# Exploring the Impact of Green Human Resource Management Practices on Green Human Capital in Egyptian Hotels

## استكشاف تأثير ممارسات إدارة الموارد البشرية الخضراء على رأس المال البشري الأخضر في الفنادق المصرية

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## Abstract

Green human resource management represents a strategic fusion of environmental responsibility and human resource management, demonstrating a commitment to environmental sustainability through human resource policies and practices. Therefore, this study aimed to examine the impact of green human resource management practices on enhancing green human capital in Egyptian hotels. The population of the study included all certified Green Star hotels in Egypt, which are 158 hotels distributed over 17 destinations country-wide. The target population for this study included all human resources managers in these hotels. A questionnaire form was used as a data collection tool. The total number of valid answered questionnaires reached 146 forms, representing 92.40% of the total distributed ones. SPSS-26 software was used to analyze the collected data. The correlation and regression results of this study showed that four variables "green recruitment and selection", " green training and development", "green reward and compensation" and "green employee empowerment and participation" have a significant impact on green human capital. Results also clarified that only one variable "green performance management and appraisal" has no impact on green human capital. This study recommended the necessity of establishing an environmental management culture by integrating environmental issues into the recruitment process in order to attract green job candidates who have knowledge of environmental management standards when applying for advertised jobs, thus contributing to enhancing green human capital in Green Star hotels.

## الملخص

تُمثل إدارة الموارد البشرية الخضراء دمجًا استراتيجيًا بين المسؤولية البيئية وإدارة الموارد البشرية، مما يُظهر التزامًا بالاستدامة البيئية من خلال سياسات وممارسات الموارد البشرية. لذلك، هدفت هذه الدراسة إلى التعرف علي تأثير ممارسات إدارة الموارد البشرية الخضراء على تعزيز رأس المال البشري الأخضر في الفنادق المصرية. شمل مجتمع الدراسة جميع فنادق النجمة الخضراء المعتمدة في مصر والبالغ عددها ١٥٨ فندقًا موزعا على ١٧ مقصد سياحي على مستوى الدولة. وكان المجتمع المستهدف لهذه الدراسة يشمل جميع مديري الموارد البشرية في هذه الفنادق. تم استخدام استمارة الاستبيان كأداة لجمع البيانات. وبلغ إجمالي عدد الاستبيانات الصالحة المجاب عليها ١٤٦ استبانة بنسبة ٩٢.٤٠% من اجمالي الاستبيانات الموزعة. تم استخدام برنامج SPSS-26 لتحليل البيانات التي تم جمعها. أظهرت نتائج الارتباط والانحدار لهذه الدراسة أن أربعة متغيرات، هي: "التوظيف والاختيار الأخضر"، و"التدريب والتطوير الأخضر"، و"المكافأة والتعويض الأخضر"، و "تمكين الموظف الأخضر ومشاركته"، لهما تأثير معنوي على رأس المال البشري الأخضر. كما أوضحت النتائج أن متغيرًا واحدًا فقط، وهو "إدارة وتقييم الأداء الأخضر"، ليس له تأثير على رأس المال البشري الأخضر. وأوصت هذه الدراسة بضرورة ترسيخ ثقافة الإدارة البيئية من خلال دمج القضايا البيئية في عملية التوظيف، وذلك لاستقطاب مرشحين للوظائف الخضراء ممن لديهم إلمام بمعايير الإدارة البيئية عند التقدم للوظائف المعلن عنها، مما يُسهم في تعزيز رأس المال البشري الأخضر في الفنادق ذات النجمه الخضراء.

*Keywords:* Green Human Resource Management Practices, Green Human Capital, Egyptian Hotels

*الكلمات الدالة:* ممارسات إدارة الموارد البشرية الخضراء، رأس المال البشري الأخضر، الفنادق المصرية

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# 1. Introduction

Environmental protection has become one of the main issues in the world today due to some recent occurrences, like global warming and the resulting climate changes, such as an increase in the earth's temperature. Hence, the sustainability of the activity must be based on the conservation of natural resources for the use of future generations. Consequently, sustainability is recognized as a crucial issue that managers and politicians need to focus on (Howard-Grenville, Buckle, Hoskins, and George, 2014). In this context, several organizations have shifted to being more ecologically conscious, a trend known as "environmentally friendly organizations". Moreover, tourism and the environment are closely linked. The hotel industry is one of the largest industries in the global economy, using vast amounts of natural resources in its day-to-day operations and generating significant amounts of waste and pollution (Shehata and Elfeel, 2017).

Additionally, hotels all over the world have started embracing the concept of a green environment (Rahman, Chen, and Reynolds, 2020). In contrast to traditional hotels, there is a growing desire for environmentally friendly hotels, or "green hotels," as environmental consciousness and environmental regulations spread throughout the world. Consequently, some hotels have begun implementing various innovative techniques in order to make their operations more environmentally friendly. Apparently, green hotels are viewed as *"environmentally friendly establishments that apply distinctive strategies to reduce negative impacts on the environment by implementing programs to save water and energy and reducing solid waste production and recycling"* (Abdou, Hassan, and El Dief, 2020).

Moreover, Human Resource Management (HRM) is one of the most important aspects of the organization since it is the only department capable of coordinating all activities to provide optimal performance (Rawashdeh and Al-Adwan, 2012). In addition to that, the cornerstone of attaining the best environmental management is HRM (Gupta, 2018). This means that HRM may help create and implement environmental management successfully by using practices such as selection, performance appraisal, and training with environmental goals. Nevertheless, green concepts must be incorporated into HRM to be deemed Green Human Resource Management (GHRM) (Sobaih, 2019). Given this, Sabokro, Masud, and Kayedian (2021) confirmed that organizations can monitor the effects of the environment with the use of GHRM practices, which are the ideal strategy for environmental preservation programs.

According to Green Human Capital (GHC), GHC is regarded as a critical component of the green intellectual capital process, which promotes green structural capital and green relationship capital. Also, green human capital is the primary component and the most prominent dimension of green intellectual capital (Asiaei, Bontis, Alizadeh, and Yaghoubi, 2022). Additionally, Sheikh (2022) claimed that GHC creates value for the organization, helps it adhere to stringent international environmental regulations, and satisfies its customers' high environmental expectations. Therefore, organizations may successfully execute their green agenda with the help of GHC.

