INVESTIGATING THE ROLE OF GREEN TRAINING AND LEADERSHIP, ORGANIZATIONAL LEARNING AND ORGANIZATIONAL COMMITMENT TOWARDS GREEN PERFORMANCE: A CASE OF PUBLIC FIRMS IN UAE

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Abstract: *Considering the sustainable business practices have been under significant attention of the researchers, policymakers, and environmental activists because of changing environmental concerns. The key purpose of this research is to examine the role of green leadership, green training and development, organizational learning, and organizational commitment towards green performance of public firms as working in UAE. Data has been collected through questionnaire technique where a valid sample of 284 respondents is empirically tested. Moreover, data analysis has been conducted through descriptive statistics, correlational analysis, normality testing, and two step approach (both measurement model and structural model). The results under measurement model reflect that there is no issue related to reliability and validity, internal consistency, convergent validity, and discriminant validity of the latent constructs. Additionally, the findings through Smart PLS for structural model assessment covers that there is a significant impact of green leadership, green training and development, organizational learning, and organizational commitment on green performance of public firms in UAE. The findings would be of great support to various policymakers, governmental officials, departmental mangers and specifically the environmental organizations for promoting the sustainable performance outlook with the help of stated explanatory variables and moderating role from supportive work environment. Besides, some fruitful recommendations and limitations are also discussed to decide the future directions.*

Keywords: *Green Training and Development, Green Leadership, Organizational Learning, Green Performance, UAE.*

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Introduction

Over the time span of last three decades, organizations both at public and private sector have been observed with a growing pressure from environmental activists, policymakers and governmental officers regarding the impact of their operational activities on the nature and environment (Abbas & Sağsan, 2019). At the same time, there is a growing trend while creating awareness among the community members and general public for the declining natural resources, ecological footprints along with more pollution in the environment in the form of carbon emission and other greenhouse gases (Mohsin, Kamran, Nawaz, Hussain, & Dahri, 2021). More specifically, almost all type of organizations as working in different domestic and international markets are dependently on those energy sources which are mainly coming from fossil fuel and coal. At the same time, both local and international regulations are also getting more attention for preserving the natural environment (Zhao, Mahendru, Ma, Rao, & Shang, 2022). Such regulations are more concerned with the corporate sustainable and green performance outlook while reducing the dependency on the traditional energy sources too(Davenport, 2018). For this purpose, different organizations have been assumed to work for the quality products and services under sustainable environment for which green and ecological utilization of natural and other resources is quite significant.

To achieve sustainable and green organizational performance various studies both in theoretical and empirical perspective provide a valuable contribution based on the range of determinants and organizational resources. In this regard, recently various studies have put significant focus on a range of human resource management practices under the shadow of sustainable environment. More specifically, these practices have been regarded as true mechanism in reflecting sustainable behavior to facilitate the employee engagement too (Yaacoub & Frangieh, 2019). At the same time, the green HRM practices help in facilitating the environmental management through key dimensions like green training and development of the employees, green recruitment and selection, green participation and reward to the employees while achieving some sustainable goals (Ojo & Raman, 2019).

In addition, to achieve the sustainable performance outlook, the role of green leadership has also been observed and regarded in the recent years. The definition of green leadership (GLS) can be investigated from the context of environmental policies as determined by different leaders within the organization (Boiral, Raineri, & Talbot, 2018). At the same time, GLS is also reflected in the employees 's behaviour of the organization while taking into account eh pro-environmental policies and practices. Importantly, some authors argue that for creating sustainable environment within the organization, GLS is very important.

Unquestionably, the phenomenon of organizational learning (OL) has been regarded as one of the core constructs in the field of organizational theory. In this regard, a range of conceptual terms have been provided to reflect the title of OL. For example, it is believed that OL occurs under the influence of interlink between the organization and its environment while working through internal aspiration (Dodgson, 1993). Moreover, OL is explained as cognitive and social idea where it goes beyond processing of information.

Moreover, one of the earlier view point regarding employee commitment (OC) towards their organization is explained by Lee and Miller (1999) who state that it is a form of manifest HR practice. Meanwhile, if the employees in any organization believe that their firm is taking great care about their happiness and giving them with proper reward and incentives, consequently employees will develop more ties in the positive form with their organization (Orpen, 1995).

