Salman Hameed[1], Dr. Kashif Mehmood[2,] Dr. Adnan Butt[3*]

Organizational Sustainability through Green Human resource practices: inspecting the moderating role of employee's green value

Salman Hameed[1],

Sr. Lecturer, Bahria University Pakistan. Salmanhameed.bukc@bahria.edu.pk

Dr. Kashif Mehmood[2]

Sr. Assistant Professor, Bahria University Pakistan kashifmehmood.bukc@bahria.edu.pk

Dr. Adnan Butt[3*]

Sr. Assistant Professor, Bahria University, Pakistan. adnanbutt.bukc@bahria.edu.pk

Abstract

Purpose: Environmental sustainability is a topic of growing concern around the world. Universally, organizations are a huge contributor in it either constructively or destructively, and here jumps in the role of Green Human Resource Management (GHRM). The objective of this research is to investigate the perceived importance of GHRM and the readiness of the employees to embrace GHRMP.

Design/methodology/approach: With a deductive approach, employees at all work levels of the manufacturing and services industry were surveyed on a random basis to identify their perception of the importance of GHRMP and how it can lead in the direction of sustainable practices of the organization and for society at large.

Findings: Results indicated that GHRMP is perceived to be an important factor when talking about corporate-level efforts towards sustainability. Employee green values were having significant but weak moderating ability in between GHRMP and sustainable performance, whereas environmental fit is found to be strongly significant as a mediator in the relation. GHRMP implementation framework would be very helpful to enhance the readiness of GHRM implementation. The employee will be more comfortable with the efforts of the organization and will tend to express out his own values and will support in the collective cause of sustainability for the generations to come.

Originality: This research studies the effect of GHRM on sustainable performance of the organization supported by the values considered important for by the employee thus debating over the corporate and individual values for the generations to come.

Keywords: Sustainability, Green HRM, Individual Green Values, Environment Orientation Fit, Sustainable Developmental Goals.

1. Introduction

It is understood that environmental issues and greenhouse gasses are both triggered through and are the result of human behavior (Anwar *et al*, 2020). Alongside, the world is encountering growing severities from the escalating population, climate shift, and resource scarceness, consequently, the notion of corporate sustainability has got substantial momentum by its most interested stakeholders i.e. academia and governments (Afsar, Cheema, & Javed, 2018). Organizations are adopting environmental management systems (Kim, Kim, Choi, & Phetvaroon,2019) and green policies and practices to overcome environmental pollution, so that behavior of the employee may be steered to bring down pollution (Mtutu, P.; Thondhlana, G., 2016).

An organization's corporate sustainability strategy may encounter highly positive or negative outcomes from the behavior of its employees, so the organizations need to inculcate greater sustainable values in the behaviors of their employees. (Benn, Edwards, & Williams, 2014). Altogether, a prime aspect of management research has turned out to be environmental management supported by the efficiencies offered by the human resource management (HRM) practices in the organization (Boxall, Purcell, & Wright,2009), intended to advance organizations environmental performance (also termed as green HRM), thus furnishing positive relational notion between green HRM practices and environmental performance (Renwick, Redman, & Maguire, 2013).

Similarly, environmental researchers (Hu *et al*., 2018) have concentrated their attention on the significant elements of humans' green behaviors towards environmental issues. Stern, P.C. (2000) have advocated that destructive environmental human activities can be mitigated due to the individual`s green values and behaviors. Numerous researches propose that the more the employees are receptive toward the issues of the environment, the higher will be the environmental accomplishment of the organization. (Singh *et al*., 2019).

This research article is structured as follows. Section 2 provides the theoretical framework of the study and advances a set of hypotheses. The methods segment then represents the essential elements of the research topic. After the presentation of the results, we discussed them and, afterward, we presented conclusions on the vital contributions and limitations of the study, as well as visions for its possible future development.

1.1 Challenges to Pakistan and the need for sustainable values.

Globally the issue of sustainability attainment is backed by various country-wise rules, regulations, and environmental and social standards that force the organizations to espouse environment-oriented corporate strategies, enabling them to guarantee pollution attrition, leading to natural environment enhancement and fortification (Dixit, 2020) thus environmentalism and sustainability are now considered as a bigger a concern for organizations (Malik *et al*., 2020).

Talking with the context of Pakistan, the Pakistan environmental protection Act, 1997 states that every organization must make sure the preservation, restoration, and safeguard of the ecological environment (Nadeem and Hameed, 2008). Javeed *et al*., (2020) have noticed that very few pieces of literature is being available on this, as the industry interest and adoption for preservation and protection of the natural environment exists in limbo. Pakistan contributes 0.4% of the globe's entire carbon with a progressive trend (Shahzad *et al*., 2017). Grounded on the above-mentioned facts it has become a dire need for the Pakistani business industry to promote and inculcate sustainable values in the organization and develop novel and

Salman Hameed[1], Dr. Kashif Mehmood[2,] Dr. Adnan Butt[3*]

innovative capabilities in its human capital through research and development. It has identified a need to create consciousness regarding these problems such as GHRM and sustainability efforts (Malik *et al*.,2020), so the organizations would be willing to engage those skillful employees who have an understanding of GHRM and future common need of sustainability and these employees will help organizations to achieve sustainability goals (Yusliza *et al*., 2020).

Hence this study is initiated to focus on this issue to research, expose, and more over-identify processes and variables supportive towards environmentally sustainable preferences through the lens of green HR practices being moderated by individual green value and mediated by environmental orientation fit of the employees.

Sustainability

The existential needs of future generation are affected by the current depletion of natural resources, deterioration of the environment caused by the contemporary enterprises to gain economic benefits out of it (Pinzone *et al*.,2016), thus this phenomena has created a threat for the future generations to come and the protection and preservation of all these rare resources have become the highest priority worldwide (Dyllick, T.; Hockerts, 2002) to develop sustainable values and practice for our common future.

Since the last decade, an enormous amount of effort is devoted to creating awareness about environmental problems, attracting the attention of professionals concerning initiating green activities in organizations, activities such as a lessening in material waste, less CO_2 discharges, reduction in paper waste, etc. (Ahmad, 2015) and due to the pressure from the society and stakeholders, the higher management professionals in every organization are lying more emphasis to bring in the spirit of sustainability in the daily operations of the organizations. (Chouinard *et al*.,2011).

Based upon a triple bottom line assumption; the trio of sustainability consists of; natural environment, economic and social performance (Dyllick, T.; Hockerts, K., 2002). The economic concerns focus on financial matters, secondly, environmental concerns deal with plummeting environmental damages and discouraging resource misuse; and lastly, the social aspect is attached to the welfare of stakeholders, societies, customers, and employees (Yusliza *et al*., 2020). In line with the basis of sustainable development, the social, economic, and environmental objectives are mutually dependent and jointly bolstering (ISO 26000:2010).

