

Top Management Support: Underlying Mechanism between Green Human Resource Management Practices and Environmental Performance

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ABSTRACT

Worldwide, the environmental policymakers and researchers have argued that the causes of environmental deterioration such as loss of biodiversity, increased pollution and resource deficit are entrenched into the human behaviors. In this regard, most of the firms tend towards guaranteeing that their day-to-day operations are not harmful to environment by the application of green initiatives. Thus, there exists an emerging need for shaping and understanding the employee behavior to decrease these harmful environmental effects. Present study, therefore, contributes to the debate by empirically investigating the impact of four dimensions of green HRM practices. The study further incorporates top management support as a mediating mechanism in the relationship between green HRM practices and environmental performance. The study uses green HRM practices (green training and development, green performance management, green employee involvement and green recruitment and selection) as explanatory variables, top management support as mediating variable and environmental performance as outcome variable. The data are collected from 314 respondents working in the manufacturing firms of Pakistan. The study finds positive effect of green HRM practices on environmental performance. The study shows that top management support significantly mediates between green HRM practice and environmental performance. The study suggests promoting top management support to improve environmental performance as it helps firms to achieve sustainable comparative advantage and let the firms produce environmentally friendly products. The study concludes that the appreciation by the top management motivates the employees to engage in environmentally friendly initiatives which leads towards sustainable environmental performance.

Keywords: *green training and development, green performance management, green employee involvement, green recruitment and selection, top management support, environmental performance*

I. INTRODUCTION

Worldwide, the environmental policymakers and researchers have argued that the causes of environmental of deterioration such as loss of biodiversity, increased pollution and resource deficit are entrenched into the human behaviors (Renwick et al., 2013; Mtutu & Thondhlana, 2016). In this regard, most of the firms tend towards guaranteeing that their day-to-day operations are not (or less) harmful to environment by the application of green initiatives. Thus, there exists an emerging need for shaping and understanding the employee behavior to reduce the harmful environmental effects of their organizational activities.

In response to such issues, the role of “green human resource management (GHRM)” in effecting environmental performance (EP) has emerged as a hot topic (Dumont et al., 2016). GHRM is the enclosure of environmental awareness within the HR process of recruiting, selecting, training and developing green personnel that understands the environment-friendly initiatives, practices and values. As well, current studies supporting the human resources’ role in EP have focused on GHRM as a significant factor in implementing the organizational environmental policies (Kim et al., 2017).

The conservation of environment has been an imperative concern for last few eras. Nearly all industries have incorporated environmental conservation initiatives. Most of the manufacturing firms have intended to abolish waste produced during the process of production and discarding of products and have improved EP (Famiyeh et al., 2018). To understand practices of GHRM, as advocated by Renwick et al. (2013), few researches (such as Pinzone et al., 2016) mobilize “ability-motivation-opportunity (AMO)” theory authored by Appelbaum et al. (2000). According to this theory, HRM related practices contribute to an organizational performance by “enhancing peoples’ abilities (through training), motivation (through performance management system) and opportunities (through suggestion system)”. Hence, the impact of GHRM (such as training, performance management, and employee involvement or ability, motivation and opportunity) on EP through top management support seems to be established.

The environmental protection has appeared to be the global concern. The increased environmental issues are motivating the hiring of “environmentally responsible management” in the companies, for concern, in manufacturing organizations (Singjai et al., 2018; Ouyang et al., 2019), it is due to the reason that “firms operate in a competitive global economy in which they must not only be efficient but also be responsible, especially the environmental responsibility” (Yong et al., 2019, p.215). Undeniably,

application of environmental management is deliberately imperative to the companies, as responding to exterior changes can boost up the demand of customers towards the products/services of an organization, and strengthen its economical position (Fraj et al., 2015; Molina-Azorin et al., 2015). Among the tactics implemented by the companies to report the environmental issue, such as technological viewpoint (Chan et al., 2020), GHRM has become an embryonic research issue (Ren et al., 2018) that needs to be addressed. GHRM is necessary in achieving the environmental objectives of the organization (Paille et al., 2014). It is (GHRM) considered as one of the best approaches to certify a good association between a firm and its stakeholders (Yusoff et al., 2020).

Many of the prior studies on GHRM have studied the impact of GHRM on either organizational level or individual one. Such as, one stream has focused on the GHRM related employee behavior (Luu, 2019; Dumont et al., 2017) while the other one has dealt with the impact of GHRM on EP (Roscoe et al., 2019; Masri & Jaaron, 2017). Although, recent published studies have linked the GHRM to firms' EP through green employee behavior, such as eco-friendly behavior (Kim et al., 2019), organizational citizenship behavior (Anwar et al., 2020) and employee pro-environmental behavior (Saeed et al., 2019), but the mediating role of top management support (TMS) in the association between GHRM practices and EP is still missing. Indeed, the success of environmental management of an organization depends on employees' environmental behavior (i.e., TMS) which helps improving EP (Kim et al., 2019). Among others, Pham et al., (2020) analyze the mediating effect of organizational citizenship behavior on the link between GHRM and EP. Yet, this study has still missed the contribution of GHRM's aspects (green training and development (GTD), green employee involvement (GEI), green performance management (GPM) and green recruitment and selection (GRS)) separately and the mediating role of TMS in the relation between each dimension of GHRM and EP, which creates the need of current study. Accordingly, this study seeks to fill the abovementioned research gaps by examining that how GHRM influence both the individual and organizational levels to answer the following research questions:

RQ1: Does GHRM's practices directly influence the EP?

RQ2: Does TMS mediate between GHRM practices and EP?