Additionally, OC of the employees towards their organization covers the action towards their organization. In this regard, one of the oldest notion is shared by Gouldner (1960) who claims that if any employee will understand that his/her organization is committed toward him/her, the stated employee/s will also respond in the same way based on attitude and behavioural factor. As a result, such commitment of the employees will help in achieving higher organizational sustainable performance (Muslimat, Ab Wahid, & Erlangga, 2020).

Literature Review

Green training and development (GTD)

Green training and development (GTD) can equate employees with effective working methodologies that ensure waste reduction, proper resource utilization, energy-saving, and reduced environmental degradation (IGI, 2022). One of the leading challenges in organizations today is balancing green development strategies and organizational performance. The solution to this issue is based on green human resource practices for enhanced development and training of employees that are effective in organizational sustainability performance (OSP). GHRM encourages higher-quality employee awareness while committing to environmental sustainability (Pallewaththa & Kumarasinghe, 2018). According to literature evaluations, a comprehensive procedure to frame context for GHRM has yet to materialize. An essential purpose of GHRM is to provide environmental training to organizational members to build required skills and knowledge. Balchat, Gusov, and Mohammed (2022) research shows that green HRM variables, including green training, development practices, green learning, and recruitment, boost organizational sustainability significantly. Green training also encourages the sustainable utilization of natural resources in business organizations. GDT practices implemented by the HR department for employee attitude toward performance are seen as an essential factor for OSP (Yafi, Tehseen, & Haider, 2021). Environment-conscious activities and the representation of organizational knowledge are two crucial parts of green HR. It also entails lowering carbon emissions. Green employment is an occupation that involves working directly with policies, ideas, resources, or technology that help to reduce environmental impact and that requires specific knowledge, skills, education, or expertise in these fields (Hussain, 2018). GHRM entails implementing environmentally friendly HR practices that lead to higher efficiency, cheaper costs, and improved employee engagement.

Organizational Learning (OL)

Independent information is transformed into organizational knowledge through organizational learning (OL). Due to a lack of precise recommendations, organizations fail to execute realistic initiatives. "Companies apply or adjust their mental models, rules, processes, or information to maintain or improve their efficiency," according to (OL) (Freixanet, Rialp, & Churakova, 2020). OL can be taken as a management attribute involving organizational planning and control. It mainly focuses on developing a strategic plan and capturing and evaluating the organizational goals based on the attained knowledge. It requires managing the data or information obtained through organizational resources for positive outcomes on the overall performance (Butko, Ivanova, Popelo, & Samiilenko, 2020). The research literature has shown that knowledge management (KM) is also taken as a parallel research stream, a systematic process to enhance effectiveness and production at the organizational level through proper training of employees. OL is an essential source of KM for the continuous development and utilization of resources (Yuliansyah, Rammal, Maryani, Jais, & Mohd-Sanusi, 2021).

Green Leadership (GLS)

Green leadership (GLS) involves employees in the training and development process and rewards them, an essential aspect of employee motivation and intellectual stimulation. GLS motivates employees toward green organizational behavior and fulfills corporate objectives such as green creativity and a sustainable workplace environment (Begum, Ashfaq, Xia, & Awan, 2022). Environmental management and ecological pro-behavior are no longer a requirement but essential for an organization to attain sustainable competitive advantage and green development. Furthermore, it is critical to comprehend the fundamental reasons why people engage in green behavior at work. Previous research has found that GLS has a beneficial impact on green professional commitment, which leads to an enhanced green innovation in the workplace. As a result, to combat the growing threat of climate change, employers must encourage employees to practice green behavior at work (Graves & Sarkis, 2018).

The influence of GLS on employee behavioral intention is investigated in the research of Nawaz Khan (2022), which incorporates the conservation of resources theory. The data is gathered from Pakistani participants from a variety of businesses. GLS p, as expected, has a favorable influence on green employee behavior, according to this study. In the study, the influence of psychological stress is not substantial, but a green attitude significantly mediates the correlation between GLS and green employee' behavior. Green human resource management (GHRM) practices do not impact the direct relationship between GLS and employee behavior, nor the secondary link between GLS and green behavior via emotional fatigue. GHRM, on the other hand, drastically reduced the mediating role of green attitude towards employee satisfaction. The study offers environmental scientists, administrators, and politicians a useful information for reforming tactics to encourage green workplace behavior.

