

**AN EMPIRICAL ANALYSIS OF FACTORS INFLUENCING GREEN HRM
AND ITS IMPACT ON JOB SATISFACTION MOTIVATION AND GREEN
EMPLOYEE INVOLVEMENT ON SELECTED MANUFACTURING
INDUSTRIES IN COIMBATORE DISTRICT**

Mr.A.Giriprakash
Assistant Professor,
Sakthi Institute of Information and
Management Studies,
Pollachi.

Dr. K. T. Vijay Karthigeyan
Associate Professor
College of Management
SRMIST
Kattankulathur

Sustainable development is a concept responding to the global challenges related to human activity in both developed and developing countries. This new concept of civilizational development is the outcome of the need to mitigate and prevent the adverse effects of the economic development. It is a modern direction of the economic development, emphasising the introduction of the new methods of organisation and management, both on the national level and the levels of various economic entities, as well as on the replacement of the cumbersome technologies with the “environmentally-friendly” ones According to the World Commission on Environment and Development, sustainable development satisfies the needs of the present generation without jeopardising the ability of future generations to satisfy theirs. Such development is intelligent, environmentally-friendly, based on the effective use of resources, knowledge and innovation Green Human Resource Management may play an essential role in environmental management as it is an element of sustainable human resource management (SHRM) This is a new approach to the realization of the HR function, the nature of which is to include ecological objectives in all HRM sub-areas, from employment planning, through recruitment, selection, employee motivation and development, to their evaluation and influence on working conditions. This necessitates that the formulation of the HR function aims not only at the category of economic interest but also at ecological areas, so as to generate added value for stakeholders Hence, Green HRM reflects the level of the greening of human resource management practices whereas its implementation requires individual stages of human resource management to be modified and adapted, to become green environmentally-friendly. The present study assess the relationship between Job Satisfaction, Motivation ,Green Employee Involvementand green HRM practises followed in the organisation.

1.1 INTRODUCTION:

The term “Green Human Resource Management” is by all accounts an unfamiliar term to most of the people, including experts and academics in HRM. Green HRM is related to “all of the practices required for creating, usage and continuous maintenance of a system that is established with the purpose of making the representatives of a company green. It’s the part of human resource management that is involved with converting ordinary representatives into green representatives with the purpose of accomplishing the environmental objectives of the company, and lastly to make a commitment to being sustainable. It is related to the approaches, activities and frameworks that orient the workers of the company into the green movement for the benefit of the individual, society, natural environment and the business” Without creating personal and integrating practical techniques, it is rather hard to turn the organization green. That is the reason why HR practices are a crucial segment of sustainable business development. The idea of sustainable development is focused on fostering economic progress and advancement while at the same time preserving the quality of the environment; it sets up a system for the incorporation of environmental policies and strategies for development .

Going green is crucial for today’s organizations, and understanding that importance leads to the significance of Green human resource management. Greening is necessary in order:

- 1.To diminish climate change.
- 2.To prevent natural disasters.
- 3.To avoid unhealthiness and diseases because of contamination.
- 4.To minimize animal harming.
- 5.To encourage biodiversity.
- 6.To strengthen the relation between the individual and its’ surroundings.

Green HRM refers to utilizing each worker to apply sustainable approaches and enhance the employees’ mindfulness and commitment on the issues of sustainability. Green HRM is the process of utilizing HRM activities to enhance the sustainable use of resources. Term Green human resource management is mostly related to the aligning of the employee management strategies and activities with a wider corporate environmental schedule (Rani & Mishra, 2014).

1.2 REVIEW OF LITERATURE:

Hallahan (2000) suggests that the Ability-Motivation-Opportunity (AMO) framework can explain how the objectives of HRM and potentially GHRM, are derived through the implementation of HR activities and practices. The AMO framework suggests that individual's process information through three specific factors: ability, motivation and opportunity (Boselie, Dietz and Boon, 2005). Ability refers to the skills that an individual uses to process the message; motivation serves to heighten the interest of the individual to process a particular message, and opportunity focuses on the executional factors of the message being broadcast from the organization. Put simply, HR practitioners must make the GHRM message:

- 1) Simple enough to tap into individual cognitive abilities
- 2) Attractive enough to encourage individual Employee Motivation and
- 3) Unmistakably structured so that the message optimizes the likelihood of the message being successfully processed (Hallahan, 2000).

Taj (2011) offers subjective opinions of how GHRM is definitively viewed from a business executive's perspective. Ashok Ramachandran, HR Director of Vodafone Essar Ltd. claims that Green human resources could very well imply using every employee touch point/interface to promote sustainable practices and increase employee awareness. GHRM reflects the way an organisation chooses to drive and increase employee commitments and awareness on the issues of sustainability' (Taj, 2011).

