Arab American University

Faculty of Graduate Studies

Assessment of the Relationship between GHRM Practices and Sustainable Performance of Palestinian Manufacturing Companies

By

Ibrahim Alturk

Supervisor

Dr. Nidal Dwaikat

This thesis was submitted in partial fulfillment of the requirements for the Master's degree in Quality Management

December / 2021

THESIS APPROVAL

Assessment of the Relationship between GHRM Practices and Sustainable Performance of Palestinian Manufacturing Companies

By

Ibrahim Alturk

This thesis was defended successfully on 11th/12/2021 and approved by:

Committee Members	**Signature**
1. Dr. Nidal Dwaikat /Supervisor:	……..…
2. Dr. Ashraf Almimi/ Internal examiner:	
3. Dr. Saad Zighan /External examiner:	

DECLARATION

I certify that this thesis submitted for the Master's degree in Quality Management is the result of my own research, except where otherwise acknowledged, and that this thesis (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Name: Ibrahim Alturk

Signature:

Date: 04/09/2022

ACKNOWLEGEMENT

First, special thanks are extended to the supervisor of this thesis Dr. Nidal Dwaikat for his time and effort. Without his guidance, this thesis would not have been possible. I would also like to thank all of the thesis committee members for the valuable feedback they provided. In addition, I am grateful to every member of my family for their support during my academic life, particularly during writing this thesis. Last but not the least, I highly appreciate those who responded to the questionnaire and provided the primary data for the study.

ABSTRACT

Growing awareness of environmental issues among stakeholders create increasing pressure on manufacturing companies to adopt green strategies including green human resource management practices. Thus, this study aims to assess the relationship between green human resource management practices and the sustainable performance of the Palestinian manufacturing companies. To achieve this objective, the quantitative hypotheses-testing approach is utilized. Primary data are gathered, using an electronically distributed questionnaire, from a sample of (144) HR managers working in manufacturing companies.

The developed questionnaire consists of three parts: (1) companies' characteristics, (2) green human resource management practices, and (3) sustainable performance. A five-point Likert scale, ranging from Strongly Disagree to Strongly Agree, is used in the last two parts of the questionnaire. Data are analyzed using descriptive statistics and multiple linear regression analysis. The SPSS software is utilized in data analysis.

The results of the study indicate that the Palestinian manufacturing companies implement green human resource management practices at a moderate level, with mean value of (3.32) on a five-point scale. In addition, the results show that the sustainable performance of these companies is high, with mean value of (3.80) on a five-point scale. Finally, the regression analysis confirms that the dimension of green reward and compensation is the only one among the five dimensions of green human resource management practices that has a significant positive impact on the sustainable performance of the Palestinian manufacturing companies.

In light of the results of the study, the researcher recommends Palestinian manufacturing companies to pay increasing attention to the dimensions of green training and development, green performance management and appraisal, green reward and compensation, and green empowerment and participation.

CONTENTS

Page

Page

Page

LIST OF TABLES

Page

LIST OF FIGURES

Page

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter consists of a general background to the study, the problem statement, the importance of the study, the questions to be answered, the objectives to be achieved, hypotheses development and conceptual model of the study, and thesis structure.

1.2 General Background

Recently, there has been growing interest in environmental issues and sustainability concerns at the organizational level mainly due to rapid increase in hazardous emissions and the corresponding adverse environmental outcomes (Yu et al., 2019). This forced researchers and practitioners to employ human resource management as a tool for greening organizations and, in sequence, societies as a whole. In doing so, employees are the cornerstone to success or failure. The result was the emergence of a new concept. It is the green human resource management (GHRM).

This concept can be defined as a set of policies, practices, and systems that stimulate the green behavior of a company's employees in order to create an environmentally sensitive, resource-efficient, and socially responsible organization.

In this context, it is important to emphasize that the notion of green human resource management depends on theories and models found in different fields including, but not limited to, management, economics, psychology and sociology (Ren et al., 2018). Indeed, green human resource management includes all practices and procedures contributing to organizational sustainability from the viewpoints of employees.

Much research has recently focused on investigating the potential impact of applying green human resource management (GHRM) practices on organizational outcomes including, among other things, sustainable performance.

In this context, it is worth saying that there are many different definitions of sustainability. For example, sustainable performance of an organization refers to achieving good financial performance that is accompanies by its ability to contribute to the social well-being. In addition, it means the coordination of financial, environmental, and social objectives in the delivery of core business activities.

Despite the ample number of empirical studies that investigated the impact of green human resource management practices on sustainable performance all over the world (e.g. Anusingh and Shikha, 2015; De Giovanni, 2012; Diabat et al., 2013; Garza-Reyes et al., 2018; Green et al., 2012; Laosirihongthong et al., 2013; Luzzini et al., 2014), little attention has been dedicated to this topic in developing countries, including Palestine.

In fact, and despite the fact that the manufacturing sector is the major contributor to pollution among all economic sectors in Palestine, a few studies have been carried out on environment-related variables. More specifically, only a few empirical studies, to the researcher's best knowledge, have investigated the impact of green human resource management practices on the sustainable performance of companies (Mousa and Othman, 2020; Zaid and Jaaron, 2020).

Consequently, this study is carried out to fill the knowledge gap from two perspectives. More specifically, from the theoretical perspective, this study contributes to the existing literature by providing more empirical evidence, from one of the developing countries, regarding the potential impact of green human resource management practices on the

sustainable performance of the Palestinian manufacturing companies. From the practical perspective, the results of the study will help these companies uncover the areas of these practices that need further improvement, which might in turn contribute to enhancing sustainable performance over the long run, including economic, operational, social, and environmental performance.

1.3 Problem Statement

In Palestine, the manufacturing sector is considered among the most important economic sectors, with 20,710 working establishments, employing nearly 121,763 workers, and contributing to 13% of the GDP of the country (PCBS, 2020). In this context, it is not surprising that this sector is in fact the largest contributor to environmental pollution in the country among all economic sectors (GIZ, 2014; Masri and Jaaron, 2017).

Consequently, it is vital for these companies to balance economic and environmental concerns while doing their businesses. Accordingly, green human resource management practices need to be taken into consideration to minimize environmental problems.

In the sequel, it is necessary to assess the level of green human resource management practices in the Palestinian companies, particularly manufacturing ones, and to assess the relationship between these practices and the sustainable performance of these companies.

The findings of this study would uncover green human resource management practices in the Palestinian manufacturing companies that need to be improved. This, in turn, might enhance their sustainable performance, including economic, operational, social and environmental performance, over the long-run.

1.4 Importance of Study

The importance of this study stems from three main points. First, there has been growing interest in corporate environmental issues all over the world including, among others, green human resource management practices to enhance the sustainable performance of companies, especially manufacturing ones. Nevertheless, the notion of green human resource management is still at an early stage in Palestine.

In addition, manufacturing companies are the largest contributor to pollution among all economic sectors in Palestine (GIZ, 2014). Finally, only a few studies have assessed the relationship between green human resource management practices and the sustainable performance of manufacturing companies in the Palestinian context (e.g. Zaid and Jaaron, 2020). Therefore, more empirical studies on this new topic need to be carried out to add more empirical evidence in this regard.

1.5 Research Questions

The study is carried out to answer the following main question:

"To what extent do green human resource management practices affect the sustainable performance of the Palestinian manufacturing companies?".

However, the sub-questions are as follows:

1. What is the level of green human resource management practices in the Palestinian manufacturing companies?
2. What is the level of sustainable performance of the Palestinian manufacturing companies?