Employee Commitment (ECT)

The research work of Mahmood Aziz et al. (2021) examines the correlation between ECT and employees' job satisfaction in the context of Iraq. ECT impacts the work variables such as production, turnover, and execution of workers. The study employs a quantitative method to obtain related data to analyze the cointegration of given variables. Findings of the study reveal that ECT impacts employees' job satisfaction at work. Both variables are positively connected, and enhanced ECT improves the satisfaction level of employees at an organization. ECT is important to business corporations, and it plays a role in encouraging employees. The goal of this study is to determine the impact of ECT on operational effectiveness in Kurdish institutions. Employee commitment is defined as an employee's psychological bond with the organization and the ensuing loyalty. In today's business marketplace, every company has new challenges in maintaining efficiency and developing loyal employees (Andavar & Ali, 2020). No organization can operate at its best these days unless every worker is concentrated on the business's objectives. According to Damit, Harun, Martin, Othman, and Ahmad (2019), an organization's commitment to an employee's passionate attachment to, observable proof of, and contribution to the company. When workers are confident that they will learn and develop with their current managers, they are more committed to staying with that business. ECT arises when a man unites unimportant rewards with a foreseeable plan of action by placing a side wager. Hamza et al. (2021) associate dedication with the nature of the part's relationship to the broader framework. Organizational commitment is defined as the behaviour that links individuals to the organization through social performing artists' willingness to contribute their vitality and reliability to social frameworks, the connection of identity frameworks to social connections, which are considered conscience (Prabhu, Abdullah, Ahmed, Nambirajan, & Pandiyan, 2020).

Research Methodology

Research Framework and Hypotheses

The literature review part under chapter two has covered the relationship between the study variables. Based on the theoretical and empirical findings, it is inferred that green training and development, green leadership, organizational learning, and organizational commitment as the key variables having their influence on the sustainable performance of the organization. More specifically, supportive work environment can be utilized as a moderator to investigate the relationship between the stated variables. Therefore, Figure 1 covers the theoretical framework of the study based on the relationship between the variables.
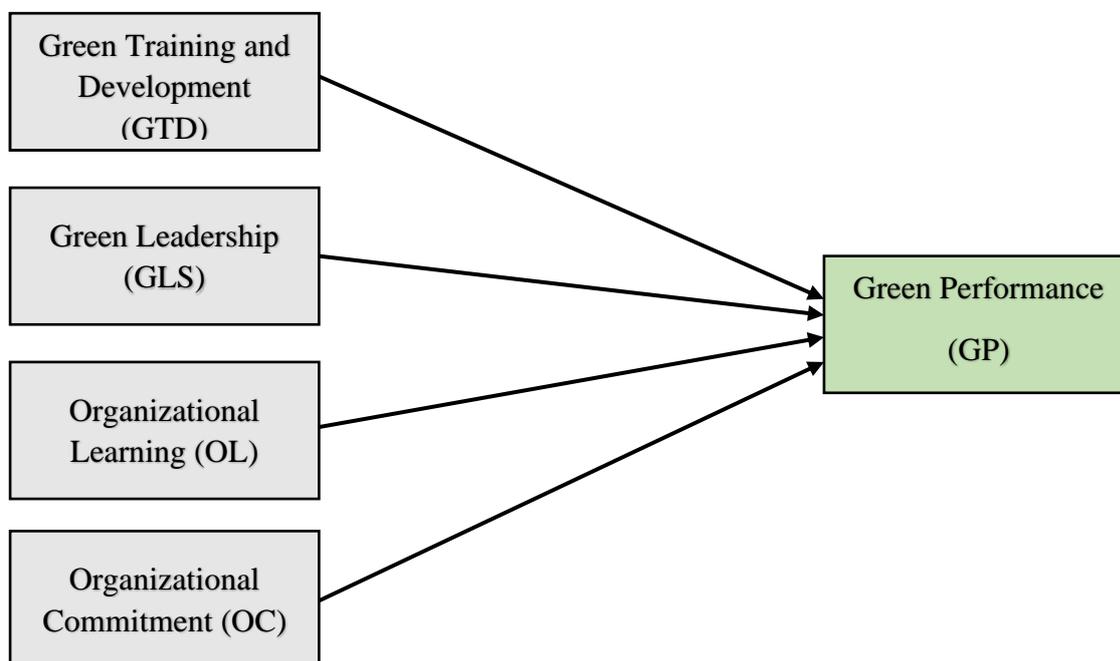
Figure 1: Framework of the Study