After reviewing the available literature on the relationship between GHRM and EP, present study found various empirical and theoretical gaps in the prior studies and intends to fill these gaps in following four ways. First, the study found that authors have conducted several studies on the relationship between GHRM and EP and revealed the positive impact of GHRM on EP (Hameed et al., 2020; Kim et al., 2019; O'Donohue & Torugsa, 2016). Researchers also highlighted that eco-friendly behavior of the employees is one of the most fundamental factors that can promote EP (Pham et al., 2020). The studies revealed that green training and development (Simpson & Samson, 2010), green performance management (Muster & Schrader, 2011), green recruitment and selection (Arulrajah et al., 2015) and green employee involvement (Dangelico, 2015) are the important drivers of EP. Therefore, to the best of author's knowledge, until now, no research study has been conducted (more specifically in Pakistan) that has investigated the combined effect of these four dimensions of GHRM. Second, this study argues that number of researchers have concluded that EP is highly affected by the employee's environmental initiatives which is influenced by the management behaviors (Gkorezis, 2015; Ramus & Steger, 2000; Paille et al., 2020). The study, therefore, contributes by investigating the relationship between TMS and EP. Third, current study proposed that GHRM practices have significant effect on the behavior of top management (Jacobsen & Bøgh Andersen, 2015). However, to the best of author's knowledge, the question of "GHRM impacts TMS" is still not answered, thus, this study tries to answer this question. Fourth, literature clearly shows the mediating role of TMS in the linkage between GHRM and EP. However, as far as we know, no study has so far been conducted that has analyzed the mediating role of TMS in the relationship between GHRM and EP. Thus, this study examines the mediating role of TMS is the nexus of GHRM and EP under the theoretical lenses of AMO and social exchange theories.

II. LITERATURE REVIEW

A. GHRM Practices and Environmental Performance (EP)

Currently, organizations are highly fretful about the increased environmental issues. They are conscious about the inclusion of certain practices in their organizational activities that positively contributes to the EP. Researchers argued that the application of GHRM practices in the organizational activities positively contributes to the EP (Hameed et al., 2020; Kim et al., 2019; O'Donohue & Torugsa, 2016). According to Vachon and Klassen (2006), the incorporation of green practices (i.e., GPM and GTD) plays a crucial role in promoting EP. Some other researchers also shed the light on the positive role of GHRM practices in reducing the adverse environmental impacts. For instance, Milliman and Clair (2017) scrutinized the affiliation between GHRM and EP and found the positive relationship between EP and GHRM. They argued that in such organizations in which the GHRM practices are implemented, the performance of the employees is evaluated on the basis of their eco-friendly

behaviors. Jabbar and Abid (2014) also worked on the nexus between GHRM and EP. They inferred that GHRM practices motivate the employees to involve in different eco-friendly activities by providing different monetary and non-monetary rewards.

Muster and Schrader (2011) stated that the fundamental purpose of GHRM is to advance the environmental compassion among the employees and to make them conscious about their environmental behaviors which affect their consumption arrays. Saeed et al. (2019) demonstrated that GHRM significantly affect the pro-environmental behavior of the employees. Authors believed that GHRM practices promote environmentally friendly behavior among the employees which positively contributes to the EP. Similarly, Singh et al. (2020) also concluded the positive linkage of GHRM with EP. Roscoe et al. (2019) suggested that employees' environmental trainings intensify the concerns of the employees about the environmental issues which results in improved organizational performance. Authors stated that providing the green training to the employees will not only result in improved EP but it also promotes environmental initiatives among the employees. Simpson and Samson (2010) argued that the explicit aim of training is to promote the green abilities of the employees to reduce the unnecessary environmental hazards. Arulrajah et al. (2015) indicated that employee' recruitment and selection on the basis of eco-friendly behaviors also plays an important role in EP.

B. Top Management Support (TMS) and Environmental Performance (EP)

Enhancing the EP is the issue of significant importance to the researchers. In this regard, different businesses, economics and management researchers have conducted research and published studies in different academic journals. Researchers believed that the EP is highly affected by the behavior and the involvement of employees in the organizational activities. For instance, Hameed et al. (2020) concluded that if the employees of the organizations are engaged in eco-friendly activities, the organization will show improved EP. Some other researchers (e.g., Pham et al., 2020) also concluded a positive role of employee's eco-friendly activities in employee involvement. The researchers are highly conscious about promoting the eco-friendly behavior of employees and have started spending many sleepless nights to find out such factors that can promote employee's eco-friendly behaviors. It has become cleared to the researchers that TMS is one of the most important factors which positively contribute to the employee's inclination to promote eco-friendly initiatives (Gkorezis, 2015; Pail   et al., 2020). Paille et al. (2020) are supported the positive role of TMS in employees' eco-friendly initiatives. They concluded that supervisors may enthusiast their subordinates to behave in an economical friendly manner to improve the EP through green training.

Existing studies point out that in advance economies the TMS affects organization environmental certification practice (Singh et al., 2018). Particularly, TMS can encourage environmental certification practice through higher management faith and higher management involvement. Upper Echelons theory describes that the beliefs or values of higher managers can affect their selective perception of external information, that is, high level managers may tend to get information regarding environmental certification, like procedures and benefits of certification.

Min et al. (2020) investigated the relationship between managers' support and employees' sustainable performance and showed the positive relationship between the variables. It was observed that indeed it is the manager, supervisor or the leader of an organization who engages the employees in environment-friendly initiatives. Considering the above literature, present study argued that the EP is highly affected by the employee's environmental initiatives which is influenced by TMS. Present study therefore contributes to the existing debate by examining the empirical relationship between TMS and EP.

C. GHRM Practices and Top Management Support (TMS)

Many researchers have conducted their research on the manager's role in different contexts. Researchers argued that managerial position include "moral and professional support, building sound workplace, and assistance of the leaders towards their subordinates or employees". Manager's role is also comprised of some features of a leader e.g., "perceptual discrepancy, supportive behavior, value congruity, trustworthiness, and similar personalities". Researchers believed that TMS is highly influenced by the organizational practices (De Vries, 2000), as leaders lead the organization as per the organizational concerns. Jacobsen and B  gh Andersen (2015) stated that the organizations striving in uncertain environments become acute engines of feasibility, prosperity, and growth and therefore demands their leaders or TMS powers to motivate the employees to perform better to compete in the market.

