Revisiting the impact of green human resource management practices on the sustainable environmental performance: An emerging economy perspective

Abu Nayeem Mohammad Hasan BBA Student, IIUC, Bangladesh

Abstract

The study examined the Green Human Resource Management (GHRM) practices that are significantly influential to the sustainable environmental performance of organizations. The study employed a quantitative method to analyze data, collected from 143 HR professionals of different establishments from ready-made garments & steel industries in Bangladesh. The purpose of the study is to investigate the connection and impact of GHRM practices on organizational sustainable environmental performance, to an extent, to identify the degree of the factor's stimulus sustainability. Following previous works on this area, the study has revealed significant impacts of green reward & incentives, green training & development, green performance & management, and knowing green HRM, green organizational culture, and insignificant impact of green recruitment & selection on the sustainable environmental performance of organizations. The findings of the study might help HR managers and leaders in the organization by providing a constructive view of HR management practices. Furthermore, the contribution of this paper lies in enriching the scope and depth of green HRM in the emerging sustainable environmental performance of organizations.

Keywords Sustainability, Green HRM, Environmental performance, Ready-made

garments, Steel industries, Bangladesh

Paper type Research paper

1. Introduction

Human Resource Management (HRM) in the 21st century seeks sustainable organizational growth rather minimal use of human resource to achieve superior profitability. Nowadays, most of the organizations incorporated green practices in their HRM functions to achieve the environmental sustainability, which is generally encompassed by governments, business leaders, consumers communities (Jackson, Renwick, Jabbour, Muller-Camen, 2011). In contrary, in the conventional views about the role of organization prioritize economic activity over environmental responsibility in environmental Vol. 7-8, Dec. 2018-19 sustainability (Ones & Dilchert, 2012). In this age, green human resource management (GHRM) became the global



IIUC Business Review pp. 123-146 © HUC ISSN 1991-380X concern regarding environment-friendly performance in both, developed and developing countries (Sharma & Gupta, 2015). To deal with this quickly changing industrial world, must develop HR in conformity with the business strategies in the labor-intensive manufacturing companies (Ahmad, Khan, Abdullah, & Rashid, 2017; Chowdhury, Othman, Khan, & Sulaiman, 2020). However, very few organizations of Bangladesh concern about the GHRM practices in their organizations, where are 4560 garments factories & 400 steel industries doing their business. The previous study by Renwick, Redman, and Maguire 2008, identified that distinguished policies in the field of recruitment, performance and appraisal management, training and personnel development, employee relations, and reward systems are considered powerful tools for aligning employees with a company's environmental strategy. GHRM depends on the unique and identifiable patterns of green decisions and behaviors of HR managers (Jackson, Renwick, Jabbour, & Muller-Camen, 2011). The understanding and studies on green HRM in recent years amplified by various contemporary scholars (Berrone & Gomez-Mejia, 2009; Jabbour, Santos, & Nagano, 2010; Massoud, Daily, & Bishop, 2008; Stringer, 2009). The literature has suggested, to improve environmental performance in organizations and several competitiveness dimensions, management and employee environmental training and awareness can simultaneously make it possible (Alberti, Caini, Calabrese, & Rossi, 2000; Bunge, Cohen-Rosenthal, & Ruiz-Quintanilla., 1995). GHRM is an environment friendly initiative that works ensure work efficiencies, lesser cost, and heightened employee engagement levels (Rani & Mishra, 2014).

The GHRM practices in ready-made garments and steel industries yet to be addressed intensively. This study discussed the impact of GHRM practices in achieving environmental sustainability, in addition to it has outlined the factors should be included in the HRM functions to create an environment friendly workplace. Prioritizing issues that may affect the organization adversely in achieving environmental goals that scrutinized identified the effects on the organization.

2. Literature review

2.1. Green Human Resource Management

Green Human Resources Management (GHRM) can be defined as the set of policies, practices, and systems that stimulate the green behavior of a company's employees in order to create an environmentally sensitive, resource-efficient and socially responsible workplace and overall organization. In other words, GHRM is the use of policies, philosophies, and

practices of HRM to promote sustainable use of resources and prevent adverse impacts arising from environmental causes within business organizations (Zoogah, 2011). Human resource practices which consist preservation of environmental management, whole execution and systems in the organizations that is required to achieve effective environmental performance of organizations (Jabbour & Santos, 2008), that the idea of GRHM refers developing human resource management practices regarding the environmental sustainability through increasing the employee's commitment to the issues of environmental sustainability. These practices include functions have been practiced in nowadays organizations, these are recruitment and selection, training and development, reward and incentives, compensation, performance appraisal, induction aim to achieve organization goal of environmental sustainability (Khan, Ali, Arefeen, 2014; Khan & Jahur, 2007), also the statements supported by Renwick, Redman, and Maguire (2013) and added It has been proposed that green HRM can be measured by considering its multidimensional nature. In the empirical study conducted by Opatha and Arulrajah (2014) outlined that green HRM practices are imperative in organizations to reduce global warming, minimizing natural disasters avoiding informal, harmful and greedy usage of natural resources for production and consumption, resisting health diseases due to pollution, minimizing harms to lives in the earth by ensuring appropriate balance of relationships among plants, animals, people, and their environment, and through all of these ensuring sustainability of humans and business organizations for a prolonged period of time.

