

Does Green Employee Empowerment Mediate the Relationship between Green HRM and Environmental Performance?

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ABSTRACT: An empirical study was carried out in relation to Green HRM, Green employee empowerment and environmental performance owing to empirical and contextual gap. This study focuses on exploring the mediating role of green employee empowerment on the relationship between green HRM practices including green recruitment and selection, green training and development, green performance management and green rewards systems and environmental performance in dairy industry in Sri Lanka. This study has adopted quantitative research strategy and three hypotheses were developed based on empirical gaps identified in literature review. Data were gathered from managers in the dairy industry by using self-filled closed ended questionnaire and analyzed through SPSS software tool. Study found that green employee empowerment partially mediates the relationship between green HRM practices and environmental performance in dairy industry. Implications of this study have been drawn toward practitioners and researchers. This study provides managerial policy makers fruitful insights on sustainable business operations. It can be recommended that organizations should empower employees to engage in green initiatives through green HRM practices in order to enhance the environmental performance of the dairy firm. In order to encourage future researchers, this study has highlighted gaps in the green human resource management systems and environmental performance.

Keywords - Environmental Sustainability, Green Employee Empowerment, Green HRM, Environmental Performance, Dairy Industry, Sri Lanka.

1 INTRODUCTION

In the sustainability era, competitive advantage is gained along with sustainable development which is defined as the development which meets the needs and wants of current generation by utilizing current resources without compromising the ability of future generations to meet their own needs. Sustainability stands on three pillars: profits, people and planet which is known as triple bottom line concept. In the business context, “profits”: the conventional bottom line talks about the economic condition, “people” stands for social dimension which concerns about all stakeholders and “planet” reflects the care for the environment.

Environmentalism is a social movement which is focused on the welfare of the environment including protecting and conserving elements of earth’s ecosystem such as air, water, land, plants, animals, rainforest, deserts and oceans. Because of the human development their interactions, set of environmental issues have to be addressed by individuals and organizations commonly such as overpopulation, commercialization and industrialization, urbanization, global warming and destruction of natural resources. As a solution, business organizations are shifting from conventional practices in to green initiatives which generate competitive advantage. Importance of green human resource management has been pointed out including avoiding or

minimizing global warming, natural disasters, health disasters, harms to animals or natural creators and ensuring appropriate eco-balance and prolonged survival of human beings and organizations. Business organizations are engaging in Corporate Social Responsibility (CSR) activities to enhance the welfare of the society by showing the gratitude towards the society for which materials are supplied and products/services are sold while contributing to reduce the environmental pollution, conserving natural resources for future generations and projecting organizational brand name.

The word “Green” or “Greening” has been explained with four meanings: “1) Preservation of the natural environment, 2) Conservation of the natural environment, 3) Avoidance or minimization of environmental pollution and 4) Generation of gardens and looking-like natural places”. To be a “Green Employee”, person should perform four roles along with above four meanings including 1) preservationist who saves natural environment as its original form without harming or change, 2) conservationist who is really careful when natural resources are used, 3) non-polluter who avoids or minimizes contamination of water, air and land and 4) maker who likes to green or natural places and gardens (Opatha & Arulrajah, 2014). Scholars and experts involve in environmental management (Denton, 1999, Daily and Huang, 2001, Daily et al., 2002, Govindarajulu and Daily, 2004, Hameed et al., 2020) argue that HR professionals in business organizations face multiple challenges when generating green employees through implementing green human resource initiatives.

With massive technological improvements, industrialization and urbanization, most of developing countries are at a risk of environmental pollution. Air, water and land pollution, lead pollution, insufficient water for sanitation and hygiene, hazardous waste cause eco-imbalance and harmful living conditions thereby people in a risk of having fatal deaths. It has been found that environmental pollution causes more than 9 million premature deaths worldwide which is three times more than from malaria, tuberculosis and AIDS combined and 15 times more than forms of wars. Global level cost associated with health damage and precautions is approximately \$5.7 trillion which is equivalent to 4.8% of global GDP. World Bank says that pollution makes huge impact on human lives and pollution management should be addressed through job creation, better energy efficiency improved transport and sustainable development (World Bank, 2020).

Dairy industry in Sri Lanka

Dairy industry which is a sub-sector of livestock in agriculture in Sri Lanka acts as a complex and emerging unit of Sri Lankan economy (Perera & Jayasuriya, 2008). Milk and Milk related products play a major role in domestic requirements. Given the malnutrition faced by pre-school children and pregnant mothers, the importance of milk consumption has been emphasized by health authorities in Sri Lanka (Vidanapathirana, 2019). The growth of dairy production which is recorded after 2008 was a result of various initiatives including upgraded infrastructure facilities for small, medium and large scale milk collectors, increased contribution from northern and eastern provinces, financial assistance given by the government, marketing strategies to promote liquid milk consumption, diversification of income avenues of people (Mendis & Edirisinghe, 2014).