For the EP, GHRM is certainly important. There are reasons for it. Primarily, this is because the stakeholders expect an organization to make wise and responsible use of available resources. This also means that firms are required to i) protect the environment, ii) lessen the usage, and iii) avoid waste generation from the air, water, energy, minerals and other materials used in the manufacturing process. It is also expected to recycle and reuse the materials to the maximum extent instead of relying on nature to handle these issues. Preservation of nature in its actual form is the prime responsibility of an organization vis-  -vis

dumping of hazardous materials in the environment (Arulrajah et al., 2016). Moin et al. (2021) also believed that TMS is influenced by the organizational HR practices. This study therefore proposed that the HR practices have significant influence on TMS. However, the question of whether TMS is influenced by the GHRM practices still needs to be answered.

D. Mediating Role of Top Management Support (TMS)

Protection of natural environment is an issue of concern for all the stakeholders and researchers are no exception in this regard. It is generally accepted that the industries and/or the organizations are the main source of environmental hazards because their routine activities are polluting the environments by emitting toxic gases. Organizations, therefore, decided to incorporate different environmental practices (GHRM practices) to improve the EP. Most manufacturing units do take steps to reduce the waste generation during the production process. They achieve this objective by promoting the environmental initiatives through green efforts (i.e., green training and development, green product management, etc.) (Bohdanowicz et al., 2011). These green efforts pursue the employees to become part of the environmentally friendly initiatives which resultantly improves EP (Wang et al., 2018). Singh et al. (2020) are of the opinion that GHRM practices affect TMS and at the same time contribute positively to the EP.

E. Theoretical Framework

Ability motivation opportunity (AMO) theory and social exchange theory (SET) provide the theoretical lenses to support linkages among the variables. AMO theory implies that HRM practices improves the employee's environmental initiatives through increased human competencies. These human competencies encourage the employees to promote their eco-friendly behaviors by reducing the waste material (Jiang et al., 2012). A number of researchers have conducted the researches in the context of AMO theory and concluded that EP can be promoted through the GHRM practices. The advocates of the AMO theory concluded that organizational HRM practices positively contribute to the employee's sustainable performance (through rewards, compensations, and incentives), and employee's personal aptitudes (thorough training and development), which in turn promotes the eco-friendly behavior among the employees. SET indicates that, in the field of HRM, the leaders or the supervisory powers play an important role in building the knowledge of their subordinates regarding some particular subject. Present study, on the basis of SET, proposes that the supervisory behaviors will provide the knowledge about the environmental initiatives to the employees which positively contributes to the EP.

F. Hypotheses

H1: There is a significant relationship between GHRM Practices (GTD, GRS, GEI, and GPM) and EP.

H2: Top management support significantly mediates the relationship between GHRM practices (GTD, GRS, GEI, and GPM) and EP.

G. Conceptual Framework

Figure 1 shows conceptual framework for the influence of GHRM practices on EP through TMS.

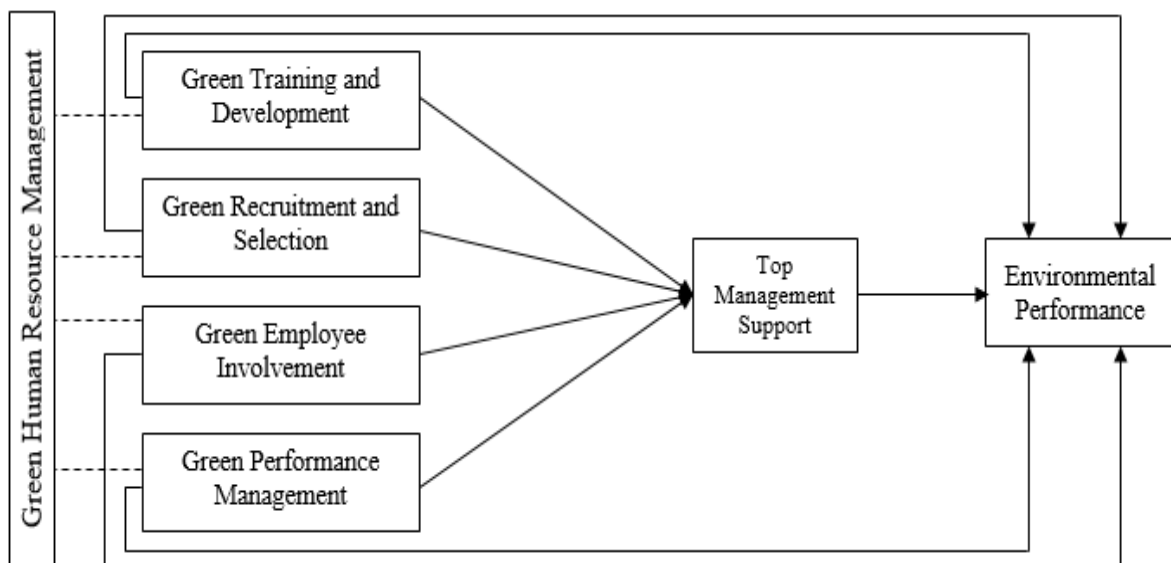


Figure 1: Conceptual Framework

III. METHODOLOGY

A. Data and Sample

In order to analyze the effect of GHRM practices on EP through TMS, the employees of manufacturing firms in Pakistan were chosen as sample respondents. Acquiring data from each employee of the manufacturing industry in Pakistan was a difficult task. However, the accurate and effective sampling was crucial to conduct an effective and successful research. The data were collected from the sample respondents. The study figures out a specific sample size and uses the approach proposed by Tabachnick and Fidell (2012). According to them, the appropriate sample size for the study, n , is calculated by $IVs * 15 + 50$ where IVs is the “independent variables” of the research. According to this rule, a minimum sample of (140) will be enough to obtain the required statistical force in exact outcomes. Thus, by using a convenient sampling technique, 400 employees of manufacturing firms in Pakistan were included in the survey.