In this perspective, numerous research works have been conducted and the conclusion of earlier research studies have endorsed the importance of the incorporation of sustainability in different commercial operations (Inigo &Albareda, 2019; Pedersen, Gwozdz, & Hvass, 2018 ; Danese, Lion, & Vinelli, 2019; Mathivathanan, Kannan & Haq, 2018; Mavi & Standing, 2018; Buchert & Stark, 2019; Paulson & Sundin, 2019; Magon, Thomé, Ferrer, & Scavarda, 2018; Magon *et al*., 2018; Yusliza, Othman. & Jabbour, 2017).

For over three decades or more, sustainable development has been the focus of the strategic manager's consideration (Javeed *et al*., 2020; Roscoe *et al*., 2019), but the lynchpin which connects the dot is human factors. These human factors incite the organizational effectiveness practices towards sustainability, and this has enhanced the interest of stakeholders towards GHRM. Literate supported from the studies of Cohen

et al.,(2012); Ehnert *et al*., (2014) has pointed towards the significant capability of GHRM towards sustainability goals. As per Bombiak, E.; Marciniuk-Kluska (2018) ecological awareness and sustainability were found to be the resultant of green activities.

2. Theoretical framework and hypothesis development

Our study is mounted on the precepts of social exchange theory (SET). SET focuses on "the voluntary acts of people who are inspired by the gains they are projected to bring in and usually do bring in from others". Several other study domains like knowledge management, marketing, social psychology, and management have been tested through SET. The utilization of SET theory as a potential instrument to probe into the environmental sustainability issues was first addressed by Craddock *et al*. (2012).

For studying how individuals perform from a sustainability perspective, SET has become an ideal framework to study over (Yuriev *et al*., 2018), is why this theory has been the base of our study which intends to bring a win-win situation, mutually for the employee and the organization by studying and aligning their aims and efforts towards sustainability goal. The findings of Temminck *et al*., (2015) has also strong supporting towards the positive attitude of the employee, who has a stronger sense that their organization is self-devoted towards the global goal of sustainability, coupled with GHRM practices the intentions and attitudes are triggered many folds.

2.1   Green HRM

The rise in the environmental issues laid greater emphasis on social and environmental performances and sprout out the phenomena of sustainable performance, superseding over the non-sustainable goal of the economic performance of a firm (Bombiak, E.; Marciniuk-Kluska, 2018**).** The harmonization of the organization's environmental objectives and human resource objectives brings in the synergy termed as green human resource management (Yong *et al*., 2019; Jabbour *et al*., 2019). Green human resource management (GHRM) practices support businesses to attain competitive advantage and affiliate business approaches alongside the environmental sensitivities (Malik *et al*.,2020, Gilal *et al*, 2019), enabling businesses to get sustainable performance.

The attention of the previous literate has been diverted towards HRM practices as they can be instrumental in attaining sustainable goals of the organizations. Pragmatic evidence on the association between HR practices and sustainability is described by Younus *et al*., (2019) by using different variables of Human Resource Management (HRM) practices such as green job analysis job description, recruitment and selection, training, and development(Paille P., Valeau P., & Renwick D., 2020)., performance evaluation and rewards as predictors. Once the organization employs and train individuals with those skill set based upon the knowledge of GHRM, it will certainly assist in achieving sustainability, which is the ultimate goal of the organizations (Yusliza *et al*., 2020; Buchert, T.; Stark, 2019).

2.1.1   Green Hiring

Currently, the importance of green hiring is getting consideration from the organization and their HR specialists, as they are developing a deep interest to appeal and attract gifted employees, specifically those who are environmentally conscious. As it is very crucial yet important for an organization to meet its sustainability goals (Young *et al*., 2019). Higher the organization are functional and knowledgeable towards executing sustainable activities (Zaid *et al*.,2018) in the society, greater will be the market human talent attracted towards the organization (Renwick *et al*., 2013) thus we can say that hunting the right talent with

Salman Hameed[1], Dr. Kashif Mehmood[2,] Dr. Adnan Butt[3*]

the passion for the environment is a tuff task to achieve by any environment-friendly organization (Anwar *et al*., 2020).

2.1.2   Green Training and involvement

Environmental practices of any organization can be greatly supported by the green training of the employee (Singh *et al*., 2019a; Jabbour *et al*., 2017b) and can be treated as the foundation for helping the management to lay successful green environmental values in the organization (Jabbour, 2013). Aragao and Jabbour, (2017) have expressed that public sector organizations can be encouraged towards green practice like green procurement with the help of green training. An employee may develop their professional skills and abilities in handling environmental concerns (Pinzone *et al*., 2016, 2019) consequently purporting the organizational accomplishment in the green domain (Kaur *et al*., 2019). This research posits that green training stands crucial for generating awareness and responsibility towards achieving sustainability skills and hence selected for study in this research.

2.1.3   Green performance management and compensation

Performance evaluations are performed by nearly every single organization by utilizing several formats and practices. This supports the organization to recognize the positive and negative aspects of the employees. Ahmad (2015) suggested that organizations may enhance sustainability efforts through the performance management system, since the performance management system steer employees and determine their contribution toward set goals. Consequently, the performance management system adds to the evolution of green efforts in the end (Jackson *et al*., 2011) by actually infiltrating CSR's culture amongst employees through involving green behaviors of employees in performance appraisal reports (Ahmad, 2015). HR managers may inspire line managers to incorporate CSR objectives in performance appraisal and feedback meetings with job incumbents (Milliman, 2013).

Derived from previous research, it was uncovered that green performance management and compensation are substantially associated with three components of sustainability namely, economic, social, and environmental. Despite the issues encountered by the organization to precisely calculate the performance of the employee, Longoni *et al*., (2018); Renwick (2013) have reported that green performance appraisal has a positive effect on sustainability. As per Gimenez *et al*., (2015) based upon the coupling of employee performance with rewards, benefit, and promotion, the employee gets motivated and tends to produce better and enhanced results related to sustainable goals.

Consequently, the following hypothesis is being purposed:

Hypothesis 1 (H1):

Green HRM has a positive effect on the sustainable performance of the organization.

2.2   Individual Green Values

It is vital to comprehend that HRM procedures work hand in hand with the eco-friendly behavior of workers, enabling the organization to accomplish its goal of ecological sustainability. Some scholars considered the potential effect of an individual's appetite (Stern, Dietz, Abel, Guagnano, & Kalof, 1999). If employee green values are in congruence with the values of the organization, thus this concurrence of these mutual green values will enhance the in-role and extra-role behavior of the employee. (Cheema, Afsar, & Javed, 2019). Intentions of the employees are the stimulus that raises their concern about their performance

concerning the sustainability efforts of the organization and they engage themselves in extra-role behaviors under the aegis of GHRM practices and policies (Pham *et al*., 2019). Similarly, evidence of enhancement in environment-friendly behavior of an employee is found positive in relation with his environmental values (Andersson, Shivarajan, and Blau, 2005) and is found to be prosocial (Chou, 2014); thus prompting an employee to engage more and more with the organizational goals and if the employee enjoys environment craving, he/she will effort more devotedly (Ramus and Killmer, 2007) for the furtherance of the environment goal, which positively influences employee performance and organizational performance through environmental passion.