In this context, implementing GHRM practices has grown in importance for hotels seeking to establish a sustainable culture. Additionally, numerous studies made major contributions to the resolution of human element-related issues; some of these studies concentrated on how GHRM practices affect global economic growth in a variety of industries, including the hotel sector in particular. On the other hand, there are a few numbers of researches that have examined GHRM practices on green human capital, although it's essential for the development of GHRM practices. From an applied perspective in Egyptian hotels (Green Star Hotels), this study is one of the most important studies that studies the relationship between these variables. Hence, the importance of this study increases in its ability to fill the research gap by exploring and clarifying the impact of applying green human resource management practices on green human capital in Egyptian hotels (Green Star Hotels).

## 2. Conceptual Framework and Hypotheses Development

### 2.1 Green Human Resource Management Practices and Green Human Capital

In the field of HRM, human resource practices have an essential role in the development of many facets of Intellectual Capital (IC) (Teo, Reed, and Ly, 2014). Additionally, implementing HRM policies can greatly increase human capital's ability to support the adoption of green practices in the workplace, hiring environmentally conscious employees, offering workshops or training on environmental issues, recognizing employees' achievements in appraisals, and rewarding them when environmental targets are met (Chaudhary, 2019).

The concept of GHRM is one of the contemporary management practices used by businesses to ensure environmental sustainability and safeguard the environment (Deepika, 2016). Therefore, GHRM also arose from the requirement for companies to implement environmental preservation standards and universal environmental concerns (D'Mello, Manjush, and Monteiro, 2016). Furthermore, greening human resources requires a set of procedures and policies to safeguard employees and maintain the company's priceless knowledge capital in the most economical and environmentally responsible manner possible (Tang, Chen, Jiang, Paillé, and Jia, 2018). According to Fayyazi, Shahbazmoradi, Afshar, and Shahbazmoradi (2015), GHRM is defined as *"the use of HRM policies to encourage the sustainable use of resources within organizations and promote the cause of environmentalism, which further boosts up employee morale and satisfaction"*. In addition, Tang *et al.* (2018) defined GHRM as *"greening the human resources involves a set of policies and practices for protecting the environment such as green recruitment and selection, green training, green performance management, green pay and rewards, green involvement"*.

In the hotel industry, HRM practices are a useful instrument for growing and transforming the hotel industry's resources into human capital, which makes it easier to accomplish its goals (Jawaad, Amir, Bashir, and Hasan, 2019). According to a recent study, GHRM may have a positive effect on green human capital. Also, hotels employ Human Resource (HR) practices as a vital strategy for building human capital to address environmental issues when faced with external environmental constraints (Yong, Yusliza, Ramayah, and Fawehinmi, 2019). Moreover, green involvement and green training in hotels can increase green human capital. Therefore, in order to meet environmental regulations, hotels can provide environmentally conscious employees, which may change the employees' ability to achieve environmental goals (Haldorai, Kim, and Garcia, 2022). Hence, the following hypothesis is formulated:

> *H1:- Green human resource management practices have an impact on green human capital.*

### 2.2. Green Human Resource Management Practices

GHRM practices are the most effective strategy to assist the organization in developing a "green employee" who values and acknowledges the environmental performance of the organization by emphasizing green recruiting and hiring, green training and development, green compensation, and enhancing the organization's human capital (Dutta, 2012).

In the hotel industry, green recruitment and hiring in hotels include launching online application systems to reduce the wastage of printed materials. This can be achieved using web-based and online modules and tools. Furthermore, green rewarding in hotels involves giving employees bonuses every month in recognition of their environmentally friendly efforts. In addition, GHRM practices have been implemented by hotels in several developing countries to encourage environmentally friendly behaviors (Pham, Chiappetta Jabbour, Vo-Thanh, Huynh, and Santos, 2020).

### 2.2.1    Green Recruitment and Selection

Paperless hiring practices that have little effect on the environment are known as "green recruitment and selection" (Obaid, 2015). As submitted by Saini and Shukla (2016), this type of recruitment pattern uses phone or video interviews, online portals, and online application forms like Google Forms to minimize the environmental impact of travel. Furthermore, Nisar, Haider, Ali, Jamshed, Ryu, and Gill (2021) stated that green human capital is produced by employing people who share an organization's environmental policy or green practices.

In the hotel industry, hotels utilize electronic communication, websites, and search engines for green recruitment, providing a competitive advantage by attracting environmentally conscious human resources (Irani, Kiliç and Adeshola, 2022). Meanwhile, GHC is deeply embedded in employees and is positively correlated to the GHRM. Thus, improving GHC requires an effective green recruitment and selection practice (Mankgele, Mmakola, and Chidi, 2023). Furthermore, green human capital can be acquired through effective green recruitment and selection procedures. Hence, the following hypothesis is formulated:

> *H1a: Green recruitment and selection has an impact on green human capital.*

### 2.2.2    Green Training and Development

One of the most important strategies to fill the gaps in employees' environmental awareness, knowledge, and skills is effective green training (Renwick, Redman, and Maguire 2013). Furthermore, green skills can be acquired through an effective green training and development strategy (Pham, Phan, Tučková, Vo, and Nguyen, 2018). Also, green training equips employees with knowledge, attitudes, and skills to identify environmental issues and improve green performance, which enhance green human capital (Latan, Jabbour, de Sousa Jabbour, Wamba, and Shahbaz, 2018). In this context, green training and development is defined as "*a process of continuing education designed to update employ' knowledge and skills, which is exactly what both companies and employees need for sustainable development*" (Pinzone, Guerci, Lettieri, and Huisingh, 2019).

In the hotel industry, GHRM practices may have an effect on the stock of knowledge, expertise, and skills gained through green training and employee development, which enhancing GHC (Yong, Yusliza, Ramayah, Chiappetta Jabbour, Sehnem, and Mani, 2020). Additionally, Nisar *et al*. (2021) reported that hotels should implement training activities to enhance employees' knowledge and skills in green initiatives, ultimately fostering the development of GHC. Thus, the subsequent hypothesis is put forth:

> *H1b: Green training and development has an impact on green human capital.*

### 2.2.3    Green Performance Management and Appraisal

To sustain environmental performance, one of the most crucial aspects of effective GHRM practices is employees' green performance appraisal (Arulrajah, Opatha, and Nawaratne, 2015). However, green performance management and appraisal system is "*a framework for assessing the Environmental Performance (EP) levels in different departments within an enterprise and compiling useful records of the EP of managers*". Hence, employees at all levels should discuss green issues inside the company and provide clarifications on green plans, performance indicators, and standards through the performance assessment system (Alam, 2021).