B. Variables

This study uses GTD, GRS, GEI and GMS as explanatory variables, TMS as mediating variable and EP as outcome variables. GTD refer to “altering employee’s knowledge, skills, and behavior related to environmental issues” (Teixeira et al., 2012 p.319). The study adapted (5) items of GTD from Tang et al. (2018) and Masri and Jaaron (2017). GRS is “the integration of environmental management with recruitment & selection, where HRM policies are used to promote environmental sustainability and the wise and judicious use (conservation) of resources within business organizations” (Obaid & Alias, 2015 p. 952). The study adapted 5 items of GRS from Daily et al. (2012) and Masri and Jaaron (2017). GEI is defined as “the participation of employees in sustainable green organizational practices”. The study adapted (5) items of GEI from Masri and Jaaron (2017) and Pinzone et al. (2016). GPM refers to the “environmental concerns and policies of the company and organizational concentration on the use of environmental responsibilities” (Harvey et al., 2013). The study adapted (5) items of GPM from Jabbour et al. (2010) and Masri and Jaaron (2017). TMS refers to “a procedure which is concerned with getting appropriate information to managers as and when they need it and which aids the manager in making decisions”. TMS is assessed through three items scale developed by Dai et al. (2014). EP refers to “the use of renewable resources, improved energy and water efficiency, the reduction of air contaminants and greenhouse gas emissions, increased reuse and recycling, and the reduction of hazardous waste and toxic pollutants” (Jasch, 2000 p. 80). The study adapted (8) items of EP from Paille et al. (2014) and Melnyk et al. (2003).

C. Likert Scale

There are different types of Likert scales such as Type-5 and Type-7. The scale comprises of various sub-scales and reversed items that help avoid biases attached to reciprocal method (Crampton & Wagner, 1994). In this study, criteria of 5-type Likert scale (starts from 1 (strongly disagree) to 5 (strongly agree)) were chosen to measure the items of modeled variables.

D. Data Analysis

To obtain the empirical values based on the data collected, “Partial Least Square Structural Equational Modeling (PLS-SEM)” was used. This model is an advanced and progressive option. Indeed, PLS modeling is mostly adopted technique that helps in testing direct, indirect, casual, bi-directional, mediating, and moderating links among the variables using process of bootstrapping. Through the process of bootstrapping, PLS-SEM generates t-statistics for testing the significance of structural paths. For implementing the standard errors of bootstrap, this process allows access to a huge quantity of subsamples from the definite sample with an auxiliary. The errors provide the estimated t values for testing the significance of the variable in addition to compacting with the issue of data’s normality.

IV. RESULTS AND DISCUSSION

A. Assessment of Measurement Model

In the measurement (outer) model (shown in Figure 2), the scholars take in to consideration diverse criterion of validity and reliability. In this model, the discriminant validity aids verifying the construct’s validity which is an essential step in the hypotheses testing (Hair et al., 2014). In this case, Chin (2010) provides two methods of measuring discriminant validity; “Former & Larker Method and Heterotrait-Monotrait (HTMT) Ratio”. The maximum score of HTMT is 0.90. This study considers these two measures for checking discriminant validity.

Additionally, internal consistency and composite reliability (CR) are also examined by the outer model. The score of CR must not be less than 0.70 (Alarcón et al., 2015). Moreover, the indicators' reliability is tested through loading scores that must not be less than 0.50. Whereas, convergent validity is accessed by the scores of AVE (average variance extracted) that must not be lower than 0.50. Thus, these types of validity are established in this study (Hair et al., 2014).

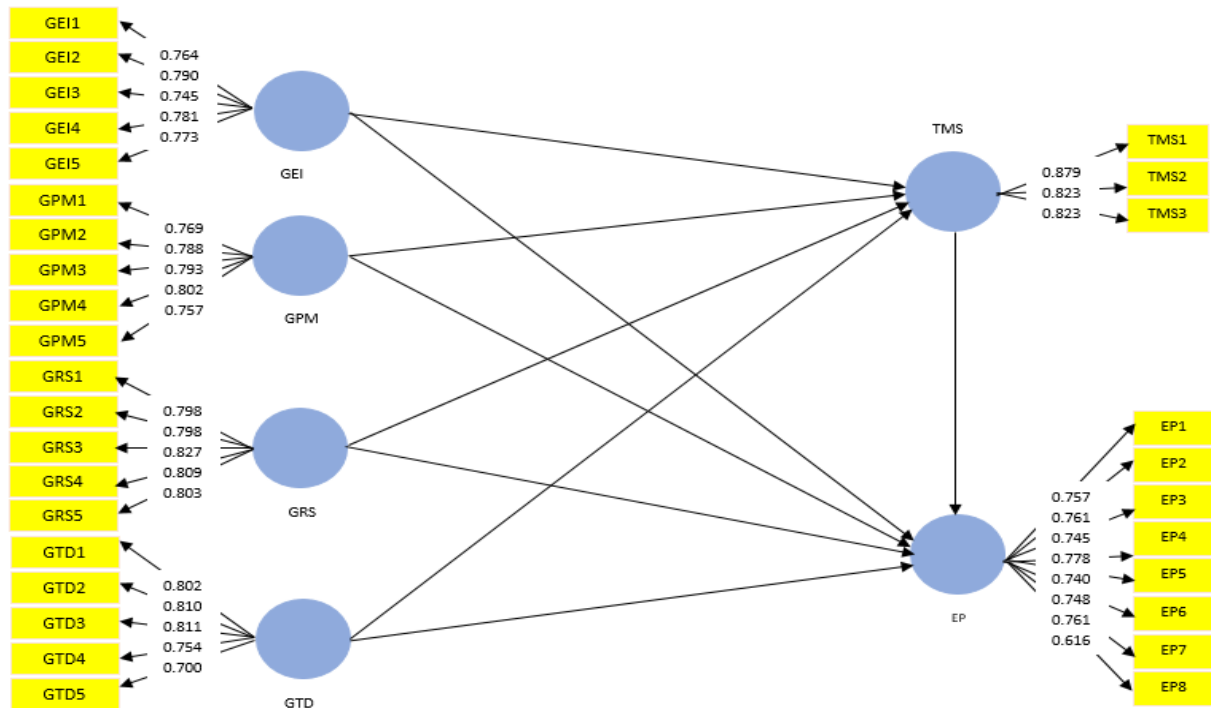


Figure 2: Measurement Model

B. Reliability and Internal Consistency

Reliability and internal consistency are accessed using Cronbach Alpha (α), rho_A and composite reliability (CR). As suggested by Hair et al. (2014), threshold level of α , rho_A and CR is 0.70. Values of α presented in Table 1 vary from 0.795 to 0.881; showing that the constructs possess high reliability. CR also tests the reliability on the basis of interconnections between each multi-item constructs. Results in Table 1 depict that the scores of CR exceed 0.70. Moreover, the scores of rho_A are also within the limits. Outputs reported in Table 1 depicts that all the rho_A scores are greater than threshold level (i.e., 0.70). This reports that the data of each multi-item construct are highly reliable and internally consistent.