Consequently, the following hypothesis is being purposed:

Hypothesis 2 (H2):

Individual green values moderate the relationship between green HRM practices and the sustainable performance of the organization.

2.3   Environmental orientation fit

A person's characteristics pack with the environment in which he dwells and that comes out as the behavior of an individual (Kristof, 1996). Folger (2001) extends this discussion and claims that employee values and belief about his social and environmental responsibilities will pair up much better with the organizational values, if the organization is more greener toward social and environmental matters, hence the environmental orientation fit come into action.

As per Banerjee (2002), environmental orientation is the acknowledgment of the legality and significance of the biophysical atmosphere in devising organizational future policy, and the incorporation of environmental problems into the strategic planning method. This approach leads the organization to invest in the protection of the natural environment and reassures employees to discuss ideas that can advance the environment directed towards green innovation (Folger, 2001), and this satisfies the person-environment fit of the employee, which is prone toward sustainability aspect and he feels reassured that individual green values and works environment characteristics are well-harmonized (Caplan & Van Harrison, 1993).

Regarding the green values of employees, Hörisch, Kollat, and Brieger (2017) reported that future-oriented work personnel deliberately pursue those organizations whose corporate responsibility behaviors reflect climate transformation and environment crucial for them when selecting an employer. This corporate integration of sustainable values of the organization strengthens the feeling of the employees towards green behaviors such as efficient use of energy, green HRM, green procurement, natural environment protection, and instigates the feeling in him/her to improve the natural environment not only at domestic level but also at the office (Cheema *et al*.,2020). These behaviors then become components of an individual value and belief approaches and his environmental fit provokes him/her to participate the utmost in the sustainability efforts of the organization.

Consequently, the following hypothesis is being purposed:

Hypothesis 3 (H3):

Environmental orientation fit mediates the effect of green HRM practice on the sustainable performance of the organization.

Salman Hameed[1], Dr. Kashif Mehmood[2,] Dr. Adnan Butt[3*]

```
                    ┌─────────────────────────┐
                    │  Individual Green Value  │
                    └─────────────────────────┘
                                 │
                                 ▼
┌──────────────────┐                              ┌──────────────────┐
│  GHRM Practices  │ ──────────────────────────▶  │  Sustainability  │
└──────────────────┘                              └──────────────────┘
          │                                              ▲
          ▼          ┌─────────────────────┐             │
          └────────▶ │    Environmental    │ ────────────┘
                     │   Orientation Fit   │
                     └─────────────────────┘
```
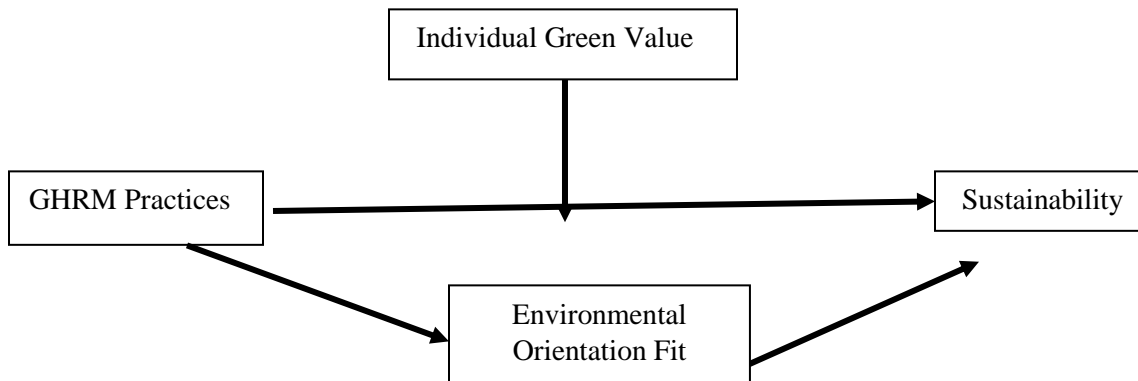
Conceptual Framework

3. Methods

Our research study applied a cross-sectional, quantitative, deductive research approach to deliver upon the hypotheses. Personals were chosen from production-oriented companies like cement manufacturing, vehicle assembling companies, textile, chemical, and paints manufacturers, pharma, oil and gas exploration, and production companies operating in Pakistan because the researcher needed to approach professional and knowledge workers having exposure and awareness on sustainability issues related to their job activities and environment. This area of business and commerce is one of the major contributors to environmental changes, as their practices directly affect the ecological system. A countrywide sample gives us a deeper knowledge of the relationship amongst selected variables. As the questionnaire was floated in the branch offices of the chosen companies.

An estimate of 500 company employees was contacted to fill up the questionnaire for the conduct of this study. Out of these twenty-three companies, five were govt owned or govt autonomous bodies and eighteen belonged to the private sector. Employees from all cadres of management were chosen for the survey. All the employees who came in contact for research purposes were very eager and interested to contribute to the study. Most people were having a quite good understanding of the sustainability issue. Alongside most of the focused organizations were found to be involved in creating awareness about sustainability issues and ways to overcome them. The outcomes of companies training programs were observed during the discussion and data collection process.

3.1 Data collection

The questionnaires were distributed among participants through various methods i.e. by hand as well as by google forms. Some of the forms were also filled via telecom discussion. We obtained 357 valid responses over 2 months. In total, 32.02 % of the respondents were female and 40.16 % were between 31 and 39, and 31% worked in the company for the period 07 to 09 years. Out of 357 responses, 13.48 % came from cement manufacturers, 22.47 % came from pharmaceutical, 17.69 % from chemical and paints, 15.73 % from textile, 9.55 % from oil and gas, and 22.47% from vehicle assembling companies. Employees answered questions using a 5-point Likert scale.

3.2 Measurement development

The scale used to gauge the dependent variable of green HRM practices (GHRMP) is modified from Macro *et al*., (2015). This scale has been used by several other authors like Aryee, Law, and Law (2007) and Renwick *et al*. (2013,) The scale used to measure the dependent variable of sustainability (SUST), developed on the five-point scale is adapted from Zhu, Sarkis, and Lai (2008). The scale used to measure the moderating variable of Individual Green Value (IGV), developed on the five-point scale is adapted from Kaiser *et al*., (1999). The scale used to measure the independent variable of Environmental Orientation Fit (EOF) developed on the five-point scale is adapted from Menguc and Ozanne (2005).