In the hotel industry, the HR department should create a waste management program, environmental audits, green information systems, and a green audit program for employee green performance appraisal. Meanwhile, green performance management and appraisal can enhance employees' expertise, skills, and capabilities in environmental protection, thus improving GHC (Arshad, Abid, Contreras, Elahi, and Ahmed, 2022). Therefore, the following hypothesis is formulated:

> *H1c:- Green performance management and appraisal has an impact on green human capital.*

### 2.2.4    Green Reward and Compensation

According to GHRM, rewards and compensation are a useful instrument for encouraging environmentally friendly practices in organizations (Ahmad, 2015). Consequently, employees can be

encouraged to embrace sustainable practices by implementing incentive programs that reward environmental performance. One such program is the green pay and reward system, which combines environmental performance with compensation (Siyambalapitiya, Zhang, and Liu, 2018). Furthermore, Green reward and compensation are crucial in enhancing green human capital and assisting companies in their environmental activities within the framework of GHRM (Mandago, 2019).

In the hotel industry, hotels should focus on designing green and energy-efficient products and processes, and provide incentives to encourage their adoption. In this context, green compensation is significantly related to GHC (Arshad *et al*., 2022). Moreover, green reward is a driving force in promoting workplace environmental sustainability (Shoaib, Nawal, Zámečník, Korsakienė, and Rehman, 2022). Hence, the subsequent hypothesis is put forth:

> *H1d:- Green reward and compensation has an impact on green human capital.*

### 2.2.5 Green Employee Empowerment and Participation

Green employee empowerment is a crucial GHRM practice that is essential for achieving organizational green goals (Tariq, Jan, and Ahmad, 2016). In this context, GHRM practices promote environmental consciousness among employees, encouraging them to modify their behavior and adopt pro-environmental attitudes in both personal and professional aspects. Also, GHRM improves environmentally friendly initiatives by encouraging employees to participate in greener activities (Hameed, Khan, Islam, Sheikh, and Naeem, 2020).

In the hotel industry, hotels prioritize green employee engagement, allowing employees to apply environmental knowledge, participate in green initiatives, and offer creative waste reduction suggestions, which enhances resource efficiency and environmental performance (Haldorai *et al*., 2022). As in that, green human capital can be acquired through effective green employee empowerment procedures (Shoaib, Abbas, Yousaf, Zámečník, Ahmed, and Saqib, 2021). As a result, the following hypothesis is proposed:

> *H1e:- Green employee empowerment and participation has an impact on green human capital.*

The conceptual framework for this research is shown in the figure below.
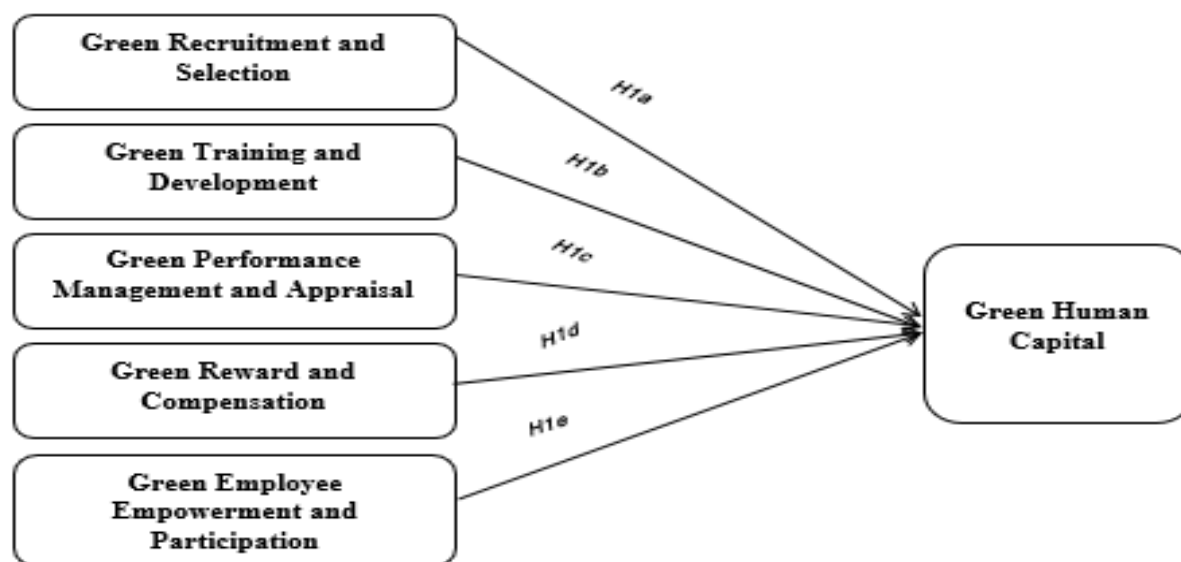


**Figure 1. The Conceptual Framework**

## 3. Study Methodology

### 3.1 The Population and Sample of the Study

Due to the limited scale of the study and the homogeneity of its population, a comprehensive survey was used. According to the statistics of the "Green Star Hotel" Program – Egypt's Green Certification Program in support of Sustainable Tourism, which is managed by the Egyptian Hotel Association

(EHA) under the patronage of the Egyptian Ministry of Tourism and Antiquities. The study population consisted of hotels that had obtained the Green Star certification. (three, four, and five green star category) in Egypt, amounting to 158 green star hotels (GSH) distributed over 17 destinations country-wide (Alexandria - Borg-Alarab - Marsa Matrouh - Sharm El-Sheikh - Dahab - Taba - Soma Bay - Hurghada - El Gouna - Sahl Hasheesh - Makadi - Safaga - Madinat Coraya - Marsa Alam - Luxor - Ain El Sokhna - Cairo). The target population for this research included HR managers because they are supposed to have a good background on GHRM practices and their impact on green human capital of these hotels.

### 3.2 Instrument and Data Collection

The researcher designed a self-administered questionnaire as a data collection tool in order to obtain the required data. The questionnaire was divided into two sections for measuring the variables of the study (see table 1). The first section of questionnaire was divided into five categories asked respondents about green human resource management practices. The second section of questionnaire was divided into five categories asked respondents about green human capital. Each category in turn included sub items to measure HR managers perception, all items were measured using a five-point Likert scale. To ensure the content validity of the instrument, an invitation was extended to a pilot study of (30) HR managers of Green Star-certified hotels and (12) academic staff and hospitality industry practitioners as well as set of academic experts who visited the hospitality field. They were asked to provide their observations and comments about the efficiency of the layout, the clarity of the words, the appropriateness of the questions, and finally the probable duration for answering the questionnaire.