Table 1. Reliability and Internal Consistency

Variables	Cronbach's Alpha (α)	rho_A	Composite Reliability (CR)
EP	0.881	0.883	0.906
GEI	0.829	0.830	0.880
GPM	0.841	0.842	0.887
GRS	0.866	0.867	0.903
GTD	0.834	0.838	0.883
TMS	0.795	0.799	0.880

C. Convergent Validity

The items' convergent validity is depicted in Table 2. Factor loadings are used to examine whether or not the convergent validity of each construct's item is present in the data (see Figure 2). According to Hair et al. (2014), the loading value of each factor must surpass 0.50 to confirm the presence of convergent validity. The output presented in Table 2 reports that loading for each constructs outstrips the threshold as lowest value of loadings is 0.616 (EP8) hence confirming convergent validity. The

convergent validity is also examined through AVE. According to Hair et al., (2014), the score of AVE must be >0.50 . The AVE scores (reported in Table 2) in our sample meets the threshold criteria which again confirm the presence of convergent validity.

Table 2. Convergent Validity: Factor Loadings and AVE

Items	EP	GEI	GPM	GRS	GTD	TMS	AVE	VIF
EP1	0.757						0.547	1.839
EP2	0.761							1.982
EP3	0.745							1.857
EP4	0.778							2.105
EP5	0.740							1.901
EP6	0.748							1.879
EP7	0.761							1.894
EP8	0.616							1.383
GEI1		0.764					0.594	1.653
GEI2		0.790						1.794
GEI3		0.745						1.641
GEI4		0.781						1.731
GEI5		0.773						1.683
GPM1			0.769				0.611	1.671
GPM2			0.788					1.765
GPM3			0.793					1.800
GPM4			0.802					1.833
GPM5			0.757					1.687
GRS1				0.798			0.651	1.881
GRS2				0.798				1.867
GRS3				0.827				2.081
GRS4				0.809				1.922
GRS5				0.803				1.875
GTD1					0.802		0.603	1.927
GTD2					0.810			1.875
GTD3					0.811			1.898
GTD4					0.754			1.626
GTD5					0.700			1.467
TMS1						0.879	0.709	1.926
TMS2						0.823		1.657
TMS3						0.823		1.605

D. Discriminant Validity

The existence of discriminant validity is identified by two criterions, “Fornier-Larker criteria and Heterotrait-Monotrait (HTMT) ratio”. A Fornier-Larker criterion examines validity using correlation matrix (reported in Panel A of Table 3). This criterion suggests that the diagonal scores must be greater than other (off-diagonal) scores. Panel A shows that the entire diagonal scores (0.740, 0.771, 0.782, 0.807, 0.776 and 0.842) are higher than other values which fulfills the Fornier-Larker criteria of discriminant validity. Henseler et al. (2014) suggest that the HTMT ratio of less than 0.90 is acceptable to achieve the discriminant validity of constructs. Panel B of Table 3 depicts that all the HTMT ratios are less than the threshold (0.90); hence, this criterion also fulfills the discriminant validity’ condition.

Table 3. Discriminant Validity: Fornier Larker Criteria and HTMT Ratio

Variables	EP	GEI	GPM	GRS	GTD	TMS
Panel A: Fornier Larker Criteria						
EP	0.740					
GEI	0.633	0.771				
GPM	0.644	0.703	0.782			
GRS	0.602	0.734	0.757	0.807		
GTD	0.636	0.745	0.711	0.741	0.776	
TMS	0.724	0.637	0.663	0.579	0.574	0.842
Panel B: HTMT Ratio						
EP						
GEI	0.737					
GPM	0.745	0.830				
GRS	0.686	0.843	0.820			
GTD	0.739	0.846	0.848	0.843		
TMS	0.843	0.782	0.810	0.695	0.703	

E. Assessment of Structural Model

Structural (inner) model (shown in Figure 3) is assessed after the assessment of outer model which aids to perform the testing of hypotheses for the proposed framework of research (Chin, 2010). This analysis helps checking the relations between the variables of interest. The significant and insignificant “t or p” values allow the researchers to accept or reject the study hypotheses that were constructed based on the relevant literature. In addition to this, this model also assesses the mediating effect of TMS in the relations between GHRM practices and EP. Structural model is concerned with the issue of collinearity and hypotheses testing using path modeling.