2.2. Green recruitment and selection

HRM practices can think of as required instruments for producing, fortifying, and sustaining employee actions in line with organizational capabilities or culture in group level job competencies or norms, and individual motivation, opportunity (Buller & McEvoy, 2012; 52). In creating an environmental oriented workforce, companies have two options: First is focused on green recruitment. Second is providing required environmental protection related awareness, education, training and development of the existing workforce (Arulrajah, Opatha, & Nawaratne, 2015). Among the various types of HRM practices, recruitment is that, organizations adopt to attract and increase the number of qualified applicants (Delery, 1998; Jiang, Lepak, Han, Hong, Kim, & Winkler, 2012; Khan, Hoque, & Shahabuddin, 2019). Green recruitment is systematic steps of recruiting new competent candidates who are aware of sustainable process, environmental schemes and familiar with words of preservation and ecological environment, world

renowned organizations (google, Timberland, ves) adopted the green recruitment process in their acquisition criteria (Bangwal & Tiwari, 2015). Recruitment in respect of greening, makes it sure that new talents are familiar with the green practices and environmental system that will support the effective environmental management within the organization (Wehrmeyer, 1996) regarding environmental performances, nowadays organizations are attracting new employees through the digital applications, separated in effective and ineffective recruitment process (Guerci, Montanari, Scapolan, & Epifanio, 2016). The recruitment websites of major European recruiter set significant outline on the environmental activity of the organization (Ehnert, 2009). To make sure improvement of environmental management systems, acquisition process should be designed containing enough information of environmental culture & values. Studies reveal that applicants are concerned about organizational practice & decision makings regarding sustainable organizational performance (Wehrmeyer, 1996; Stringer, 2009). The Chartered Institute of Personnel and Development (CIPD) believes in that becoming a green employer may improve employer brand value, Goodwill and is a useful way to attract potential employees who have an environmental orientation.

Hypothesis 1: Green recruitment & selection has significant impact on organizational environmental sustainability

2.3. Green reward and incentives

Offering reward and incentives to employees is one of the major practices in HRM, which influences individuals to be more likely to perform the task repeatedly with more enthusiasm. Regarding green practices, the organizational sustainability of the organization's highly linked with green reward management practices of the organizations. green reward management plays a significant role to motivate employees on corporate environmental management initiatives (Arulrajah, Opatha, & Nawaratne, 2015). There is a positive relationship between pay and rewards and environmental performance. Reward and pay system have encouraging impact on the productivity of the manufacturing industries (Masri, & Jaaron, 2017). Rewarding employees for their outstanding contribution towards the organization's environmental performance, accelerate the goal achievement (Jabbour & Santos, 2008; Jabbour, & de Sousa Jabbour, 2016), Also this practice can be used to inspire employees to share some innovative and green creative ideas relating to their individual jobs (Ahmad, 2015). Employees who contribute the most to environmental sustainability enjoy a different sort of

reward practices concerning the adaptation of new green skill. Money-based EM (Environmental management) rewards (bonus cash, premiums), and it has been discussed that sometimes employees may feel more driven by offering nonfinancial rewards through green pay and reward, such as recognition and praise (Jabbour & Santos, 2008; Jackson, Renwick, Jabbour, & Muller-Camen, 2011). Some well-practiced non-monetary based EM rewards (sabbaticals, leave, gifts), recognition-based EM rewards (awards, dinners, publicity, external roles, daily praise), and positive rewards in EM (feedback), All of these kinds of rewards have been practiced nowadays (Renwick, Redman, & Maguire., 2013) Incentives and rewards may be more powerful measures of aligning employees' performance with the firm's goals than other practices in the HRM system. However, in general, combining monetary and nonmonetary rewards are significantly effective in motivating employees, acknowledged by the most of the researchers (Jabbour & Santos, 2008; Renwick, Redman, & Maguire., 2013).

2.4. Green training and development

Training is a sequence of experiences or opportunities designed to modify behavior in order to attain a stated objective. Training and development aim at developing competences such as technical, human, conceptual and managerial for the furtherance of individual and organization growth (Khan & Ali, 2014, 2015). Green training & development is a series of actions that provoke employees to learn new skills of environment protections, also it focuses on environmental issues in the organization (Jabbour, 2011). Training and development deals with the improvement of employees' knowledge, skills then bring changes in attitude (Khan & Jahur, 2007; Khan, Ali, Arefeen, 2014; Uddin, Khan, & Solaiman, 2014). However, GTD focuses on conserve energy, reduce waste, diffuse environmental by educating employees about the value of environmental management (Zoogah, 2011). The organization should provide Training on necessary skills to achieve green goal, and develop employees for future requirement. This practice delivers training on green working method to engage employees in environmental problem solving (Zoogah, 2011). A green management system closely dependent on GTD, stated after a significant survey on 437 employees, conducted by Daily, Bishop, and Steiner (2007), another study says it has strong impact environment practices (Daily, Bishop, & Massoud, 2012), but one of recent studies says TD has least influence on green human resource management (GHRM) of organizations (Masri, & Jaaron, 2017). Hosain and Rahman (2016) suggested that TD process can be designed by incorporating programs, workshops, seminars, sessions and presentations

aiming to enhance competencies and skills in environment management. In another observation is to achieve sustainability effectively in the organization GHRM should design training program concerning environmental awareness, attitudes, knowledge and values (Cherian & Jacob, 2012; Dumont, Shen, & Deng, 2017).

Hypothesis 2: GTD has a positive relation with the environmental sustainability

2.5. Green performance management and appraisal

Performance appraisal as the dimension of human resources which is used to analyze an employees' performance based on their responsibilities defined by Ivancevich (1995). Performance management is an enduring process of maintaining a communication between supervisor and an employee over the year to assist in organizational strategic goal achievement (Khan, Hoque, & Shahabuddin, 2019; Bangwal & Tiwari, 2015). Green performance management (GPMA) plays very important role in the effectiveness of green management work over passage of time because they guide employee performance to the environmental performances need by the organization (Jabbour & Santos, 2008). Environmental performance standards and indicators have to be developed in PMS to supplement green HR practices (Mehta & Chugan, 2015). This can be initiated by linking performance evaluation to green goals and tasks specified in the job description (Mehta & Chugan, 2015). Total performance management system should be developed Considering Key Performance Areas (KPA) and Key Performance Index (KPI) to achieve environmental sustainability (Hosain & Rahman, 2016). GPM practices aim at make even the employees' behaviors with the organization's environmental goals (Govindarajulu & Daily, 2004; Harvey, Williams, & Probert, 2013).