3. To what extent do green recruitment and selection affect the sustainable performance of the Palestinian manufacturing companies?
4. To what extent do green training and development affect the sustainable performance of the Palestinian manufacturing companies?
5. To what extent do green performance management and appraisal affect the sustainable performance of the Palestinian manufacturing companies?
6. To what extent do green reward and compensation affect the sustainable performance of the Palestinian manufacturing companies?
7. To what extent do green empowerment and participation affect the sustainable performance of the Palestinian manufacturing companies?

1.6 Objectives of Study

The main objective of this study is to assess the relationship between green human resource management practices and the sustainable performance of the Palestinian manufacturing companies. The specific objectives are as follows:

1. To examine the extent to which green recruitment and selection affect the sustainable performance of the Palestinian manufacturing companies.
2. To examine the extent to which green training and development affect the sustainable performance of the Palestinian manufacturing companies.
3. To examine the extent to which green performance management and appraisal affect the sustainable performance of the Palestinian manufacturing companies.
4. To examine the extent to which green reward and compensation affect the sustainable performance of the Palestinian manufacturing companies.

5. To examine the extent to which green empowerment and participation affect the sustainable performance of Palestinian manufacturing companies.

1.7 Hypotheses Development and Conceptual Model

As stated previously, the main objective of this study is to assess the relationship between green human resource management practices and the sustainable performance of the Palestinian manufacturing companies. More details and discussion on green human resource management practices and sustainable performance are given in Chapter Two. However, Figure 1.1 depicts the conceptual model of the study, where each dimension of green human resource management practices is hypothesized to positively affect the sustainable performance of the Palestinian manufacturing companies. On other words, the five dimensions of green human resource management practices are the independent variables whereas sustainable performance is the dependent variable.

In this context, and as explained later in Chapter Three, the construct of green human resource management practices is measured using five dimensions: (1) green recruitment and selection, (2) green training and development, (3) green performance management and appraisal, (4) green reward and compensation, and (5) green empowerment and participation. These dimensions are specifically selected, based on previous literature, since they are the most frequently used by researchers and academics while assessing the relationship between green human resource management practices and sustainable performance. The operationalization of these dimensions is shown in Chapter Two.

However, it is worth defining each of these dimensions. First, green recruitment and selection refer to the process of recruiting and selecting human resources who show obligation to environmental issues (Chaudhary, 2019). Green training and development

refer to practices that equip human resources with the knowledge needed to follow green policies and practices (Jabbour et al., 2012). Green performance management and appraisal refer to the process of managing and assessing the performance of human resources with respect to environmental issues (Jabour and Santos, 2008). Green reward and compensation refer to the package of monetary and nonmonetary incentives that are intended to enhance green behaviors of human resources (Jackson et al., 2014). Finally, green empowerment and participation refer to practices that build an environment in which human resources engage in green activities in an effective way (Dubois and Dubois, 2012).

On the other hand, the construct of sustainable performance is measured using the four dimensions of economic performance, operational performance, social performance, and environmental performance. The operationalization of these dimensions is shown in Chapter Two.

Accordingly, and as shown in the conceptual model of the study, the following hypotheses are developed to be tested:

Main Hypothesis:

Green human resource management practices positively affect the sustainable performance of the Palestinian manufacturing companies.

Specific Hypotheses:

H_1: Green recruitment and selection positively affect the sustainable performance of the Palestinian manufacturing companies.

H_2: Green training and development positively affect the sustainable performance of the Palestinian manufacturing companies.

H_3: Green performance management and appraisal positively affect the sustainable performance of the Palestinian manufacturing companies.

H_4: Green reward and compensation positively affect the sustainable performance of the Palestinian manufacturing companies.

H_5: Green empowerment and participation positively affect the sustainable performance of the Palestinian manufacturing companies.

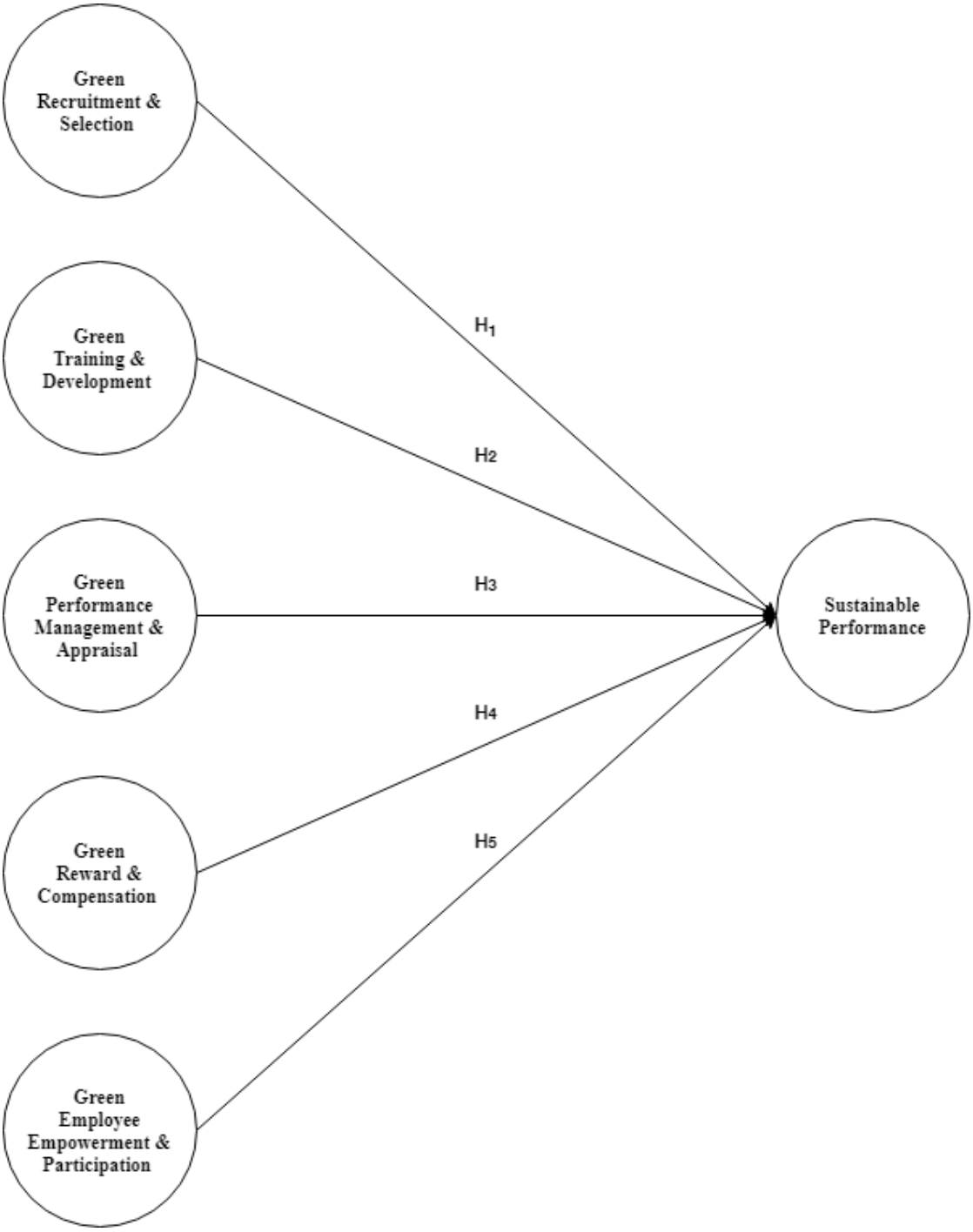

Figure 1.1: Conceptual Model of Study

1.8 Thesis Structure

The thesis consists of five chapters. In the first chapter, an introduction to the study is given. In the second chapter, the related literature is reviewed. In the third chapter, the research methodology is discussed. In the fourth chapter, data analysis and discussion are presented. Finally, the main conclusions, the necessary recommendations, the research limitations, and some directions for future researchers are provided.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

In this chapter, the theoretical framework of green human resource management and sustainable performance is discussed. Then, the most important empirical studies that investigated the impact of green human resource management practices on sustainable performance of companies, particularly manufacturing ones, are reviewed.