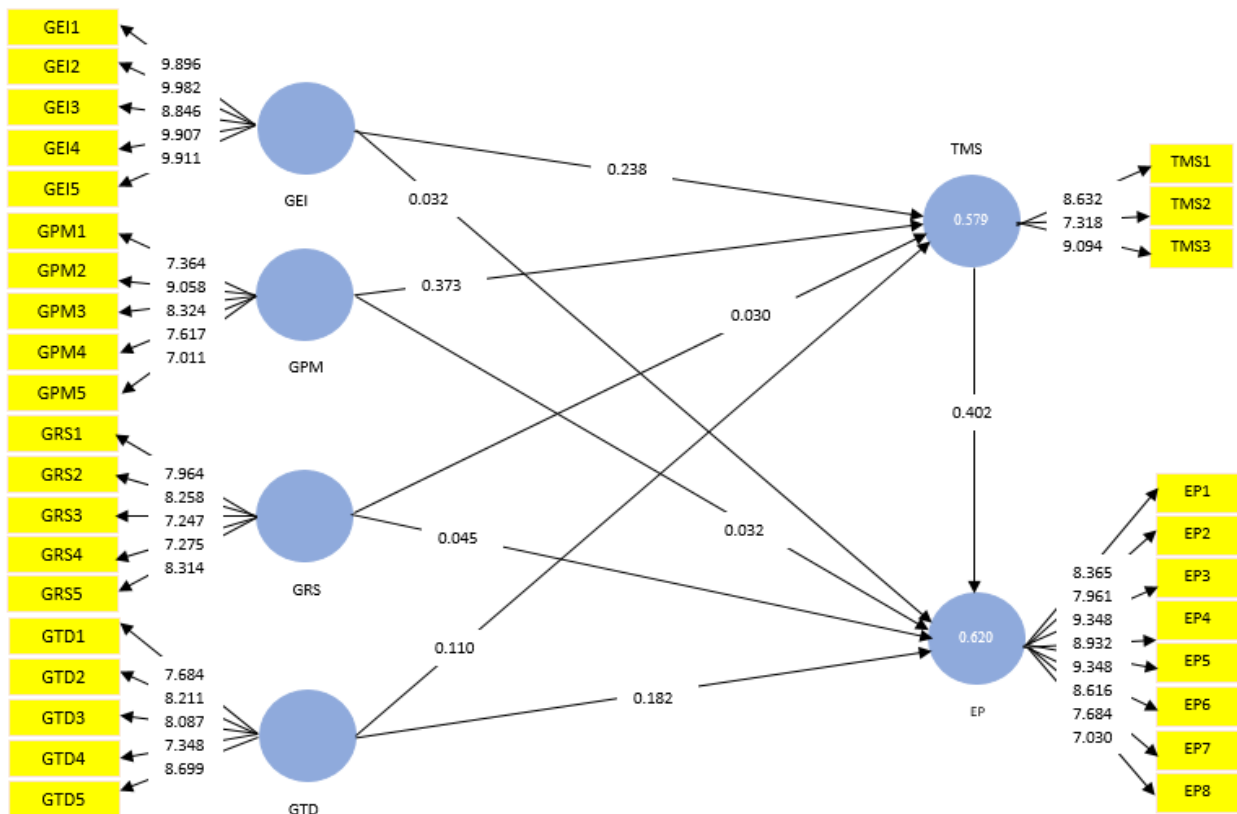


Figure 3: Structural Model

F. Collinearity Issue

Structural model is shown in Figure 3 which is concerned with the issue of collinearity and hypotheses testing using path modeling. Pearson correlation and VIF scores are used to detect collinearity issue; scores are presented in Table 4 (correlations) and Table 2 (VIF). The output of correlation matrix is reported in Table 4. This output displays that the data do not contain any issue of multicollinearity as all the correlations among the variables of interest are below 0.70. Besides, to check the problematic (non-problematic) correlations, the study conducted VIF (variance inflation factor) to examine such problems (Thompson et al., 2017). The results of VIF are depicted in Table 2. According to Diamantopoulos and Sigouw (2006), the VIF value must be < 3.3 . The VIF scores shown in the Table 2 ranged from 1.383 to 2.105. Thus, the scores of VIF are within the threshold levels suggested by prior researchers (Diamantopoulos and Sigouw, 2006). Hence, confirming the non-problematic correlations among the study items. After confirming that the data do not contain any issue of collinearity, the study tests the hypotheses.

Table 4. Correlation Matrix

Variables	EP	GTD	GRS	GEI	GPM	TMS
EP	1					
GTD	0.5291	1				
GRS	0.5998	0.2431	1			
GEI	0.4302	0.3499	0.2316	1		
GPM	0.3410	0.2104	0.2862	0.4934	1	
TMS	0.5193	0.4725	0.5757	0.6344	0.2620	1

G. Hypotheses Testing

The hypotheses are tested using direct and indirect effects. The direct effects are used to test main hypotheses and the outputs are reported in the Panel A of Table 5. Model 1 indicates positive influence of GEI ($\beta : 0.032, p: \leq 0.01$) on EP and shows that one-unit inclination in GEI leads to rise EP by 0.032 units. The result of model 2 reports positive effect of GEI ($\beta : 0.238, p: \leq 0.01$) on TMS. The positive sign of coefficient shows that one unit rise in GEI tends to increase TMS by 0.238 units. In third model, GPM shows positive relation ($\beta : 0.032, p: \leq 0.01$) with EP which states that one unit rise in GPM enhances 0.032 units of EP. There is direct link between GPM and TMS, as reported in model 4. Result implies that one-unit upturn in GPM grows TMS by 0.373 units ($\beta : 0.373, p: \leq 0.01$). The study finds positive impact of GRS ($\beta : 0.045, p: \leq 0.01$) on EP and shows that an increase of one unit in GRS leads to incline EP by 0.045 units (see model 5). GRS also shows positive contributions in improving TMS (see model 6). Coefficient of GRS ($\beta : 0.030, p: \leq 0.05$) suggests that 0.030 units of TMS can be improved by enhancing one unit of GRS. In the model 7, GTD shows positive relation ($\beta : 0.182, p: \leq 0.01$) with EP which states that one unit rise in GTD enhances 0.182 units of EP. The study finds positive impact of GTD ($\beta : 0.110, p: \leq 0.01$) on TMS and shows that an increase of one unit in GTD leads to incline TMS by 0.110 units (see model 8). There is a positive link between TMS and EP, as reported in model 9. Result implies that one-unit upturn in TMS grows EP by 0.402 units ($\beta : 0.402, p: \leq 0.01$). Thus, the above findings show that the H1 is acknowledged.

The indirect effects (reported in Panel B of Table 5) are used to test the mediating hypotheses. Path coefficient in Model 10 indicates significant indirect (mediating) influence of TMS on EP. As compare to the outputs reported in model 7, the entry of TMS (mediating variable) has changed the coefficient as well as level of significance of GTD, indicating that TMS significantly mediates between GTD and EP. Comparing the result of model 11 with that of model 1, it is found that TMS significantly mediates between GEI and EP. Comparing the result of model 12 with that of model 5, it is found that TMS significantly mediates between GRS and EP. Moreover, in model 13, coefficient of GPM also reveals significant mediating role of TMS in improving EP. Hence, the H2 is sustained. Furthermore, R squared is used to check the models' goodness of fit. The R squares (shown in structural model) shows that 62% changes in the EP are designated by all the independent variables while 57.9% fluctuations in the TMS are explained by all the explanatory variables.