2.6. Knowing on green HRM

Narrative of green HRM is still in an early stage with hypothesis about its effect on employee workplace outcomes (Dumont, Shen, & Deng, 2017). Green knowledge can lead to understanding and helping individuals to behave in particular ways, it can be learnt from mass media or environmental training and development resulting in better understanding of environmental impacts (Rayner & Morgan, 2018). Environmental knowledge (EK) denotes the knowledge and awareness about environmental issues and solutions (Zsóka, Szerényi, Széchy, & Kocsis, 2013). EK has a positive relation to green practices of organizations (Rayner & Morgan, 2018). A significant number of respondents agreed on the existing structure of job positions empower

the acquisition of knowledge about the environmental management programs inserted in some companies (Jabbour, 2011). EK and awareness is found to affect employee's intentions to implement pro environmental practices (Safari, Salehzadeh, Panahi, & Abolghasemian, 2018).

Hypothesis 3: Sound knowledge on green HRM positively influence in achieving environmental sustainability

2.7. Green organizational culture and practice at work

Concerning sustainability, the HR department plays a significant role in developing a culture in organizations (Harmon, Fairfield, & Wirtenberg, 2010). Green culture means green values and people's recognitions and evaluation about green environmental value (Margaretha & Saragih, 2013). The organization environmental culture can be considered as the set of assumptions, values, symbols, and organizational artifacts that reflect the desire or necessity of being an environmentally correct organization (Harris & Crane, 2002). Harris and Crane (2002) said an organization, promoting a green culture which must be supported by environmentally responsible beliefs, assumptions, and behaviors. Therefore, the organizations seem more attractive to skilled and efficient employees when it has an effective environmental management reinforced by strong environment friendly culture, managers appear to engage in more eco-friendly behaviors than non-managers, and the effect is even stronger for higher level leaders (Ones, Dilchert, Biga, & Gibby, 2010). Pro-environmental organizational culture be likely to be more powerful when the company has a team of environmentally attentive workforce (Fernandez, Junquera, & Ordiz, 2003). Green value of an organization develops, based on several features, for instance green knowledge, and awareness of human demonstrated actions to natural environment, in addition green enterprises, green products, green consumption, green environment, green trade, green life, green technology considered as green culture in this century (Li, Jin, Hua, Kong, & Lin, 2011). Culture is a crucial attribute of an organization which may provide competitive advantage to a particular firm in achieving sustainability (Barney, 1986).

Hypothesis 4: Green organizational culture has a positive relationship with environmental sustainability in organization

2.8. Environmental sustainability

As world economies and organizations transform to abate, diminish, and

neutralize their environmental impact and adapt to environmental sustainability, industrial and organizational psychologists are uniquely positioned to aid in these efforts (Ones & Dilchert, 2012). Sustainable development and sustainability are most commonly defined as meeting the needs of the present generation without compromising the needs of future generations (Sarkis, 2001). Regarding the sustainability, most of the organization have taken some initiatives, these are recycling, reducing the use of energy and natural resources (Accenture, 2011; SHRM, & Aurosoorya, 2011; Zibarras & Ballinger, 2011), and switching to environmentally responsible products or processes (D'Mello, Ones, Klein, Wiernik, & Dilchert, 2011). Several organizations are implementing recycling program as a part of green initiatives to increase the number of recycled products and reduction the amount of waste, in addition to have a measurable environmental impact, offices are conserve energy (Ahmad, 2015). The organizations around the globe are significantly opting for green building as their workplace and offices replacing traditional offices, green buildings include some improved features linked to green practices such as energy efficiency, renewable energy, and storm water management (Ahmad, 2015). Sustainable practices that assist in fixing a society more competitive including waste reduction, recycling, reuse and waste diversion are being continued after by more companies as they locate inefficiencies in their operations (Sarkis, Meade, & Presley, 2006) and it has become strategic weapon and a vital for most occupations in the twenty-first century and has become a fundamental market force affecting long-term financial viability and success (Preston, 2001). There are three steps to measure sustainability impact of firm, first one is environmental influence on land, air, water, and ecosystems what are most visible to consumer (being "green"). 2nd is economic impact in subsidizing to the feasibility of large economic system and 3rd one is social equity impact on the indigenous groups in which the firm operating business (Reilly & Weirup, 2012).

Independent Variables Green recruitment & selection Green reward & incentives Green training & Environmental development Sustainability Green performance management & appraisal Knowing on Green HRM Green organizational cultures

Figure 1. Conceptual framework & model

3. Methodology

The study requires a comprehensive survey, which conducted by a questionnaire containing 41 questions under six independent variables, and a dependent variable. This survey tried to reveal impact of these six independent variables (green recruitment, and staffing, green reward and incentives, green training and development, green performance management & appraisal, knowing on green HRM, green organizational culture) on organizational environmental sustainability. Survey methodology is one of the most implemented and effective methods of study (Khan & Ali, 2014, 2015; Veal, 2005), and survey research aimed at explanation asks about the relationships between variables (Pinsonneault & Kraemer, 1993). This survey went on 143 HR professionals in different organizations, the questionnaires were provided for themselves after describing research motive.

3.1. Sample and procedure

This study collected data utilizing an extensive questionnaire, developed focusing on HR professionals serving in ready-made garment factories and steel industries in Chittagong. The survey respondents are from large manufacturing companies, because of their sensitivity to environmental issues, also they are subjected to government rules as they have formalized HR practices (Guerci, Longoni, & Luzzini, 2016; Tzafrir, 2005). To collect data from the respondents continued for seven weeks of June & July, and the researcher conducted interviews by own selves. Most of the respondents from the participants of Bangladesh Institute of Management, employed as HR professionals in different organizations. 200 of hard copies of questionnaire were provided and received 167 of them, finally allowed 143 for the data analysis. The development was throughout the process, the study has maintained confidence and clarity in developing a questionnaire, provided autonomy with the understandable explanation of a research objective, motive, and meaning of every single section. There is a common phenomenon, if someone committed to the research, respondents will answer questions even when they have no knowledge (Baker, 2003). The participation in the study was voluntary, and no remuneration or incentives were being provided.