The rating scale ranges from "strongly disagree" (1) to "strongly agree" (5). The questionnaires were distributed over a period of six months, starting in December 2022. The hotel management gave the researchers permission to let the participants finish the questionnaire during regular business hours. The researcher gave an explanation of the purpose of the research and guaranteed that all the information gathered would be handled in the strictest confidence. The questionnaires were distributed to the whole population (158 HR managers), one questionnaire distributed in each hotel; only 146 questionnaires were obtained, all of which were valid, which represent a response rate of (92.40%). Hence, the number of valid and returned questionnaires gave a good response rate; according to (Sekaran, 2001), a thirty percent response rate is acceptable for most studies.

### 3.3 Measurements

Every variable was selected from the body of current literature. green human resource management practices: green recruitment and selection consists of 8 items, green training and development consists of 5 items, green performance management and appraisal consists of 7 items, green reward and compensation consists of 5 items, and green employee empowerment and participation consists of 5 items (Arulrajah *et al.,* 2015; Sobaih, 2019; Mukherjee, Bhattacharjee, Paul, and Banerjee, 2020; Tulsi and Ji, 2020; Ma, Chen, and Ruangkanjanases, 2021). Moreover, green human capital: employee productivity and contribution towards environmental protection consists of 5 items, employee competency of environmental protection consists of 6 items, quality of products and services on environmental protection consists of 7 items, the cooperative degree of team-work about environmental protection consists of 6 items, and  managers' support for employees to achieve their jobs on environmental protection consists of 4 items (Chen, 2008, Huang and Kung, 2011; Chang and Chen, 2012, Chen and Lin, 2015, and Cahyono and Hakim, 2020).

## 4. Findings and Discussion

### 4.1 Reliability Analysis

A reliability analysis (Cronbach's Alpha) was conducted to ensure the reliability of the questionnaire. All values of Cronbach's alpha for constructs were more than 0.6 which are acceptable indicating that the reliability of all constructs used in this study had a positive consequence as shown in **table 1**.

**Table 1. Reliability Analysis of the Study Variables**

| Dimensions | | No. of statements | Cronbach's α |
|---|---|---|---|
| Green Human Resource Management Practices | Green Recruitment and Selection | 8 | .668 |
| | Green Training and Development | 5 | .867 |
| | Green Performance Management and Appraisal | 7 | .861 |
| | Green Reward and Compensation | 5 | .936 |
| | Green Employee Empowerment and Participation | 5 | .698 |
| | The Overall | 30 | .911 |
| Green Human Capital | Employee Productivity and Contribution Towards Environmental Protection | 5 | .785 |
| | Employee Competency of Environmental Protection | 6 | .727 |
| | Quality of Products and Services on Environmental Protection | 7 | .814 |
| | The Cooperative Degree of Team-work about Environmental Protection | 6 | .842 |
| | Managers' Support for Employees to Achieve their Jobs on Environmental Protection | 4 | .693 |
| | The Overall | 28 | .937 |

## 4.2 Testing the Hypotheses

To test the study hypotheses, the researcher adopted the regression coefficients as follows:

- **Test of the study hypotheses**

The researcher adopts linear regression coefficient to test $H_{1a}$ as follows:

*H1a:- Green recruitment and selection has an impact on green human capital*

**Table 2: The Impact of Green Recruitment and Selection on Green Human Capital**

| Dependent Variable | | Independent Variable |
|---|---|---|
| | | **Green Recruitment and Selection** |
| Green Human Capital | R | .442 |
| | R2 | .195 |
| | Sig. | .000 |
| | Constant | 2.414 |
| | | Sig. = 0.000 |
| | B. | .457 |
| | | Sig. = 0.000 |

The previous **table 2** showed that there was a Medium significant correlation between green recruitment and selection and green human capital (R=0.442), as well as R Square ($R^2$) referred to the determination coefficient was (0.195). Moreover, the sig. (2-tailed) was (0.000) less than (0.05), which suggested that the study rejected the null hypothesis and accepted the alternative hypothesis; in other words, there was a significant impact of the independent variable (green recruitment and selection) on the dependent variable (green human capital). Furthermore, the statistical constant (α)

equal 2.414 with a significance level less than 1%, whereas (B) equal 0.457 with a significance level less than 1%. From the previous result, the following equation was suggested:

**Green Human Capital = 2.414 + (.457 * Green Recruitment and Selection+ e)**

The researcher adopts linear regression coefficient to test $H_{1b}$ as follows:

*H1b:- Green training and development has an impact on green human capital*

**Table 3: The Impact of Green Training and Development on Green Human Capital**

| Dependent Variable | | Independent Variable |
|---|---|---|
| | | **Green Training and Development** |
| Green Human Capital | R | .609 |
| | R2 | .371 |
| | Sig. | .000 |
| | Constant | 2.740 |
| | | Sig. = 0.000 |
| | B. | .364 |
| | | Sig. = 0.000 |

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The previous **table 3** showed that there was a strong significant correlation between green training and development and green human capital (R=0.609), as well as R Square ($R^2$) referred to the determination coefficient was (0.371). Moreover, the sig. (2-tailed) was (0.000) less than (0.05) which suggested that the study rejected the null hypothesis and accepted the alternative hypothesis; in other words, there was a significant impact of the independent variable (green training and development) on the dependent variable (green human capital). Furthermore, the statistical constant (α) equal 2.740 with a significance level less than 1%, whereas (B) equal 0.364, with a significance level less than 1%. From the previous result, the following equation was suggested:

**Green Human Capital = 2.740 + (.364 * Green Training and Development+ e)**

The researcher adopts linear regression coefficient to test $H_{1c}$ as follows:

*H1c:- Green performance management and appraisal has an impact on green human capital*

**Table 4: The Impact of Green Performance Management and Appraisal on Green Human Capital**

| Dependent Variable | | Independent Variable |
|---|---|---|
| | | **Green Performance Management and Appraisal** |
| Green human capital | R | .428 |
| | R2 | .184 |
| | Sig. | .000 |
| | Constant | 2.972 |
| | | Sig. = 0.000 |
| | B. | .305 |
| | | Sig. = 0.000 |

