Assessing the Role of Green Human Resources Management and Environmental Cooperation:
A Case Study on Food Industries Sector in Iraq

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Abstract

This study aims to identify the strategy of green human resources management (GHRM) and its impact on environmental cooperation of the industries sector In Iraq, to achieve the goals of this study, was used the analytical description approach, The data were analyzed by SPSS statistical program, the validity of the hypothesis was confirmed by the Alpha cronbach test method. The results of the study concluded that there is a positive relationship between the direction of green human resource management and environmental cooperation, the results were discussed and compared with previous studies. The results also showed that the high level of green human resource management leads to significant increase the level of environmental performance. The presented study offers useful insights on how manufacturing organizations should strategically link their human resources management functions to support their environmental performance necessary for competitive advantage. This work gave more attention to the relationship between human resources management (HRM) and organisational sustainability leads to developing and implementing the strategy of sustainable business within the organization.

Key words: orientation, green, performance, human resources, environmental
J.E.L. classification: O15,O53

1. Introduction

The term of Green Human Resources Superintendence refers to play telluric firm provision organization to help environmental practical cryptogram leads to mass employee's attention on the issues of environmental sustainability mundane strength superintendence plays an pennant and shrewd role in develop the investment resulted highest return and most of the other elements of wealth. The suitably of secular advantage comes from its function by dealing with the most valuable assets of an organization through focusing on every activity and source of vitality and effectiveness of all wealth. Competition, is important for the human elements in the institution to perform its duties fully, it must be manage in the optimal way, making the institution the ability to achieve its goals, mission and vision for which it was established. Therefore, any institution should have a human resource management that is interested in it and works to happiness and achieve its requirements until reflected positively on the production of the institution (Masri & Jaaron, 2017).

The human resources department considered as the most affected by the environmental changing of the organization because it is responsible for activities related to the principle resources which is affected by any alteration that occurred in the performance of organization.

Furthermore, it is necessary to adopt the appropriate policies and practical systems to face the external challenge (Rajiani et al, 2016). For this reason, human resources department has to be a partner in planning, preparing and developing new strategic for the organization. That could be done by the adoption of proactive in predicting all circumstances and variables that affect the management of human resource.

2. Theoretical background

The concept of Green Human Resource Management (GHRM) holds great importance for each of the organizations and employees. The organization today has good knowledge about the concept of (GHRM) that were previously developed to help them conserve the green but still a few organizations are unable to put them in practices in different functional areas of practices (Jackson et al, 2011) In present time, society has become more aware of the environment and companies which have begun to include proposals green in the daily work environment. The environmentally friendly human resource explains many proposals that increase efficiency and reduce costs and create an atmosphere of better employee engagement. However, that could help the organizations to work in an environmentally sustainable manner (Jabbour & Jabbour, 2016).

The role of individuals is one of the important elements and influences the performance of the organization. The behaviors and activities of the performs in the organization, including his regularity in work, his contact with others, his emotions, his satisfaction with work and his performance of his tasks are considered the cornerstone and the first nucleus of the organization's performance (Tang et al, 2018) . otherwise, the performance of human resources has received the attention of many researchers and thinkers in multiple fields, and the researchers have unanimously agreed that the interest in the individual's performance in the institution and giving him the necessary attention reaches the institution to the highest of its goals, and of course all institutions seek to complete their work efficiently and highly effectively in order to reach the goals that have been plan ahead and with lowest cost (Yu et al, 2020).

Managing green human resources expresses one of the most important aspects of human resource management and practice. Moreover, it's not limited to human resource management practices, but this concept goes beyond the concept of motivation in all business organizations practices, reducing carbon emissions and pollution practices. These can be occurred by using green employment, training, development, green assessment, employees, experts and besides people with competence, talent, knowledge and know-how, as these employees are considered as human and intellectual capital for the organization these organizations must maintain the management of green human resources to limit wrong practices towards the environment (Yong et al, 2020).