3.2. Measures

The measure of this quantitative data analysis questionnaire was adapted from the previous research work on Green Human Resource Management practices. This questionnaire is segmented in seven sections, six sets of questionnaires are on independent variables and another one is on

environmental sustainability performance, all of the sections of the measures were designed in 5-Point Likert Scale (1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree) and the dependent variable scale distributed in (1-Much worse, 2-Worse, 3-Neutral, 4-Better, 5-Much Better). The instruments were checked by veteran researcher and rectified following their instructions. The dependent variable 5 items questionnaire were adapted from Masri and Jaaron (2017), concerning environmentally sustainable performance, in the reliability test the value of Cronbach's Alpha coefficient is 0.702. Cronbach's Alpha coefficient values of green recruitment & selection is 0.892, where the items were adapted from Jabbour, Santos, and Nagano (2010), Masri and Jaaron (2017). Seven questions were adapted in the section green reward & incentives from Arulrajah, Opatha, and Nawaratne (2015), Jabbour, (2011), Saeed, Afsar, Hafeez, Khan, Tahir, and Afridi (2019), Masri and Jaaron (2017), Cronbach's Alpha coefficient value is 0.903. In the section of green training & development, five items questionnaire were collected from previous work by Bangwal, Tiwari (2015), Cook and Seith (1992), North (1997), Renwick, Redman, and Maguire (2008, 2013) and reliability test values is 0.939. Measures of green performance appraisal & management adapted from the works done by Dumont, Shen, and Deng (2017), Masri and Jaaron (2016), Renwick, Redman, and Maguire (2008, 2013), in extent set of questionnaires Alpha value is 0.926. Saeed, Afsar, Hafeez, Khan, Tahir, and Afridi (2018) worked on knowing on green HRM, set of questions were adapted from Jabbour, Santos, and Nagano (2010), the Cronbach's Alpha coefficient value of this set is 0.856. The set of questionnaires on green organizational culture adapted from Bangwal, Tiwari, and Chamola, (2017), these sets of measures reliability result is 0.834.

3.3. Data analysis and results Table 1. Demographics

Measures	Particulars	Frequency	Percent	Valid Percent	Cumulative Percent
Current Position In Exe	cutive	74	51.4	51.4	51.4
Job	Assistant Manage	er 33	22.9	22.9	74.3
	Manager	12	8.6	8.6	82.9
	HR officer	24	17.1	17.1	100.0
	Total	143	100.0	100.0	
Last Achieved Bachelor		33	22.9	22.9	22.9
Academic Degree	Masters	110	77.1	77.1	100.0
	Total	143	100.0	100.0	

Length of Services	1 to 5	77	54.3	54.3	54.3
	6 to 10	33	22.9	22.9	77.1
	More than 10	33	22.9	22.9	100.0
	Total	143	100.0	100.0	
Marital Status	Married	94	65.7	65.7	65.7
	Unmarried	49	34.3	34.3	100.0
	Total	143	100.0	100.0	
Sex	Male	99	68.6	68.6	68.6
	Female	44	31.4	31.4	100.0
	Total	143	100.0	100.0	
Age	25-35	119	82.9	82.9	82.9
	36-45	24	17.1	17.1	100.0
	Total	143		100.0	100.0

Table 1 shows that most of the respondents are male, age range lies in 25 to 35. Comparing with others significant number of employees have completed their master's degree, near to half of respondents' length of services in the job above 5 years.

3.4. Factor analysis

The study assessed by the factor analysis (FA), at first the value of KMO and Bartlett's Test is .845 that indicates adequate sampling (Cerny, & Kaiser, 1977) with a significant value of Bartlett's Test of Sphericity (Chi-Square-144.494, p<0.05), that does mean there are significant correlation among variables and positively correlated to each other, expressed in the Table no. 2 and Table no. 3.

Table 2. Correlation analysis

1	2	3	4	5	6	7
1						
.702**						
.698**	.749**					
.752**	.794**	.795**				
.372*	.517**	.409*	.474**			
.604**	.632**	.500**	.679**	.666**		
.070	.131	.067	.051	.467**	.310	1
	.698** .752** .372* .604**	1 .702** .698** .749** .752** .794** .372* .517** .604** .632**	1 .702** .698** .749** .795** .794** .795** .372* .517** .409* .604** .632** .500**	1 .702** .698** .749** .752** .795** .372* .517** .409* .474** .604** .632** .500** .679**	1 .702** .698** .749** .795** .794** .795** .372* .517** .409* .474** .604** .632** .500** .679** .666**	1 .702** .698** .749** .752** .794** .795** .372* .517** .409* .474** .604** .632** .500** .679** .666**

^{**.} Correlation is significant at the 0.01 level (2-tailed).

^{*.} Correlation is significant at the 0.05 level (2-tailed).

Table 3. KMO and Bartlett's Test Analysis

KMO and	Bartlett's Testa	
Kaiser-Meyer-Olkin Measure of Sampling	g Adequacy.	.845
Bartlett's Test of Sphericity	Approx. Chi-Square	144.494
	Df	21
	Sig.	.000
*p<0.05		

Table 4. Descriptive statistics (Mean & SD)

	N	Minimum	Maximum	Mean	Std.
					Deviation
Recruitment & Staffing Function	143	1.00	4.83	3.4286	.97291
Green reward & Incentives	143	1.50	4.83	3.4048	.98873
Green training & Development	143	1.00	5.00	3.4114	1.09967
Performance management & appraisal	143	1.00	5.00	3.2694	1.05592
Knowing on Green HRM Practices	143	3.00	5.00	4.3095	.56900
Green Organizational Culture	143	2.20	5.00	3.8000	.80732
Commitment to the Environmental sustainability	143	2.80	5.00	3.9143	.61603
Valid N (listwise)	143				

In the Table 4, shows that the square root of the average variance extracted for each construct to assess the discriminant validity of constructs.

The impact of green HRM performance on environmental sustainability Multiple regression analysis is employed to analyze the impact of green human resource management practices on achieving organization environmental sustainability. In the Tables 5 & 6 show variation among variables is pretty bigger than the study expected where (0.145 > P). At least one of group in independent variables has more impact on the environmental organizational sustainability.