H0: There is no significant impact of green training and development on green performance of
   public firms in UAE.
H1: There is a significant impact of green training and development on green performance of
   public firms in UAE.
H0: There is no significant impact of green leadership on green performance of public firms in
   UAE.
H2: There is a significant impact of green leadership on green performance of public firms in
   UAE.
H0: There is no significant impact of organizational learning on green performance of public
   firms in UAE.
H3: There is a significant impact of organizational learning on green performance of public
   firms in UAE.
H0: There is no significant impact of organizational commitment on green performance of
   public firms in UAE.
H4: There is a significant impact of organizational commitment on green performance of public
   firms in UAE.

In addition, data under current research has been collected through questionnaire technique where all the items have been extracted from existing literature. More specifically, a valid sample of 283 respondents from different public firms of UAE have been finalized which was tested through SPSS and Smart PLS. Besides, this research is based on the deductive research approach.

Results and Discussion

Measurement Model Checking

Under measurement model checking, the first step is to consider the reliability and validity of the latent constructs. More specifically, the results have been shown in Table 1 with the help of Cronbach's alpha, rho_A, composite reliability, and average variance extracted (AVE). The results show that the value of Cronbach's alpha for the study variables entitled as green leadership, green performance, green training and development, organisational commitment, and organizational learning have shown the scores like 0.842, 0.858, 0.928, 0.875, and 0810. More specifically, the existing literature indicate a threshold level of 0.70 for the alpha value in order to claim the reliability of the latent constructs (Ahmad & Ahmad, 2018; Calefato et al., 2008; Taber, 2018). As it is quite clear from the findings in Table 1 that all the latent variables have shown their relative alpha score of above 0.70, therefore, the reliability of the latent constructs has been achieved. At the same time, the rho_A reflects the measurement of composite reliability of the latent variables as measured through unstandardized loadings. Moreover, composite reliability as shown in the fourth column of Table 1 covers that the relative values for the GLS, GP, GTD, OC, and OL are 0.904, 0.933, 0.944, 0.905, 0.911. These values are a good measure of the internal consistency in the scaled item; therefore, it is regarded as similar to the alpha value (Netemeyer, Bearden, & Sharma, 2003). In this way, it is stated that a higher value of composite reliability is an excellent indication to claim that study items have shown a constant trend in measuring the same construct.

In addition, the results in Table 1 cover the average variance extracted (AVE) score for the relative exogenous and endogenous constructs. More specifically, AVE helps in analyzing the amount of variance as captured by the latent construct in relation to amount of variance due to measurement error. As per the review of existing literature, it is inferred that the value of AVE for every single latent construct should be greater than 0.50, covering the fact that it better reflect every single latent variable. Hair, Black, Babin, Anderson, and Tatham (2010) have suggested the similar findings and claim that value of AVE should be at least 0.50 or above. Ther last column in Table 1 shows that the AVE value for the study variables have been reflected as 0.758 for GLS, 0.875 for GP, 0.771 for GTD, 0.616 for OC, and 0.837 for OL. Based on the threshold level, it is claimed that all the study variables have significantly achieved the minimum level in terms of AVE scores, hence no problem for the reliability and validity of the latent constructs.

Table 1: Construct Reliability and Validity

Variables	Cronbach's Alpha	rho_A	Composite Reliability	(AVE)
GLS	0.842	0.864	0.904	0.758
GP	0.858	0.864	0.933	0.875
GTD	0.928	0.959	0.944	0.771
OC	0.875	0.887	0.905	0.616
OL	0.810	0.874	0.911	0.837

Note: GTD: Green training and Development, GP: green performance, OC: organizational commitment, GLS: green leadership, OL: organizational learning.

