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Research article

# Assessing organizations performance on the basis of GHRM practices using BWM and Fuzzy TOPSIS

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ABSTRACT

Over the past few years, the need for sustainable environmental management has increased rapidly and green management has emerged as an important tool for the same. The role of Green Human Resource Management (GHRM) practices in environmental management and green management is widely known but still lesser discussed in academic literature. Thus, realizing the importance of GHRM in environmental management by organizations, this study attempts to identify the important practices of GHRM and evaluate the performance of manufacturing organizations using GHRM practices. A three-phase methodology is used for the same. The first phase involves identification of GHRM practices in manufacturing organizations through literature review and expert opinion. The second phase involves ranking of GHRM practices using Best Worst Method (BWM) and third phase methodology involves evaluating manufacturing organizations on the basis of GHRM practices using Fuzzy Technique for Order Preference by Similarity to Ideal Solution (TOPSIS). This research can help managers to identify important practices of GHRM for their organization. This study also provides a framework for managers to evaluate their organization's performance on the basis of GHRM practices.

## 1. Introduction

Increased manufacturing facilities have caused a transformative change in the economic condition of the developing countries, these changes are greatly influenced by resource constraints and environmental challenges (Marquis et al., 2015; Ren et al., 2017). Also, pressure from stakeholders has forced the modern-day organizations to introduce environment-friendly processes and activities (Molina-Azorín et al., 2009). Organizations commitment towards saving the environment is an indicator of its environmental performance, the performance depends on the following criteria: ability of the organization to control the pollution, lesser discharge of waste in the environment, implementation of recycling and reuse practices at the organization and implementation of systems like ISO 14001 at the organization. All these activities and systems require direct involvement of Human Resource Management (HRM) department (Lober, 1996; del Brío et al. 2007). The success of these pro-environmental strategies is ensured only when they are well aligned with organizations HRM practices (Collins and Clark, 2003). For any new strategy to succeed, organizations require competent manpower and resources that are well trained in performing that task (Jiang et al., 2012). Similarly, implementing green practices in the organization for environmental protection is an arduous task which is largely dependent on the availability of right workforce and managers. Thus, organizations need to develop a strong GHRM department that can recruit people with zeal towards environment protection and also train its current workforce to adopt and implement these activities through proper training programs or by luring them through rewards and special benefits (Mishra, 2017). Ren et al. (2017) have given a working definition of GHRM as “phenomena relevant to understanding relationships between organizational activities that impact the natural environment and the design, evolution, implementation, and influence of HRM systems”.

GHRM although being a very important area for organizations is still less researched and most of the studies are done in western context (Masri and Jaaron, 2017; Ragas et al., 2017; Tang et al., 2017). Almost all of these studies are based on either literature review or are focusing on investigating the relationship between GHRM and some other constructs like organizational performance. No study has been done to rank the practices of GHRM. With the aim to address these gaps, this study has following objectives:

- This study aims to identify practices of GHRM in Indian context through extensive literature review and expert opinion.
- This study aims to rank the practices of GHRM using a novel best – Worst methodology.
- This study aims to rank manufacturing organizations on the basis of

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their performance on identified GHRM practices using Fuzzy TOPSIS.

The rest of this study is organized as follows: second section aims to identify GHRM practices through review of past studies and expert opinion. The third section elaborates about the hybrid methodologies used in the study. The fourth section is dedicated to illustrating the application of proposed methodology through a case study of certain organizations. The fifth section discusses results and presents their analysis. The sixth section presents managerial and practical implications. The seventh section is dedicated to sensitivity analysis and the last section gives conclusions and scope of future work.

## 2. Literature review

GHRM refers to using HRM practices to reinforce environmental sustainable practices and increase employee's commitment on the issues of environmental sustainability. It embraces considering concerns and values of Environmental Management (EM) in applying Human Resources (HR) initiatives generating greater efficiencies and better Environmental Performance (EP) necessary for reducing employees' carbon footprints (Masri and Jaaron, 2017). A detailed review of studies carried out in the field of GHRM taking different perspectives is presented in Table 1.

### 2.1. Green recruitment and selection

Traditionally recruitment and selection functions of an organization are focused only on selecting a candidate who can fulfill desired job responsibilities and drive performance among a set of candidates (Ramasamy et al., 2017). However, to build and maintain a green workplace the organization needs to select and hire an employee who supports and is interested in the environment (Renwick et al., 2013). Environmental management has taken center stage among an organization's goals and thus they follow a systematic recruitment and selection process which concentrate on green abilities and knowledge of the candidates (Ahmad, 2015). The main attributes of green recruitment and selection (GRS) are: Hiring candidate with environmental knowledge and awareness (Jabbour, 2011; Ahmad, 2015; Masri and Jaaron, 2017; Nejati et al., 2017; Tang et al., 2017); Green branding to attract green employees (Tang et al., 2017); Preferring candidates who choose green criteria to shortlist organizations (Tang et al., 2017); Preferring internal employees with green abilities to fill vacant positions (Nejati et al., 2017); Designing job positions exclusive considering environmental aspects of the organizations (Opatha, 2013; Masri and Jaaron, 2017); Making candidates aware of organizations environmental goals during recruitment process (Mandip, 2012; Renwick et al., 2013); Using online tools like video conferencing for recruitment (Muniandi and Nasruddin, 2015; Masri and Jaaron, 2017).