Table 5. Model Summery

						Change Statistics			3	
		R	Adjusted	Std. Error of	R Square	F			Sig. F	Durbin-
Model	R	Square	R Square	the Estimate	Change	Change	df1	df2	Change	Watson
1	.523a	.273	.118	.57865	.273	1.756	25	117	.145	1.846

a. Predictors: (Constant), GC, GTD, GKG, GRS, GRI, GPMA

b. Dependent Variable: GEP

Table 6. ANOVA analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.527	25	.588	1.756	.145b
	Residual	9.375	117	.335		
	Total	12.903	142			

a. Dependent Variable: GEP

b. Predictors: (Constant), GC, GTD, GKG, GRS, GRI, GPMA

Table 7. Coefficients

Model		Unstandardized Coe	Unstandardized Coefficients Standardized					
			Coeff	Coefficients		Sig.		
		В	Std. Error	Beta				
1	(Constant)	1.691	.784		2.156	.040		
	GRS	010	.171	016	059	.053		
	GRI	.034	.180	.055	.190	.080		
	GTD	.150	.161	.045	2.155	.021		
	GPMA	.220	.200	378	3.103	.010		
	GKG	.504	.243	.465	4.075	.000		
	GC	.159	.208	.209	2.766	.020		

a. Dependent Variable: GEP

The study conducted multiple regression analysis to predict $\beta0$ (environmental sustainability), variability depends on + $\beta1$ (green recruitment & selection) + $\beta2$ (Green Reward & Incentives) + $\beta3$ (green training & development) + $\beta4$ (green performance management & appraisal) + $\beta5$ (knowing on green HRM) + $\beta6$ (green organizational culture). In the Table-7 the analysis shows there is a significant impact on criteria variable of GTD, GPMA, GKG, GC where the p values are (0.021, 0.010, 0.000, 0.020 < .05), values of weighted Beta 0.045, -0.378, 0.465, 0.209 respectively. In the contrary, there are no significant impacts of green recruitment & selection, green reward & incentives identified on environmental sustainability where values (0.053, 0.80 > 0.05) with Beta values are - 0.016, 0.055 correspondingly.

4. Discussion

The study labored to identify the impacts of green human resource management practices on achieving organizational environmental sustainability, GHRM consists of green recruitment & selection, green reward & incentives, green training & development, green performance appraisal & management, knowing on green HRM, and green organizational

culture. The study has hypnotized that green recruitment & selection, green training & development, knowing on green HRM, and green organizational culture has a positive impact on organizational environmental sustainability achievement. Empirical study & intensive survey analysis on 143 HR professionals in different organizational supported some of these hypotheses.

The results expose that green recruitment & selection is not adequately effective in ensuring environmental sustainability. However, it may make may create a positive value of organization regarding green human resource management practice. recruitment & selection practices can support to make sure that new candidates are familiar with an organization's environmental culture and are capable of maintaining their environmental values (Wehrmeyer, 1996). The previous study, conducted by Grolleau, Mzoughi, and Pekovic, (2012) reveals that the environmental criteria of a company for the recruitment of an employee enriches the profile of a company's environmental commitment.

Another hypothesis was on green training & development has a positive impact on environmental sustainability, then the study found a significant relationship between these variables, the green training & development greatly stimulus in environmental sustainability achievement. This statement backed by Ramus (2002) that the survey of managers, on best management practices concluded by stating that it has significance in HRM processes along with a amid green culture that facilitates the achievement of environmental goals. In extent, Sarkis, Gonzalez-Torre, and Adenso-Diaz (2010) emphasize that training plays a crucial role in building organizational capacities and competency of the workers, qualifying employees to understand how the environment will affect and is affected by their duties and decisions.

As the study expected that Knowing on green HRM could play a vital role in the environmental performance in the organizational sustainability achievement, the statistics and study also support the statement. That shows significance is better than the other variables in this regard where the p-value is .000 < 0.05. This hypothesis also supported by Ramus (2002), Frick, Kaiser, and Wilson (2004), and the recent study conducted by Afsar, Badir, and Kiani, (2016) evident that collaboration of environmental knowledge with green HRM practices is expected to increase employees' participation in environmentally friendly behaviors.

Lastly, the study found that organizational culture has an impact on sustainable environmental performance at a significant level. This outcome exposed in the 4th hypothesis and supported by recent study piloted that organizational culture recognized as a more powerful factor in employees' participation in improvement in the environmental management in organizations (Rothenberg, 2003). In extent Margaretha and Saragih (2013) has underlined that organizations initiating greener corporate culture, concentrating on environmentally sustainable business practices resulting in greater efficiencies, creating an atmosphere of better employee engagement in an economic way.

The result shows that the green reward & incentive doesn't influence in a significant way, but the practice may inspire employees to contribute to sustainability achievement. However, green performance management & appraisal effects considerably. Considering necessity Ahmad (2015) recommended that human resources departments should incorporate a performance appraisal system to be able to evaluate employees on their competencies related to environmental sustainability.

5. Implications

5.1. Theoretical application

Considering the concurrent reality, green human resource management practice becomes the contemporary global issue (Norton, Zacher, & Ashkanasy, 2014). This study has identified some of the crucial aspects of environmental performance in the organization to achieve sustainability. Theoretically, this study will help to emerge to corporate leaders to develop plans, policies, and strategy to train employees of organizations, in extent it will help to have a transparent notion enduring practice and they require practice to face imminent challenges. A growing number of researchers (e.g., Jackson & Seo, 2010; Kumari, 2012; Renwick, Redman, & Maguire 2013) has suggested that organizations should incorporate green practices to effectively and successfully implement organizational green policies. This empirical study successfully reveals the correlation between factors that may affect environmental sustainability, also identified the degree Influence of green recruitment & selection, green reward & incentives, green employee management & performance appraisal, green training & development, knowledge on GRHM & green organizational culture. In the process of the study engaged HR Professionals who are the key partner of these changes that helps to get a perception. In essence, this empirical study would be the outline for the stakeholders of this issue.