The previous **table 4** showed that there was a medium significant correlation between green performance management and green human capital (R=0.428), as well as R Square ($R^2$) referred to the determination coefficient was (0.184). Moreover, the sig. (2-tailed) was (0.000) less than (0.05) which suggested that the study rejected the null hypothesis and accepted the alternative hypothesis; in other words, there was a significant impact of the independent variable (green performance

management and appraisal) on the dependent variable (green human capital). Furthermore, the statistical constant ($\alpha$) equal 2.972 with a significance level less than 1%, whereas (B) equal 0.305 with a significance level less than 1%. From the previous result, the following equation was suggested:

**Green Human Capital = 2.972 + (.305 * Green Performance Management and Appraisal+ e)**

The researcher adopts linear regression coefficient to test $H_{1d}$ as follows:

*H1d:- Green reward and compensation has an impact on green human capital*

**Table 5: The Impact of Green Reward and Compensation on Green Human Capital**

| Dependent Variable | | Independent Variable |
|---|---|---|
| | | **Green Reward and Compensation** |
| Green Human Capital | R | .589 |
| | R2 | .347 |
| | Sig. | .000 |
| | Constant | 2.941 |
| | | Sig. = 0.000 |
| | B. | .313 |
| | | Sig. = 0.000 |

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The previous **table 5** showed that there was a medium significant correlation between green reward and compensation and green human capital (R=0.589), as well as R Square ($R^2$) referred to the determination coefficient was (0.347). Moreover, the sig. (2-tailed) was (0.000) less than (0.05) which suggested that, the study rejected the null hypothesis and accepted the alternative hypothesis; in other words, there was a significant impact of the independent variable (green reward and compensation) on the dependent variable (green human capital). Furthermore, the statistical constant ($\alpha$) equal 2.941 with a significance level less than 1%, whereas (B) equal 0.313 with a significance level less than 1%. From the previous result, the following equation was suggested:

**Green Human Capital = 2.941 + (.313 * Green Reward and Compensation+ e)**

The researcher adopts linear regression coefficient to test $H_{1e}$ as follows:

*H1e:- Green employee empowerment and participation has an impact on green human capital*

**Table 6: The Impact of Green Employee Empowerment and Participation on Green Human Capital**

| Dependent Variable | | Independent Variable |
|---|---|---|
| | | **Green Employee Empowerment and Participation** |
| Green Human Capital | R | .619 |
| | R2 | .348 |
| | Sig. | .000 |
| | Constant | 2.027 |
| | | Sig. = 0.000 |
| | B. | .500 |
| | | Sig. = 0.000 |

The previous **table 6** showed that there was a strong significant correlation between green employee empowerment and participation and green human capital (R=0.619), as well as R Square ($R^2$) referred to the determination coefficient was (0.348). Moreover, the sig. (2-tailed) was (0.000) less than (0.05), which suggested that the study rejected the null hypothesis and accepted the alternative hypothesis;

in other words, there was a significant impact of the independent variable (green employee empowerment and participation) on the dependent variable (green human capital). Furthermore, the statistical constant (α) equal 2.027 with a significance level less than 1%, whereas (B) equal 0.500 with a significance level less than 1%. From the previous result, the following equation was suggested:

**Green Human Capital = 2.027+(0.5 * Green Employee Empowerment and Participation + e)**

The researcher adopts multiple regression coefficients to test $H_1$ as follows:

***H1:- Green human resource management practices have an impact on the green human capital.***

**Table 7: The Impact of Green Human Resource Management Practices on Green Human Capital**

| Dependent Variable | | | Independent Variables |
|---|---|---|---|
| | | | **Green Human Resource Management Practices** |
| Green Human Capital | R | | .797 |
| | R2 | | .635 |
| | Sig. | | .000 |
| | Constant | | 1.464 |
| | | | Sig. = 0.000 |
| | B. | Green Recruitment and Selection | .164 |
| | | | Sig. = 0.006 |
| | | Green Training and Development | .202 |
| | | | Sig. = 0.000 |
| | | Green Performance Management and Appraisal | -.036 |
| | | | Sig. =0.446 |
| | | Green Reward and Compensation | .177 |
| | | | Sig. = 0.000 |
| | | Green Employee Empowerment and Participation | .240 |
| | | | Sig. = 0.000 |

The previous **table 7** showed that the coefficient of determination ($R^2$) is (0.635), which suggested that 63.5% of the variation of green human capital was explained by independent variables. Just one variable has no impact on green human capital "Green performance management and appraisal (sig. = 0.446) more than (0.05); other variables have a significant impact on green human capital where sig. values were less than (0.05). The following equation can be inferred to predict green human capital from the study independent variables as follows:

**Green Human Capital = 1.464 + (0.164* Green Recruitment and Selection + 0.202* Green Training and Development + 0.177* Green Reward and Compensation + 0.240* Green Employee Empowerment and Participation)**
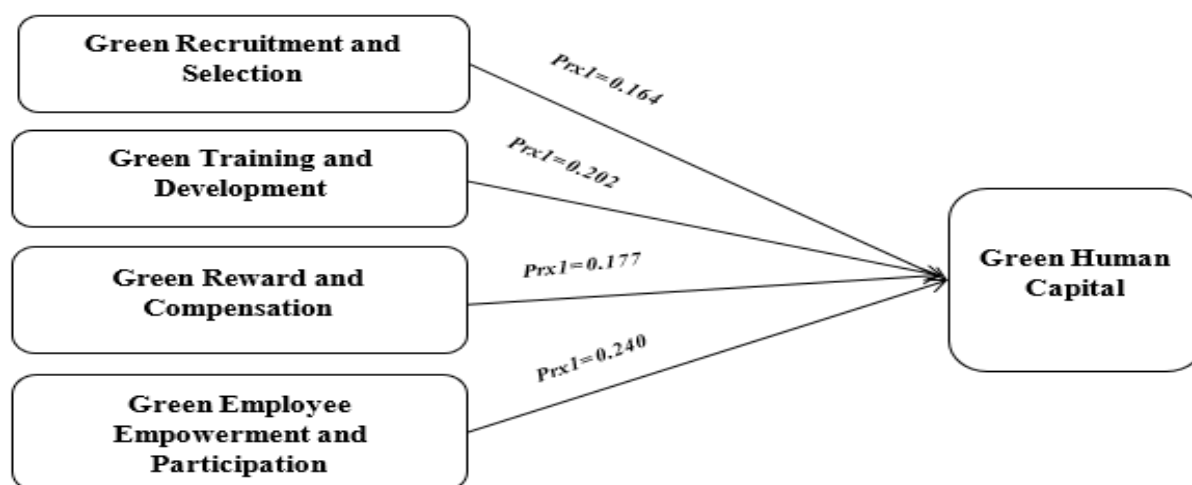
**Figure 2. Analysis Model of Green Human Resource Management Practices on Green Human Capital**