During the first half of 2018, milk production was increased from 8.5% which was able to meet 40% of the total domestic demand in Sri Lanka. Although Sri Lankan GDP is contributed by only 7.0% in 2019 showing a slight decline compared to 2018 (7.1%), several development strategies have been suggested by the Central Bank of Sri Lanka. Further, it has been stated that dairy sector requires sustainable practices which are resilient to climate changes and environmental trends (CBSL, 2018). In 2019, milk production has been decreased by 6.3% with increased average cost of milk production by 7.2% and the number of neat and buffalo milking cows have been decreased (CBSL, 2019) which reflect the fact of the necessity of being efficient in milk production. Further, the use of agrochemicals on feedstuffs and drinking water for animals is a huge challenge faced by dairy firms in terms of environmental concern. Due to the lack of lands in up-country, Sri Lanka, animals are fed with crop residues which are contaminated with agro chemicals (Katukurunda et al., 2012). Milk production through cattle and buffalos should be done in a sustainable approach as animals are live resources and dairy firms should formulate and implement sustainable plans to face the new challenge of resource constraints while increasing their profit margins. The green behaviors and environmental initiatives of employees are essential to

make dairy firms efficient and save natural resources within the dairy firm.

As per the study done by Qureshi et., al (2020), it is a must to investigate the impact of green human resource management functions on the organizational sustainability. Studies on sustainability theme in the dairy industry have been emerged after 2011 and most of researches have been conducted in the field of sustainability addressing waste treatment, electricity consumption, environmental impacts and economic issues (Feil et al., 2020). They further emphasized that lack of studies have been done on the triple bottom line of the sustainability in dairy industry and no concern has been given to the linkage between green initiatives and sustainability (Feil et al., 2020). The literature presents only few studies addressing the impact of green initiatives on the sustainable pillars in the dairy industry.

With this ground, it can be found an empirical gap in the literature in terms of the link between green HRM and environmental sustainability which is one pillar of sustainability. It therefore seems reasonable to conduct an empirical study to explore the effect of green human resource management practices which stimulate green behavior of employees toward environmental performance through green employee empowerment in the dairy industry, Sri Lanka.

2 RESEARCH OBJECTIVES

1. To identify the relationship between green HRM and green employee empowerment.
2. To identify the relationship between green employee empowerment and environmental performance.
3. To identify the mediating role of green employee empowerment on the relationship between green HRM and environmental performance.

3 THEORETICAL BACKGROUND

3.1 Green HRM with Environmental Performance

Green HRM is concerned as an approach for sustainable investment and development. When human capital is used for the implementation of environmental management plans, both economic and environmental goals can be achieved (Seyed Javadin et al.,2017). Green HRM involves in communicating awareness of being green and establishing the interaction between employees and the environment management. Policies for environment protection enhance the green behavior of employees which lead for environmental performance (Ghadge et al., 2017). All activities relating to retaining green employees within the organization is called green HRM and it includes mainly translating regular employees in to green employees to achieve environmental goals and thereby environmental sustainability (Opatha & Arulrajah, 2014). Dutta (2012) has found two types of elements in Green HRM namely eco-friendly functions of human resources and safekeeping of knowledge capital. He has emphasized that green HRM as a resolution for generating a green work force to create a green culture in organizations. With these facts, it can be assumed that Green HRM practices have a positive impact on environmental performance of the organization.

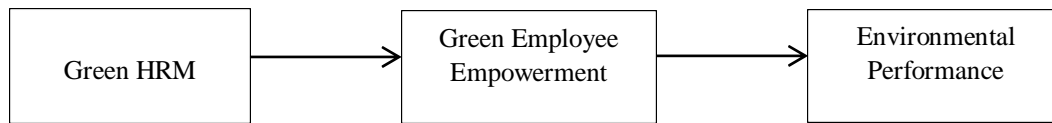
3.2 Mediating Role of Green Employee Empowerment

GHRM practices can affect the behavior of employees through psychological mechanisms (Hameed et al., 2020; Spreitzer, 1995). Psychological mechanisms such as psychological green climate for and green engagement in green initiatives lead for performance enhancement. When employees are empowered through Green HRM practices, they would contribute to environmental performance. In order to strength the relationship between green HRM and environmental performance, green empowerment plays a considerable role. Increased feeling of empowerment would lead employees to present discretionary behavior which is required for environmental performance. It has been found that when employees receive some incentives/ benefits from the organization for environmental initiatives, they feel obliged to present a green behavior (Hameed et al., 2020). With these facts, it can be assumed that green employee empowerment mediates the relationship between green HRM practices and environmental performance.