5.2. Practical implications

This research has noteworthy practical implications for human resource management practices, this study reveals key factors that should be adopted by organizations to respond to the emerging environmental issues. This empirical study assesses stimuli of green practices on environmental performance and found green training & development, knowing on green HRM, and green organizational culture effects organizations considerably. Organizations outlined the significance level of green practices and identified organizations require to bring changes in the training & development procedure incorporating holistic environmental aspects, with the aim of employees stay prepared to meet the current & future needs to achieve organizational sustainability. In extent, it has discussed the role of green environmental culture in achieving sustainability, what can organizations develop by imposing new rules & regulations with an integrated employee orientation regarding greening.

Our study also deals with the factors may affect sustainability and found, having sound knowledge of GHRM among employees another precondition of environmental sustainability achievement, where study got most of the HR professionals are aware of the greening & performance of those firms comparatively better in this regard. However, green recruitment & selection procedure helps to build an image of the firms towards newcomers that may attract competent candidates to make choice based on environmental concern. Most importantly, the green performance management & appraisal system helps to manage employees by environmental goal where green reward & incentives system motivates to be more efficient in the workplace. The study has revealed, environmentally concerned organizations already incorporated these parameters in their organization.

In essence, this study is a vibrant framework for the policymakers, leaders, and managers in setting an action plan to deal with the approaching challenges, and the factors discussed in this research would be great weapons in the environmental goals achievement.

6. Limitations & directions for future research

The research is not free of Limitations. Firstly, respondents are from ready-made garments and steel industries that may the reason of not reflecting overall scenario of green HRM practices. A future researcher can work on this area in other sectors comparing this extent. Besides, this study may be influenced by demographic & cultural factor, because process went on the perspective of Bangladesh. The research can get biased partially through the possible bias and respondents also may biased that the researcher may carry (McKinnon, 1988). This empirical study just worked on some of variables where other variables are also important in this area, and future study has opportunities to work with more variables considering

across the practices of green human resource management in developed and underdeveloped countries.

References

- Accenture. (2011). Decision maker attitudes and approaches towards sustainability in business. Retrieved from http://www.accenture.com/ite Collection Documents / PDF / AccentureDecision-Maker-Attitudes.pdf
- Afsar, B., Badir, Y., & Kiani, U. S. (2016). Linking spiritual leadership and employee pro environmental behavior: The influence of workplace spirituality, intrinsic motivation, and environmental passion. *Journal of Environmental Psychology*, 45, 79-88. doi: 10.1016/j. jenvp.2015.11.011
- Ahmad, A., Khan, M.A., Abdullah, A.A.M., & Rashid, M. H. U. (2017). Environmental disclosures: A study on some selected pharmaceutical and chemical companies in Bangladesh. *IIUC Business Review*, 6, 9-24.
- Ahmad, S. (2015). Green human resource management: Policies and practices. *Cogent Business & Management, 2*(1), 1030817. doi: 10.1080/23311975.2015.1030817
- Alberti, M., Caini, M., Calabrese, A., & Rossi, D. (2000). Evaluation of the costs and benefits of an environmental management system. *International Journal of Production Research*, 38(17), 4455-4466.
- Arulrajah, A. A., Opatha, H. H. D. N. P., & Nawaratne, N. N. J. (2015). Green human resource management practices: A review. *Sri Lankan Journal of Human Resource Management*, *5*(1), 1-16.
- Baker, (2003). Data collection questionnaire design. *The Marketing Review,* 3(3), 343-370.
- Bangwal, D., & Tiwari, P. (2015). Green HRM–A way to greening the environment. *IOSR Journal of Business and Management*, 17(12), 45-53.
- Bangwal, D., Tiwari, P., & Chamola, P. (2017). Green HRM, work-life and environment performance. *International Journal of Environment, Workplace and Employment*, 4(3), 244-268.
- Barney, J. B. (1986). Organizational culture: Can it be a source of sustained competitive advantage? *Academy of Management Review*, 11(3), 656-665.
- Berrone, P., & Gomez-Mejia, L. R. (2009). Environmental performance and executive compensation: An integrated agency-institutional perspective. *Academy of Management Journal*, 52, 103-126. doi: 10.5465/AMJ.2009.36461950

- Buller, P. F., & McEvoy, G. M. (2012). Strategy, human resource management and performance: Sharpening line of sight. *Human Resource Management Review, 22,* 43-56. doi: 10.1016/j.hrmr. 2011.11.002
- Bunge, J., Cohen-Rosenthal, E., & Ruiz-Quintanilla, A. (1995). Report from the Cornell work and environmental initiative and the Center for Advanced Human Resource Studies. Ithaca, NY: Cornell.
- Cerny, C. A., & Kaiser, H. F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate Behavioral Research*, 12(1), 43-47.
- Cherian, J., & Jacob, J. (2012). A study of green HR practices and its effective implementation in the organization: A review. *International Journal of Business and Management*, 7(21), 25–33.
- Chowdhury, M. M. I., Othman, K. B., Khan, M. A., & Sulaiman, I. F. (2020). Role of effective corporate governance and motivational leadership in increasing productivity and efficiency of human resources. *Global Journal of Management and Business Research*, 20(10), 29-39.
- Cook, J., & Seith, B. J. (1992). Designing an effective environmental EMS training program. *Journal of Environmental Regulation*, 2(1), 53-62.
- D'Mello, S., Ones, D. S., Klein, R. M., Wiernik, B. M., & Dilchert, S. (2011, April). *Green company rankings and reporting of pro-environmental efforts in organizations*. Paper presented at the 26th Annual Conference of the Society for Industrial and Organizational Psychology, Chicago, IL.
- Daily, B. F., Bishop, J. W., & Massoud, J. A. (2012). The role of training and empowerment in environmental performance: A study of the Mexican maquiladora industry. *International Journal of Operations & Production Management*, 32(5), 631-647.
- Daily, B. F., Bishop, J. W., & Steiner, R. (2007). The mediating role of EMS teamwork as it pertains to HR factors and perceived environmental performance. *Journal of Applied Business Research (JABR)*, 23(1), 95-109.
- Delery, J. E. (1998). Issues of fit in strategic human resource management: Implications for research. *Human Resource Management Review, 8*(3), 289-309. doi:10.1016/S1053-4822(98)90006-7
- Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human Resource Management*, 56(4), 613-627. doi:10.1002/hrm.21792