## 4.3 Discussion of Results

This study aimed to examine the relationship between five main variables of green human resource management practices (green recruitment and selection, green training and development, green performance management and appraisal, green reward and compensation, and green employee empowerment and participation) and green human capital in Egyptian hotels (Green Star Hotels). Accordingly, the correlation and regression results of this study results agreed with four variables related to the relationship between green recruitment and selection, green training and development, green reward and compensation, and green employee empowerment and participation and green human capital (H1a, H1b, H1d, and H1e). on the other hand, the results did not agree with only one variable that has no impact on green human capital, "green performance management and appraisal" (H1c).

The findings revealed the relationship between green recruitment and selection and green human capital; these findings demonstrated that green recruitment and selection has a significant impact on green human capital. This result agreed with a study conducted by Mansoor, Jahan, and Riaz (2021), who claimed that enhancing green human capital requires effective green recruitment and selection practice.

Moreover, the findings revealed a significant relationship between green training and development and green human capital; these findings clarified that green training and development has a significant impact on green human capital. This result agreed with Ma *et al*., (2021), who asserted that employees that who undergo green training have "knowledge, attitudes, and skills" that enable them to identify environmental issues and take the necessary steps to improve green performance at work, which boosts green human capital.

Accordingly, the results showed that green performance management and appraisal has no impact on green human capital. This result differed with Dimitrov (2021), who mentioned that green performance management improves the skills of an employee, behavioral competencies, teamwork, diversity, managing change, and collaboration to deal with different environmental problems, which would support the company's core values and tend to improve green human capital.

Apparently, this study confirmed the significance of green reward and compensation for enhancing green human capital. These results indicated that green reward and compensation has a significant impact on green human capital. This is somewhat similar to Arshad *et al.* (2022), who revealed that green reward and compensation are crucial in enhancing green human capital.

Finally, the results demonstrated that green employee empowerment and participation has a significant impact on green human capital. This result was in line with the results of Shoaib *et al.* (2021), who pointed out that green human capital can be acquired through effective green employee empowerment procedures.

# 5. Conclusion

Green human resources management implements green practices to foster employee loyalty and increase environmental performance. This study underscores the significant role of human resource contributions in reducing environmental impacts, promoting sustainable performance, and achieving sustainable development objectives. The results of this study contribute to the body of knowledge by studying and evaluating the application of green human resource management practices in Egyptian hotels "Green Star hotels". The added knowledge can be expressed through HR managers' perceptions regarding GHRM practices to enhance green human capital. However, this study's main contribution is to help HR managers in the hotel industry implement GHRM practices, which will boost their productivity and contribution towards environmental protection. Furthermore, this study aimed to examine the impact of green human resource management practices on enhancing green human capital in Egyptian hotels (Green Star hotels). It was achieved through reviewing the literature and a structured survey and then by conducting statistical tests.

The results of the study concluded that green recruitment and selection has a significant impact on green human capital, which indicates that green recruitment and selection in hotels prioritizes environmentally conscious employees to effectively address environmental issues, thereby enhancing productivity and environmental protection. Also, the findings revealed the relationship between green training and development and green human capital; these findings showed that green training and development has a significant impact on green human capital, which indicates that green training equips employees with knowledge, attitudes, and skills to identify environmental issues and take appropriate actions at work to improve green performance. On the other hand, the results demonstrated that green performance management and appraisal has no impact on green human capital. Additionally, the results indicated that green reward and compensation has a significant impact on green human capital, which indicates that green reward and compensation enhance employee efficiency and productivity in protecting the environment, thus enhancing green human capital. Ultimately, another result clarified that green employee empowerment and participation has a significant impact on green human capital, which indicates that empowering green employees and addressing environmental issues can enhance production efficiency and promote environmental protection.

# 6. Recommendations

As per Egypt's 2030 vision, the Egyptian government is presently promoting sustainability and green orientation. Egyptian hotels can benefit from the results of this study to highlight the importance of GHRM practices in developing employees' skills and abilities towards protecting the environment and thus contributing to the sustainability of hotel activity. Therefore, in the following, this study will recommend some suggestions that human resources managers and the official bodies responsible for the hotel industry can follow to encourage hotels to implement green human resources management practices in order to sustain hotel activity.

## A. Recommendations for Human Resource Managers

- Clearly defining the environmental tasks and responsibilities of employees in their job descriptions to ensure commitment to green behaviors, which in turn increases productivity related to environmental protection.
- Encouraging environmentally committed managers to invest more time and effort to providing green training for employees, enhancing their environmental protection capabilities, and supporting the development of green human capital for a sustainable environment.
- Highlighting the procedure of effective and continuous recording of results for employees in performance appraisal records and providing regular feedback on the implementation of their environmental responsibilities, which ultimately enhances green human capital.

- Collaborating with hotel management to encourage environmentally committed employees by linking suggestion schemes to rewards (e.g., rewards for innovative environmental initiative/performance), enhancing productivity, and contributing to environmental protection.
- Supporting green employee empowerment and participation in environmental protection by establishing effective environmental teams on an ongoing basis to manage environmental issues in hotels and raise awareness of their importance to ensure enhanced employee productivity and efficiency in protecting the environment.

### B. Recommendations for the Official Bodies Responsible for the Hotel Industry

- **The Ministry of Tourism and Antiquities** should introduce legislation mandating hotels to adopt green practices, including implementing green human resources management practices to foster a green employee culture.
- **The Egyptian Hotel Association (EHA)** should hold seminars to spread the culture of employing green employee and highlighting how crucial it is to develop employees' skills, knowledge, and experiences in environmental preservation.