2.2 Green Human Resource Management

In this section, the concept of green human resource management is defined, its importance is highlighted, and the dimensions that are used to measure this construct are identified.

2.2.1 Concept of Green Human Resource Management

Several academics and researchers have defined the concept of green human resource management. However, there is no consensus on one definition. The most important of these definitions are briefly reviewed below.

As Shah (2019) says, green human resource management refers to integrating green practices into the various human resource functions to enhance staff green behavior and improve sustainable performance.

Bombiak and Marciniuk-Kluska (2018) explained the concept of green human resource management by saying that it is an innovative strategy whereby environmental goals are incorporated in human resource areas including staff recruitment and selection, training and development, assessment and compensation.

Peter and Lanos (2015) briefly defined the concept of green human resource management as the organizational effort to decrease resource wastage. Clearly, this definition focuses only on one aspect of green HRM which is reducing waste and ignores the other aspects which are also important.

Moreover, the concept of green human resource management refers to the various activities that are developed and applied within an organization to make it green (i.e. environment-friendly). In other words, it is the part of human resource management that is interested in converting traditional employees of an organization into green ones to realize the environmental aims, thus significantly contributing to environmental sustainability (Kennedy and Toffler, 2014).

Similarly, Watson and Kavid (2014) defined this concept as the bundle of strategies, policies, and procedures relating to human resource management that aims to realize sustainable performance in an organization.

According to Opatha and Arulrajah (2014), green human resource management refers to strategies, policies, and practices that aim to create green employees for the advantage of the employee, the organization, the community, and the entire environment.

In addition, green human resource management denotes all organizational efforts that aim to make and keep employees green so that they positively contribute to business sustainability (Opatha and Arulrajah, 2014).

Marhatta and Adhikari (2013) provided another definition of green human resource management by saying that it is employing the strategies of human resources to encourage sustainable usage of organizational resources in particular and environment sustainability in general. Similarly, Jabbour (2013) defined this concept as the systematic

and organized reconciliation of traditional human resource management with environmental objectives of an organization.

Green human resource management can also be defined as the process of creating green employees who recognize, appreciate, and provide green initiatives and pursue green objectives within the HR functions, including among others, hiring, training, and rewarding organizational human capital (Mathapati, 2013).

In the same context, Mampra, (2013) defined this concept as the application of HR practices in a way that enhances sustainable usage of organizational resources and encourages green initiatives.

Another definition of green human resource management was provided by Dutta (2012) who said that this concept refers to a philosophy that helps to create green staff who understand and acknowledge "going green" in organizations. The goals of such philosophy can be achieved through the various HR functions including, but not limited to, hiring, training, developing, and compensating the organization's human capital.

Finally, Mandip (2012) said that green human resource management is using the practices of human resource management to enhance environmental sustainability at the organizational level.

In this study, green human resource management refers to all strategies, policies, procedures, and activities that are implemented by the human resource management of Palestinian manufacturing companies in order to enhance their sustainable performance over the long run including the economic, operational, social, and environmental performance.

2.2.2 Importance of Green Human Resource Management

Many organizations, especially manufacturing ones, have recently selected to implement policies that are environmentally friendly mainly due to growing environmental worries and the consequent drafting of environmental standards (Ashraf et al., 2015). In fact, implementing green human resource management is beneficial to organizations due to different reasons as discussed below.

First, Mwita (2019) confirmed that one of the most important benefits that can be achieved from properly implementing green human resource management is widening the base of customers as well as shareholders. In the same line, many academics and researchers had already emphasized that adopting green human resource management practices creates positive image and enhances brand recognition (e.g. Cherian and Jacob, 2012; Haridas and Sivasubramanaian, 2016).

In addition, Hosain and Rahman (2016) stressed that applying green human resource management results in more sustainable and healthier environment and enhances the competitive advantage of organizations through more staff involvement.

Uddin and Islam (2015) said that adopting green human resource management is beneficial to organizations in that it helps them realize their financial objectives from one hand and protects the environment from any adverse effects from the other hand.

Several empirical studies confirmed that proper implementation of green human resource management practices improves the performance of organizations (e.g. Gotschol et al., 2014; Mwita, 2019; Renwick et al., 2013; Wu et al., 2019).

Nijhawan (2014) stressed that green human resource management can be used as a strategic tool to decrease costs, increase efficiency, minimize carbon emissions, and achieve green work-life balance.

Another benefit arising from effective adoption of environmental policies and practices is gaining competitive advantage over competitors (Leonidou et al., 2017; Macke and Genari, 2018; Siyambalapitiya et al. 2018; Sudin, 2011). This is explained by the fact that organizational success these days does not only depend on economic factors but also depends on environmental aspects.

Finally, implementing green human resource management improves environmental outcomes such as using resources more efficiently (Alhadid and Abu-Rumman, 2014; Florida and Davison, 2001) and minimizing pollution and wastage (Phillips, 2007).

2.2.3 Dimensions of Green Human Resource Management

A careful review of the related literature indicates that there is no agreement on the dimensions that are used to measure the construct of green human resource management practices. Therefore, the most important of these dimensions are identified below.

Several academics and researchers identified green hiring, green training, green performance management, and green compensation as the most important dimensions of green human resource management (e.g. Yong et al., 2019).

Other dimensions of green human resource management include job description, organizational culture, unions' role in environmental activities, organizational learning, and green health and safety (e.g. Moraes et al., 2018; Pham et al., 2019; Tang et al., 2018).

The three dimensions that are viewed as being the most effective green human resource management practices are green hiring, green training and development, and green performance management and compensation (e.g. Guerci et al., 2016; Longoni et al., 2016).

Cherian and Jacob (2012) identified four dimensions as the most important constituents of green human resource management practices: (1) recruitment, (2) training, (3) motivation, and (4) compensation.

Several researchers and academics concluded that the framework of green human resource management practices is made of four elements: (1) recruitment (Grolleau et al., 2012), (2) performance management (Jabbour et al., 2013), (3) green culture (Jabbour et al., 2013), and (4) training and development (Unnikrishnan and Hegde, 2007).

According to Jabbour et al. (2010), green human resource management practices involve four dimensions: (1) job analysis and description, (2) recruitment and selection, (3) training, and (4) compensation.

Only a few researchers and academics used job analysis and description as a dimension when measuring the construct of green human resource management practices (e.g. Malik et al., 2020; Roscoe et al., 2019, Yong et al., 2020; Yusliza et al., 2019).

Earlier in 2008, Renwick et al. confirmed that green human resource management practices involve human resource practices that are environmentally friendly in five main aspects: (1) recruitment, (2) performance management and evaluation, (3) training and development, (4) green relations, and (5) compensation.