4. Analysis of data and results

To test our study prototype, we used the partial least square (PLS) methodology using Smart PLS (Oh, Teo, & Sambamurthy, 2012), endorsed through a comprehensive check of sturdiness. Common variance method (CMV) According to Spector (2006), the common variance method (CMV) is utilized in the quantitative research papers when data is gathered from a single resource. Common variance can arise amongst items and constructs at various points which influences the reliability of the structural associations (Theng So *et al*., 2013). To tests this the one-factor analysis i.e Harman's one-factor test revealed no CMV issue, and the single factor was extracting 26.84 % of the variance, which is far below 50 % (Podsakoff M. *et al*. 2003).
Table 1- Measurement Model

Constructs	Items	Outer Loadings	Cronbach's Alpha	rho_A	Composite Reliability	(AVE)
Green Human Resource Practices	GHRM 03	0.691				
	GHRM 04	0.558				
	GHRM 06	0.688	0.810	0.824	0.857	0.504
	GHRM 07	0.766				
	GHRM 08	0.842				
	GHRM 09	0.680				
Individual Green Values	IGV 10	0.511				
	IGV 11	0.871				
	IGV 12	0.500				
	IGV 13	0.773	0.848	0.871	0.889	0.542
	IGV 14	0.836				
	IGV 15	0.734				
	IGV 16	0.832				
Environmental Orientation Fit	EOF 17	0.661				
	EOF 18	0.760				
	EOF 19	0.930	0.705	0.976	0.809	0.527
	EOF 20	0.477				
	SUS 29	0.559	0.886	0.923	0.911	0.552

Salman Hameed[1], Dr. Kashif Mehmood[2,] Dr. Adnan Butt[3*]

Sustainability	SUS 30	0.902
	SUS 31	0.912
	SUS 32	0.888
	SUS 33	0.875
	SUS 34	0.866
	SUS 35	0.428
	SUS 37	0.564
	SUS 38	0.452

Items removed: GHRM 01,02,05 - EOF 21,22,23 – SUS 24,25,26,27,28,

All Cronbach`s Alph values are > 0.7, which indicates the indicator reliability (Nunnally, 1978) and can be further used for further analysis. Similarly, all items loading are > 0.5, which indicates indicator reliability (Hulland,1999), as well as all AVE values, are >0.5 as indicators of convergent reliability(Bagozzi and Yi,1998; Fornell-Larcker,1981). Another criterion of indicator reliability is the value of coefficient rho_A must be > 0.7 and Composite Reliability >0.6 (Dijkstra & Henseler, 2015) which is also > then 0.7 in our case. Thus the model is fit for measurement.

All of the above measures given in Table 1, confirm the reliability of the model constructs.

Table 2: Discriminant Validity - Fornell-Larcker Criterion

	EOF	GHRMP	IGV	SUST_
EOF	*0.726*			
GHRMP	0.269	*0.710*		
IGV	0.641	0.593	*0.736*	
SUST_	0.703	0.688	0.712	*0.743*

Note: Value in Italic represents the square root of AVE

Table 3: Discriminant Validity – Hetrotrait Montrait Ratio (HTMT)

	EOF	GHRMP	IGV	SUST_
EOF				
GHRMP	0.408			
IGV	0.795	0.732		
SUST_	0.760	0.796	0.821	

Table 4: Goodness of the model

	R Square	Q Square
Environmental orientation Fit	0.073	0.028
Sustainability	0.770	0.415

The value of R2 should be equal to or over 0.1 (Falk & Milller, 1992). The results in Table 4 show that R2 values for Sustainability are over 0.1. Therefore the predictive capacity of this construct is developed, whereas Environmental orientation Fit is having a low value of 0.073, which depicts that its predictive capability is low. We also applied Stone–Geisser's Q 2 (Geisser, 1975; Stone, 1974) test to gauge the predictive relevance of the model (see Table 4). Because the Q2 value is greater than 0 for all endogenous variables, this shows accepted predictive relevance.

 As a third step, because the performance constructs have more than one exogenous construct (i.e. green hiring, green training and involvement, and green performance management and compensation), we calculated the relative effect sizes (f 2) of the exogenous constructs using Cohen's equation (Cohen, 1988) according to which anything above 0.35 is effective and anything below 0.15 is week effect. The f square values (see table 5) for effect to EOF and GHRMP on SUST are high means that these two variables have high effect size, whereas The f square values for GHRM through the mediation of EOF and f square values for IGV are relatively small showing that they have small effect sizes.

Table 5:   Effect size (f square)

	EOF	GHRM mod IGV on SUST	GHRMP	IGV	SUST
EOF					0.500
GHRM mod IGV on SUST					0.021
GHRMP	0.078				0.652
IGV					0.026
SUST					

4.1   Estimation model

Table 6 shows the PLS results of the estimation models, including standardized path coefficients, with the significance based on two-tailed t-tests for our hypotheses.

Table 6: Path Analysis

	Original Sample (O)	T Statistics (|O/STDEV|)
EOF -> SUST_	0.478	10.162
GHRM mod IGV on SUST	0.069	4.183
GHRMP -> EOF	0.269	8.111
GHRMP -> SUST_	0.490	13.985
IGV -> SUST_	0.131	2.779

4.1.1   Mediation analysis

Salman Hameed[1], Dr. Kashif Mehmood[2,] Dr. Adnan Butt[3*]

Mediation analysis was performed to assess the mediation role of EOF on the linkage between GHRMP and SUST The results (see table 7) exposed that the total effect of GHRMP on SUST was significant . With the insertion of the mediating variable the effect of the GHRMP on SUST is also significant. The indirect effect of GHRMP on SUST through EOF was also found significant . This shows that the relations ship between GHRMP and SUST is partially mediated by EOF.

To further test the mediation effect, we executed numerous tests based upon the recommendations of Preacher (2015).. Hence, we measured the reliability of our findings through various measures (see Table 7). First, we utilized the conventional Baron and Kenny (1986). We crisscross the following: (i) the direct effect of green human resource management on sustainability without mediators (c) and with mediators (c`), displaying that it is reduced when the mediators are considered; (ii) the direct effect of green human resource management on the mediators (EOF) (a); (iii) the effect of the mediators EOF on sustainability (b); (iv) the total effect of green human resource management ((a*b) + c`). Lastly, we analyzed the indirect effect via bootstrapping analyses by considering bias-corrected and accelerated confidence intervals (95%) for indirect effects (see Table 7). Mediation is said to happen if the derived confidence interval does not include zero. All of the above-mentioned tests verified the findings reported underneath.

