifies the relationship between GTL, green creativity, GWE and environmental sustainability. The study was carried out with the IT sector across Chennai and Bengaluru with a purposive sampling technique holds a respondent of 324 samples. The study confirms the role of GTL further enhances the increased motivation among employees and in turn employees are more likely to exhibit responsible behavior and also help in achieving environmental sustainability in the organisation. The study exhibits a positive relationship between GWE and ES bringing additional evidence that ought to measure successfully on the business's environmental performance. The study's findings conclude that the GWE and green creativity combinedly boosts the environmental sustainability in line with the role of green transformational leadership as it stands as a motivating factor for the employees and encourage them to achieve environmental sustainability. GTL's distinctive impacts the employees to go beyond their interest and generate out-of-the-box solutions and improve environmental well-being.

**Contribution/Originality:** This study marks new avenues for the research community to expand the research arena into information technology sectors in India as this sector remains as one of the largest contributors to the Indian economy. Any business needs a push to reach its targets on deadline. This study engraved by GTL makes the employees remain charted in their performance.

### 1. INTRODUCTION

Environmental sustainability is a key concern in the modern period owing to human activities' enormous implications on global health and the well-being of future generations. Urgent concerns like as climate change and biodiversity loss remain, emphasizing the urgent need for action to address global environmental issues (Said et al., 2024). One definition of sustainability is "ensuring that current needs are met without jeopardizing future generations' capacity to meet their own needs" (UN, 2021). There is a lot of pressure on businesses to go green to maintain a competitive edge in today's market, as sustainable growth is expected everywhere (Park & Kim, 2014). There is still a critical gap in understanding how GTL affects green work engagement (GWE) and green creativity among IT professionals in rapidly growing tech hubs such as Chennai and Bengaluru while IT (Information Technology) organisations increasingly recognize the importance of environmental sustainability. Previous

research has generally focused on general EM practices or discrete green projects, with not much thought paid to the critical role of leadership in fostering long-term behavioural changes among employees. A transformative leader's pro-environmental ideals will ripple down the chain of command and inspire his followers to do the same. For instance, according to [Han, Liao, Taylor, and Kim \(2018\)](#) leaders may inspire their subordinates to conduct more beneficial work for the organization's environment, consider alternative approaches to environmental concerns, and think about sustainable growth throughout the organisation. Pollutants in the environment have been produced by overpopulation and rapid urbanization ([Wang et al., 2013](#)). For these reasons, environmental protection has recently come into the spotlight, and the term "environmentalism" has been coined. People are paying attention to environmental challenges and ethical practices, particularly in contemporary enterprises. Studies have shown that green transformational leadership (thus forward GTL) is one of the factors that influence workers' environmentally conscious actions ([Robertson & Carleton, 2018](#)). It was shown that ecologically focused transformational leadership influences the pro-environmental actions of workers both directly and indirectly. A lot of ideas, including leadership have been influenced by sustainability. Environmental leadership studies, such as eco-servant leadership ([Tuan, 2020](#)) are direct outcome. The research indicated a favorable correlation among "environmental sustainability", environmental "attitudes and values" and "green" work engagement (GWE). Engaging in eco-friendly behaviours in the workplace is essential for "environmental sustainability". A "green climate" was identified as a mediator between environmental sustainability and GWE ([Zhang, Zhang, & Zhao, 2024](#)). Positive correlations between characteristic "traits" and "environmentally sustainable workplace" behaviours were also identified. It prepares IT organizations with empirical methodologies for cultivating GTL capable of effectively advancing sustainability projects. It provides guidance for HR departments to develop specialized training programs that improve leaders' capacity to promote green work engagement and innovation among workers. It also facilitates IT firms in diminishing their ecological impact while preserving a competitive edge via improved employee innovation and engagement and assists organizations in aligning their leadership development initiatives with environmental sustainability objectives, possibly decreasing operating expenses and enhancing company reputation.

## 2. THEORETICAL BACKGROUNDS

### 2.1. Organizational Identity Theory

"Organisational identity theory" by [Albert \(1985\)](#) proposed that "organisational identity" influences "employee conduct". [Buil, Martínez, and Matute \(2019\)](#) addressed how the members attitudes reflect in an organisation. Based on OIT, organisations with a strong "green" identity in which sustainability is firmly connected in their "culture" and "mission" are far more inclined to champion environmentally responsible behaviours. GTL plays a key part in carving out the identity by encouraging people to adopt sustainability-oriented principles which improves GWE and GC in the organisation.

### 2.2. RBV Theory

[Penrose \(2009\)](#) greeted RBV (resource-based view) theory as the foundation for the ideal resource management as "resource-based view" is a management framework that defines the strategic resources that a corporation might leverage to gain a sustained competitive advantage. By integrating RBV theory organisations are in bound to develop its internal resources which are difficult to imitate which would ultimately lead to competitive advantage. Both theories reiterate the role of leadership in cultivating sustainable habits. Green leaders in OIT define the organization's identity around sustainability whereas in RBV, utilize and develop resources to fulfil objectives related to sustainability. From the OIT, employees are more engaged when they are in line with the organization's green identity. RBV underlines that when employees leverage unique, valued resources to confront green challenges, their engagement grows. OIT relates creativity in encouraging workers in accordance with the

organization's sustainable objective. RBV describes GC as a result of resources and competencies that create environmental sustainability.