In this study, five dimensions are used to measure green human resource management practices in the Palestinian manufacturing companies: (1) green recruitment and

selection, (2) green training and development, (3) green performance management and appraisal, (4) green reward and compensation, and (5) green empowerment and participation.

2.3 Sustainable Performance

In this section, the concept of sustainable performance is defined, the importance of this concept is highlighted, and the dimensions that are used to measure this concept are identified.

2.3.1 Concept of Sustainable Performance

The concept of sustainable performance has recently gained considerable attention from academics, researchers, and practitioners due to increasing pressures on organizations to balance economic activities with social and environmental concerns. Below is a review of the most important definitions of sustainable performance.

Organizational sustainability denotes the degree to which an organization can sustain in the economic, social, and environmental dimensions over the long run (Roca-Puig, 2019). In the same way, and according to Bombiak and Marciniuk-Kluska (2018), sustainable performance means focusing on the social performance as well as environmental performance in addition to the economic performance of an organization.

Similarly, sustainable performance refers to the achievement of economic, social, and environmental objectives over the long run through a business model that adds value and at the same time is socially and environmentally responsible (Jablonski, 2016).

The most accepted definition of “sustainability” is improvement that satisfies the needs of people currently without affecting the needs of future generations (Higgins and Coffey, 2016).

Sustainable performance is also defined in a brief way as the performance achieved by an organization at the economic, environmental, and social levels (Linnenluecke and Griffiths, 2010).

Finally, sustainable performance means that corporate success depends not only on financial indicators (e.g. profits, ROA, and ROE) but also on social and environmental dimensions as well (Gardberg and Fombrun, 2006).

In this study, sustainable performance is defined as the economic, operational, social, and environmental performance of the Palestinian manufacturing companies that is derived from the implementation of green human resource management practices.

2.3.2 Importance of Sustainable Performance

It is important for organizations to pay attention to sustainable performance over the long run, through balancing economic performance from one hand with social and environmental performance from the other hand, to gain several benefits as discussed below.

Jablonski (2016) argued that organizations concerned with sustainable performance in the long run create sustainable business models which balance the interests of shareholders as owners and the interests of other stakeholders via creating value to customers and promoting social responsibility.

Several studies confirmed that companies that implement the notion of organizational sustainability, especially the environmental dimension, gain competitive advantage over their competitors and thus have better performance (e.g. Faleye and Trahan, 2011; Li et al., 2010). Consequently, it is not surprising that more organizations are increasingly

concerned with environmental issues, particularly environment protection (Norton et al., 2017; Wiernik et al., 2016).

Organizations that implement the concept of sustainable performance helps in maximizing the well-being of groups, areas, and entire societies (Zoogah, 2011). In fact, focusing on sustainable performance improves the standard of living for people while enabling future generations to make use of natural resources and the entire environment (Selier, 2007).

2.3.3 Dimensions of Sustainable Performance

Having defined the concept of sustainable performance, it is time to identify the different dimensions that make up this construct.

The majority of academics and researchers agree that the construct of sustainable performance consists of three dimensions: (1) economic performance, (2) social performance, and (3) environmental performance (e.g. Ayuso et al., 2014; Hussain et al., 2018; Roca-Puig, 2019; Svensson et al., 2018). These three dimensions are referred to as the three bottom line (Hussain et al., 2018).

In this context, economic performance is performance regarding financial outcomes. Environmental performance, on the other hand, relates to performance with respect to environmental concerns. Finally, social performance deals with performance regarding stakeholders' interests including shareholders and employees (Yusliza et al., 2020).

The above three sustainable performance dimensions can be defined, in the context of green initiatives, in another way. First, environmental performance is the capability of an organization to decrease air emissions, minimize material wastage, reduce consumption of dangerous and toxic material, and lower the rate of environmental accidents (Zhu et

al., 2008). Second, social performance is the actual outcome of going green related to social issues such as the image of an organization and its products from the standpoint of different stakeholders including, among others, staff, customers, suppliers, creditors, and the society at large (Newman et al., 2016). Finally, economic performance is related to both financial and marketing achievements, compared with industry average, as a result of implementing green initiatives (Zhu et al., 2005).

According to Younis et al. (2016), four dimensions have to be used as indicators of sustainable performance in the context of green management studies: (1) economic performance, (2) operational performance, (3) social performance, and (4) environmental performance.

In this study, and as recommended by Younis et al. (2016), the four dimensions of economic, operational, social, and environmental performance are used to measure the sustainable performance of the Palestinian manufacturing companies.

2.4 Previous Empirical Studies

In fact, many empirical studies investigated the potential impact of green human resource management practices on the sustainable performance of companies, particularly manufacturing ones. Some of these studies are briefly reviewed below.

Beginning from Palestine, **Zaid et al. (2020)** examined the effect of green human resource management practices on the sustainable performance of manufacturing companies. To do so, the quantitative hypotheses-testing research design was adopted. The primary data were gathered, using a structured questionnaire, from a total of 121 manufacturing companies. The structural equation modelling (SEM) technique was employed in data analysis.

The main result of path analysis confirmed that green human resource management practices have a significant positive effect on each of the four constituents of sustainable performance (i.e. economic, operational, social, and environmental performance).

In Malaysia, **Yong et al. (2020)** investigated the impact of green human resource management practices on the sustainable performance of manufacturing companies as measured by economic, social, and environmental performance. The quantitative hypotheses-testing research design was used. The primary data were collected from 112 manufacturing companies using a structured questionnaire. Data were analyzed using the technique of structural equation modelling (SEM).

The results of the study indicated that the two dimensions of green recruitment and green training have a significant positive impact on the sustainable performance of companies. On the other hand, the other four dimensions of green human resource management practices (i.e. green and job analysis and description, green selection, green performance appraisal, and green reward) have no significant impact on companies' sustainable performance.

In Pakistan, **Malik et al. (2020)** examined the effect of green human resource management practices on the sustainable performance of manufacturing companies, namely economic, social, and environmental sustainability. The quantitative research approach was adopted in the study. The primary data were collected, via a structured questionnaire, from 800 manufacturing companies. The structural equation modelling (SEM) technique was used in data analysis.

The main result of the study confirmed that two dimensions of green human resource management practices positively affect companies' sustainability. More specifically,

green hiring and green compensation are found to have a significant positive effect on the sustainable performance of manufacturing companies.

In Indonesia, **Ong and Riyanto (2020)** examined the influence of three dimensions of green human resource management practices on the environmental performance of manufacturing companies. To achieve the objective of the study, the quantitative research design was adopted where the primary data were gathered, using a survey, from 100 employees. Data analysis was carried out using the structural equation modelling (SEM) technique.

The key result of the study indicated that two dimensions of green human resource management (i.e. green motivation and staff engagement) have significant positive influence on environmental performance whereas green competency has no significant influence.

In Thailand, **Jirawuttinunt and Limsuwan (2019)** investigated the impact of four dimensions of green human resource management practices on the performance of ISO 14000 firms. The quantitative research design was used where the primary data were gathered, using a structured questionnaire that is delivered by mail, from 242 HR managers. The primary data were analyzed using descriptive statistics and the multiple linear regression technique.

The main result of the study confirmed that each of the four dimensions of green human resource management practices (i.e. green hiring, green training, green compensation, and green performance management) positively affects the performance of ISO 14000 firms as measured by human capital performance and environmental performance.