Table 7: Tests for mediation

| Direct effect									Indirect effect (mediation)	Total effect
C		C`		a		b			ab	Confidence Intervals Bias Corrected
Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value			BI (2.5 %;97.5)	(a*b)+ c`
0.619	0.000	0.490	0.000	0.269	0.000	0.478	0.000	0.129	0.093;0.169	0.619

4.1.2 Moderation Analysis

Moderation analysis was done to assess the moderating effect of IGV. The results revealed a significant moderating role of IGV on the relationship between GHRMP on Sustainability (see Table 8).

Table 8: Moderation Results

Path Coefficients	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
IGV -> SUST_	0.131	0.047	2.779	0.006
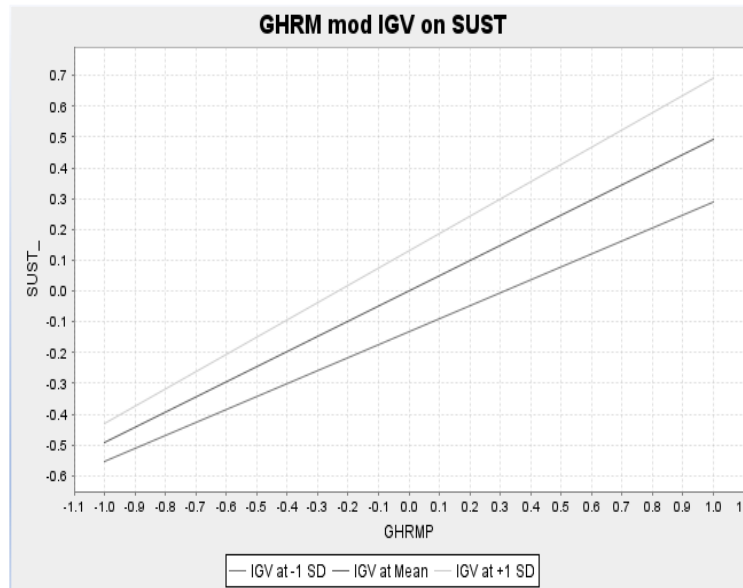
(Graph 01)

The appended graph (Graph 01) shows the relationship between GHRMP and SUST in the presence of IGV as moderating variable. The rising curve towards the right in blue color shows that IGV with mean causes a positive relationship between GHRMP and SUST. Hence, it implies that as GHRMP increases by 0.1 unit, SUST increases by 0.04 unit.

Followed by the same result, the rising curve towards the right in green color shows +1 SD for IGV, here GHRMP increases by 0.1 unit causes SUST to increase by approximately 0.055 unit. Lastly, the rising curve towards the right in red color shows -1 SD for IGV, here GHRMP increases by 0.1 unit causes SUST to increase by approximately 0.055 unit. Conclusively we can say that + 1 SD in IGV brings greater changes in the relation between GHRMP and SUST due to the moderating capacity of IGV.

Coming back to the sets of hypotheses produced above, results validate that our independent variable (GHRMP) exert a strong total effect on sustainability, thus supporting H1. Concerning the moderation effect of the variable (IGV), results suggest that it is also positively related to sustainability but has a week relation, thus supporting H 3. Lastly, concerning the indirect effect of mediating variable (EOF), results suggest that it is also positively related to sustainability but has a week relation in compassion with the total effect of GHRMP, thus supporting H 3.

5. Discussion of the main findings

Our findings demonstrate the different role(s) that green HRM practices (i.e. green hiring, green training and involvement, and green performance management and compensation) play with the mediating connection of environmental orientation fit and moderated by IGV on sustainability issues prevailing in the society In the succeeding passages we discuss such results concentrating on our hypotheses. The green HRM practices are having positive relations with the sustainable performance of the organization (H1). Then we discuss our contributions to the second research hypothesis on the relationship between IGV and sustainable performance of the organization (H 2) and lastly, we debate our key contribution on the

Salman Hameed[1], Dr. Kashif Mehmood[2,] Dr. Adnan Butt[3*]

relationship between green HRM practices and EOF and its mediating role between the green HRM practices and sustainable performance of the organization (H 3).

The opening hypothesis is based on the idea that the capacities and efficiencies of human resource practices coupled with the green approaches in its domain can bring in synergy in the sustainable performance of the organization (Renwick *et al.*, 2013; Boxall, Purcell, & Wright,2009). A similar finding has been endorsed by our results that green HRM practices are significantly and positively related to the sustainable performance of the organization (see coefficient values in Table 6), our result stands in parallel with earlier rulings of (Malik *et al.*,2020, Gilal *et al*, 2019). These findings are seconding the efforts of the organizations under study. As it was noticed that during the phase of data collection the people were quite well ware about the aspect of sustainable issue attached with their work-life due to training in the organization and that is why their awareness and exposure have created the aura that has certified the relation and the impact of green HRM practices toward the sustainability goal of the organization (Paille P., Valeau P., & Renwick D., 2020).

A surprising outcome is that the items of green hiring were not having satisfactory factory loading, which leads to the removal of two questions related to green hiring. This fact can be construed as follow; till the time the onboarding employee is not clear about the ongoing effect and activities of the organization working for sustainability, he is least bother either the organization is hiring him/her due to their flair for sustainable causes for the environment.   This points that the enhanced and improved environmental performance of the organization is not necessarily carving out through the green hiring practices of organizations. These findings are also standing tall with the findings of Macro Guerci, Annachiara Longoni & Davide Luzzini (2015):

The second hypothesis suggests that IGV may strengthen the green HRM practices outcome on the sustainable performance of the organization by moderating the relationship between them (Ramus and Killmer, 2007). This relation is significant which is in parallel with the findings of Gilal *et al*, (2019) but the relationship is quite weak (see table 6) and the reason for this weakness would be the lack of either ownership or we can say that employee would be missing any kind of official or interpersonal reinforcement from the peers around him. Same has been quoted by Carrico and Riemer (2011) that certain hurdles in the work environment inhibit the employee to display his energy-conserving- green values in the organization. Pakistan is a country where collectivism is part of the culture and at times such kind of values are not expressed or displayed openly. So, this might have led to the weak relation of IGV with the sustainable performance of the organization. insignificant moderating relationship of IGV between GHRM and employee green performance has been also reported by Chaudhary R. (2020).

The last hypothesis suggests that EOF may serve as a stimulant to green HRM practices by mediating its relationship with the sustainable performance of the organization (Cheema *et al*.,2020). This sustainability is a relatively new phenomenon in the domain of human resource practices so the better the employee is adjusted and understand the green practice and preferences of his organization, the better he will be toned-up to adopt this novel green approach toward work (Afsar and Badir (2017). Thus, we can say that the environmental fit will help the employee to contribute to the green causes of the organization towards

sustainability. Our findings are highly significant and positively inclined toward the mediation relation under study. Such EOF attribute is also reported highly positive in the study of Afsar *et al*., (2018).