Table 5. Hypotheses Testing

Panel A: Direct Effects					
Model	Path	Coefficient	Std. Dev.	T Stat.	P Values
1	GEI → EP	0.032	0.011	2.909	0.003***
2	GEI → TMS	0.238	0.088	2.705	0.007***
3	GPM → EP	0.032	0.014	2.286	0.019***
4	GPM → TMS	0.373	0.085	4.388	0.000***
5	GRS → EP	0.045	0.006	7.500	0.000***
6	GRS → TMS	0.030	0.015	2.000	0.049**
7	GTD → EP	0.182	0.057	3.193	0.000***
8	GTD → TMS	0.110	0.029	3.793	0.000***
9	TMS → EP	0.402	0.056	7.179	0.000***
Panel B: Indirect Effects					
Model	Path	Coefficient	Std. Dev.	T Stat.	P Values
10	GTD → TMS → EP	0.044	0.018	2.444	0.014***
11	GEI → TMS → EP	0.096	0.039	2.462	0.012***
12	GRS → TMS → EP	0.012	0.005	2.400	0.025**
13	GPM → TMS → EP	0.150	0.039	3.846	0.000***

Note: *** and ** indicate level of significance at 1% and 5%, respectively.

V. DISCUSSION

The study aims investigating the mediating role of TMS in the nexus between GHRM practices and EP and finds a positive link between TMS and EP which implies that an upsurge in TMS grows EP. The results are in accordance with the prior studies (Singh et al., 2018; Min et al., 2020). The findings explain that TMS encourages environmental certification practice through top management faith and involvement. The TMS belief is a subjective psychological state (Wei et al., 2020), signifying the findings and engagement willingness of top management on the value of environmental certification practice. It is the prerequisite of firm's environmental certification practice. It is now cleared that the TMS is one of the most important factors which positively contribute to the employee's inclination to promote eco-friendly initiatives (Gkorezis, 2015; Paillé et al., 2020).

The study also finds positive impact of GEI on EP which shows that inclination in GEI leads to raise EP. There is a positive effect of GEI on TMS which states that GEI tends to increase TMS. GPM also shows positive relation with EP which states that a rise in GPM enhances EP. Moreover, there is direct link between GPM and TMS which implies that an upturn in GPM grows TMS. The study finds positive impact of GRS on EP and shows that an increase in GRS leads to incline EP which is in line with Arulrajah et al. (2015). GRS also shows positive contributions in improving TMS as there is a direct trade-off between GRS and TMS.

The findings show positive relation of GTD with EP which states that a rise in GTD enhances EP. The results support the findings of Roscoe et al. (2019). The findings report that the training of the employees regarding the environmental impacts of the organizational activities intensifies the concerns of the employees about the environmental issues which results in improved organizational performance. It implies that providing the green training to the employees will not only result in improved EP but it will also promote the environmental initiatives. The study finds positive impact of GTD on TMS and shows that an increase in GTD leads to incline TMS. It implies that the organizations provide green training and development to their employees through their GHRM practices to promote their environmental initiatives for improving the organizational environment. The above findings indicate that the green HRM practices have positive impact on EP. Thus, the findings show that H1 is supported. The results acknowledge the findings of past researchers (Hameed et al., 2020; Kim et al., 2019; O'Donohue & Torugsa, 2016; Vachon and Klassen, 2006; Milliman and Clair, 2017; Jabbar and Abid, 2014; Saeed et al., 2019; Singh et al., 2020).

The effect of GHRM practices on TMS can be explained in such a way that the organizations that strive in uncertain environments becomes acute engines of feasibility, prosperity and growth and therefore demands their leaders or organization's TMS to motivate the employees to perform better to compete in the market (Jacobsen and Bøgh Andersen, 2015; Moin et al.,

2021). Besides, TMS mediates the relation between GHRM practices and EP stating that the mediator causes to change the association between GHRM practices and EP. These findings provide support for H2. The findings can be reported in such a way that the green HR policies and practices encourage their employee to make the use of sustainable resources for the production process which positively contributes to the EP of the organizations. The green HR practices promote positive environmental consequences. Similarly, Obaid and Alias (2015) also suggested that green practices motivate the employees to get involved in environment-oriented initiatives that will ultimately help in alleviating carbon footprint of the employees and as a consequence a positive impact on EP. The involvement of top management in organizational activities is fundamental to promote a sustainable organizational environment. The study argued that the HR policies of the organizations significantly contribute to the top managements' participation in the organizational activities because these policies legitimize the managers to make the defensible decision for the organization to improve its performance (Kim & Ko, 2014). Though, the human resource department of the organizations plays an important role in improving its EP.

VI. CONCLUSION AND IMPLICATIONS

The environmental protection has appeared to be the global concern. The increased environmental issues are motivating the hiring of “environmentally responsible management” in the manufacturing organizations. Hence, the improvement in EP is the issue of significant importance to the researchers that needs to be addressed. Present study, therefore, contributes to the debate by empirically investigating the impact of four dimensions of GHRM. The study further incorporates TMS as the mediating mechanism in the model. The study finds positive effect of green HRM practices (GTD, GPM, GEI and GRS) and EP. The study also shows that TMS significantly mediates between green HRM practice and EP of manufacturing firms which supports AMO and SET theories.

This research adds to the relationships that have not been much explored and grown in the manufacturing setup of emerging nations by incorporating TMS in the links of green HRM practices and EP. Moreover, it enhances the literature of EP by examining that how main practices of green HR in the manufacturing firms are associated with each other, and eventually to the EP. Particularly, the recognition of such links among the green HRM practices with EP theoretical and managerial validation and prioritization of green HR practices in the context of manufacturing firms, hence enhancing the understandings regarding how the manufacturing firms should link the HR functions to tackle the initiatives of EP.