### 3. LITERATURE REVIEW

#### 3.1. GTL and Environmental Sustainability

Organisational success in the hospitality business is strong leadership (Okumus, 2020). Leaders are an intriguing topic for scholars in the fields of tourism and hospitality. An abundance of research has been conducted in this area, yielding a variety of conclusions. According to these studies, leaders have an impact on staff actions (Ozturk, Karatepe, & Okumus, 2021). A study by Yasin Ghadi, Fernando, and Caputi (2013) looked at the impact of transformational leadership on employee engagement in the workplace. The investigation included 530 full-time employees in Australia. Study participants reported higher levels of engagement, energy, and dedication to their job when their bosses transformed. The results of the research of Huang, Ting, and Li (2021) are included as well. It presented evidence that CEOs' (Chief Executive Officers) green transformational leadership has a favourable impact on the green involvement of their top management teams. According to the results, employees' performance improves when their leaders inspire them emotionally and commit to the team's mission. According to Gustiah and Nurhayati (2022) to improve environmental performance as a whole, GTL is defined as a leadership style that encourages workers to do their part for the planet (Suliman et al., 2023). The results of the research of Huang et al. (2021) are included as well. GTL is distinguished by its insistence on inspiring and motivating employees while discussing their developmental needs to meet environmental objectives (Chen & Chang, 2013). Both green transformational leadership and green innovation exert a favourable impact on sustainable performance. The research expands the RBV paradigm by finding elements that promote green innovation and sustainable performance inside organisations. This study provides significant insights and implications for policymakers, executives, and academics about the integration of knowledge management, "green organisational culture", GTL and green innovation to attain sustainable performance in developing nations such as Vietnam (Huynh, Nguyen, & Vo, 2024).

*H<sub>1</sub>: GTL has a significant link with ES in the information technology sector.*

#### 3.2. GTL and Green Creativity

"Green transformational leadership" is associated with the behaviour of leaders who focus on clear inspiration and vision to motivate and encourage employees in cultivating the firm's environmental objectives. According to Benevene and Buonomo (2020) and Ren, Li, Yuan, Li, and Chen (2018) GTL encourages the employees to gather information while engaging and involving them in environmentally sustainable processes, behaviours, and activities. Ren et al. (2018) and Robertson and Barling (2013) found that employees who are more likely to engage in environment -friendly practices and other environment- centric activities could further improve the overall ecological performance in the organisation (Andersson, Jackson, & Russell, 2013). Some studies are grounded and admit that there exists a cordial influence between green creativity and a transformative leadership style by Mittal and Dhar (2016) and Riva, Magrizzos, and Rubel (2021) had stated that GTL comprehends various magnitudes such as "inspirational motivation", "individualized consideration", "idealized influence" which would nurture green creativity among the employees in the organisation. On the other hand, green creativity would also remain as emergent point and pave the way to innovative green products and services, and that would ultimately lead to the success of new product development on team creativity and the competence to retort in the market. Research by Al-Ghazali, Gelaidan, Shah, and Amjad (2022) designates a positive relationship between GTL and green creativity, signifying that active leadership can significantly improve green creative behaviour in organizations. Studies also confront that GTL exhibits an increased Green Organizational Citizenship Behaviour (GOCB) that could in turn, boosts GC among employees. Öğretmenoğlu, Akova, and Göktepe (2022) also emphasize a supportive GTL could

motivate on employee creativity in EP further could be positively correlated with GC by supporting the idea that nurtures creative environments. GTL despite impacts the organisation both directly and also indirectly on sustainable performance as GC tends to explain its power by provoking componential theory with a blend of 'relevant skills', 'relevant processes', 'task motivation' can influence the frequency of creativity within the organisation (Amabile, 2011). GTL mentions that a leader is the one who guides his employees by inspiring being presentable to his own employees by encouraging and motivating them towards the task accomplishments of the organisations "environmental vision" (Sharma & Nair, 2020).

*H<sub>2</sub>: GTL has an impact on green creativity in the information technology sector.*