In the Palestinian context, **Mousa and Othman (2019)** carried out an empirical study to investigate the effect of applying green human resource management practices in healthcare establishments on their sustainable performance, particularly economic, social, and environmental performance. To achieve this objective, the mixed research desin was utilized whereby 14 semi-structured interviews were carried out and a questionnaire was employed to collect primary data from 69 managers. Data were analyzed using the structural equation modelling (SEM) technique.

The results of the study indicated that green human resource management practices are applied at a moderate level, with a mean value of 2.42 on a five-point scale. In addition, sustainable performance is assessed to be high, with a mean value of 3.42 on a five-point scale. Moreover, the results revealed that the two dimensions of green hiring and green training are the most influential among all dimensions of green human resource management practices whereas green performance management and compensation is the least influential. Finally, path analysis confirmed that green human resource management practices positively affect sustainable performance where environmental performance has the maximum path coefficient and social performance has the minimum path coefficient.

In Palestine, **Zaid et al. (2018)** examined the effect of GHRM practices on the sustainable performance of manufacturing companies. The quantitative hypotheses-testing approach was used. The primary data were gathered, using a structured questionnaire, from 121 companies which are among the most contributor to pollution in the manufacturing sector. Data were analyzed using the structural equation modeling technique.

The main result of the study confirmed that GHRM practices positively affect the sustainable performance of manufacturing companies. More specifically, GHRM practices (namely green hiring, green training, and green compensation) have a significant positive effect on the environmental, economic, and social performance of these companies.

Also in Palestine, **Masri and Jaaron (2016)** examined the influence of green human resource management practices on the environmental performance of manufacturing companies. The mixed research design was used by employing both quantitative and qualitative methods. To collect the primary data, both semi-structured interviews and fully-structured questionnaires were used. Specifically, the interviews were made with 17 human resource managers to identify dimensions of green human resource management whereas the questionnaires were used to gather primary data on the identified dimensions from a total of 110 companies. To analyze data, descriptive statistics, ANOVA, and the correlation coefficient were used.

The results of the study showed that green human resource management practices are applied by the Palestinian manufacturing companies at a moderate level, with mean value of 2.72 on a five-point scale. In addition, the results confirmed that each of the six constructs of green human resource management practices is significantly and positively correlated with the environmental performance of these companies.

In Pakistan, **Bhutto and Aurangzeb (2016)** examined the effect of green human resource management on corporate performance. The quantitative research design was adopted where primary data were collected from 376 companies, using a structured questionnaire.

The primary data were analyzed using the multiple regression analysis technique with the aid of SPSS.

The main result of the study confirmed that each dimension of green human resource management practices has a significant positive effect on corporate performance. More specifically, green hiring, green training and development, and green learning positively affect the performance of Pakistani companies.

Finally, **AnuSingh and Shikha (2015)** examined the impact of green human resource management practices on environmental performance of ISO 14001 certified companies in Delhi-NCR. The quantitative research approach was used. Using a structured questionnaire, primary data were collected from 133 respondents of these companies. The technique of multiple linear regression analysis was used in data analysis.

The results of the study indicated that the three dimensions of management commitment, staff training, and green initiatives positively affect the environmental performance of companies. On the other hand, the three dimensions of environmental communication, environmental staff, and staff engagement have no significant effect.

Having reviewed the most relevant studies that investigated the impact of green human resource management practices on corporate sustainable performance, it is worth saying that the current study contributes to the existing body of knowledge by filling the theoretical gap in literature from twofold. First, while all of the previous empirical studies, with the exception of one, included economic, social, and environmental performance as the three dimensions of sustainable performance, this study incorporates operational performance along with the three mentioned dimensions to have a more comprehensive measure of sustainable performance. Second, whereas most of the

previous empirical studies investigated the effect of green human resource management practices as one bundle on the sustainable performance, this study examines the impact of each green human resource management practices individually on the sustainable performance (i.e. economic, operational, social, and environmental performance).

2.5 Hypotheses and Model Development

Having reviewed some of the previous empirical research regarding the impact of green human resource management practices on the sustainable performance of companies, it is time to develop the hypotheses of the study and the corresponding conceptual model.

Green Recruitment and Selection and Sustainable Performance

Many researchers empirically examined the effect of green recruitment and selection on the sustainable performance of companies. Most of these empirical studies confirmed that green recruitment and selection positively affect the sustainable performance of companies (e.g. Malik et al., 2020; Mousa and Othman, 2019; Yong et al., 2020; Zaid et al., 2018; Zaid et al., 2020).

Accordingly, the first hypothesis is developed as follows:

H_1: Green recruitment and selection positively affect the sustainable performance of the Palestinian manufacturing companies.

Green Training and Development and Sustainable Performance

Many empirical studies examined the effect of green training and development on the sustainable performance of companies. These empirical studies confirmed that green training and development positively affect the sustianable performance of companies (e.g. Mousa and Othman, 2019; Zaid et al., 2020).

Accordingly, the second hypothesis is developed as follows:

H_2: Green training and development positively affect the sustianable performance of the Palestinian manufacturing companies.

Green Performance Management and Appraisal and Sustainable Performance

Many researchers empirically examined the effect of green performance management and appraisal on the sustainable performance of companies. These empirical studies confirmed that green performance management and appraisal positively affect the sustainable performance of companies (e.g. Malik et al., 2020; Mousa and Othman, 2019; Yong et al., 2020; Zaid et al., 2018; Zaid et al., 2020).

Accordingly, the third hypothesis is developed as follows:

H_3: Green performance management and appraisal positively affect the sustainable performance of the Palestinian manufacturing companies.

Green Reward and Compensation and Sustainable Performance

In fact, too many empirical studies are carried out to examine the effect of green reward and compensation on the sustainable performance of companies. These empirical studies confirmed that green reward and compensation have a significant positive effect on the sustainable performance of companies (e.g. AnuSingh and Shikha, 2015; Jirawuttinunt and Limsuwan, 2019; Malik et al., 2020; Masri and Jaaron, 2016; Mousa and Othman, 2019; Ong and Riyanto, 2020; Yong et al., 2020; Zaid et al., 2018; Zaid et al., 2020).

Accordingly, the fourth hypothesis is developed as follows:

H_4: Green reward and compensation positively affect the sustainable performance of the Palestinian manufacturing companies.

Green Empowerment and Participation and Sustainable Performance

Some empirical studies examined the influence of green empowerment and participation on the sustainable performance of companies. These empirical studies confirmed that green empowerment and participation have a significant positive impact on the sustainable performance of companies (e.g. AnuSingh and Shikha, 2015; Jirawuttinunt and Limsuwan, 2019; Malik et al., 2020; Masri and Jaaron, 2016; Mousa and Othman, 2019; Ong and Riyanto, 2020; Yong et al., 2020; Zaid et al., 2018; Zaid et al., 2020).

Accordingly, the fifth hypothesis is developed as follows:

H_5: Green empowerment and participation positively affect the sustainable performance of the Palestinian manufacturing companies.

Operationalization of Study Variables

Having developed the hypotheses of the study, it is time to operationalize the study variables as shown in Figure 2.1. As shown in the figure, and based on previous literature, each dimension of green human resource management practices is hypothesized to have an impact on the sustainable performance of the Palestinian manufacturing companies.