6. Implications for research and practice

Our research has contributed a significant theoretical piece in management research. Specifically, we extended the preceding work/studies on corporate greening showing that green HRM systems may have an immense effect on the advancement of corporate sustainability programs systems (Macro Guerci, Annachiara Longoni & Davide Luzzini., 2015. Exclusively, we established the fact that human resource management with a green approach is the correct set of strategy which can expand and expedite the sustainable efforts of the organization by deploying its resources in the right fashion. Yet we also identified that green training and involvement; green performance management and compensation are the vital aspects of green HRM which can be instrumental in creating the proper work set for expanding and orient the workforce of the organization towards the collective goal of sustainability.

These findings validate the richness of the HRM practices proposed by Amrutha VN, Geetha SN, (2019), through their meta-analysis, which supports that the fundamental HR green practices have colossal ability to purport and strengthen the cause of sustainability. In the same context, we also emphasize that the employee plays a vital role in the whole episode of organization development from no sustainability practices to sustainability champions. The result of our study helps to share the load of the HR function of the organization, which is assumed to be responsible for the sustainable goal of the organization. We can support and propagate that the momentum in the HR function of the organization can be made through developing the attitude of the employee towards greener goals.

The higher the induvial green values are boosted, the greater will be the impact on green HRM practices (Pinzone *et al*., 2019; Pham *et al*., 2019). Therefore, the recommendation based upon our research findings inserts the link of employee passion and values in between the organizational efforts for sustainability by revealing the fact that the better an organization efforts for the achievement of sustainable values, the higher the employee values are aligned with the values of the organization.

The organizational managers can swiftly catch two birds with one arrow. As we have attained the result that green HRM practices are the most influential in supporting the sustainability goal but in between the (i) environmental orientation fit of the employees has shown marginal strength on effecting these efforts, so the manager in the organization should even care for the minute details for greener efficiency like the recycling of the waste paper, disposable cups, lunchtime eatable residuals, the disposal of tea leaves (in the flower pot). These ideas are being given here to make the managers realize that these efforts will enhance the environmental orientation of the employee and he will conclude that it is not just the lip service of the organization, but the organization is turning all the stones to comply with the SDG goals.

Lastly, for the HR curricula developer and academicians, it opens a new door of discussion to come up with novel ideas towards the conventional practices of HR. The conventional practice of HR to date, (in the region of Southeast Asia and specifically taking with the context of Pakistan, as our study is concentrated on Pakistan) are having top to bottom approach with the only focus on profitability and productivity. This needs to be enforced with a fresh and different perspective of contribution towards the society. The future workforce with the priority of the society and environment can only make the change, if the seed of

Salman Hameed[1], Dr. Kashif Mehmood[2,] Dr. Adnan Butt[3*]

sustainable approach towards work style and policies is induced in them, by the time they sprout out from their educational institutions.

7. Conclusion

Findings validate that: (i) green HRM practices scientifically affect the sustainable performance of the organization, out of all the HRM practices, green hiring was not having a significant effect (ii) the mediating role of EOF had a substantial part in stimulating the efforts towards sustainability as it created a mutual collaborative approach of the employee goals towards organizational goals (iii) the moderation effect of IGV are mildly significant but can play role in the required effort of sustainability.

The first constraint which is attached to our study is that we have adopted the function aspect of the HR activity which is not comprehensive or have totality in it, which means that different other effects and activities of HR may be utilized to have a more comprehensive view in this prospect like, decision making, industrial relations (Guest, 2011). The subsequent limitation is attached with the one-short aspect of data collection, which gives on time or you can say is the situational expression of the employee for a specific point in time. Thus, future research may collect multiple data points to enhance the rigor of the study. Thirdly, the unit of analysis is individual i.e., the employee and this can create biases in the result. Though this study has tried to overcome the CMV effect, it is recommended to cover this aspect by moving towards the dyed relationship, which would bring in more effective results.

Finally, future studies might investigate the observable pattern of the employee toward green HRM practices by contemplating any potential co-operative impacts amongst them (Gilal *et al*., 2019), identifying the standing of national and regional cultures issue in settings HRM practices (Macro Guerci, Annachiara Longoni & Davide Luzzini, 2015) and expensive remedies to conventional practices of recycling methods similarly cause the chief challenges in the application of GHRM at the organizational level, particularly in countries having emerging economies (Yusliza *et al*., 2017) and hurdles in technology adoption (Pham, N. T., Hoang, H. T., & Phan, Q. P. T., 2019) would be invaluable for examining the potential connection amongst green HRM practices, EOF and IGV.

Declaration of Conflicting Interest.
'The Author(s) declare(s) that there is no conflict of interest'.

References

1. Afsar, B., Cheema, S., & Javed, F., (2018). Activating employee's pro environmental behaviors: The role of CSR, organizational identification, and environmentally specific servant leadership. *Corporate Social Responsibility and Environmental Management*, *25*(5), 904–911.

2. Amrutha VN, Geetha SN, (2019). A systematic review on green human resource management: Implications for social sustainability, *Journal of Cleaner Production.*

3. Andersson, L., Shivarajan, S., & Blau, G., (2005). Enacting ecological sustainability in the MNC: A test of an adapted value-belief-norm framework. *Journal of Business Ethics*, *59*(3), 295–305.

4.   Anwar, N.; Mahmood, N.H.N.; Yusliza, M.Y.; Ramayah, T.; Faezah, J.N.; Khalid, W., (2020) Green human resource management for organizational citizenship behavior towards the environment and environmental performance on a university campus. *J. Clean. Prod.* 256, 120401

5.   Arag~ao, C.G., Jabbour, C.J.C., (2017). Green training for sustainable procurement? Insights

6.   from the Brazilian public sector. Ind. Commer. Train. 49 (1), 48e54.

7.   Banerjee, S. B., (2002). Corporate environmentalism: The construct and its measurement. *Journal of Business Research*, *55*(3), 177–191.

8.   Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51, 1173–1182.

9.   Boiral, O., Raineri, N., & Talbot, D. (2018). Managers' citizenship behaviors for the environment: A developmental perspective. *Journal of Business Ethics*, *149*(2), 395–409.

10.   Bombiak, E.; Marciniuk-Kluska, A., (2018). Green human resource management as a tool for the sustainable development of enterprises: Polish young company experience. *Sustainability*. 10, 1739.

11.   Boxall, P., Purcell, J., & Wright, P., (2009). Human resource management: Scope, analysis, and

12.   significance. In J. Storey, P. Wright, & D. Ulrich (Eds.), The Routledge companion to strategic human resource management (pp. 1–17). New York: Routledge

13.   Buchert, T.; Stark, R., (2019). Integration of sustainability targets into the product creation process of german manufacturing companies. *In Technologies and Eco-Innovation Towards Sustainability I*; Springer: Berlin, Germany, 2019; pp. 211–228.