### 3.3. GTL and Green Work Engagement

As stated by Suliman et al. (2023) in their research article, the study boldly coins that transformational leaders are keener in enhancing employee engagement and commitment to environmental goals. Gustiah and Nurhayati (2022) confessed and concluded that GTL has a momentous positive effect on GWE. Çop, Olorunsola, and Alola (2021) demonstrated that GWE is justified in concluding GTL by defining an environment in which workers may learn and grow providing them with a feeling of personal ownership and engagement in the organisation and the environment. Suliman et al. (2023) in their works claimed that the findings of this study explain the considerable role of GTL in encouraging GWE signifying leaders with transformational characteristics contribute to completely committed to their jobs, deeply involved in environmental work with environmental tasks at their jobs, and helping employees feel happy when they are working intensely on environmental tasks. The study made by Zhang et al. (2024) arrived at a strong notation of a positive link with ES with special accolades with "environmental attitudes and values along with GWE. Being involved in green activities at workplaces is a key component of ES. A green climate emerged to express a feasible link between ES and GWE. The study also observed that employees with "transformative managers" were more engaged, dynamic and devoted to their jobs. Furthermore, the study attempted by Huang et al. (2021) revealed the relevance of the shift towards green engagement of managerial teams was highly favourably impacted by CEOs' GTL. In accordance with bold statement by Suliman et al. (2023) through their study's findings, GTL has a significant advantage that could influence on GWE and 'environmental performance' within hotel workforce. In addition, GWE have a substantial positive and partial effect on the relationship between GTL and hotel employees' environmental performance.

*H<sub>3</sub>: GTL has a positive impact on GWE in the information technology sector.*

### 3.4. Green Creativity on ES

GC promotes organisational success in terms of both economic and environmental factors in addition to encouraging green behaviour. Creativity makes it easier to implement green initiatives and practices that contribute to the performance of the environmental management (EM) (Cheng, 2019; Wang, Wang, Wang, Yan, & Li, 2018). GC is a prerequisite for promoting environmental sustainability through the incorporation of green HRM practices. Organisations can nurture an innovative culture that emphasises environmentally friendly options (You & Kee, 2024). GC is closely related to environmental sustainability, pointing out innovative design approaches that reduce ecological impact. GC fulfils an important role as it fosters effective transitions towards sustainable practices that benefit the environment. Green creativity points out that incorporation of environmental sustainability strategy with effective GHRM (Green human resource management) practices, might enhance employee creativity. Thus, it encompasses both environmentally conscious creativity and overall creativity (Good, Singh, & Ezzedeen, 2023). According to Ogbeibu, Senadjki, Emelifeonwu, Gaskin, and Pereira (2021) the effective sharing of green creative ideas is predominant in crafting organisational strategies that are consistent with the UN's global consensus. Environmental sustainability principles contribute to the successful achievement of the "sustainable development" goals. Evidence from developing nations is scarce. This study adds a contribution by employing the

traces of Nigeria's manufacturing industry where organisations had limited success nurturing the effective interchange of green creative ideas. This study analyses the predictive capacities of leaders' trustworthiness and green creative idea sharing among their respective team members using the social exchange and stakeholder theory lenses. Furthermore, the study had also found the roots through the research attempted by Baah, Agyabeng-Mensah, Afum, and Lascano Armas (2024) developed a significant path between green creativity that directly posits and robustly impacts on green competitive advantage with sustainable production and financial performance. The study approached by Ma, Ali, Shahzad, and Khan (2025) in manufacturing industry with an incorporation of Natural Resource Based View (NRBV) theory that emphasis the empirical findings by facilitating green knowledge sharing that positively correlates with green creativity and green innovation in directive to accomplish "ES".

*H<sub>1</sub>: Green creativity admits its impact on ES in the information technology sector.*

### 3.5. GWE on Environmental Sustainability

GWE refers to the power that could be put forth by employees in activities with the goal of fostering an environmentally sustainable workplace that reflects a dedication to eco-friendly practices and a strong connection to a green work environment (Aboramadan, Albashiti, Alharazin, & Zaidoune, 2020). GWE remains as the most prominent element as and when the employees remain more committed to environmentally sustainable work practices as stated by Li, Jin, and Shi (2018). The impact of GWE on employee performance, especially in terms of ecological awareness, is clearly positive and significant. Therefore, organisations ought to improve GWE by providing employees detailed information about the company's ethical standards towards environment (Marini, Handoyo, & Sukadiono, 2023). Schaufeli, Bakker, and Salanova (2006) revealed that GWE seeks to establish eco-friendly organisational practices that enhance biomedical efficiency by elevating staff members' awareness and dedication to environmental concerns, ultimately encouraging them to consume materials sustainably (Aboramadan & Karatepe, 2021). The report recommends cultivating a creative culture inside organisations to successfully address environmental concerns and improve sustainability. It wraps up with a notion that green creativity improves environmental performance by emphasizing its role in inventive issue solving (Riva et al., 2021). GWE may deliberately include human resource practices to support environmentally responsible policies and improve organisational performance (Zhang et al., 2024). Employees who realise their company's dedication to sustainability are prone to engage in green work practices, promoting positive interactions between employees and the company. GWE focused on environmentally friendly activities has an extensive and beneficial impact on employee performance in an eco-conscious culture. It is recommended that business management increase its efforts to improve. Green work engagement involves increasing staff awareness of the company's commitment to environmental consciousness (Marini et al., 2023).

*H<sub>2</sub>: GWE has a positive impact on ES in the information technology sector.*

## 4. CONCEPTUAL FRAMEWORK

A conceptual framework depicts the theoretical and conceptual foundations by addressing both independent and dependent variables of the study. It also ensures relevant theories behind the previous research claiming to oblige that the study is grounded with the existing literature. It includes an analytical framework to the research by integrating theoretical understanding with genuine investigation. Figure 1 identifies and categorizes variables, Green transformational leadership as an independent variable, green creativity and green work engagement as a mediating variable and environmental sustainability as the dependent variable. Further the framework ensures clarity and coherence in investigating the research problem.