- Ehnert, I. (2009). Sustainable Human Resource Management. London: Springer.
- Fernandez, E., Junquera, B., & Ordiz, M. (2003). Organizational culture and human resources in the environmental issue: A review of the literature. International Journal of Human Resource Management, 14(4), 634-656.
- Frick, J., Kaiser, F. G., & Wilson, M. (2004). Environmental knowledge and conservation behavior: Exploring prevalence and structure in a representative sample. Personality and Individual Differences, 37(8), 1597-1613. doi: 10.1016/j.paid.2004.02.015
- Govindarajulu, N., & Daily, B. F. (2004). Motivating employees for environmental improvement. Industrial Management & Data Systems, 104(4), 364-372.
- Grolleau, G., Mzoughi, N., & Pekovic, S. (2012). Green not (only) for profit: An empirical examination of the effect of environmental-related standards on employees' recruitment. Resource and Energy Economics, 34(1), 74-92. doi: 10.1016/j.reseneeco.2011.10.002
- Guerci, M., Longoni, A., & Luzzini, D. (2016). Translating stakeholder pressures into environmental performance – the mediating role of green HRM practices. The International Journal of Human Resource Management, *27*(2), 262-289.
- Guerci, M., Montanari, F., Scapolan, A., & Epifanio, A. (2016). Green and nongreen recruitment practices for attracting job applicants: Exploring independent and interactive effects. The International Journal of Human Resource Management, 129-150. doi: 27(2),10.1080/09585192.2015.1062040
- Harmon, J., Fairfield, K. D., & Wirtenberg, J. (2010). Missing an opportunity: HR leadership and sustainability. *People and Strategy*, 33(1), 16-21.
- Harris, L. C., & Crane, A. (2002). The greening of organizational culture: Management views on the depth, degree and diffusion of change. *Journal* of Organizational Change Management, 15(3), 214-234.
- Harvey, G., Williams, K., & Probert, J. (2013). Greening the airline pilot: HRM and the green performance of airlines in the UK. The International Journal of Human Resource Management, 24(1), 152-166.
- Hosain, S., & Rahman, M. D. (2016). Green human resource management: A theoretical overview. IOSR Journal of Business and Management (IOSR-JBM),18(6), 54-59. doi: 10.9790/487X-1806035459

- Jabbour, C. J. C. (2011). How green are HRM practices, organizational culture, learning and teamwork? A Brazilian study. *Industrial and Commercial Training*, 43(2), 98-105. doi: 10.1108/00197851111108926
- Jabbour, C. J. C., & Santos, F. C. A. (2008). Relationships between human resource dimensions and environmental management in companies: Proposal of a model. *Journal of Cleaner Production*, 16(1), 51-58. doi: 10.1016/j.jclepro.2006.07.025
- Jabbour, C. J. C., Santos, F. C. A., & Nagano, M. S. (2010). Contributions of HRM throughout the stages of environmental management: Methodological triangulation applied to companies in Brazil. *The International Journal of Human Resource Management*, 21(7), 1049-1089.
- Jabbour, C. J. C., & de Sousa Jabbour, A. B. L. (2016). Green human resource management and green supply chain management: Linking two emerging agendas. *Journal of Cleaner Production*, 112, 1824-1833.
- Jackson, S. E., & Seo, J. (2010). The greening of strategic HRM scholarship. Organization Management Journal, 7(4), 278-290.
- Jackson, S. E., Renwick, D. W., Jabbour, C. J., & Muller-Camen, M. (2011). State-of-the-art and future directions for green human resource management: Introduction to the special issue. German Journal of Human Resource Management, 25(2), 99-116. doi: 10.1177/239700221102500203
- Jiang, K., Lepak, D. P., Han, K., Hong, Y., Kim, A., & Winkler, A. L. (2012). Clarifying the construct of human resource systems: Relating human resource management to employee performance. *Human Resource Management Review*, 22(2), 73-85. doi: 10.1016/j.hrmr.2011.11.005
- Khan, M. A., & Ali, A. J. (2014). The role of training in reducing poverty: the case of the ultra-poor in Bangladesh. *International Journal of Training and Development*, 18(4), 272-281.
- Khan, M. A., & Ali, A. J. (2015). Do non-governmental organisations' socio-economic and training programmes improve disaster prevention capacity of their beneficiaries? *International Social Work*, *58*(3), 401-420. DOI: 10.1177/0020872815570074
- Khan, M. A., & Jahur, M. S. (2007). Human resource development practices in some selected business enterprises in Bangladesh: An explanatory study. *Indonesian Management and Accounting Research*, 6(1), 16-32.
- Khan, M. A., Ali, A. J., & Arefeen, S. (2014). The impact of training on NGO beneficiaries' education in Bangladesh: The missing link. *Advances in Environmental Biology*, 8(9), 679-88.

- Khan, M.A., Hoque, N., & Shahabuddin, A. M. (2019). HRM practices and performance management in public service organizations in Bangladesh: An empirical study. IIUC Studies, 16, 9-34.
- Kumari, P. (2012). Green HRM-Issues and challenges. Global Research Analysis, 1(5), 80-83.
- Li, H., Jin, H., Hua, Y., Kong, C., & Lin, L. (2011). Green research based on cultural three-hierarchy theory. Journal of Sustainable Development, 4(3), 196.
- Margaretha, M., & Saragih, S. (2013, March 20-23). Developing new corporate culture through green human resource practice. Paper presented at the International Conference on Business, Economics, and Accounting (IBEA), Bangkok, Thailand.
- Masri, H. A., & Jaaron, A. A. (2017). Assessing green human resources management practices in Palestinian manufacturing context: An empirical study. Journal of Cleaner Production, 143, 474-489. http://dx.doi.org/10.1016/j.jclepro.2016.12.087
- Massoud, J. A., Daily, B. F., & Bishop, J. W. (2008). Reward for environmental performance: Using the Scanlon Plan as catalyst to green organizations. International Journal of Environment, Workplace and Employment, 4(1), 15-31.
- McKinnon, J. (1988). Reliability and validity in field research: Some strategies and tactics. Accounting, Auditing & Accountability Journal, 1(1), 34-54.
- Mehta, K., & Chugan, P. K. (2015). Green HRM in pursuit of environmentally sustainable business. Universal Journal of Industrial and Business Management, 3(3), 74-81. doi: 10.13189/ujibm.2015.030302
- North, K. (1997). Environmental business management: An introduction (2nd ed.). International Labour Organization.
- Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2014). Organisational sustainability policies and employee green behaviour: The mediating role of work climate perceptions. *Journal of Environmental Psychology*, 38, 49-54.
- Ones, D. S., & Dilchert, S. (2012). Environmental sustainability at work: A call to action. *Industrial and Organizational Psychology*, 5(4), 444-466.
- Ones, D. S., Dilchert, S., Biga, A., & Gibby, R. E. (2010, April). Managerial level differences in eco-friendly employee behaviors. Paper presented at the 25th Annual Conference of the Society for Industrial and Organizational Psychology, Atlanta, GA.