The figure also shows that five dimensions are used to measure green human resource management practices. These dimensions are: (1) green recruitment and selection, (2) green training and development, (3) green performance management and appraisal, (4) green reward and compensation, and (5) green empowerment and participation. Each of these five dimensions is measured using five indicators. Finally, the model shows that

each dimension of sustainable performance (i.e. economic, operational, social, and environmental performance) is measured using five indicators. The operationalization of the different constructs is shown in Table 2.1.

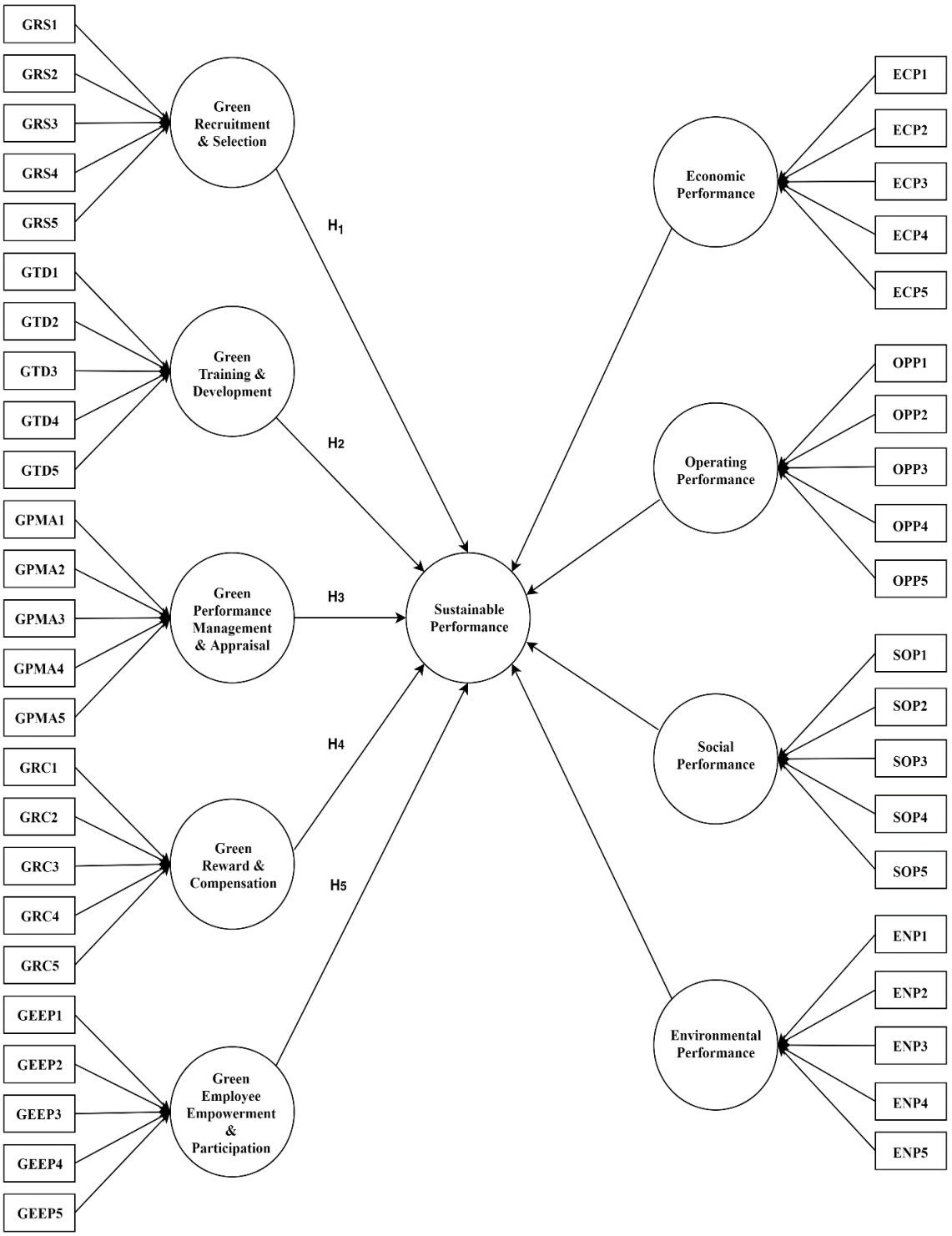

Figure 2.1: Operationalization of Study Variables

Table 2.1: Operationalization of Study Variables

Dimensions and Indicators	Reference
Green Human Resource Management Practices	
Dimension 1: Green Recruitment and Selection (GRS)	
1. My company uses paperless recruitment and selection process.	
2. My company recruits applicants who are well-informed about environmental issues.	Tang et al. (2018)
3. My company uses green criteria for shortlisting candidates.	
4. My company makes use of green aspects in testing candidates.	Opatha & Arulrajah (2014)
5. My company selects applicants who have environmental awareness.	
Dimension 2: Green Training and Development (GTD)	
6. My company allocates budget for conducting green training.	
7. In my company, green training is a priority when compared to other types of training.	Tang et al. (2018)
8. My company assesses in which green aspects employees need training.	
9. My company provides environmental training to employees to increase environmental awareness.	Opatha & Arulrajah (2014)
10. In my company, all training materials are available online for employee to reduce paper cost.	

Table 2.1: Operationalization of Study Variables

Dimensions and Indicators	Reference
Dimension 3: Green Performance Management and Appraisal (GPMA)	
11. My company sets green targets, goals, and responsibilities for employees.	
12. In my company, there is thecommunication of green goals.	Tang et al. (2018)
13. My company uses green performance indicators in performance evaluation.	
14. My company keeps track of non- compliance or not meeting green objectives.	Opatha & Arulrajah (2014)
15. My company provides regular feedback to employees to improve their environmental performance.	
Dimension 4: Green Reward and Compensation (GRC)	
16. My company provides monetary rewards for green accomplishments.	
17. The company provides non-monetary rewards for green achievements	Tang et al. (2018)
18. My company recognizes environmental performance publicly (e.g. awards, dinner, and publicity).	
19. My company rewards for green skills acquisition.	Opatha & Arulrajah (2014)
20. My company appreciates green initiatives of employees.	

Table 2.1: Operationalization of Study Variables

Dimensions and Indicators	Reference
Dimension 5: Green Empowerment and Participation (GEP)	
21. My company uses green whistle-blowing and help-lines.	
22. In my company, employees take part in problem solving regarding environmental problems.	Tang et al. (2018)
23. My company offers forums for employees to improve environmental behavior.	
24. The company involves employees in formulating environmental strategy.	Opatha & Arulrajah (2014)
25. Our company uses various formal and informal communication ways to develop green values.	
Sustainable Performance	
Dimension 1: Economic Performance (ECP)	
1. Reducing the cost of purchased materials.	
2. Reducing the cost of energy consumption.	
3. Reducing the fees for waste treatment.	Zhu et al. (2008)
4. Reducing the fees for waste discharge.	
5. Reducing the fines for environmental accidents.	

Table 2.1: Operationalization of Study Variables

Dimensions and Indicators	Reference
Dimension 2: Operational Performance (OPP)	
6. Enhancing the company's situation in the market.	
7. Designing/developing superior products.	
8. Dropping all kinds of waste.	Abdullah et al. (2015)
9. Enhancing the marketing of products in global markets.	
10. Improving product quality.	
Dimension 3: Social Performance (SOP)	
11. Improving health and safety of employees.	
12. Improving health and safety of community.	De Giovanni (2012)
13. Improving overall stakeholder welfare.	
14. Reducing harmful effect of processes on local community.	Abdullah et al. (2015)
15. Development of economic activities in the community.	