The findings indicate that the behaviors and the active support of top management are highly dependent on the effective implementation of the HR policies, and thus, the study concludes a positive relationship between green HR practices and TMS. The results suggest promoting TMS to improve EP as it helps the firms to achieve sustainable comparative advantage and let the firms produce environmentally friendly products. The study concludes that the appreciation by the top management motivates the employees to engage in environmentally friendly initiatives that leads towards sustainable EP.

A. Theoretical Implications

The findings support the conception of AMO theory which argues that there is a need of three components (ability, motivations, and opportunity) to assure the voluntary efforts of employees. Supporting by the AMO theory, the findings imply that HRM practices improves the employee's environmental initiatives through increased human competencies. These human competencies encourage the employees to promote their eco-friendly behaviors by reducing the waste material (Jiang et al., 2012). Though, based on AMO theory, the study made that green HR practices promote the “green employee's ability” through GTD, GPM, GRS and GEI (Renwick et al., 2013). Thus, the findings disseminate the employees regarding the importance of EP to promote their green behaviors. This green mechanism increases the employee's environmental commitment and promote the green behavior of employees (Roscoe et al., 2019). The green mechanism does not automatically translate into the motivation of employees to behave in eco-friendly manners. Undeniably, there is a supporting behavior of top management behind this mechanism.

The results also support SET which proposes a critical speculative configuration to explain the implication of workspace and its behavior. Within the context of SET, prior studies contend that HR practices help promoting the affirmative significances of workers in the workplaces. Based on theory, the results show that business organizations offer social, emotional, and economic possessions to their workers. Due to this, the organizational workforces feel appreciative and eager to do something in return for the benefits of organization (Saks, 2006). Based on SET, the findings imply that in the field of HRM, TMS plays an important role in building the knowledge of their subordinates regarding green HR projects. The TMS provides the knowledge about the environmental initiatives to the employees which may positively contribute to the sustainable EP.

B. Practical Implications

The study offers significant implications to the practitioners. The findings imply that the manufacturing enterprises need to develop a supportive culture in the organization to guarantee the superior environmental commitment and awareness among the workers through the deployment of green culture. It can be made possible by adding the environmental concerns to the elements of mission and vision of manufacturing firms, and via ensuring TMS, commitment, and interest environment. Thus, it is of utmost importance encouraging the managers of the organization to play their crucial role and adopt democratic decision-making style towards the EP.

Besides, the top managers need to smooth the course of spreading the environment related information and values in the enterprise. It is essential for the manufacturing firms to focus on hiring workers who are supportive towards environment and are interested in the protection of environment through green practices, it will guarantee the successful application of environmental management that leads towards high EP.

The activity of GRS should consider establishing greener reputation for the firms to entice qualified green personnel. This is crucial during the job design process that attracts such candidates for the employment. Although, during candidate interviews, manufacturing firms must contain the elements that examines the readiness of candidates' effectual behavior towards environment. Together, the organizations must need to make sure that they select those candidates who have sufficient awareness of environmental concerns to fill the vacancy. The firms must keep establishing employees' qualification, skills, and levels of awareness regarding the environment by offering them green training and incessantly tracking and recording their performance towards sustainable environment. The environment related training and development needs to emphasize on educating the new workers about the environmental problems, issues of greener culture and the firm by emphasizing such issues during the induction program. Besides, in addition to new workers, the existing and experienced workers should also be the part of future trainings.

Finally, the manufacturing firms should motivate the workers and enhance their interests towards environmental concerns by offering them green empowerment and rewards. It can be made possible by aligning the suggestion of workers for innovative ideas and solutions regarding environment to the firm reward system, it will enhance the EP of the organization. The manufacturing firms can also provide opportunities to contribute towards EP through employee involvement. These green practices of our model must not be distinct. All these practices must be interrelated and influence each other because they were found using correlational analysis. Thus, the study suggests that the manufacturing firms should consider these green HR practices a continuous work.

Although, the results report that the increased awareness and commitment of employee towards environment is highly important, which is the "green management of organizational culture". This HR practice emphasize on the involvement and support of top management regarding EP activities. The findings imply that the TMS facilitates the environmental behavior by clarifying green framework to motivate their employees. It is similar with many prior researchers (such as Robertson & Barling, 2013; Govindarajulu and Daily, 2004; Ramus, 2002) who have highlighted the leading role of TMS in encoring the workers to involve in sustained environment initiatives. The TMS effect is vital in the manufacturing enterprises due to the powers, visibility and scope they have that ultimately makes them enable to guarantee that similar environmental communications are sent to all the workers (Zibarras & Coan, 2015).

C. Managerial Implications

In addition to theoretical and practical implications, the study also offers some managerial implications. From the managerial perspective, the findings of the study guide the manufacturing firms' managers regarding the implementation of GHRM best practices that influence the EP via TMS. Establishing the fact that the EP is hotly becoming a prominent trend in the manufacturing industry, thus using GHRM practices in emerging countries can increase the firms' capabilities of cleaner production that are essential for competing at both the domestic and international levels. Moreover, this research guides the manufacturing firms' managers to associate their environmental goals with specific green HR practices which will enhance the EP. Additionally, adopting the full set of green HRM practices according to the priorities identified in this study helps the firms to establish an eco-friendly culture.

D. Limitations and Future Research Directions

The study has offered deep insights on the effect of GHRM practices on EP. However, the study has faced some limitations. The study has used quantitative data that has reduced its scope and applicability. Therefore, further researchers can focus on employing relevant methods of research along with qualitative methods for examining the impact of GHRM practices on EP. Even this study offered a detailed examination on the extent of GHRM practices utilization in the manufacturing companies,

further studies are suggested to assess this GHRM practices utilization on overall performance of the companies in the terms of monetary benefits. This study only analyzes four dimensions of GHRM practices, a further area for the future researchers could contain the investigation of other GHRM practices such as employee commitment, managerial support, employee motivation, green appraisal, green compensation and rewards, green empowerment, green organizational culture etc. This conduct has utilized only one outcome variable (i.e., EP), further studies can include other outcomes variables like social and economic performance etc.

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