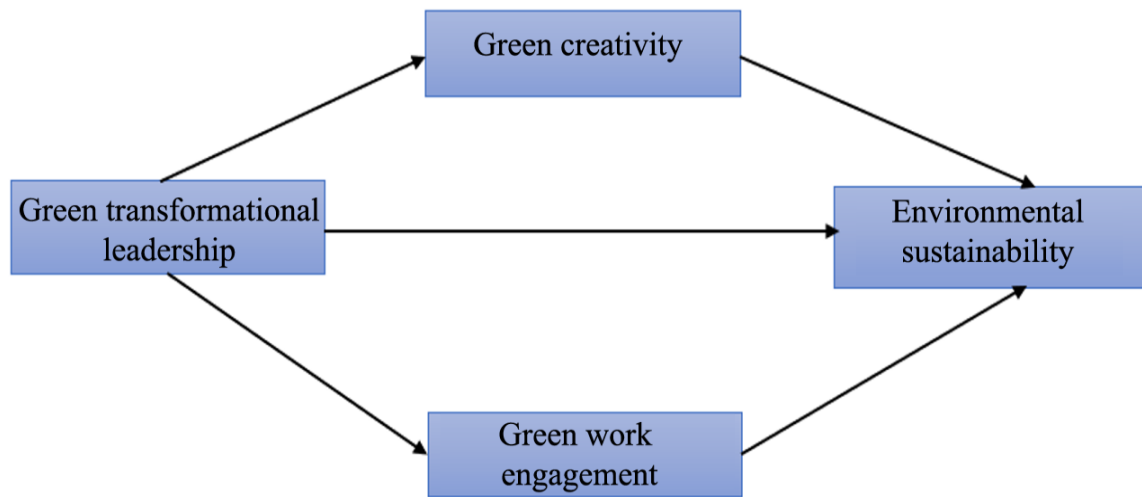


Figure 1. Conceptual framework.

## 5. RESEARCH OBJECTIVES

- To examine the effect of GTL on environmental sustainability across the IT sector in Chennai and Bengaluru.
- To analyse the impact of green creativity on environmental sustainability.
- To assess the relationship among GTL, green creativity, GWE and environmental sustainability.
- To foresee the mediating impact of green creativity and GWE on GTL and environmental sustainability across the IT sector.
- To analyse the demographic profile and understand the characteristic features of the sample belonging to the IT sector.

## 6. RESEARCH METHODOLOGY

### 6.1. Data and Sample

The present research was carried out in the IT sector across Chennai and Bengaluru as the industry is ever rising and sheds light worldwide. The industry remains dominant, as the employees play the major role in contributing to environmental sustainability. The study constituted with 324 samples from information technology sector through which findings and conclusions were made. Data were gathered using a 32-item structured questionnaire developed using inputs from existing validated measures and guided by earlier studies. The questionnaire was shared using Google Forms to ensure accessibility and convenience of participation. Purposive sampling was practiced to guarantee that individuals with relevant knowledge and experience were included. This study aimed to investigate particular mediating relationships that necessitate knowledgeable replies. The sample size was selected using recognised statistical analysis criteria, ensuring sufficient power to investigate complicated mediation effects.

### 6.2. Research Design

This study used a quantitative research approach to check out how GTL affects "environmental sustainability" through "green creativity" and "GWE" in the information technology industry. GTL and ES are the focus of this study, which aims to analyse the mediating function of "green creativity" and GWE" in this relationship. Chennai and Bengaluru, two of India's premier tech hubs to be explored on sustainable practices were the focus of the IT industry. The swift expansion, worldwide impact, and substantial employee involvement in promoting environmental sustainability efforts led to the selection of the information technology industry. Researchers used purposive sampling technique to find people who could provide the most accurate information about their experiences with green transformational leadership and sustainability initiatives at work. There was a



large dataset for analysis because 324 participants participated in the study. The reason behind this conceptual framework is to examine, how GTL influence green creativity and green work engagement to boost the employees work commitment to achieve the organizations' environmental objectives.

### 6.3. Statistics Support

Analytical tools, including SMART PLS (Partial Least Square) were applied to examine the proposed interactions and to investigate the mediating influences of green creativity and GWE on the connection between GTL and ES. This technique was crafted to correspond with the study's aims and generate significant insights on the interaction between leadership, creativity, working environment, and sustainability within the IT sector.

### 6.4. Measures of the Study

The instrument consists of 32 -item scale addressing the conceptual model and detailing each variable whose various developed scales are adopted from several researchers. The detailed note on each construct can be delt further. 7 demographic variables for better understanding of the samples and have in-depth observation in the study.