14.   Caplan, R. D., & Van Harrison, R., (1993). Person-environment fit theory: Some history, recent developments, and future directions. *Journal of Social Issues*, *49*(4), 253–275.

15.   Carrico, A. R., & Riemer, M. (2011). Motivating energy conservation in the workplace: an evaluation of the use of group-level feedback and peer education. Journal of Environmental Psychology, 31(1), 1e13.

16.   Chaudhary R. (2020). Green human resource management and employee green behavior: An empirical analysis. *Corp Soc Resp Env Ma*. 2020;27:630–641.

17.   Cheema, S., Afsar, B., & Javed, F., (2020). Employees' corporate social responsibility perceptions and organizational citizenship behaviors for the environment: The mediating roles of organizational identification and environmental orientation fit. *Corporate Social Responsibility and Environmental Management*, *27*(1), 9-21.

18.   Chou, C. J., (2014). Hotels' environmental policies and employee personal environmental beliefs: Interactions and outcomes. *Tourism Management*, *40*, 436–446.

19.   Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillside, NJ:

20.   Lawrence Erlbaum.

21.   Cohen, E.; Taylor, S.; Muller-Camen, M., (2012). HRM's Role in Corporate Social and Environmental Sustainability; Research Report; SHRM: Alexandria, VA, USA.

22.   Craddock, E., Huffman, H., Henning, J.,(2012). Taming the dragon: how industrial organizational psychologists can break barriers to "Green" business. Ind. Organ.Psychol. 5, 484e487.

23.   Danese, P., Lion, A., & Vinelli, A., (2019). Drivers and enablers of supplier sustainability

24.   practices: a survey-based analysis. *International Journal of Production Research*, *57*(7),

25.   2034-2056.

26.   Dixit, A.K., (2020). Protection of environment for sustainable development. *Stu. Indian.*

27.   *Place. Names* 40, 1369e1380.

Salman Hameed[1], Dr. Kashif Mehmood[2,] Dr. Adnan Butt[3*]

28.   Dyllick, T.; Hockerts, K., (2002) Beyond the Business Case for Corporate Sustainability. *Bus. Strategy Environ*., 11, 130–141.

29.   Ehnert, I.; Harry,W.; Zink, K.J., (2014) Sustainability and HRM: An introduction to the field. In Sustainability and Human Resource Management: Developing Sustainable Business Organizations. Springer. Heidelberg, Germany; pp. 3–32. ISBN 978-3-642-37524-8.

30.   Folger, R., (2001). *Fairness as deonance. Theoretical and cultural perspectives on organizational justice* (pp. 3–33).

31.   Geisser, S. (1975). The predictive sample reuse method with applications. Journal of the American

32.   Statistical Association, 70, 320–328.

33.   Gilal F., Ashraf Z., Gilal N., Gilal R., Chaana N., (2019). Promoting environmental performance through green human resource management practices in higher education institutions: A moderated mediation model. *Corp Soc Resp Env Ma*. 2019;1–12.

34.   Gimenez, C.; Sierra, V.; Rodon, J.; Rodriguez, J.A., (2015). The role of information technology in the environmental performance of the firm. Academia Revista Latinoamericana de Administrac*ió*n.

35.   Guest, D. E. (2011). Human resource management and performance: Still searching for some

36.   answers. Human Resource Management Journal, 21, 3–13.

37.   Hayes, A. F., & Scharkow, M. (2013). The relative trustworthiness of inferential tests of the indirect effect in statistical mediation analysis: Does method really matter? Psychological Science, 24, 1918–1927.

38.   Hu, J.; Yang, Y.; Jing, F.; Nguyen, B.Awe., (2018) spirituality and conspicuous consumer behavior. *Int. J. Consum. Stud*., 42, 829–839.

39.   Inigo, E. A., & Albareda, L., (2019). Sustainability oriented innovation dynamics: Levels of

40.   dynamic capabilities and their path-dependent and self-reinforcing logics. *Technological*

41.   *Forecasting and Social Change*, *139*, 334-351.

42.   ISO   26000:2010.   Guidance   on   Social   Responsibility.   Available   online: http://www.cnis.gov.cn/wzgg/201405/ P020140512224950899020.pdf

43.   Jabbour, C.J.C., (2013). Environmental training in organisations: from a literature review

44.   to a framework for future research. Resour. Conserv. Recycl. 74, 144e155.

45.   Jabbour, C.J.C.; de Sousa Jabbour, A.B.L.; Sarkis, J.,(2019) Unlocking effective multi-tier supply chain management for sustainability through quantitative modeling: Lessons learned and discoveries to be made. *Int. J. Prod. Econ*. 217, 11–30.

46.   Jabbour, C.J.C., Mauricio, A.L., de Sousa Jabbour, A.B.L., (2017). Critical success factors

47.   and green supply chain management proactivity: shedding light on the human aspects of this relationship based on cases from the Brazilian industry. Prod. Plan. Control 28 (6e8), 671e683.

48.   Jackson, S.E., Renwick, D.W.S., Jabbour, C.J.C., Muller-Camen, M., (2011). State-of-theart

49.   and future directions for green human resource management: introduction to the special issue. Ger. J. Hum. Resour. Manag. 25 (2), 99e116

50.   Javeed, S.A., Latief, R., Lefen, L., (2020). An analysis of relationship between environmental regulations and firm performance with moderating effects of product market competition: empirical evidence from Pakistan. *J. Clean. Prod.* 254, 120197.

51.   Kalish, D., Burek, S., Costello, A., Schwartz, L., & Taylor, J., (2018). Integrating Sustainability

52.   into New Product Development: Available tools and frameworks can help companies

53.   ensure that sustainability is embedded as a fundamental building block of new product

54.   development. *Research-Technology Management*, *61*(2), 37-46

55.   Kaur, S., Gupta, S., Singh, S.K., Perano, M., (2019). Organizational ambidexterity through global strategic partnerships: a cognitive computing perspective. Technol. Forecast. Soc. Chang. 145, 43e54.

56.   Kristof, A. L., (1996). Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology*, *49*(1), 1–49.

57.   Longoni, A.; Luzzini, D.; Guerci, M.,(2018). Deploying environmental management across functions: The relationship between green human resource management and green supply chain management. J. Bus. Ethics , 151, 1081–1095.

58.   Lorente, J. J , de Burgos Jimenez, J., & Céspedes., (2001). Environmental performance as an

59.   operations objective. *International Journal of Operations & Production Management*, *21*(12), 1553-1572.

60.   Macro Guerci, Annachiara Longoni & Davide Luzzini., (2015): Translating stakeholder pressures into environmental performance – the mediating role of green HRM practices, The International Journal of Human Resource Management.