Discriminant Validity

The justification for the reliability and validity of the latent constructs have opened further pathway for checking the discriminant validity in the next stage. Therefore, this section has provided some significant results in terms of discriminant validity of the model for which results have been covered in Table 2 in terms of Fornell-Larcker criterion. As stated earlier, to examine the discriminant validity of the model, three different measures have been suggested in the current literature which are named as Fornell-Larcker Criterion, loadings and cross loadings, and finally, the HTMT ratio. More specifically, as expressed by (Henseler, Ringle, & Sarstedt, 2015) criterion for analyzing the discriminant validity of the model through Fornell-Larcker is widely used in the current literature where published research are mainly considering on it. More specifically over 72.08% research studies in the field of marketing have utilized Fornell-Larcker whereas 7.79% have focused on cross loadings or both by 26.13%. This means that all these measures have got much attention in the current literature. The criteria of Fornell-Larcker helps in analyzing the degree of shared variance between the latent constructs in the model. Moreover, according to this criterion, the square root of each construct's AVE is higher than its correlation with another construct. The results have been presented in Table 2 where the value of square root of each of the latent construct's AVE is presented in diagonal mode which is reasonably greater than its correlation with the other constructs. For example, the AVE square root for GLS, GP, GTD, OC, and OL are observed as 0.871, 0.936, 0.878, 0.785, and 0.915, respectively. These values have shown enough evidence to claim that that discriminant validity through square root of AVE for every relative latent construct is more than the presented correlation with other constructs as shown in Table 2. Therefore, current research has justified the discriminant validity between the latent constructs through Fornell-Larcker method.

Table 2: Fornell-Larcker Criterion

Variables	GLS	GP	GTD	OC	OL
GLS	0.871				
GP	0.724	0.936			
GTD	0.168	0.240	0.878		
OC	0.452	0.341	0.313	0.785	
OL	-0.069	-0.126	-0.032	-0.013	0.915

Note: GTD: Green training and Development, GP: green performance, OC: organizational commitment, GLS: green leadership, OL: organizational learning.
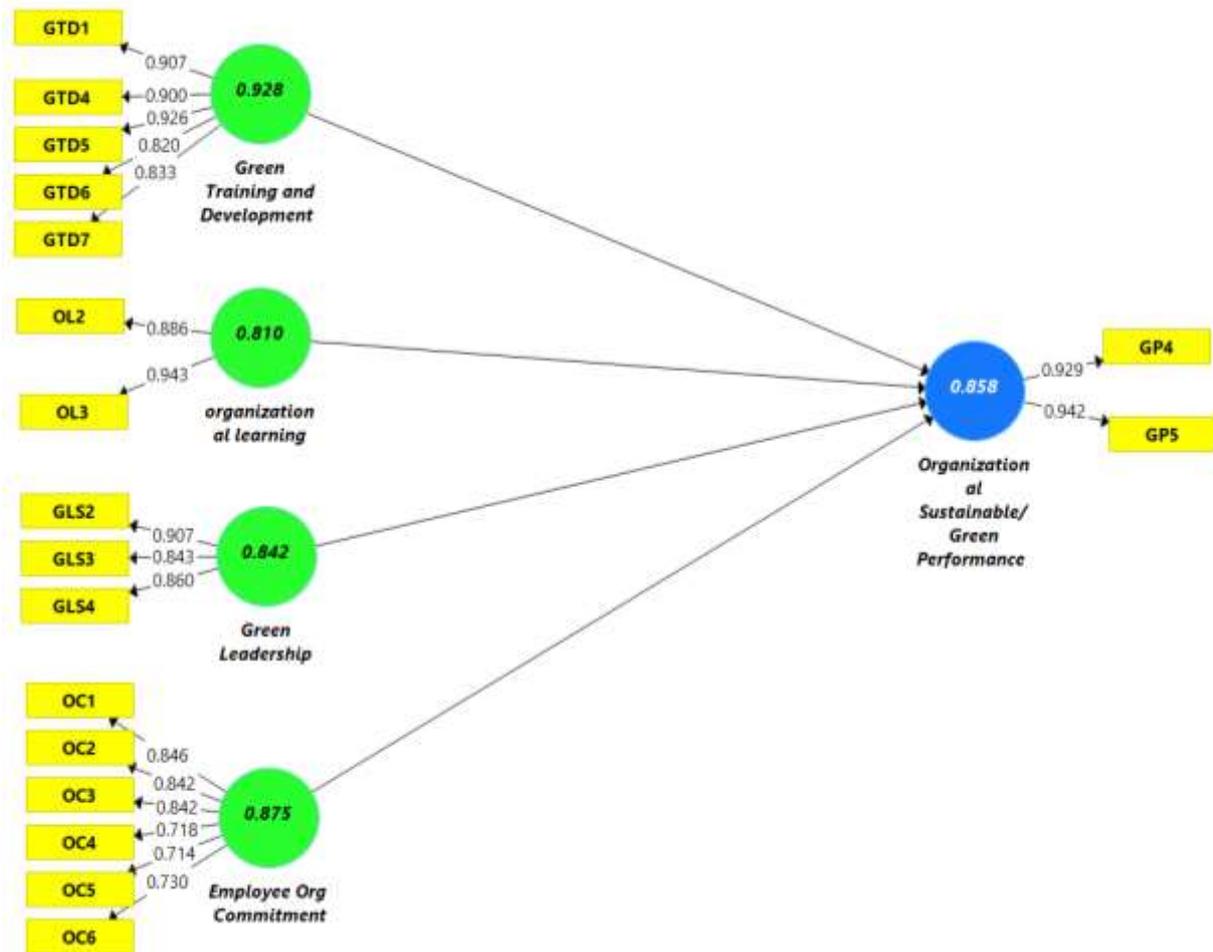
Figure 2: Measurement Model Output