### 2.2. Green training and development

Training is necessary skill sets which help employees to improve their knowledge and help them to be innovative (Liebowitz, 2010). However, with growing environmental concerns, the organizations are more inclined towards providing green training to its employees. Green training incites employees to acquire certain skills to attend to the environmental concerns of the organizations and focus on environmental improvements thus meeting the organization's objectives (Jabbour, 2011; Tang et al., 2017). Green training is the most significant method through which HRM can accomplish organizations environmental objectives and help the organization to transit towards a more sustainable organization (Teixeira et al., 2012; Jabbour, 2013). The main attributes of green training and development (GTD) are as follows: Developing exclusive training programs on environmental management for employees (Masri and Jaaron, 2017; Tang et al., 2017); Green knowledge management initiatives (Tang et al., 2017); Providing all the training material online to reduce paper cost (Kapil, 2015; Masri and Jaaron, 2017); Designing special workshops for energy management within the organization (Our contribution); Special training session for waste management and recycling (Renwick et al., 2008, 2013; Jabbour, 2013); Engaging employees in environmental problem solving (Zoogah, 2011); Job rotation in green assignments (Prasad, 2013; Arulrajah et al., 2016).

### 2.3. Green performance management system

It pertains to a system of appraising employees' performance in environmental management abilities (Jabbour et al., 2008). HR managers use green work rating as an indicator for evaluating employees job performance related to environment and thus help promote environmental objectives of the organization by monitoring and evaluating employees behavior and performance (Kapil, 2015; Sharma and Gupta, 2015). Traditional performance management systems left out on sustainability aspect of the organization and focused only on objectives like the ability to maximize profit, but keeping into consideration future needs, green performance management specifically concentrates on organizations and employees ability to accomplish green and sustainability objectives (Tapamoy, 2008; Ramasamy et al., 2017). The main attributes of green performance management system (GPS) are as follows: Using green performance indicators during appraisals (Kapil, 2015; Sharma and Gupta, 2015; Tang et al., 2017); Setting green objectives and targets for employees (Masri and Jaaron, 2017; Nejati et al., 2017; Tang et al., 2017); Setting objectives for managers for green outcomes from employees (Renwick et al., 2013; Prasad, 2013; Masri and Jaaron, 2017; Tang et al., 2017); Negative appraisal for noncompliance with environmental objectives (Renwick et al., 2008; Nejati et al., 2017; Tang et al., 2017); Employee assessments after attending Green Training (GT) (Nejati et al., 2017); Regular feedback to employees to achieve environmental goals (Jackson and Seo, 2010; Jackson et al., 2011; Arulrajah et al., 2016; Nejati et al., 2017);

### 2.4. Green Pay and Reward System

Green pay and reward (GPR) system are means of inciting employees to work towards environmental objectives of the organization through financial and non-financial rewards. It is also an attempt to prevent talented employees to leave the organization and also attract new employees having knowledge of green practices (Jabbour et al., 2008; Mandip, 2012). Modern organizations adopt the practice of strategically rewarding the employees who work towards achieving organizations environmental objectives (Ahmad, 2015; Ramasamy et al., 2017). Continuously appreciating the employees and rewarding them for their eco-initiatives keep them motivated and aligned towards environmental practices (Daily and Huang, 2001; Renwick et al., 2013). The main attributes of GPR are as follows: Green travel benefits to the employees (Ramus, 2001; Jackson et al., 2011; Renwick et al., 2013; Jabbar and Abid, 2014; Tang et al., 2017); Financial incentives and tax cuts (Ramus, 2001; Jabbour et al., 2008; Arulrajah et al., 2016; Kapil, 2015; Tang et al., 2017); Green recognition for environmental management (Ramus, 2001; Masri and Jaaron, 2017; Nejati et al., 2017; Tang et al., 2017); Bonus pay for employees surpassing their environmental targets (Nejati et al., 2017); Rewards for innovative environmental suggestion (Prasad, 2013; Ahmad, 2015; Masri and Jaaron, 2017);

### 2.5. Green Employee Empowerment and Involvement

Green employee empowerment and involvement (GEI) refers to a system where employees are given opportunities to take part in environmental management initiatives and thus making them an integral part of various practices to prevent pollution and waste management