Mousa & Othman (2020) declared that human resources management is one of the most important assets in the organizations that play an important essential role in managing personnel affairs and that could increase the recent global trend by focusing on organizations business. Moreover it is required from the managers of modern human resources to integrate the philosophy of green human resources in its message side by side with different human resources policies and practices. These practices lead to enhancing worker activity and health and consequently it increases the production and productivity for employees, meaning that it increases efficiency and reduces costs and thus increases competitiveness and the human resources department encourages the role of innovation.The use of human resources management policies is to encourage and promote the sustainable uses of resources with business planning processes and promotes the issue of environmental support, the purpose of going to green is to use products and methods that don't adversely affect the environment through pollution or depleted natural resources and thus includes a system managing the green human resources on environmentally friendly human resources policies and practices that help On the other hand, the organization seeks to achieve its goal of environmental brands and protecting the environment from any negative effects that may be caused by the policies and procedures carried out by the institutions (Singh et al, 2020) .

Where companies need to strike a balance between industrial growth and the protection of the natural environment for a generation to prosper the future wealth. The green administration seeks to clarify the need to achieve a balance between industrial growth to create and protect the natural environment so that future generations thrive (Kalaivani, 2020).

The organization could demonstrate its commitment to sustainability and environmental conservation through the adoption of a hypothetical recruitment method, if it is possible to complete the recruitment requirements through electronic means of communication, including the interview and in a manner that reduces travel, as well as polarization practices that support green management can include environmental dimensions, The career is part of the sustainability agenda, the company's website, and its search engines. The human resources department must include information about the environmental commitment to the organization in order to attract workers who believe in these environmental concepts, this could be explained through the media as contributions to social and environmental responsibility (Emilisa & Lunarindiah, 2020).

Training in the green human resource environment is one of the most important factors in developing the knowledge and skills required within organizations in order to implement environmental management programs (Kim et al, 2019), The training should also demonstrate the green impact of the organization's vision and mission.

The environmental approach requires increasing the awareness of workers, their skills, practical knowledge, training and development, which are essential elements in the implementation of green management and are considered as mechanisms to facilitate the sustainability of companies, which in turn can create an opportunity to develop intellectual capital and green training is one of the most important tools for developing human resources and facilitating the transition to more sustainable society, To ensure the effectiveness of green training, it should be planned in proportion to the nature of jobs. For example, warehouse employee training should focus on reducing waste and energy management and training the employee to work in ways that reduce waste, proper use of resources and energy conservation, and reduce the causes of environmental degradation, and provide an opportunity To involve employees in solving environmental problems (Yong et al, 2019), To address training concerns, the Environmental Management Institute has established training workshops for environmental managers, including raising the awareness and skills in environmental performance.

3. Research methodology

The research used the descriptive approach through to study the phenomenon and enable us to identifying it, and also using the statistical methods for analyzing the collected data that through which represented to the questionnaire as a sample of workers who works In the food industries sector in Iraq.

The study relied on conducting personal interviews, but it was directed through forms for interviews. These forms were prepared by specifying questions in advance in an organized and coordinated in the form of a questionnaire with the interviewers and discussing them in the main points of the research topic to obtain information, opinions and behaviors that can be revealed from as a result of these interviews.

The researcher prepared the questionnaire and determined it's axes and phrases, additionally, used to construct and prepare the questionnaire in the theoretical framework of the study, previous studies related to the subject of our study and the questionnaire included two objects (Green Human Resources Management and Environmental Cooperation). The number of questionnaire phrases reached 30 words and a five-Likert scale was used Degrees that consist of strongly agree (5), agree (4), neutral (3), disagree (2), strongly disagree (1) in answering the questions of the study axes

The study community is represented by workers in the food industry sector companies in Iraq who answered the questionnaires for the research and a number of personal interviews were conducted with them, the researcher used the field study application on the sampling method due to the difficulty of conducting a comprehensive inventory. The sample included jobs (Managers of departments, their deputies and heads of departments) The researcher used the control sample method, which is a sample whose elements are intentionally chosen by the researcher due to the availability of some characteristics in these individuals, but not others, where these individuals serve the researcher's goal, and this type of samples is used in the event that the necessary data are available. I have only one class in society. And the researcher's choice of this type of sample came because it leads to an increase to reduce the standard error and the accuracy of the estimates, the

number of selected sample individuals were 70, and the number of valid forms used in the analysis were 60.