Structural Model

Impact of Green Leadership on Green Performance

For expressing the direct relationship between first independent variable entitled as green leadership and main dependent variable named as green performance, the results are covered in Table 3. It is found that the coefficient for the direct impact of GLS on GP is 0.709, providing the evidence that 1% change in green leadership is leading towards a change of 0.709 in the main dependent variable of green performance. The value of standard deviation for this coefficient is found to be 0.044 which means that a dispersion in the stated coefficient. Moreover, through coefficient and standard deviation, the t-value has been achieved which is 16.144. To reflect whether this t-value is statistically significant or not, a threshold level of 1.96 has been determined in the existing body of literature. Based on the direct impact of green leadership on green performance, it is stated that their relationship is positively significant. In the existing literature, some studies have been found for justifying the relationship between green leadership and green or sustainable performance. For example, Iqbal, Ahmad, and Halim (2020) claim that in the contemporary environment, green leadership has been emerged as a significant strategy to deal with environmental challenges. Through clustering sampling technique, data was collected from small and medium enterprise where a final sample of 369 respondents have been collected. The study findings through SEM approach confirm the fact that there is a significant and direct impact of green/sustainable leadership on green performance where an overall 0.431% change has been expressed in the main dependent

variable due to green leadership. Moreover, there is a significant mediating effect of org. learning on the association between green leadership and sustainable performance. Chen, Chang, and Lin (2014) claim that literature studies are widely missing while exploring the relationship between green transformational leadership and green performance, hence their study has filled this gap.

Impact of Green Training and Development on Green Performance

The relationship between green training and development and green performance has been tested on empirical grounds through SEM approach. The results have been covered in Table 3 where it is found that the coefficient based on the original sample is 0.262 indicating that 1% change in the GTD is leading towards a positive change in green performance of 26.2%. Moreover, the value of standard deviation in the stated coefficient is 0.046, leading towards a T-statistics of 5.696. This would claim that there is a significant and positive impact of green training and development on green performance among the public entities as working in the region of UAE. Due to higher value of T-statistics, the relative coefficient of green training and development reflects a p-value of 0.000, hence significant at 1%. Khan, Bhatti, Obaid, Sami, and Ullah (2020) investigate both theoretical and empirical relationship between green HR practices (including training and development) and sustainable organizational performance. It is claimed that sustainable concerns have got much attention among the manufacturing firms as working in Malysia while addressing sustainable issues. Their study mainly focusses on green HR practices like training and development, green recruitment and selection, green assessment and green performance as well. Considering quantitative survey analysis for the purpose of data collection, while applying SEM technique. The results confirm the positive nexus between green HR practices including training and development and sustainable performance as shown by manufacturing organizations in Malaysia.

Impact of Organizational Commitment on Green Performance

The relationship between organizational commitment and green performance has also been examined in the present study for which findings are presented through coefficient value, standard deviation, T-value and P-value, respectively. The coefficient of OC is 0.623 indicate that there is a positive impact of green performance via more commitment from the employees. More specifically, this coefficient reflects that 1 % change in the value of OC is leading towards a change of 0.623 in the green performance among the public firms as working in the region of UAE. Additionally, the value of standard deviation under this coefficient is 0.070 through which the T-value of 8.90 has been achieved. Meanwhile, this t-score provides the p-value of 0.000, significant at 1%. Therefore, it is claimed that there is a significant and positive impact of organizational commitment on green performance as demonstrated by public entities in UAE. Additionally, the level of organizational commitment indicates the way through which employees are found to be emotionally attached with their organization. Such practice helps in examining whether the employees will stay with their organization for a longer period of time.