#### 6.4.1. Green Transformational Leadership

GTL remains as an independent variable as it showcased on the conceptual model. The construct GTL was preferred to borrow from [Chen and Chang's \(2013\)](#) scale which was adopted from [Podsakoff, MacKenzie, and Bommer \(1996\)](#) with six-items. An example of a sample question includes (a) as and when I keep trying to motivate my employees to come up with new green ideas. (b) "I prefer to inspire my employees to comply with environmental compliance." (c) I also stimulate my employees to think more on "environmental degradation". (d) I provide a clear environmental vision to my employees.

#### 6.4.2. Green Creativity

The model demands the adoption of "green creativity" developed by [Chen and Chang \(2013\)](#) with a six-item scale as it stands as a mediating variable. To measure creative green behaviour and achieve sustainability with the environment as the sample item are (a) "Planning in advance to implement new green ideas in organisation." (b) "Opinions from employees on new ways to adopt green practices". (c) "My organisation is willing to adopt new ideas to solve environmental- related problems".

#### 6.4.3. Green Work Engagement

The scale was adopted from [Schaufeli et al. \(2006\)](#) with six items out of nine items with respect to GWE. (a) "Company lets employees work enthusiastically and sustain a green vision". (b) "My company environmentally friendly, being with positive energy and enthusiasm." (c) "Employees feel joyful about the activities relating to the environment."

#### 6.4.4. Environmental Sustainability

As the research demands the need for the dependent variable to have deeper thoughts with the support of the developed scale of "environmental sustainability" from [Li et al. \(2018\)](#) paper by which is a six-item scale to evaluate sustainability. Scale item ranges as (a) "company focus on the usage of limited natural resources like water and gas". (b) "Company conscious is more on reduction of hazardous waste". (c) "Company pulls attraction to use reduced hazardous waste.

### 6.5. Reliability and Validity

Reliability tests confirmed the consistency of the measurement instruments used in the study, ensuring valid results. As the survey is being administered and completed by the respondents, it is appropriate to validate the questionnaire to continue the analysis. “Cronbach alpha value” for GTL with a six item scale hailing with the  $\alpha$  value of 0.868 as the obtained value shows that it is highly reliable. Table 1 represents other constructs like GC, GWE and ES reliability value of each construct are measured with reverence to their item scale is also gained with an alpha value as 0.834, 0.812 and 0.786 in concern as the value signals to proceed further with the analysis as it is satisfying the criteria of reliability (Hair, Gabriel, & Patel, 2014).

**Table 1.** Analysis of reliability: Cronbach's alpha.

Measures	No. of constructs/ Items	Cronbach's alpha
Green transformational leadership style (GTL)	6	0.868
Green creativity (GC)	6	0.834
Green work engagement (GWE)	6	0.812
Environmental sustainability (ES)	6	0.786

## 7. RESULTS

### 7.1. Demographic Profile

Table 2 identifies the basic understanding of the information technology sector across Chennai and Bengaluru which will give a strong picture of the respondents to dive deeper into the present research study. The majority of the respondents working in this particular sector are male 57% with females making up 43% in total of 324 respondents. The age of the respondents between 31-35 years are sounding high among the total population as it represents 24% with the smallest group being 21-25 years are 13%. The marital status of the employees who are being with the sector holds the majority on unmarried owing to 71%, while 29% are married. Educational background of the population is pointing to 63% of the samples have an undergraduate degree UG (Under graduate) and 37% hold a postgraduate degree PG (Post graduate). The level of experience in the present organisation are about 29% have over 15 years of experience while only 11% have less than a year of experience. Additionally, the income level of the employees is 35% earn over 100,000 with 13% earning less than 25,000 as per the study. The designation of the employees with the largest group holds the position of lead as 22%, while the smallest group as above senior manager with 12% of the total respondents.

**Table 2.** Demographic characteristics.

S. No	Demographic variable	Category	Frequency	Percentage (%)
1	Gender	Male	186	57
		Female	138	43
		Total	324	100
2	Age	21-25	43	13
		26-30	59	18
		31-35	77	24
		36-40	69	21
		41 and above	76	24
		Total	324	100
3	Marital status	Married	93	29
		Unmarried	231	71
		Total	324	100
4	Educational background	UG	205	63
		PG	119	37
		Total	324	100
5	Experience	Less than 1 year	36	11
		1-5 years	44	14
		6-10 years	68	21



S. No	Demographic variable	Category	Frequency	Percentage (%)
		11-15 years	83	25
		More than 15 years	93	29
		Total	324	100
6	Income level	<25000	41	13
		25001 – 50000	45	14
		50001 – 75000	59	18
		75001 – 100000	67	21
		>100000	112	34
		Total	324	100
7	Designation	Associate	45	14
		Senior associate	67	21
		Lead	71	22
		Manager	58	18
		Senior manager	43	13
		Above senior manager	40	12
		Total	324	100

## 7.2. Measurement Model

Table 3 represents values of each construct and their relationship and internal consistency. The path loadings of each construct are tabulated along with the representation of each item in accordance with dependent and independent variables. Environmental sustainability holds a strong relationship which is represented by values of path loading except ES4 as the value remains below the nominal value of path loading. The Cronbach's alpha administers internal consistency of the variables. GTL exhibits the highest reliability as 0.868 and the green creativity with a reliability of 0.834 as its internal consistency is measured to be outstanding among the variables. In general loadings above 0.7 are to be considerably good indicating to be a strong construct. Hence, ES tends to be a decent construct. AVE signifies the variance of the indicators, as the most highly contributing average variance extracted (AVE) is found to be GTL as 0.602 as it remains as the most promising variable of the conceptual framework.