## 7. Limitations and Future Research

Given the wide geographical area of the population, it took the researcher considerable effort, time, and money to reach all Egyptian hotels with green star certification distributed in 17 destinations country-wide, so that the study's findings could be generalized across Egypt. Accordingly, data was collected from HR managers in the Egyptian hotels (Green Star hotels), which made it difficult for all HR managers to cooperate in collecting data and answering questionnaires. Furthermore, it may be useful in future research to examine the same research hypotheses but from other perspectives, such as employees' perspectives on GHRM practices. Additionally, the study's findings may not be generalizable to other hotel categories. Therefore, the study should be applied to other hotels with environmental (green) certifications, but this time excluding Green Star hotels. Unexpectedly, the primary limitation of this study was the scarcity of literature on studying the impact of GHRM practices on green human capital in Egyptian hotels (Green Star hotels). Finally, there are some suggestions for future studies related to GHRM practices, as follows: (1) Investigating the relationship between GHRM practices and hotels' green innovation/green reputation. (2) Exploring the linkage between GHRM practices and green management maturity.

## References

Abdou, A. H., Hassan, T. H., and El Dief, M. M. (2020). A description of green hotel practices and their role in achieving sustainable development. *Sustainability*, Vol. 12 No. 22, pp. 9624 9643

Ahmad, S. (2015). Green human resource management: Policies and practices. *Cogent business & management*, Vol. 2 No.1, pp. 1‑13.

Alam, M. A. A. (2021). Impact of GHRM on Organization՚s Environmental Performance: Mediating Role of Green Employee Empowerment. *Journal of Business*, Vol. 6 No. 2, pp. 15-30.

Arshad, M., Abid, G., Contreras, F., Elahi, N. S., and Ahmed, S. (2022). Greening hospitality sector: Employees' environmental and job attitudes predict ecological behavior and satisfaction. *International Journal of Hospitality Management*, Vol. 102, 103173.

Arulrajah, A. A., Opatha, H. H. D. N. P., and Nawaratne, N. N. J. (2015). Green human resource management practices: A review. *Sri Lankan Journal of Human Resource Management,* Vol. 5 No. 1, pp. 1-6.

Asiaei, K., Bontis, N., Alizadeh, R., and Yaghoubi, M. (2022). Green intellectual capital and environmental management accounting: Natural resource orchestration in favor of environmental performance. *Business Strategy and the Environment*, Vol. 31 No. 1, pp. 76-93.

Cahyono, B., and Hakim, A. (2020, April). Green intellectual capital and competitive advantage: the moderating effect of Islamic business ethics. In *3rd Asia PacificInternational Conference of Management and Business Science (AICMBS 2019)* (pp. 78-84). Atlantis Press.

Chang, C. H., and Chen, Y. S. (2012). The determinants of green intellectual capital. *Management decision*, Vol. *50* No. 1, pp. 74-94.

Chaudhary, R. (2019). Green human resource management in Indian automobile industry. *Journal of Global Responsibility*, Vol. 10 No. 2, pp. 161-175.

Chen, Y. S. (2008). The positive effect of green intellectual capital on competitive advantages of firms. *Journal of business ethics*, Vol. 77 No. 3, pp.271-286.

Chen, Y. S., and Lin, Y. H. (2015, February). Improvement Of Green Human Capital, Green Absorptive Capacity And Green Dynamic Capacities To Achieve Green Service Innovation: An Analysis Of Structural Equation Modeling (SEM). In Comsan, MNH (Chair), *3rd International Conference on Energy Systems and Technologies. 16 – 19 Feb. 2015, Cairo, Egypt.*

D᾽Mello, L., Manjush, H., and Monteiro, M. (2016). A study on the green human resource management at gateway hotel, Mangalore. *International Journal of Scientific Research and Modern Education (IJSRME)*, Vol. 1 No. 1, pp. 843-852.

Deepika, S. (2016). Green HRM: An effective tool to attain & maintain competitive advantage. *international Journal of advanced research in Engineering & Management (IJAREM)*, pp. 14-16.

Dimitrov, K. (2021). Green human resources management: linking and using green practices for sustainable business organizations. *Trakia Journal of Sciences*, Vol. 19 No. 1, pp. 276-281.

Dutta, D. S. (2012). Greening people: A strategic dimension. *ZENITH International Journal of Business Economics & Management Research*, Vol. 2 No. 2, pp. 143‑148.

Fayyazi, M., Shahbazmoradi, S., Afshar, Z., and Shahbazmoradi, M. (2015). Investigating the barriers of the green human resource management implementation in oil industry. *Management science letters*, Vol. *5* No. 1, pp. 101-108.

Gupta, H. (2018). Assessing organizations performance on the basis of GHRM practices using BWM and Fuzzy TOPSIS. *Journal of environmental management*, Vol. 226, pp. 201- 216.

Haldorai, K., Kim, W. G., and Garcia, R. F. (2022). Top management green commitment and green intellectual capital as enablers of hotel environmental performance: The mediating role of green human resource management. *Tourism Management*, Vol. 88, pp. 1-11.

Hameed, Z., Khan, I. U., Islam, T., Sheikh, Z., and Naeem, R. M. (2020). Do green HRM practices influence employees' environmental performance?. *International Journal of Manpower*, Vol. 41 No. 7, pp. 1061-1079.

Howard-Grenville, J., Buckle, S. J., Hoskins, B. J., and George, G. (2014). Climate change and management. *Academy of Management Journal*, Vol. 57 No. 3, pp. 615-623.

Huang, C. L., and Kung, F. H. (2011). Environmental consciousness and intellectual capitalmanagement: Evidence from Taiwan's manufacturing industry. *Management decision*, Vol. 49 No. 9, pp. 1405-1425.

Irani, F., Kilic, H., and Adeshola, I. (2022). Impact of green human resource management practices on the environmental performance of green hotels. *Journal of Hospitality Marketing & Management*, Vol. 31 No. 5, pp. 570-600.

Jawaad, M., Amir, A., Bashir, A., and Hasan, T. (2019). Human resource practices and organizational commitment: The mediating role of job satisfaction in emerging economy. *Cogent Business & Management*. Vol. 6 No. 1, pp. 1-22.

Latan, H., Jabbour, C. J. C., de Sousa Jabbour, A. B. L., Wamba, S. F., and Shahbaz, M. (2018). Effects of environmental strategy, environmental uncertainty and top management's commitment on corporate environmental performance: The role of environmental management accounting. *Journal of cleaner production*, Vol. 180, pp. 297-306.

Ma, Y., Chen, S. C., and Ruangkanjanases, A. (2021). Understanding the antecedents and consequences of green human capital. *Sage Open*, Vol 11 No. 1, pp. 1-11.