4 CONCEPTUAL FRAMEWORK

The conceptual framework of the study is shown in fig. 01 and hypotheses were developed based on the conceptual framework.

Figure 1- Conceptual Framework



4.1 Hypothesis Development

H1: Green HRM is positively related with green employee empowerment.

H2: Green employee empowerment is positively related with environmental performance.

H3: Green employee empowerment mediates the relationship between green HRM practices and environmental performance.

5 METHODOLOGY

This study is a cross-sectional explorative study following positivism research philosophy. Population of this study was the number of managerial workers in the dairy industry which was 460. Sample was selected through random sampling technique and sample size which is 210 was decided based on the Morgan table (Chua, 2006). Data were collected from managerial employees working in two dairy firms in central province through a questionnaire. Designed questionnaire had two sections where first section was to gather demographic details including age, gender, educational qualifications and tenure while second section gathers data about green HRM practices and environmental performance of the dairy industry. Questionnaire was manually distributed among managers with guidelines including the purpose of the study and data collection procedure. Participants were informed that i) their participation is voluntary, ii) responses will be kept confidentially and iii) responses will be used only for academic purpose. 206 completed questionnaires were received and 08 were not fully completed. 198 completed questionnaires were used for data analysis of the study.

5.1 Measures

The scale which was five-point Likert-type scale (1= "Strongly Disagree" to 5= "Strongly Agree" adopted from a previous study (Tang et al., 2018) was used to measure green HRM practices. It had 13 items including 03 items for green recruitment and selection, 03 items to measure green Training and development, 04 items to measure green performance management and 03 items to measure green reward system. The reliability of the scale was measured using Cronbach alpha test and it was 0.77. In order to measure environmental performance, the scale which was five-point Likert-type scale (1= "Strongly Disagree" to 5= "Strongly Agree" developed by (Crucke & Decramer, 2016) which had 12 items was used. Cronbach alpha of it was 0.79. Green employee empowerment was measured using employee psychological empowerment scale (Spreitzer, 1995). This scale originally developed to measure the employee psychological empowerment and it had been rephrased according to the study requirement for the research done by Hameed et al., (2020). As an example, "My impact on what happens in my department is large" had been replaced with "The impact of my green behavior on what happens in my department is large." Cronbach alpha of it was 0.81.

6 DATA ANALYSIS AND RESULTS

Data analysis was done by using descriptive statistics, correlation analysis and regression analysis through SPSS 20. Mediation effect was tested using Baron and Kenny (1986) method of mediation analysis (Boyer, 2014). Data screening stage included normality, descriptive statistics and correlation. As per the **Table I**, average age of respondents were in between age of 30 – 40 years representing majority by males, had a higher national diploma as education qualification and working experience (tenure) in between 6- 10 years with mean values of 2.32, 1.43, 2.45 and 2.31 respectively. Standard deviation (SD) of all variables were more than 0.5 and it denoted that data were in a widely – spread distribution. Skewness and kurtosis values depicts the normality of a data distribution and in this study, skewness and kurtosis values of green recruitment and selection, green

training and development, green performance management, green reward systems, green employee empowerment and environmental performance were 0.942; 1.324, 0.761; 1.492, 0.733; 0.001, 0.531;1.089, 0.944;2.438 and 0.752;3.023 respectively. Since skewness and kurtosis values were approximately close to zero, it could be stated that data of this study had been normally distributed.

Table I - Descriptive Statistics

	Mean	SD	Skewness	Kurtosis
Age	2.32	0.52	0.945	7.564
Gender	1.43	0.54	-1.002	6.432
Education	2.45	0.74	0.935	5.201
Tenure	2.31	0.77	-1.022	7.727
Green Recruitment and Selection	2.87	0.65	0.942	1.324
Green Training and Development	3.01	0.87	0.761	1.492
Green Performance Management	2.98	0.79	0.733	0.001
Green Reward Systems	1.22	0.71	0.531	1.089
Green Employee Empowerment	3.21	0.81	0.944	2.438
Environmental Performance	3.33	0.65	0.752	3.023

6.1 Tests of hypotheses

Pearson's Correlation analysis was made to investigate the relationship between independent variables and dependent variable. It was found that all hypothesized relationships were significant. As per the results of **Table II**, Pearson correlation of green HRM and green employee empowerment was 0.588 which was significant at 1% confidence level. It implies a moderate positive relationship between green HRM and green employee empowerment. Therefore, hypothesis one is accepted. Next, Pearson correlation of green employee empowerment and environmental performance was 0.671 which was significant at 5% confidence level. It can be statically concluded that a considerable positive relationship exists between green employee empowerment and environmental performance. Therefore, second hypothesis one is accepted.