**Table 3.** Cross loadings

Latent constructs	Items	Path loadings	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	AVE
Environmental sustainability	ES 1	0.768	0.786	0.841	0.850	0.506
	ES 2	0.799				
	ES 3	0.914				
	ES 4	0.287				
	ES 5	0.634				
	ES 6	0.699				
Green creativity	GC 1	0.585	0.834	0.884	0.877	0.549
	GC 2	0.668				
	GC 3	0.586				
	GC 4	0.923				
	GC 5	0.818				
	GC 6	0.802				
Green work engagement	GWE 1	0.726	0.812	0.838	0.861	0.508
	GWE 2	0.755				
	GWE 3	0.692				
	GWE 4	0.690				
	GWE 5	0.701				
	GWE 6	0.711				
Green transformational leadership	GTL 1	0.739	0.868	0.878	0.900	0.602
	GTL 2	0.779				
	GTL 3	0.898				
	GTL 4	0.699				
	GTL 5	0.742				
	GTL 6	0.782				

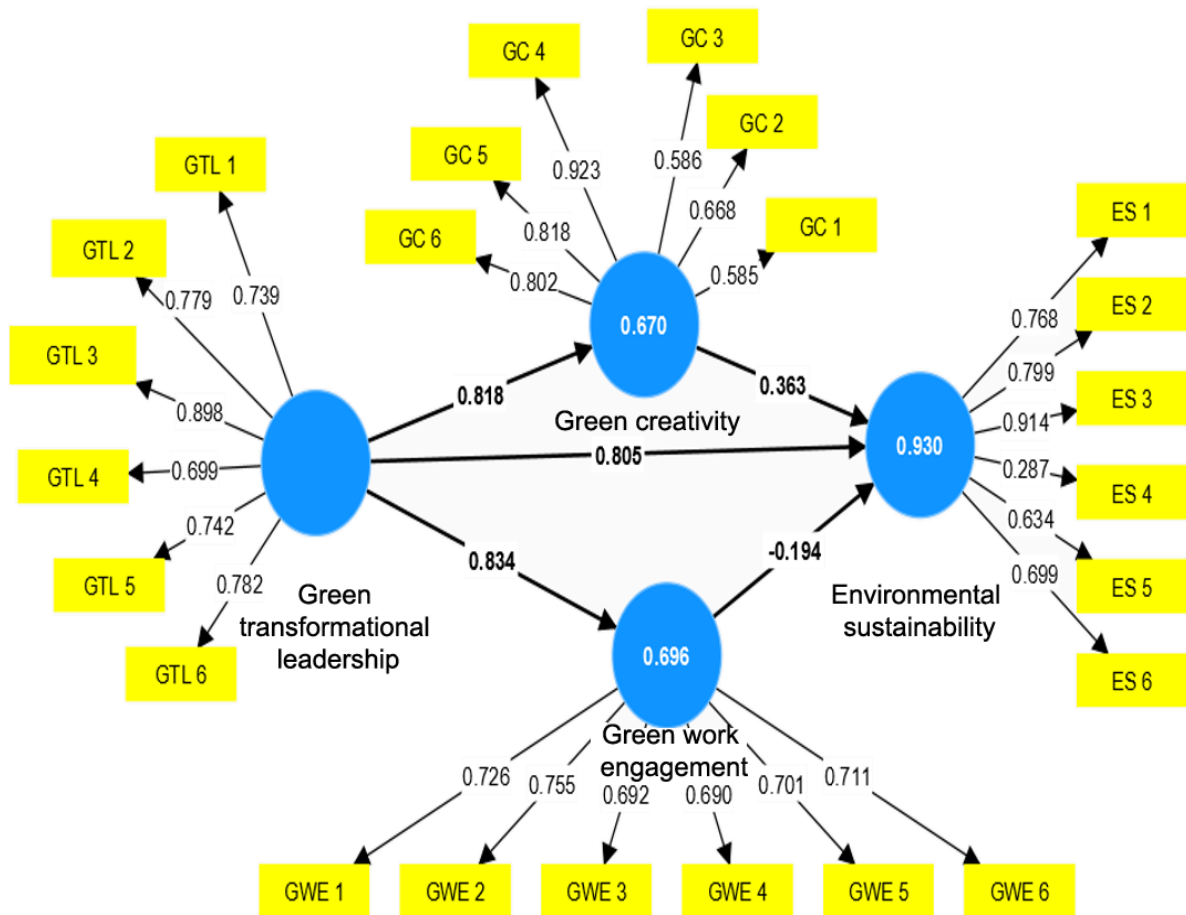


Figure 2. Measurement model.