Kramar (2014) states that the term 'sustainable HRM' has not been clearly defined, but encompasses several terms that link sustainability with HRM. The terms exploited within the sustainable HRM construct are: sustainable work systems; HR sustainability; sustainable management of HR; sustainable leadership and sustainable organizations (Kramar, 2014). The overriding correlations between these sustainability terms, according to Kramar (2014), is that they acknowledge both explicitly and implicitly the social and human outcomes of a sustainable approach to HRM. A key outcome of sustainable HRM is that it should contribute to developing an organization's human and social capital. Using this dialogue, the clear delineation between GHRM and sustainable HRM, is that GHRM specifically targets green organizational outcomes including encouraging employee green behaviors and attitudes rather than general employee developmental outcomes as highlighted in sustainable HRM.

Renwick et al, (2008 and 2013) suggested certain green employee relations and union management practices. They include employee involvement and participation in green suggestion schemes and problem-solving circles, staff independence to form and experiment with green ideas, integrating employee involvement and participation into maintenance (cleaning), employee help-line for guidance in green matters, tailoring Green Employee Involvement schemes to industry/company standards, increasing line/supervisory support behaviors in environmental management, union-management negotiating to reach green workplace agreements, training of union representatives in respect of environmental management aspects, encouraging employees to use green forms of transport, set-up of low carbon chiefs (including CEO and Board) to increase action in environmental management, and introducing green whistle-blowing and help-lines.

1.3 SAMPLING DESIGN

The study depends on primary data. Questionnaires have been used to collect the needed particulars. Questions related to the objectives have been framed after consulting the employees and employer in Coimbatore district. The researcher selected manufacturing industries for the purpose of assessing the level of job satisfaction of employees and green HRM practises adopted . There are 800 questionnaire collected from the respondents for analysis.

1.4 STATISTICAL TOOLS USED:

To Assess The factors influencing factors influencing Green HRM and its impact on job satisfaction and motivation on selected manufacturing industries reliability and factor analysis is adopted by the researcher.

1.4.1. RELIABILITY ANALYSIS

The reliability of scales used in this study was calculated by Cronbach's coefficient alpha. Cronbach's alpha reliability coefficient normally ranges between 0 and 1. However, there is actually no lower limit to the coefficient. The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. The coefficient alpha values exceeded the minimum standard of .70. It's provided good estimates of internal consistency reliability.

- The formula is as follows:

$$\alpha = \frac{kr}{1 + (k - 1)r}$$

- K is the number of items in the scale.
- R is the average correlation pairs of items.
- As the number of items in the scale (k) increase, the value of alpha becomes larger.
- If the inter-correlation between items is large, the corresponding alpha will also be larger.

1.4.2 FACTOR ANALYSIS

It is one of the more popular “analysis of interdependence” techniques. In studies of interdependence, all the variables are on an equal footing, and the analysis is concerned with the whole set of relationships among the variables that characterise the objects. Unlike regression or discriminant analysis, factor analysis would focus on the whole set of interrelationships displayed by the variables. At the conceptual level, a factor is a qualitative dimension of the data that attempts to depict the “way in which entities differ, much as the length of an object or the flavour of a product defines a qualitative dimension on which objects may or may not differ. Factor analysis is a procedure that takes a large number of variables or objects and searches out factors in common which account for their inter-correlation. correlation.

TABLE 1.1

**RELIABILITY FOR FACTORS INFLUENCING GREEN HRM AND ITS IMPACT
ON JOB SATISFACTION MOTIVATION AND GREEN EMPLOYEE
INVOLVEMENT**

S.NO.	ITEMS	SCALE MEAN IF ITEM DELETED	CRONBACH'S ALPHA IF ITEM DELETED
1	I plan to stay in this Organisation to develop my career for a long time.	125.785	0.797
2	feel proud to be a part of Organisation due to engagement in supporting green and sustainable initiatives and activities	126.005	0.805
3	Organisation has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.	126.175	0.799
4	Organisation provides training for green initiatives and therefore increase my Job Satisfaction.	126.175	0.796
5	Organisation recognizes the innovations and suggestions for green practices which leads to Job Satisfaction	126.265	0.795
6	Job satisfaction is derived due to recognition of green practices by external agencies (Government)	126.235	0.795
7	Employee in this Organisation are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box)	126.225	0.795
8	Employees in this Organisation are willing to sacrifice some of their self-interests for the benefit of the environment (eg.turn off the Air-conditioner, lights if you do not need)	126.105	0.797