Mandago, R. J. (2019). *Influence of green human resource management practices on environmental sustainability in service based state corporations in Kenya* (Doctoral dissertation, JKUAT-COHRED). pp. 6-16.

Mankgele, K., Mmakola, S., and Chidi, M. M. (2023). Green human resource management and environmental performance of hotels in South Africa: mediating and moderating role of

environmental concern and green human capital. *International Journal of Research in Business and Social Science (2147-4478)*, Vol. 12 No. 8, pp. 180-187.

Mansoor, A., Jahan, S., and Riaz, M. (2021). Does green intellectual capital spur corporate environmental performance through green workforce?. *Journal of Intellectual Capital*, Vol. 22 No. 5, pp. 823-839.

Mukherjee, S., Bhattacharjee, S., Paul, N., and Banerjee, U. (2020). Assessing green human resource management practices in higher educational institute. *TEST Engineering & Management*, Vol. 82. pp. 221-240.

Nisar, Q. A., Haider, S., Ali, F., Jamshed, S., Ryu, K., and Gill, S. S. (2021). Green human resource management practices and environmental performance in Malaysian green hotels: The role of green intellectual capital and pro-environmental behavior. *Journal of Cleaner Production*, Vol. 311, 127504.

Obaid, T. (2015). The impact of green recruitment, green training and green learning on the firm performance: conceptual paper. *International Journal of Applied Research*, Vol. 1 No. 12, pp. 951-953.

Pham, N. T., Chiappetta Jabbour, C. J., Vo-Thanh, T., Huynh, T. L. D., and Santos, C. (2020). Greening hotels: Does motivating hotel employees promote in-role green performance? The role of culture. *Journal of Sustainable Tourism*, Vol. 31 No. 4, pp. 951-970.

Pham, T. N., Phan, Q. P. T., Tučková, Z., Vo, T. N., and Nguyen, L. H. (2018). Enhancing the organizational citizenship behavior for the environment: the roles of green training and organizational culture. *Management & Marketing-Challenges for the Knowledge Society.* Vol. 13 No. 4, pp.1174-1189.

Pinzone, M., Guerci, M., Lettieri, E., Huisingh, D., (2019). Effects of 'green' training on pro-environmental behaviors and job satisfaction: evidence from the Italian healthcare sector. *Journal of cleaner production*, Vol. 226, pp. 221-232.

Rahman, I., Chen, H., and Reynolds, D. (2020). Evidence of green signaling in green hotels. *International Journal of Hospitality Management*, Vol. 85, pp. 1-8.

Rawashdeh, A. M., and karim Al-Adwan, I. (2012). The impact of human resource management practices on corporate performance: Empirical study in Jordanian commercial banks. *African Journal of Business Management*, Vol. 6 No. 41, pp. 10591- 10595.

Renwick, D. W., Redman, T., and Maguire, S. (2013). Green human resource management: A review and research agenda. *International journal of management reviews*, Vol. 15 No. 1, pp. 1-14.

Sabokro, M., Masud, M. M., and Kayedian, A. (2021). The effect of green human resources management on corporate social responsibility, green psychological climate and employees' green behavior. *Journal of Cleaner Production*, Vol. *313*, pp. 1-12.

Saini, P., and Shukla, K. K. (2016). Green recruitment: A new tool of cost cutting (conceptual study). *International Journal of Scientific and Innovative Research*, Vol. 4 No. 1, pp. 195-198.

Sekaran, U. (2001). *Research Methods for Business: a skills Building Approach.* (2nd ed.). New York: John Wiley & Sons, Inc.

Shehata, H. S., and Elfeel, S. (2017). Green Practices in Egyptian Hotels: Importance and Existence. *journal of tourism. Research*, Vol. 16, pp. 6-21.

Sheikh, A. M. (2022). Green intellectual capital and social innovation: the nexus. *Journal of Intellectual Capital*, Vol. 23 No. 6, pp. 1199-1220.

Shoaib, M., Abbas, Z., Yousaf, M., Zámečník, R., Ahmed, J., and Saqib, S. (2021). The role of GHRM practices towards organizational commitment: A mediation analysis of green human capital. *Cogent Business & Management*, Vol. 8 No. 1, pp. 1-14.

Shoaib, M., Nawal, A., Zámečník, R., Korsakienė, R., and Rehman, A. U. (2022). Modeling GHRM, green human capital, and environmental performance; Moderating role of proenvironmental attitude. In *12th International Scientific Conference Business and Management 2022*. Vilnius Gediminas Technical Univ Press, Technika.

Siyambalapitiya, J., Zhang, X., and Liu, X. (2018). Green human resource management: A proposed model in the context of Sri Lanka's tourism industry. *Journal of cleaner production*, Vol. 201, pp. 542-555.

Sobaih, A. (2019). Green Human Resource Management in Egyptian Hotels: Practices and Barriers. *International Academic Journal Faculty of Tourism and Hotel Management*, Vol. 5 No. 1, pp. 127-148.

Tang, G., Chen, Y., Jiang, Y., Paillé, P., and Jia, J. (2018). Green human resource management practices: scale development and validity. *Asia pacific journal of human resources*, Vol. 56 No. 1, pp. 31-55.

Tariq, S., Jan, F. A., and Ahmad, M. S. (2016). Green employee empowerment: a systematic literature review on state-of-art in green human resource management. *Quality & Quantity*, Vol. 50, pp. 237-269.

Teo, S. T., Reed, K. K., and Ly, K. (2014). Human resource involvement in developing intellectual capital. *The Service Industries Journal,* Vol. 34 No. 15, pp. 1219-1233.

Tulsi, P., and Ji, Y. (2020). A conceptual approach to green human resource management and corporate environmental responsibility in the hospitality industry. *The Journal of Asian Finance, Economics and Business*, 7(1), 195-203.

Yong, J. Y., Yusliza, M. Y., Ramayah, T., and Fawehinmi, O. (2019). Nexus between green intellectual capital and green human resource management. *Journal of cleaner production*, Vol. 215, pp. 364-374.

Yong, J. Y., Yusliza, M. Y., Ramayah, T., Chiappetta Jabbour, C. J., Sehnem, S., and Mani, V. (2020). Pathways towards sustainability in manufacturing organizations: Empirical evidence on the role of green human resource management. *Business Strategy and the Environment*, Vol. 29 No. 1, pp. 212-228.