On the evaluation of the measurement model, Table 4 shows results and touches upon the detailed elaborated note on key findings of the research. The conceptual model is intended to develop hypothesis and further results of the study is disclosed. H<sub>1</sub>: GTL has a positive impact on ES. The hypothesis has a direct relationship between one another. Hence the hypothesis is accepted. Moving on to the second hypothesis, H<sub>2</sub>: GTL has a significant relationship with GC, as the path co-efficient remain as 0.818 indicates that the hypothesis exhibits a positive relationship with its mediating variable. Moreover, in Figure 2, the regression value sounds better with the relationship between GTL and green creativity as it remains 67% GTL explains on GC. Thus, H<sub>2</sub> is also accepted. Further dealing with H<sub>3</sub> is standing out to confess the relationship between GTL and GWE as the path coefficient remains to be 0.834 showcasing a strong positive relationship in suggesting that when leadership focuses on green aspects as it boosts employees' engagement in green work activities. Hence, H<sub>3</sub> is also accepted.

H<sub>4</sub>: GC → ES explains their positive relationship with ES also confirming the acceptance of the hypothesis and holding a path coefficient as 0.363 indicating positive impacts towards ES. The significant relationship claims to appeal that employees' creative efforts are more likely to contribute to sustainability outcomes. Finally, the study ought to represent the H<sub>5</sub> and find the relationship between GWE→ES, as it exhibits a negative relationship between the variables, the hypothesis is rejected. The path coefficient as -0.194 which implies that higher GWE might slightly reduce ES in the model. Thus, in Figure 2 that jointly observed the impacts of GC and GWE explain 93% of the variance in ES indicating good predictive ability also clarify that organisations that prioritize GWE bows to improve its reputation and created a better platform for employee branding. It also confirms that increased level of dedication and innovative workforce and boost employee morale and productivity in the organisation. GTL explains 69.6% of the variation in GWE administers that GTL helps in shaping the employee identity. Similarly, it

guides employees and increases motivation to take part in environmental initiatives and understand the environmental issues.

**Table 4.** Testing of hypothesis.

Hypothesis	Coefficient	Std error	T- value	P- value	Decision
H <sub>1</sub>	0.805	0.061	5.236	0.000	Accepted
H <sub>2</sub>	0.818	0.432	7.845	0.005	Accepted
H <sub>3</sub>	0.834	0.697	8.711	0.000	Accepted
H <sub>4</sub>	0.363	0.192	2.860	0.000	Accepted
H <sub>5</sub>	-0.194	0.500	2.303	0.023	Not accepted

### 7.3. Discriminant Validity

The "Fornell-Larcker criteria" is an indicator implemented in SEM to assess the discriminant validity of the constructs in the model. Discriminant validity guarantees that a latent variable is distinct from other latent variables and signifies a unique dimension inside the model. ES, GC, and GWE have strong discriminant validity, as their diagonal values surpass their correlations with other variables. Table 5 represents GTL has discriminant validity concerns, especially with "environmental sustainability" (ES), since the correlation between these are 0.971 exceed the square root of the AVE for GTL with 0.776. It also indicates that these constructs may converge in definitions or it might signify a model.

**Table 5.** Analysis of Fornell-Larcker criterion.

Constructs	ES	GC	GWE	GTL
ES	0.941			
GC	0.877	0.818		
GWE	0.750	0.749	0.834	
GTL	0.971	0.741	0.713	0.776

### 7.4. Correlation

Table 6 explains the relationship among the variables of the present study. The study reveals a strong and positive relationship between GTL and ES as the correlation was 0.941 between the variables. The table elucidates a positive notion throughout the study. Then the next highest positive relationship as  $r = 0.877$  between the variables is found to be between ES and green creativity. GTL when associated with GWE exhibits 0.834 indicates a strong positive relation between them while with GC it has 0.818 being positively associated. Finally, the least is to be with green creativity over GWE initiate correlation value as 0.749 hence remains a strong and positive relationship with GC and GWE.

**Table 6.** Correlation.

Constructs	ES	GC	GWE	GTL
ES	1	0.877	0.750	0.941
GC		1	0.749	0.818
GWE			1	0.834
GTL				1

The overall summary of the research results initiates from the demographic variables as it inhibits the workplace dynamics and analyse the characteristics of gender, age, marital status, educational background, income status as all these factors contributes to the study in understanding the work dynamics over different generations and classifications. The regression values from the Figure 2 claims to flourish model fit GTL and green creativity as it remains 67% and GTL explains 69.6% of the variation in GWE as it administers that GTL helps in shaping

the employee identity in the organisation. The correlation vows to admit the association among the variables as the highest positive relationship as  $r = 0.941$  between the variables is found to be between ES and GTL.

## 8. DISCUSSION

The study findings revealed that GTL has its intended potential to inspire its employees by guiding its team members towards a better environmental consciousness and stewardship in the industry. GTL remains an inspirational to the employees and also remain motivated in performing the activities that are prone to environmental plans and ensure the business sustainability. The study also emphasizes the need for supportive organizational structures to enhance the impact of GTL by Ibrahim, Zumrah, Supardi, and Juhji (2023) on environmental performance. GTL instigates their teams to elevate their performance, dedication, and trust to new heights through which the businesses can make a difference in the world by encouraging inventiveness and environmental sustainability through green HRM and a culture of creativity as stated by You and Kee (2024). Moreover, the study sounds much better with the relationship between GTL and green creativity. This strong relationship adds upon with the findings of Srivastava, Pathak, Soni, and Dixit (2024) also hooks green organisational culture and green mindfulness.