9	Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)	126.075	0.793
10	The employee voluntarily recycles even when no one is watching.	126.115	0.798
11	The employee promotes environment protection in the workplace	126.075	0.798
12	Organisation supports equal opportunities to involve and participate in green suggestion schemes	126.005	0.801
13	Organisation provides training to the union representatives in environmental management.	126.005	0.798
14	System of joint consultations in solving environmental issues of the organization	126.025	0.798
15	Organisation recognizes union as a key stakeholder in environmental management	125.785	0.799
16	Organisation provides opportunities to the unions to negotiate with management about green workplace agreement	125.785	0.797
MEAN			126.0525
VARIANCE			0.024
STD. DEVIATION			0.156
CRONBACH'S ALPHA			0.797
NO. OF ITEMS			16

It reveals that all the 16 measurement scale items are reliable as the Cronbach alpha coefficient of 0.797 . It is greater than the threshold level of 0.70. It's provided good estimates of internal consistency reliability and also coefficient alpha values ranged from 0.797 to 0.805 for all the constructs. It is indicating that the scales used in this study were

reliable. It clearly indicates that above scale items are consistent with each other and they are reliable measure of various factors .

1.5 DIMENSIONALITY OF THE MULTI-SCALE ITEMS (FACTOR ANALYSIS)

Factor Analysis is a set of technique which by analyzing correlations between variables reduces their numbers into fewer factors which explain much of the original data, more economically. Even though a subjective interpretation can result from a factor analysis output, the procedure often provides an insight into relevant psychographic variables, and results in economic use of data collection efforts. The subjective element of factor analysis is reduced by splitting the sample randomly into two and extracting factors separately from both parts. If similar factors result, the analysis is assumed as reliable or stable

TABLE No.1.2 KMO AND BARTLETT'S TEST FORFACTORS INFLUENCING GREEN HRM AND ITS IMPACT ON JOB SATISFACTION MOTIVATION AND GREEN EMPLOYEE INVOLVEMENT

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.796
Bartlett's Test of Sphericity: Approx. Chi-Square	3214.75
Sig	0.000**
S/NS	S

**P<0.001 *P<0.05 S-Significant

From the above table , two tests namely, Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity have been applied to test whether the relationship among the variables has been significant or not. The Kaiser-Meyer-Olkin Measure of sampling adequacy shows the value of test statistics is 0.796, which means the factor analysis for the selected variable is found to be appropriate or good to the data. Bartlett's test of sphericity is used to test whether the data are statistically significant or not with the value of test statistics and the associated significance level. It shows that there exists a high relationship among variables.

TABLE NO. 1.3
COMMUNALITIES FOR FACTORS INFLUENCING GREEN HRM AND ITS
IMPACT ON JOB SATISFACTION MOTIVATION AND GREEN EMPLOYEE
INVOLVEMENT

S.NO.	ITEMS	Initial	Extraction (h ²)
X ₁	I plan to stay in this Organisation to develop my career for a long time.	1.000	0.787
X ₂	feel proud to be a part of Organisation due to engagement in supporting green and sustainable initiatives and activities	1.000	0.777
X ₃	Organisation has fair policy for performance appraisal and evaluation which leads to Job Satisfaction.	1.000	0.729
X ₄	Organisation provides training for green initiatives and therefore increase my Job Satisfaction.	1.000	0.525
X ₅	Organisation recognizes the innovations and suggestions for green practices which leads to Job Satisfaction	1.000	0.597
X ₆	Job satisfaction is derived due to recognition of green practices by external agencies (Government)	1.000	0.707
X ₇	Employee in this Organisation are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box)	1.000	0.764
X ₈	Employees in this Organisation are willing to sacrifice some of their self-interests for the benefit of the environment	1.000	0.709

	(eg.turn off the Air- conditioner, lights if you do not need)		
X ₉	Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity)	1.000	0.524
X ₁₀	The employee voluntarily recycles even when no one is watching.	1.000	0.756
X ₁₁	The employee promotes environment protection in the workplace	1.000	0.756
X ₁₂	Organisation supports equal opportunities to involve and participate in green suggestion schemes	1.000	0.689
X ₁₃	Organisation provides training to the union representatives in environmental management.	1.000	0.741
X ₁₄	System of joint consultations in solving environmental issues of the organization	1.000	0.632
X ₁₅	Organisation recognizes union as a key stakeholder in environmental management	1.000	0.819
X ₁₆	Organisation provides opportunities to the unions to negotiate with management about green workplace agreement	1.000	0.743

The above table (Communalities) represents the application of the Factor Extraction Process, it was performed by Principal Component Analysis to identify the number of factors to be extracted from the data and by specifying the most commonly used Varimax rotation method. In the principal component analysis, total variance in the data is considered. The proportion of the variance is explained by the Fifteen factors in each variable. The proportion of variance is explained by the common factors called communalities of the variance. Principal Component Analysis works on initial assumption that all the variance is common. Therefore, before extraction the communalities are all 1.000. Then the most common approach for determining the number of factors to retain i.e., examining Eigen values was done.