Table III shows that green HRM makes a positive effect on green employee empowerment ($\beta=0.820$, $p<0.05$) and green employee empowerment makes a positive effect on environmental performance ($\beta=0.30$, $p<0.05$). While direct effect of green HRM on environmental performance is recorded as $\beta = 2.21$ ($p<0.05$), indirect effect of green HRM on environmental performance through green employee empowerment is recorded as $\beta = 1.31$ ($p<0.05$). Therefore, it can be concluded that green employee empowerment partially mediates the relationship between green HRM practices and environmental performance. Accordingly, third hypothesis is accepted.

Table II - Correlations

	Green Employee Empowerment	Environmental Performance	Sig.value (p)
Green HRM	0.588	-	0.000*
Green Employee Empowerment	-	0.671	0.001**

Note: N=198, * $p<0.01$, ** $p<0.05$

Table III- Mediation Analysis

Independent Variable	Dependent Variables		Indirect effect of GHRM on EP through GEE
	GEE	EP	
GHRM	0.820*	2.21**	1.31****
GEE	-	0.30***	

Notes: N=198, *p<0.05, SE=0.03, **p<0.05, SE=0.06, ***p<0.05, SE=0.04, ****p<0.05, SE=0.07;
GHRM-Green HRM; GEE-Green Employee Empowerment; EP-Environmental Performance

7 CONCLUSION AND DISCUSSION

There are several previous studies highlighted the role of green HRM practices in environmental management (Fiore et al., 2020; Ghadge et al., 2017; Hameed et al., 2020; Office, 2007; Opatha & Arulrajah, 2014; Shahriari et al., 2019; Tang et al., 2018). This study contributes to the existing knowledge body regarding green HRM towards environmental management. The results of this study depicts a positive effect of green HRM practices on environmental performance via green employee empowerment which has been consistent with previous studies (Hameed et al., 2020; Spreitzer, 1995) but has not yet tested by empirical studies in dairy industry in Sri Lankan context. The study tested the mediation effect of green employee empowerment on the relationship between green HRM practices and environmental management, as suggested by previous studies (Hameed et al., 2020; Spreitzer, 1995). Green employee empowerment is a psychological process which reflects that when employees perceive empowerment from their organization toward environmental initiatives, they feel obligated to give/ do reciprocal exchanges.

8 PRACTICAL IMPLICATIONS

In the practical world, several practical implications can be drawn for business organizations in dairy industry. First, they can articulate a vision by incorporating environmental management and then formulate policies and procedures regarding green HRM practices giving more attention to green performance management which enhances the green behavior of employees toward environmental performance. Second, employees can be empowered to engage in environmental initiatives. In other words, employees can be given responsibility and authority to perform their tasks, duties and responsibilities aligning with organizational green values which is embedded in the organizational vision and the culture. Third, Employees can be communicated the importance of being cared toward environment through employee recruitment and selection processes as well as trainings which help them to understand green terms and concepts. Such organizational initiatives would stimulate employee's green behavior. Finally, the green behavior of employees should be appraised in annual performance reviews by including environment-oriented criteria and rewarding their green performance with monetary or non-monetary incentives.

9 LIMITATIONS AND FUTURE DIRECTIONS

This study has several limitations which may lead future researchers to expand the scope of studies relating to green HRM and environmental management. First, this study was conducted only focusing dairy industry in Sri Lanka and data was gathered only from selected dairy firms in Sri Lanka which may hinder the generalization of the findings of this study since population of this study may not be the entire representative of all dairy firms in Sri Lanka. Second, the conceptual framework of this study includes green employee empowerment as the mediating variable while more social and psychological aspects of employees can be taken as mediators. Fourth, the relationship/ impact of green HRM on environmental performance can be moderated by several factors such as individual green values (Hameed et al., 2020) which did not addressed by this study. Finally, future directions can be drawn toward the relationship between green HRM practices and green performance/ non-green performance/ green attitudes/ green financial performance/ balanced score card and etc which have not been tested yet. Such types of studies will contribute to the literature with respect to green concept along with human resource management.

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