In addition, GTL remains as a turnaround by masking environmentally conscious behaviour that remains as continuous encouragement and motivation to the employees. While GWE being a perfect mediator, it enables the level of engagement among the co-workers in which the correlation between GTL and the employees' environmental performance is increased. Moreover, GTL highlights its role Stinglhamber, Marique, Caesens, Hanin, and De Zanet (2015) on mentorship team by, inspiring supportive environmental mindset. The findings are consistent with other study in the hospitality industry that suggests that a company's GTL may encourage GC among workers by creating and communicating a compelling green vision (Bhutto, Farooq, Talwar, Awan, & Dhir, 2021). This study kicks off by looking at how GTL directly improves employee GWE and EP. This research discusses GTL's strong influence on employees' GWE and ES. On top of that, the positive relationship between GWE and ES brings additional evidence that measure successfully on the business's environmental performance. Vandenbrande (2021) stated that green practices with the goal of excluding adverse environmental impacts have created a considerable impact on how firms generate strategies to decrease waste, preserve energy, promote healthy environmental practices.

Employees are more prone to be engaged in their job are more productive and have a positive relationship with their employer (Fulaedzah, Tjahjono, & DA, 2022). The results obtained are in conformity with the resource-based approach and indicate that GHRM practices are contributing to the acquisition of distinctive environmental competencies, which are the foundation of sustainable performance. This relationship is significant and very strong. As a result, there may be other aspects that are also necessary for attaining environmental sustainability. In addition, GWE was found to have a substantial positive and partial effect on the relationship between GTL and hotel employees' environmental performance.

## 9. CONCLUSION

The suggested approach might provide a framework for other developing economies to improve their environmental performance by using green HRM strategies based on the findings. Workers are more likely to take actions that benefit the environment if they feel a connection to the company's sustainability initiatives. GTL marches towards the consideration of organisational members and stimulates the employees to reach the environmental goals in concern with the business scenario. Prior research on sustainability has extensively emphasised technical and operational concerns such as energy efficiency and waste reduction while neglecting the human components that contribute to sustainable practices (Zhang et al., 2024). Human resource practices could influence the effects given by people-centric aspects. This study presents specific, practical suggestions to HR

managers and lawmakers. The findings demonstrate that green "creativity" and "work engagement" have a high mediation influence in the IT industry suggesting that businesses should invest to get the most "environmentally" sustainable performance.

Strategic alignment of GHRM practices in collaboration with green leaders in the organization to drive environmental sustainability which adds to operational efficiency, improved business outcomes and hence long-term cost reductions. The study's results are a clear call to action for the industry to address its substantial environmental footprint right away. As a result, academics must make further efforts to build and enhance models so that practitioners may confidently employ evidence-based techniques.

### 9.1. Managerial and Theoretical Implication

The present study had shed its path on organisational identity theory and RBV theory. Lawmakers ought to prioritize the implementation of effective green HRM practices that enable green leadership to achieve sustainability goals. Organisations need to emphasize training and education initiatives to increase employee awareness and dedication to environmental concerns. Initially, we suggest that putting effort into environmental management benefits a firm's image in the eyes of stakeholders since these individuals have grown increasingly demanding and driving enterprises to go green in their processes. In addition, prior study indicates that resolving sustainability-related problems would lead to creativity within the organisation (Van Holt et al., 2020). A new type of leadership necessitates taking the required steps to change into environmentally friendly ones in addition to traditional leadership styles.

GTL's distinctive impact pushes subordinates to go beyond their interest and generate out-of-the-box solutions to reduce environmental deterioration and improve environmental well-being. It also highlights the importance of fostering green creativity within organizations to enhance environmental performance, particularly in emerging economies like India. GTFL is a strategic resource that firm should leverage to shape and implement GHRM which in turn, to influence green innovation and environmental performance. We suggest that leadership and employees are critical resource as any other organizational resources that should be valued in a manner that it becomes difficult for the competing firms to imitate while applying RBV to the HRM performance link.

### 9.2. Limitation and Future Scope

This research has certain limitations which are worth considering for future researchers. The present study was based on the Indian business scenario as India is deemed to be a developing country. The conceptual model can be further explored in hotel industry and tourism industry to come up with the best possible outcomes by the adoption of the conceptual model in similar industries. The present study employed a quantitative approach to achieve its objectives while the future research can try mixed-method approach. Further studies can try out variables like green innovation, green culture also implementing the same with double mediation and finding out the impact and also enhance the study. The study also remains as an avenue for a more nuanced theoretical framework that integrates RBV and organisational identity theory with environmental psychology and organizational sustainability providing future researchers a foundation for investigating similar relationships in different contexts.

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