Table no. 1 the locations of the factories and the numbers of questionnaires

No.	Number of questionnaires	Factory location	Factory production	Name of the factory
1	15	Iraq- Erbil	Dairy factory	Company of Dairy and Food Industries
2	15	Iraq- Baghdad	Food factory	Factory of Abu-gharib
3	15	Iraq-Karbalaa	Food factory	Karbala canning Factory
4	15	Iraq-Sulaymsniyah	Dairy factory	Sulaymaniyah dairy factory

Source: Authors' contribution

➢ **Statistical methods of data analysis:**
   ✓ **Arithmetic mean:**

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i = \frac{1}{n}(x_1 + \cdots + x_n).$$

(1)

   ✓ **Relative weight :**

$$(5X_1 + 4 X_2 + 3 X_3 + 2 X_4 + 1 X_5) / 5 N \quad (2)$$

Where:
K1- number of strongly agree
K2 - number of agree
K3 - number of neutral
K4 - number of disagree
K5 - number of strongly disagree
N - number of study sample

   ✓ **Alpha-Kornbach test**: It is a measure of the test stability.
   ✓ **Correlation coefficient test:** which is used to identify the statistical significance of correlations between variables

➢ **Validate the study tool**
   The current study was adopted to calculate the validity of questionnaires on the following methods.
A- Arbitration honesty or apparent honesty: The researcher presented the questionnaire in its initial form to (5) of the arbitrators, to express an opinion on their agreement to the both axes of the questionnaire terms and also to know their opinions and observations about the suitability of the questionnaire phrases to the objects of the study and the extent of clarity and accuracy of formulating the phrases and their linguistic integrity, Delete, amend and add phrases, and in light of this the questionnaires design was reformulated in its final form.
B- Self-honesty: In order to increase the assurance of the validity of the questionnaire, the coefficient of questionnaire stability was calculated, and then the self-honesty coefficient was calculated through the following equation

$$\text{Coefficient of honesty} = \sqrt{\text{coefficient of stability}} \quad (3)$$

$$\text{Validity of the questionnaire} = \sqrt{0.84} = 0.92 \quad (4)$$

   The self-validity coefficient of the questionnaire reached a degree in excess of 0.92, and this degree is high, and indicates that the questionnaire has a high degree of honesty, and is valid for application to the individuals of the study sample.

➢ **The stability of the study tool**

Table no. 2 Stability coefficient of the survey axis

Axis	Alpha Kornbach	number of elements
Green Human Resources Management	0.833	10
Environmental Cooperation	0.849	10
Total questionnaire	0.839	20

Source: Authors' contribution

➢ **Results of the statistical analysis**

The Alpha Kornbach coefficient was calculated for the elements of the questionnaire axes form also we noticed that the value of the stability factor Alpha for the axes of the questionnaire form is greater than 0.79 which is a strong stability factor that confirms the validity and correlation of the elements of the questionnaire axes form. Furthermore, it indicates high stability of all questionnaires.

4. Findings

➢ **Analysis of the questionnaire:**

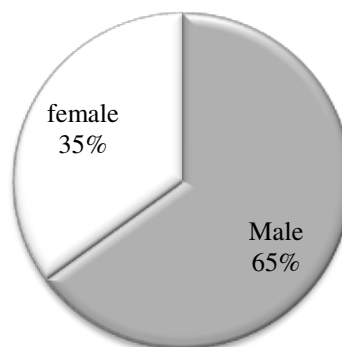**First: Characteristics of the study sample**
■ **Gender.** The study sample reached 39 male individuals, 65 % while 21 female members reached 21.67%.

