

# Level of Green Computing based Management Practices for Digital Revolution and New India

Suplab Kanti Podder, Debabrata Samanta

**Abstract:** *The reality is staring us in the form of global warming, climate changes and air-quality degradation. This reality constitutes an increasing zone on the strategic front. These strategic changes need necessarily to be responded through employees of an organization. Against this backdrop, the Green Information Technology and Green HRM have emerged as a sequel to rapid degradation of our planet due to human activities. Therefore, incorporating the environmentally friendly practices through IT practices, recruitment, training and performance management functions constitute important components of Green IT and HRM. Green information technology is the revolutionary initiatives especially for human resources management practices that lead to digital life towards sustainable society. Keeping this practical and emergent context in view, the present study makes an attempt to develop a framework for assessing the level of green HRM practices actually prevailing in Indian organizations. The requisite data were collected from original sources and clarified with existing sources. The results of the study led to the inference that Information Technology and HRM practices of promoting individual performance needs fine-tuning because any green initiative has necessarily to be a collective exercise by all concerned.*

**Key Words:** *Green Information Technology, Green Human Resources Management, Protection of Environment, Green IT and HRM Practices*

## I. INTRODUCTION

Green human resources management is the sustainable practice towards sustainable development that reduces the human involvement and paper works. The regular HRM activities can be done through green information technology that reduces the use of carbon footprints. The infrequent and innovative activities can be performed by productive human resources that ensure the sustainable development of an organization. The large segment of young population in India with the ability of green IT and HRM practices can take initiatives of digital revolution and become the role model of other countries. Green Information Technology in the combination of Information Technology and Environmental Concern. The green information technology and HRM practices results the eco-friendly outcomes with

the productive initiatives of Refuse, Reduce, Recycle and Reuse. With the consideration of reality constitutes an increasing zone on the strategic front. These strategic changes need to be responded through employees of an organization. Against this backdrop, the initiatives have the sequel to rapid degradation of our planet due to human activities. Therefore, incorporating the environmentally friendly practices through information technology activities, recruitment, training and performance management functions constitute important components of Green IT and HRM practices.

## II. LITERATURE REVIEW

Benz and Frey (2012). clarified in the research paper titled "Impact of Information Technology towards HRM practices and environmental concern", that the information technology plays important role for reducing human efforts and repeated functions in an organization. Green HRM practices like reduce, reuse and recycle are the Green IT initiatives that ensure the environmental concerns.

Kee-hung and Ramus (2015). Explained in the research article "Empirical study on Information Technology and Environmental Concern", that the information technology and applications reduce the paper works and human efforts especially for the regular HRM functions. The green IT practices response the environmental concerns.

Lado and Wilson (2013). described in the research paper "Sustainable development and green HR practices", that the organization practices the green human resources management initiatives, become sustainable comparable to others in the related sector. Information technology gives the extra power and inspiration towards the green HRM practices with less carbon footprints and repeated operations.

Opatha and Arulrajah (2016). deliberated in the article titled "The policies and practices of Green Human Resources Management Functions", that the human resources management functions especially recruitment, orientation programme, training and development activities can be performed through green IT initiatives ensure the environmental concerns and leads to sustainable development.

## III. RATIONALE OF THE STUDY

The present study was undertaken due to following reasons:

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- (i) Curiosity on the part of the researchers to understand the existing levels of green Information Technology and HRM practices in the actual practice in Indian organizations.
- (ii) Scarcity of works in the Indian context necessitated a humble contribution to fill the gap in the available literature.
- (iii) The increasing emphasis on green concerns has made the topic of green IT and HRM relevant in the context of digital revolution and new India.

**IV. OBJECTIVES OF THE STUDY**

Keeping in mind the research questions of “What is the level of Green IT and HRM practices in an Indian organization?”, and “What is the contribution of strategic forces in making an organization to think about Green IT and HRM in a firm?” the following objectives were derived:

- To identify the strategic forces necessitating for Green Information Technology and HRM practices.
- To identify the dimensions of Green IT and HRM.
- To find out the degree of practice of Green IT and HRM in Indian organizations.
- Based on the study to list out the suggestions and recommendations.

**V. RESEARCH METHODOLOGY**

The present study makes an attempt to develop a framework for assessing the level of Information Technology and HRM practices actually prevailing in Indian organizations. The requisite data were collected from original sources and clarified with existing sources. Total 450 respondents were selected at random from ten large organizations with five each belonging to manufacturing and service organizations. A set of semi-structured questionnaire and consequent semi-structured interview schedules were employed. The other sources included web literature, journals, periodicals and newspaper reports to get a picture about the prevailing context. The data collected was recorded and collated for further analysis by using SYSTAT Version 13.1 package.

**VI. RESULT AND ANALYSIS**

Table -1 list the six main forces that are necessitating the Green IT and HRM responses from the organizations. These strategic forces are arranged in the descending order of their importance as perceived by the respondents. It is clear from the table that company’s strategic considerations were the main force behind Green IT and HRM initiatives rather than the monitoring authorities. This may be due to the fact that monitoring authorities do not have sufficient legal teeth as well sufficient manpower to tackle the violations. The companies are not initiating Green IT and HRM due to fear of authorities, but due to survival compulsions. Table 1 described about strategic forces necessitating green IT and HRM responses.