Impact of Organizational Learning on Green Performance

The fourth independent variable is entitled as organizational learning where its impact on organizational sustainable performance has been investigated through SEM PLS approach. The results in Table 3. The findings show that the coefficient for the relationship between organizational learning and green performance is 0.176 showing an overall positive change in green organizational performance as reflected through employees' learning capabilities. More specifically, this coefficient has shown the standard deviation of 0.043 through which the t-value of 4.40 has been achieved (i.e., threshold level= 1.96). This confirms that 1% increase in

employees' learning is a good sign for increasing organizational performance under sustainable manner by 4.3% and vice versa. The relationship between OL and GP has also been justified in the existing studies. For example, Zgrzywa-Ziemak and Walecka-Jankowska (2020) provides a good contribution for empirically testing the relationship between organizational learning and business sustainability. Focusing on Polish and Danish companies, they have collected the data while applying SEM technique. The results show that OL is significantly and positively determining the business sustainability among 694 selected companies. Similar argument has been shared by Edwards (2009) OL is a good source for shifting towards sustainable business practices. Bilan, Hussain, Haseeb, and Kot (2020) have examined the organizational learning as a mediator on the relationship between governance mechanism, leadership and sustainable business performance.

Table 3: SEM Direct Relationship

Directions	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
GLS -> GP	0.709	0.044	16.114	0.000
GTD -> GP	0.262	0.046	5.696	0.000
OC -> GP	0.623	0.070	8.900	0.000
OL -> GP	0.176	0.043	4.400	0.000

Note: GTD: Green training and Development, GP: green performance, OC: organizational commitment, SWE: supportive work environment, GLS: green leadership, OL: organizational learning

Conclusion and Policy Implications

Based on the theoretical and empirical findings as provided by this research some significant policy suggestions and recommendations are also linked with this study. For example, the very first suggestion as provided by this study highlights that governmental departments in UAE should significantly consider the need of changing environmental situations along with pollution in the natural environment. For this purpose, there is a growing need for the promotion of green and sustainable business practices at all three management layers (lower order management, middle order management, and higher order management).

For this purpose, firstly, it is suggested that employees should be equipped with the provision of more sustainable training and development related practices while exceeding present status of such practices. In this way, employees should facilitate and encourage to utilize the organizational resources while reducing the wastes, energy conservation and consumption. At the same time, governmental officials in their relative departments should seriously focus on the utilizing the employees' skill, knowledge and expertise in dealing with the environmental degradation and management. Secondly, it is suggested that managers at their relative units or department should integrate the day-to-day activities of their employees/subordinates with positive environmental practices. This would justify that provision of both financial and non-financial incentives to those employees who actively participate and reflect such practices in their day-to-day activities should be the regular management practice.

Thirdly, the positive nexus between green leadership and green performance reflects that management at different public sector organizations is moving towards some sustainable solution with the help of current leadership practices. In this regard, it is further suggested that different types of leadership like transformational and transactional leadership as equipped with green and sustainable dimensions should be continued for a longer period of time. Moreover, green leadership practices like encouraging the employees through their active part in day-to-

day organizational performance for achieving green results would be another solution to tackle with environmental degradation.

Although this research has provided some outstanding contributions and policy suggestions, however, certain limitations are also linked with it. Details are as follows:

- The first limitation of this research claims that it has only considered green training and development out of the range of HRM practices. These practices are entitled as green recruitment and selection, green performance management, green reward and compensation and green employee empowerment.
- The second limitation of this study specifies that it has only green performance as key measure of organizational performance. However, there are range of financial and non-financial performance measures which are not in the attention of the researcher in the current study.
- The third limitation of this study expresses that this research only considers the role of supportive work environment on the relationship between green training and development, green leadership, organizational learning, organizational commitment, and green performance. However, there are various other moderators who can be added in the stated model. For example, the role of employee motivation, pro-environmental behaviour, and organizational commitment towards green practices would also be regarded.

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