61.   Magon, R. B., Thomé, A. M. T., Ferrer, A. L. C., & Scavarda, L. F., (2018). Sustainability and

62.   performance in operations management research. *Journal of Cleaner Production*, *190*, 104-117.

63.   Malik. S, Yukun Cao, Yasir Hayat Mughal, Ghulam Muhammad Kundi, Mudassir Hayat Mughal , Ramayah., (2020) . Pathways towards Sustainability in Organizations: Empirical Evidence on the Role of Green Human Resource Management Practices and Green Intellectual Capital . *Sustainability.* 12, 3228.

64.   Mathivathanan, D., Kannan, D., & Haq, A. N., (2018). Sustainable supply chain management

65.   practices in Indian automotive industry: A multi-stakeholder view. *Resources, Conservation and Recycling*, *128*, 284-305.

66.   Mavi, R. K., & Standing, C., (2018). Critical success factors of sustainable project management

67.   in construction: A fuzzy DEMATEL-ANP approach. *Journal of Cleaner Production*, *194*,

68.   751-765.

69.   Milliman, J.,(2013), "Leading-edge green human resource practices: vital components to advancing environmental sustainability". *Environmental Quality Management*, 23: 31–45

70.   Muros, J. P., (2012), "Going after the green: expanding industrial–organizational practice to include environmental sustainability". *Industrial and Organizational Psychology*, **5**: 467–502.

71.   Mtutu, P.; Thondhlana, G.,(2016). Encouraging pro-environmental behavior: Energy use and recycling at Rhodes university, South Africa. *Habitat Int.,* 53, 142–150.

72.   Nadeem, O., Hameed, R., (2008). Evaluation of environmental impact assessment system in Pakistan*. Environ. Impact Assess. Rev.* 28, 562e571.

73.   Paille P., Valeau P., Renwick D., (2020) Leveraging green human resource practices to achieve environmental sustainability. Journal of Cleaner Production 260. (2020). 121137

74.   Paulson, F., & Sundin, E., (2019). Challenges when including sustainability aspects in product

75.   development at two large manufacturing companies in Sweden. In *Technologies and Eco-*

76.   *Innovation towards Sustainability I* (pp. 229-243). Springer, Singapore.

77.   Pedersen, E. R. G., Gwozdz, W., & Hvass, K. K., (2018). Exploring the relationship between

78.   business model innovation, corporate sustainability, and organizational values within the

79.   fashion industry. *Journal of Business Ethics*, *149*(2), 267-284.

80.   Pham, N. T., Hoang, H. T., & Phan, Q. P. T. (2019). Green human resource management: a comprehensive review and future research agenda. *International Journal of Manpower*.

Salman Hameed[1], Dr. Kashif Mehmood[2,] Dr. Adnan Butt[3*]

81. Pham, N. T., Tučková, Z., & Jabbour, C. J. C., (2019). Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed method study. *Tourism Management*, *72*, 386–399.

82. Pinzone, M.; Guerci, M.; Lettieri, E.; Redman, T., (2016). Progressing in the change journey towards sustainability in healthcare: The role of "Green" HRM. *J. Clean. Prod.* 2016, 122, 201–211.

83. Pinzone, M., Guerci, M., Lettieri, E., Huisingh, D., (2019). Effects of 'green' training on pro-environmental behaviors and job satisfaction: evidence from the Italian healthcare sector. J. Clean. Prod. 226, 221e232

84. Podsakoff M., MacKenzie S.B., Lee Y. & Podsakoff P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. Journal of Applied Psychology. 2003, Vol. 88, No. 5, 879–903

85. Preacher, K. (2015). Advances in mediation analysis: A survey and synthesis of new developments.Annual Review of Psychology, 66, 825–852. doi:10.1146/annurev-psych-010814-015258

86. Ramus, C. A., & Killmer, A. B., (2007). Corporate greening through prosocial extra-role behaviors—A conceptual framework for employee motivation. *Business Strategy and the Environment*, *16*(8), 554–570.

87. Renwick, D. W. S., Redman, T., & Maguire, S., (2013). Green human resource management:

88. A review and research agenda. *International Journal of Management Reviews,* 15(1), 1–14. doi:10.1111/j.1468-2370.2011.00328.x

89. Roscoe, S., Subramanian, N., Jabbour, C.J., Chong, T., (2019). Green human resource management and the enablers of green organizational culture: enhancing a firm's environmental performance for sustainable development. *Bus. Strat. Environ*. 28, 737e749.

90. Shahzad, S.J.H.; Kumar, R.R.; Zakaria, M.; Hurr, M., (2017) Carbon emission, energy consumption, trade openness and financial development in pakistan: A revisit. Renew. Sustain. Energy Rev. 2017, 70, 185–192.

91. Singh, S. K., Chen, J., Del Giudice, M., & El-Kassar, A. N., (2019). Environmental ethics, environmental performance, and competitive advantage: Role of environmental training. *Technological Forecasting and Social Change*, *146*, 203–211.

92. Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A., & Kalof, L. (1999). A valuebelief-

93. norm theory of support for social movements: The case of environmentalism.

94. *Human Ecology Review*, *6*(2), 81–97.

95. Stern, P.C., (2000) Toward a Coherent Theory of Environmentally Significant Behavior. *J. Soc. Issues.* 56, 407–424.

96. Stone, M. (1974). Cross-validatory choice and assessment of statistical predictions. Journal of the

97. Royal Statistical Society, Series B, 36, 111–133.

98. Tremblay, M., Cloutier, J., Simard, G., Ch^enevert, D., Vandenberghe, C., (2010). The role

99. of HRM practices, procedural justice, organizational support and trust in organizational commitment and in-role and extra-role performance. Int. J. Hum. Resour. Manag. 21, 405e433.

100. Yong, J.Y., Yusliza, M.Y., Ramayah, T., Chiappetta Jabbour, C.J., Sehnem, S., Mani, V., (2019) Pathways towards sustainability in manufacturing organizations: Empirical evidence on the role of green human resource management. *Bus. Strategy Environ*.

101. Yuriev A., Boiral O., Francoeur, V., Paille P., (2018). Overcoming the barriers to pro environmental behaviors in the workplace: a systematic review. J. Clean. Prod.

102. 182, 379e394.

103.   Yusliza, M. Y., Othman, N. Z., & Jabbour, C. J. C., (2017). Deciphering the implementation of
104.   green human resource management in an emerging economy. *Journal of Management*
105.   *Development*, *36*(10), 1230-1246.
106.   Yusliza, M.; Yong, J.Y.; Tanveer, M.I.; Ramayah, T.; Faezah, J.N.; Muhammad, Z., (2020). A
structural model of the impact of green intellectual capital on sustainable performance. *J. Clean. Prod.* 249,
119334.