- Opatha, H. H. D. N. P., & Arulrajah, A. A. (2014). Green human resource management: Simplified general reflections. *International Business Research*, 7(8), 101-112.
- Pinsonneault, A., & Kraemer, K. (1993). Survey research methodology in management information systems: An assessment. *Journal of Management Information Systems*, 10(2), 75-105. doi: 10.1080/07421222.1993.11518001
- Preston, L. (2001). Sustainability at Hewlett-Packard: From theory to practice. *California Management Review*, 43(3), 26-37.
- Ramus, C. A. (2002). Encouraging innovative environmental actions: What companies and managers must do. *Journal of World Business*, *37*, 151-164. doi: 10.1016/S1090-9516(02)00074-3
- Rani, S., & Mishra, K. (2014). Green HRM: Practices and strategic implementation in the organizations. *International Journal on Recent and Innovation Trends in Computing and Communication*, 2(11), 3633-3639.
- Rayner, J., & Morgan, D. (2018). An empirical study of 'green' workplace behaviours: Ability, motivation and opportunity. *Asia Pacific Journal of Human Resources*, 56(1), 56-78. doi:10.1111/1744-7941.12151
- Reilly, A., & Weirup, A. (2012). Sustainability initiatives, social media activity, and organizational culture: An exploratory study. *Journal of Sustainability and Green Business*, 1(1), 1-15.
- Renwick, D. W., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International Journal of Management Reviews*, 15(1), 1-14.
- Renwick, D., Redman, T., & Maguire, S. (2008). Green HRM: A review, process model, and research agenda. *University of Sheffield Management School Discussion Paper*, 1(1), 1-46. Retrieved from http://www.shef.ac.uk/content/1/c6/08/70/89/2008-01.pdf
- Rothenberg, S. (2003). Knowledge content and worker participation in environmental management at NUMMI. *Journal of Management Studies*, 40(7), 1783-1802.
- Saeed, B. B., Afsar, B., Hafeez, S., Khan, I., Tahir, M., & Afridi, M. A. (2019). Promoting employee's pro environmental behavior through green human resource management practices. *Corporate Social Responsibility and Environmental Management*, 26(2), 424-438. doi: 10.1002/csr.1694
- Safari, A., Salehzadeh, R., Panahi, R., & Abolghasemian, S. (2018). Multiple pathways linking environmental knowledge and awareness to employees' green behavior. *Corporate Governance: The International Journal of Business in Society, 18*(1), 81-103. doi: 10.1108/CG-08-2016-0168

- Sarkis, J. (2001). Manufacturing's role in corporate environmental sustainability-Concerns for the new millennium. International Journal of Operations & Production Management. 21(5/6), 666-686.
- Sarkis, J., Gonzalez-Torre, P., & Adenso-Diaz, B. (2010). Stakeholder pressure and the adoption of environmental practices: The mediating effect of training. Journal of Operations Management, 28(2), 163-176.
- Sarkis, J., Meade, L., & Presley, A. (2006). An activity-based management methodology for evaluating business processes for environmental sustainability. Business Process Management Journal, 12(6), 751-769. doi: 10.1108/14637150610710918
- Sharma, R., & Gupta, N. (2015, January 2-5). Green HRM: An innovative approach to environmental sustainability. Paper presented at the Twelfth AIMS International Conference on Management, Calicut, India.
- SHRM, BSR, & Aurosoorya. (2011). Advancing sustainability: HR's role. Washington, DC: Society for Human Resource Management.
- Stringer, L. (2009). The Green workplace. Sustainable strategies that benefit employees, the environment, and the bottom line. New York: Macmillan.
- Tzafrir, S. S. (2005). The relationship between trust, HRM practices and firm performance. The International Journal of Human Resource Management, 16(9), 1600-1622.
- Uddin, M. S., Khan, M. A., & Solaiman, M. (2014). Human resource development through training on business teachers in Bangladesh. International Journal of Business and Technopreneurship, 4(1), 83-96.
- Veal, A. J. (2005). Business Research Methods (2nd ed.). Pearson Education Australia.
- Wehrmeyer, W. (1996). Greening people: Human resources and environmental management. Routledge.
- Zibarras, L., & Ballinger, C. (2011). Promoting environmental behaviour in the workplace: A survey of UK organisations. Going Green: The Psychology of Sustainability in the Workplace, 84-90.
- Zoogah, D. B. (2011). The dynamics of Green HRM behaviors: A cognitive social information processing approach. German Journal of Human Resource Management, 25(2), 117-139. doi:10.1688/1862-0000_ZfP_2011_02_Zoogah

Zsóka, Á., Szerényi, Z. M., Széchy, A., & Kocsis, T. (2013). Greening due to environmental education? Environmental knowledge, attitudes, consumer behavior and everyday pro environmental activities of Hungarian high school and university students. *Journal of Cleaner Production*, 48, 126-138. doi: 10.1016/j.jclepro.2012.11.030

Corresponding author

Abu Nayeem Mohammad Hasan can be contacted at: anmnayeem7@gmail.com