TABLE No. 1.4
ROTATED COMPONENT MATRIX FORFACTORS INFLUENCING GREEN HRM
AND ITS IMPACT ON JOB SATISFACTION MOTIVATION AND GREEN
EMPLOYEE INVOLVEMENT

Variable code	Component			
	I	II	III	IV
X4	.757	.232	.063	.041
X6	.720	.210	.042	-.032
X13	.718	-.151	.372	-.005
X7	.655	.159	.302	.111
X1	.589	.232	.064	-.01
X16	.543	.154	.045	.032
X5	.159	.758	.394	.017
X14	.232	.647	0.324	.133
x12	.166	.611	.119	-.096
X8	.458	.601	-.035	.059

X2	.029	.065	.732	.197
X15	.412	.043	.711	-.283
X9	.125	.372	.655	-.032
X11	.259	.302	.372	.759
X3	0.322	.250	0.43	.698
X10	.143	.090	.041	.549

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 4 iterations.

Table represents the Rotated Component Matrix, which is an important output of principal component analysis. The coefficients are the factor loadings which represents the correlation between the factors and the fifteen variables (X_1 to X_{16}). From the above factor matrix it is found that coefficients for factor-I have high absolute correlations with variable five variables which has the highest influence for Green HRM and its impact on Job Satisfaction Motivation and Green Employee Involvement among the respondents . It includes X4,X6,X13,X7,X1 and X16 Which is Organisation provides training for green initiatives and therefore increase my Job Satisfaction,Job satisfaction is derived due to recognition of green practices by external agencies (Government),Organisation provides training to the union representatives in environmental management,Employee in this Organisation are encouraged to put forward new ideas on energy saving and environment protection (eg. suggestion box) and I plan to stay in this Organisation to develop my career for a long time. Organisation provides opportunities to the unions to negotiate with management about green workplace agreement

Similarly factor-II has high absolute correlation with variable X5, X14,X12 and X8 which is Organisation recognizes the innovations and suggestions for green practices which leads to Job Satisfaction, System of joint consultations in solving environmental issues of the organization , Organisation supports equal opportunities to involve and participate in green suggestion schemes Employees in this Organisation are willing to sacrifice some of their self-

interests for the benefit of the environment (eg.turn off the Air- conditioner, lights if you do not need)

It is revealed from the analysis that factor III is influenced by three variables which includes X2,X15 and X9 that is feel proud to be a part of Organisation due to engagement in supporting green and sustainable initiatives and activities, Organisation recognizes union as a key stakeholder in environmental management and Employees have a sense of personal obligation to take action to stop wasting resources (eg. saving water or using less electricity). Factor IV has correlation with X11,X3 and X10 which is The employee promotes environment protection in the workplace, Organisation has fair policy for performance appraisal and evaluation which leads to Job Satisfaction and The employee voluntarily recycles even when no one is watching.

1.6 CONCLUSION:

By Clear communication of environmental policy, a company can obtain better economic performance since an improved environmental performance can enhance the firm's financial capital and reduce its costs. Additionally, innovations promoted by environmental regulations and policies can reduce a company's operating costs. Green ideas and practices are finding more and more relevance in many organizations' and within the space of the HR profession. HR leaders being the advocates of organizational culture and policies are critical to inculcate a sense of responsibility in each employee towards a sustainable green human resources management. However, still greater change needs to happen so that employees and organizations 'take that big leap in ensuring greening process in all their activities.

1.7 REFERENCES:

1. Charbel Jose ChiappettaJabbour, (2011) "How green are HRM practices, organizational culture, learning and teamwork? A Brazilian study", *Industrial and Commercial Training*, Vol. 43 Issue: 2, pp.98-105,
2. Carmona-Moreno, E., Céspedes-Lorente, J., and Martínez-del-Río, J. (2012). Environmental human resource management and competitive advantage. *Management Research: The Journal of the Ibero-American Academy of Management*, 10(2), 125-142.
3. Carmona-Moreno, E., Céspedes-Lorente, J., and Martínez-del-Río, J. (2012). Environmental human resource management and competitive advantage. *Management Research: The Journal of the Ibero-American Academy of Management*, 10(2), 125-142.

4. Garavan, T. N., and McGuire, D. (2010). Human resource development and society: Human resource development's role in embedding corporate social responsibility, sustainability, and ethics in organisations. *Advances in Developing Human Resources*, 12(5), 487-507.
5. Wee, Y. S., and Quazi, H. A. (2005). Development and validation of critical factors of environmental management. *Industrial Management and Data Systems*, 105, 96–114
6. Bhutto, S.A. Effects of Green Human Resources Management on Firm Performance: An Empirical Study on Pakistani Firms. *Eur. J. Bus. Manag.* 2016, 8, 119–125.