Table no. 3 Distribution of the study sample according to gender

Categories	N	%
Male	39	65
Female	21	35
Total	60	100

Source: Authors' contribution

Figure no. 1 Distribution of the study sample according to gender

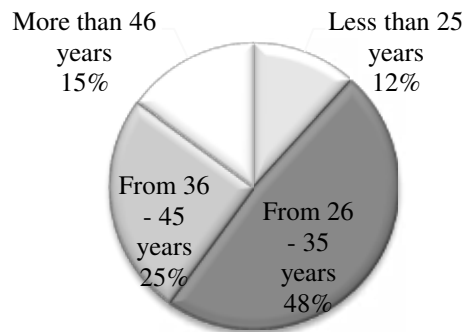*Source:* Authors' contribution

■ **Age.** The study samples were divided according to the age into four groups. The percentage showed that the samples of the individuals below 25 years were 11.67%. In addition, the percentage of the ages between 26 - 35 years were 48.33 %, while the percentage of the ages 36 - 45 years were approximately 25%. Finally, the percentage of study sample individuals, over 46 years were 15% of the study sample.

Table no. 4 Distribution of the study sample according to age

Categories	N	%
Less than 25 years	7	11.67
From 26 - 35 years	29	48.33
From 36 - 45 years	15	25.00
More than 46 years	9	15.00
Total	60	100

Source: Authors' contribution

Figure no. 2 Distribution of the study sample according to ag
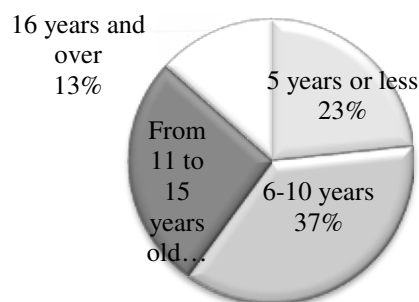

Source: Authors' contribution

■ **Years of experience in the company.** The study samples were divided according to the years of experience in the company to 4 categories. The percentage of the study sample who had less than 5 years' experience was 23.33%; the percentage of individuals sample with experience of 6-10 years was 36.67%; the percentage of individuals with experience of 11-15 years was 26.67% and the percentage of the individuals with experience more than 16 years was 13.33% of the study sample

Table no. 5. The study sample distribution by years of experience in the company

Categories	N	%
5 years or less	14	23.33
6-10 years	22	36.67
From 11 to 15 years old	16	26.67
16 years and over	8	13.33
Total	60	100

Source: Authors' contribution

Figure no. 3 Distribution of the study sample according to Years of experience in the company

Source: Authors' contribution

Second: the axes of study
The first axis (Green Human Resources Management):

Table no. 6 Phrases of the first axis

No.	Phrase	Strongly agree %	Agree %	Neutral %	Disagree %	Strongly disagree %	Mean	Relative weight
1	Green Human Resources Department contributes to providing communication based on the ease of flow of necessary information in all directions	36.67	28.33	20	11.67	3.33	3.833	0.767
2	The Green HR Department helps increase the interconnection between superiors and subordinates to increase the efficiency of performance	30	37.29	20.34	10	1.67	3.783	0.757
3	The green human resources department is concerned with updating and developing work systems and procedures	30	40	20	6.67	3.33	3.867	0.773
4	The Green Human Resources Department distributes work assignments, responsibilities and powers in a good way	28.33	34.48	22.41	10	3.33	3.633	0.727
5	Green Human Resources Department contributes to achieving the goals of organizations efficiently and effectively	33.33	35	21.67	8.33	1.67	3.9	0.780
6	The green human resources department encourages providing the appropriate conditions for increasing the levels of productivity	30	31.67	23.33	11.67	3.33	3.733	0.747
7	Green Human Resource Management encourages individual initiatives and creative ideas	28.33	40	21.67	6.67	3.33	3.833	0.767
8	The human resources department contributes to the use of methods that achieve environmental protection and protection	33.33	37.7	18.03	6.67	5	3.933	0.787
9	The green human resources department contributes to increasing the organization's ability to achieve profits	31.67	31.67	21.67	6.67	8.33	3.717	0.743
10	The green human resources department contributes to speeding up the work inside the organization	36.67	33.33	23.33	3.33	3.33	3.967	0.793

Source: Authors' contribution

When arranging the axis (Green Human Resources Management) axis table (4) in terms of the degree of relative importance (the largest relative weight value) from the point of view of the study sample, it is revealed that (the incentive system encourages workers to think about devising new methods and methods of performing work The green human resources department contributes to speeding up the work inside the organization) is the most important phrase of the axis with weight Relative amounted to 0.793 and The least important phrase was (The Green Human Resources Department distributes work assignments, responsibilities and powers in a good way) with weight Relative amounted to 0.727.