Table 2.1: Operationalization of Study Variables

Dimensions and Indicators	Reference
Dimension 4: Environmental Performance (ENP)	
16. Improving compliance with environmental standards.	
17. Reducing air emissions.	Zhu et al. (2008)
18. Reducing energy consumption.	
19. Reducing material usage.	Paulraj (2011)
20. Reducing consumption of hazardous materials.	

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This chapter is dedicated to discussing the research methodology. More specifically, the research approach is selected, the population and sample of the study are identified, the data collection method is chosen, the research instrument is developed, the statistical data analysis techniques are determined, and some ethical considerations are discussed.

3.2 Research Approach

As mentioned previously, the main purpose of this study is to investigate the potential impact of green human resource management practices on the sustainable performance of the Palestinian manufacturing companies.

Here, it is worth mentioning that three types of empirical research are usually carried out: (1) quantitative, (2) qualitative, and (3) mixed. The first type is normally carried out when theories are available and hypotheses are developed accordingly regarding the phenomena of interest. In this type of research, data are usually gathered through structured questionnaires. On the other hand, the second approach is selected when data are of exploratory nature. In this type of research, data are generally collected from answers of interviewees, from responses to open-ended questionnaires, through observations, or from secondary sources. Finally, mixed studies employ both quantitative and qualitative research approaches to answer the questions of the study (Sekaran and Bougie, 2016).

In this study, the quantitative-hypotheses testing research approach is selected. More specifically, the primary data on the various variables of the study (i.e. green human resource management practices and sustainable performance) are collected from a sample of HR managers working at Palestinian manufacturing companies via a fully-structured questionnaire that is electronically-distributed.

3.3 Population and Sample

The population of a given study is defined as the entire set of persons, objects, events, and so on that the researcher is interested in studying. On the other hand, the sample of the study is a subset of the total population (Sekaran and Bougie, 2016).

Since the main purpose of this study is to investigate the potential impact of green human resource management practices on the sustainable performance of the Palestinian manufacturing companies, the population of the study consists of all HR managers in the Palestinian manufacturing companies. However, primary data are collected from a convenience sample of the entire population. As the name indicates, this type of sampling implies collecting primary data from members of the population who are conveniently available to provide the data (Sekaran and Bougie, 2016).

As explained later on, the multiple linear regression analysis technique is used to investigate the effect of each of the five dimensions of green human resource management practices on the sustainable performance of Palestinian manufacturing companies.

To carry out multiple linear regression analysis, the sample size should be several times (preferably ten times) as large as the number of variables in the study (Sekaran and Bougie, 2016). In the context of this study, there are five independent variables (five dimensions of green human resource management practices) and one dependent variable

(i.e. sustainable performance). Thus, there are six variables in this study. Accordingly, the minimum sample size of 60 observations (10 times 6 variables in the study) would be required to carry out the multiple regression analysis.

3.4 Data Collection Method

Having reviewed the related literature, developed the conceptual model of the study, determined the population of the study, and calculated the minimum required sample size, it is time to collect the primary data regarding each variable of the study (i.e. green human resource management practices and sustainable performance).

In this regard, there are three main data collection methods: (1) observation, (2) interview, and (3) questionnaire. According to Sekaran and Bougie (2016), questionnaire has three main types: (1) personally-administered questionnaire, (2) mail questionnaire, and (3) electronic questionnaire.

In this study, the questionnaire is utilized as an instrument of data collection since it is more efficient, in terms of cost, time and effort, than the other methods of data collection. Specifically, an electronic questionnaire is directed to a convenience sample of 200 HR managers at the Palestinian manufacturing companies, using Google Form.

The questionnaire is decided to be electronically distributed due to several reasons: (1) it is much easier to manage, (2) it can reach anywhere, (3) it is inexpensive, (4) its distribution is fast, and (5) respondents can answer at their own convenience.

A total of 144 questionnaires are received within a period of nearly 6 weeks, from 01/08/2021 until 14/09/2021 with a response rate of 72%, which is very good since the return rates of electronic questionnaires is typically low and a 30% rate is considered quite acceptable (Sekaran and Bougie, 2016).

All received responses are found to be valid for descriptive and inferential statistical data analysis. Finally, it is worth reminding that the number of the received responses (i.e. 144 observations) exceeds the previously determined minimum sample size of 60 observations that are required to carry out multiple linear regression analysis.

3.5 Development of Research Instrument

In order to collect the primary data, a fully-structured questionnaire is developed. The questionnaire includes a cover page that states the main objective of the study and assures the confidentiality of data. The three parts of the questionnaire are organized as follows:

Part One

This part is developed to collect data on companies' characteristics. it consists of the following seven items:

1. Company age: (4 categories).
2. Company location: (3 categories).
3. Ownership structure: (3 categories).
4. Company sector: (6 categories).
5. Total number of employees: (4 categories).
6. Having ISO certificate: (2 categories).
7. Having EFQM certificate: (2 categories).

Part Two

This part is developed to collect data on respondents' perceived level of implementing green human resource management practices in the Palestinian manufacturing companies. It consists of 25 items that are equally distributed to the following 5 dimensions:

1. Green recruitment and selection: (5 items).
2. Green training and development: (5 items).
3. Green performance management and appraisal: (5 items).
4. Green reward and compensation: (5 items).
5. Green empowerment and participation: (5 items).

Part Three

This part is developed to collect data on respondents' perceived level of sustainable performance of the Palestinian manufacturing companies. It consists of 20 items that are equally distributed to the following 4 dimensions:

1. Economic performance: (5 items).
2. Operational performance: (5 items).
3. Social performance: (5 items).
4. Environmental performance: (5 items).

A five-point Likert scale, ranging from a minimum of 1 "Strongly Disagree" to a maximum of 5 "Strongly Agree", is used in the last two parts of the questionnaire. All items that are used to measure the different constructs in these two parts are positively phrased. Thus, no items need to be reversed. Higher scores on the scale (i.e. moving from

1 to 5) indicate higher levels of practicing green human resource management and better sustainable performance.

The levels of green human resource management practices and sustainable performance in the Palestinian manufacturing companies are qualitatively evaluated according to the scale shown in Table 3.1.

Table 3.1: Qualitative Evaluation of Operational Variables

Mean Value	Qualitative Evaluation
1.00–1.80	Very low
1.80–2.60	Low
2.60–3.40	Moderate
3.40–4.20	High
4.20–5.00	Very high

3.6 Reliability of Research Instrument

The reliability of a measuring instrument reflects the degree to which it is free from bias and therefore it is consistent over time and across the different instrument items (Sekaran and Bougie, 2016).

Normally, the coefficient of Cronbach Alpha is used to test the reliability of research variables. Generally, Cronbach Alpha coefficients that are below 0.60, in the 0.70 range, and above 0.80 are considered poor, acceptable and good, respectively. In short, higher Cronbach Alpha coefficients indicate higher levels of internal consistency of a scale, and therefore the better the measurement instrument (Sekaran and Bougie, 2016).

The Cronbach Alpha coefficients for the different constructs of the study are shown in Table 3.2. The results indicate that the Cronbach Alpha coefficients for the different

constructs are all well above 0.80. Therefore, it is concluded that the reliability of the research instrument is good (Sekaran and Bougie, 2016).