Sl. No.	Strategic Forces	Mean % of Occurrence
1	Economic force necessitating waste	50.20

	reduction	
2	Steps taken by Competitors	50.10
3	Necessity to improve firm’s image	48.20
4	Increased Degree of Public Scrutiny	45.50
5	Pollution Control Boards	45.20
6	Increased Media Pressure	34.30

Compiled by Researcher

Table 1 Strategic Forces Necessitating Green IT and HRM Responses (Arranged in the Descending order of Occurrence Percentages) N = 450

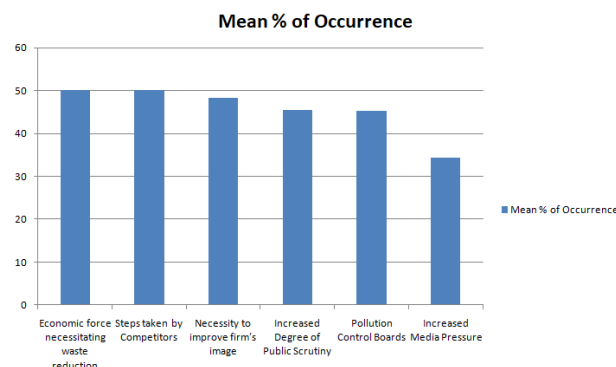


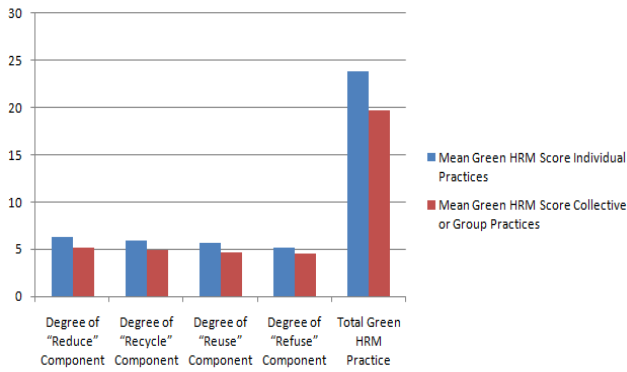
Figure 1 Strategic Forces Necessitating Green IT and HRM Responses

Table 2 lists the 4 R’s of environmental concerns as well as total Green IT and HRM as applied to the IT and HRM practices in the form of Green HRM practices. Each of these dimension had the maximum score of 10. These four dimensions and the total score are presented both for individual practices as well as group level practices. It is interesting to observe that there is very high degree of agreement at both individual as well as group level in terms of Green HRM. This is evident from the similarity in the descending order both at individual as well as at group level Green IT and HRM practices. This phenomenon may be explained by the fact that Green It and HRM practices as they presently exist are at the cognitive level and the affect component need to consolidate in these practices.

Sl. No.	Dimensions	Mean Green HRM Score	
		Individual Practices	Collective or Group Practices
1	Degree of “Reduce” Component	6.30	5.09
2	Degree of “Recycle” Component	5.87	4.89
3	Degree of “Reuse” Component	5.68	4.62
4	Degree of “Refuse” Component	5.12	4.58
5	Total Green HRM Practice	23.87	19.65

Compiled by Researcher

Table 2 Mean Levels of Green Information Technology and HRM Practices Arranged in Descending Order (N=450)



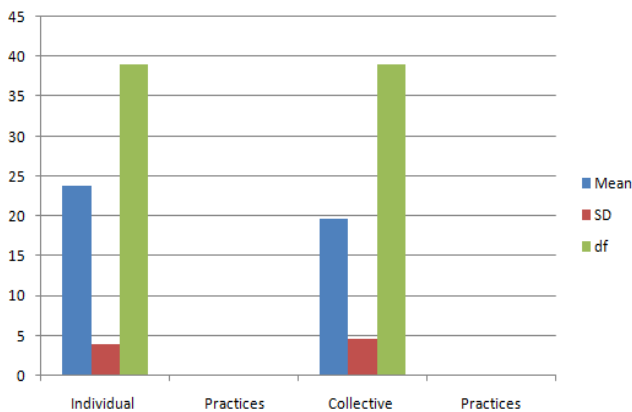
**Figure 2 Mean Levels of Green Information Technology and HRM Practices Arranged in Descending Order (N=450)**

Table 3 shows the summary of t-test results comparing the extent of individual and group level Green IT and HRM practices. It was found that individual level practices were significantly higher than group level Green IT and HRM practices.

Category	Mean	SD	df	t-value
Individual Practices	23.87	4.03	39	4.3803**
Collective Practices	19.65	4.57	39	

\*\*Significant at 0.01 level of significance

**Table 3 Summary of t-test Results of Individual Practices and Collective Practices (N=450)**



**Figure 3 Summary of t-test Results of Individual Practices and Collective Practices (N=450)**

These results indicate that individual level concerns about the environment did not get nurtured into group level efforts due to lack of support from the organizational systems.

## VII. CONCLUSIONS

It was found during the study that company's strategic forces rather than compulsion from authorities as well as individual level concerns rather than concerted group efforts were driving the Green IT and HRM initiatives in Indian organizations.

The comparison between individual practices and collective practices shows the embezzlement of green initiatives that results the negative impact on working

environment as well as the environmental concerns. The green practices of IT and HRM functions are not happening simultaneously, because an individual may apply the green initiative but the collectively the practices are not happening. So, the individual level concerns about the environment did not get nurtured into group level efforts due to lack of support from the organizational systems.

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