Table no. 7 The levels of the first axis

Level	%
Low	14.17
Average	19.67
High	66.16
Total	100

Source: Authors' contribution

It is clear from the table (5) that Green Human Resources Management has been divided into 3 levels (high - medium - low), and it was found that the high level represented 66.16%, while middle level represented 19.67%, and the low level represented 14.17% from the sample, this explains the high efficiency level of green human resource management from the view point of the study sample.

The second axis (**Environmental Cooperation**):

Table no. 8 Phrases of the second axis

No.	Phrase	Strongly agree %	Agree %	Neutral %	Disagree %	Strongly disagree %	Mean	Relative weight
1	Existence of pollution prevention programs such as cleaner production	31.67	28.33	23.33	10	6.67	3.683	0.737
2	The internal performance evaluation system incorporates environmental factors	30	30	25	11.67	3.33	3.717	0.743
3	Generate environmental reports for internal evaluation	33.33	28.33	21.67	6.67	10	3.683	0.737
4	Cooperate with supplier to reduce packaging waste	31.67	26.67	26.67	5	10	3.65	0.730
5	Require suppliers to use environmental packaging	35	31.67	25	5	3.33	3.9	0.780
6	Developing a mutual understanding of responsibilities regarding environmental performance with suppliers	36.67	30	23.33	6.67	3.33	3.9	0.777
7	Conducting joint planning with suppliers to anticipate and resolve environmental-related problems	38.33	28.33	21.67	5	6.67	3.867	0.773
8	Provide training programmers on environmental management for our employees	31.67	33.33	26.67	5	3.33	3.85	0.770
9	Organize environmental education activities for our employees	36.67	28.33	20	6.67	8.33	3.783	0.757
10	Promote employee participation for green development	30	35	21.67	5	8.33	3.733	0.747

Source: Authors' contribution

Table (6) showed the Environmental Cooperation axis according to the degree of relative importance (the largest relative weight value) from the point of study view, it is revealed that (Require suppliers to use environmental packaging) is the most important phrase of the axis with weight relative amounted to 0.780 and the least important phrase was (Cooperate with supplier to reduce packaging waste) with weight Relative amounted to 0.730.

Table no. 9 The levels of the second axis

Level	%
Low	12.45
Average	17.33
High	70.22
Total	100

Source: Authors' contribution

It is clear from the table (7) that the job satisfaction axis has been divided into 3 levels (high - medium - low) and it was found that the high level presented 70.22%; middle level presented 17.33% and low level presented 12.45% of the sample, which indicates the high level of environmental cooperation from the view point of the study.

Third: Green human resource management and its relationship with environmental cooperation

The research shows that there is a **statistically significant correlation between human resources management and environmental cooperation.** He used the correlation coefficients method to find out the hypothesis and the results were as follows:

Table no. 10 The relationship between Green Human Resources Management and Environmental Cooperation:

variable	Level Environmental Cooperation
Level of Green Human Resources Management	**0.797

Note: ** Statistically significant at the level of significance ($\alpha = 0.01$)
Source: Authors' contribution

The table showed there is a great correlation between the level of environmental cooperation and the variable of the level of green human resources management, which shows the validity of the study with higher level of human resources management, the higher level of environmental cooperation, showed positive effect on the level of human resources management at the level of environmental cooperation.

5. Conclusions

When studying the results of the study, it becomes clear the high efficiency level of green human resource management y and the high level of environmental cooperation from the view point of the study. This explains the increase the ability of institutions and organizations in the study sample which achieved high levels of productivity and increase their competitiveness in the markets in which they operated, as well as increase their market share.

It turns out the positive impact of the level of Green Human Resources Management on the level of Environmental Cooperation. This indicates the necessary for institutions and organizations to maintain an increase in the efficiency of green human resources management, which contributes to increasing levels of environmental cooperation and increasing levels of performance for organizations and institutions and assisting them in achieving the goals that they want to reach.

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