Table 3.2: Cronbach Alpha Coefficients

Construct	# of Items	Cronbach Alpha
Green human resource management practices	**25**	**0.984**
Green recruitment and selection	5	0.858
Green training and development	5	0.921
Green performance management and appraisal	5	0.938
Green reward and compensation	5	0.949
Green empowerment and participation	5	0.954
Sustainable performance	**20**	**0.954**
Economic performance	5	0.856
Operational performance	5	0.854
Social performance	5	0.882
Environmental performance	5	0.892

3.7 Statistical Data Analysis Techniques

Two types of statistical analysis techniques are used in this study. They are descriptive statistical analysis techniques and inferential statistical analysis techniques. More specifically, descriptive statistical analysis techniques are employed to analyze, in a descriptive way, companies' characteristics. In addition, these techniques are used to assess the level of practicing green human resource management as well as the level of sustainable performance in the Palestinian manufacturing companies.

On the other hand, the inferential statistical analysis techniques are used to test the five hypotheses of the study that are previously developed. More specifically, the multiple

linear regression analysis technique is used to test the potential effect of each of the five dimensions of green human resource management practices on the sustainable performance of the Palestinian manufacturing companies. In this context, it is worth clarifying that this technique is selected since we are interested in explaining the variation in one dependent variable (i.e. sustainable performance) where there are many independent variables (i.e. five dimensions of green human resource management practices).

Finally, it is worth noting that the SPSS is used to carry out descriptive as well as inferential statistical data analysis.

3.8 Ethical Considerations

Four ethical considerations regarding this study are worth discussing. First, respondents were informed of the main objective of the study at the beginning of the questionnaire. Second, respondents were told that the responses they provide are confidential and are only used for scientific purposes. Third, no intentional misrepresentation of data is made by the researcher. Finally, the researcher affirms no conflict of interest, what so ever, with any other party.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Overview

This chapter is devoted to presenting data analysis and discussion. More specifically, it consists of descriptive statistical analysis as well as inferential statistical analysis.

4.2 Descriptive Statistical Analysis

This section presents descriptive statistical analysis. More specifically, companies' characteristics are analyzed using frequencies and percentages. In addition, the levels of companies' green human resource management practices and sustainable performance are analyzed using means and standard deviations.

4.2.1 Companies' Characteristics

The descriptive statistics of companies' characteristics are shown in Table 4.1. The results indicate that 43.1% of companies are less than 10 years old, 26.4% are 10-15 years old, 8.3% are 16-20 years old, and 22.2% are more than 20 years old. With respect to location, 36.1% of companies are located in the north, 50.0% are located in the middle, and 13.9% are located in the south. Regarding ownership structure, 43.1% of companies are sole proprietorships, 45.8% are private shareholding companies, and 11.1% are public shareholding companies. Moreover, 34.7% of companies manufacture food and beverage, 6.9% manufacture textiles, clothes, and shoes, 15.3% manufacture pharmaceuticals and cosmetics, 16.7% manufacture furniture, 13.9% manufacture chemicals and detergents, and 12.5% carry out mining and quarrying activities. Finally, 62.5% and 55.6% of companies have ISO and EFQM certificates, respectively.

Table 4.1: Companies' Characteristics

Variable	Category	Frequency	Percentage (%)
Company age	Less than 10	62	43.1
	10-15	38	26.4
	16-20	12	8.3
	More than 20	32	22.2
Company location	North	52	36.1
	Middle	72	50.0
	South	20	13.9
Ownership structure	Sole proprietorship	62	43.1
	Private shareholding	66	45.8
	Public shareholding	16	11.1
Company sector	Food & beverage	50	34.7
	Textiles, clothes, & shoes	10	6.9
	Pharmaceuticals & cosmetics	22	15.3
	Furniture	24	16.7
	Chemicals & detergents	20	13.9
	Mining & quarrying	18	12.5
Number of employees	Less than 20	66	45.8
	20-50	40	27.8
	51-100	16	11.1
	More than 100	22	15.3
ISO certificate	Yes	90	62.5
	No	54	37.5
EFQM certificate	Yes	80	55.6
	No	64	44.4

4.2.2 Level of Green Human Resource Management Practices

This section analyzes, in a descriptive way, respondents' perceived level of implementing green human resource management practices by Palestinian manufacturing companies.

Dimension 1: Green Recruitment and Selection

The descriptive statistics of green recruitment and selection in the Palestinian manufacturing companies are shown in Table 4.2. The results indicate that this dimension consists of five items. When looking at each of the five items making up this dimension, it is clear that GRS1 (Using paperless recruitment and selection process) has the highest mean value whereas GRS5 (Selecting applicants who have environmental awareness) has the lowest mean value. The overall mean value of this dimension is 3.41 out of a possible maximum of 5, with a high qualitative level.

Table 4.2: Descriptive Statistics of Green Recruitment and Selection

Item	Mean Value	Standard Deviation	Qualitative Level
GRS1	3.65	1.103	High
GRS2	3.47	1.175	High
GRS3	3.28	1.302	Moderate
GRS4	3.40	1.431	Moderate
GRS5	3.26	1.311	Moderate
Total	**3.41**	**1.013**	**High**

Dimension 2: Green Training and Development

The descriptive statistics of green training and development in the Palestinian manufacturing companies are shown in Table 4.3. The results indicate that this dimension consists of five items. When looking at each of the five items making up this dimension,

it is clear that GTD5 (All training materials are available online for employees to reduce paper cost) has the highest mean value whereas GTD4 (Providing environmental training to employees to increase environmental awareness) has the lowest mean value. The overall mean value of this dimension is 3.35 out of a possible maximum of 5, with a moderate qualitative level.

Table 4.3: Descriptive Statistics of Green Training and Development

Item	Mean Value	Standard Deviation	Qualitative Level
GTD1	3.32	1.351	Moderate
GTD2	3.39	1.359	Moderate
GTD3	3.33	1.245	Moderate
GTD4	3.26	1.278	Moderate
GTD5	3.44	1.331	High
Total	**3.35**	**1.145**	**Moderate**

Dimension 3: Green Performance Management and Appraisal

The descriptive statistics of green performance management and appraisal in the Palestinian manufacturing companies are shown in Table 4.4. The results indicate that this dimension consists of five items. When looking at each of the five items making up this dimension, it is clear that GPMA5 (Providing regular feedback to employees to improve their environmental performance) has the highest mean value whereas GPMA4 (keeping track of non- compliance or not meeting green objectives) has the lowest mean value. The overall mean value of this dimension is 3.25 out of a possible maximum of 5, with a moderate qualitative level.

Table 4.4: Descriptive Statistics of Green Performance Management and Appraisal

Item	Mean Value	Standard Deviation	Qualitative Level
GPMA1	3.28	1.355	Moderate
GPMA2	3.24	1.327	Moderate
GPMA3	3.25	1.297	Moderate
GPMA4	3.13	1.404	Moderate
GPMA5	3.38	1.368	Moderate
Total	**3.25**	**1.210**	**Moderate**

Dimension 4: Green Reward and Compensation

The descriptive statistics of green reward and compensation in the Palestinian manufacturing companies are shown in Table 4.5. The results indicate that this dimension consists of five items. When looking at each of the five items making up this dimension, it is clear that GRC4 (Rewarding employees for green skills acquisition) has the highest mean value whereas GRC2 (Providing non-monetary rewards for green achievements) has the lowest mean value. The overall mean value of this dimension is 3.29 out of a possible maximum of 5, with a moderate qualitative level.

Table 4.5: Descriptive Statistics of Green Reward and Compensation

Item	Mean Value	Standard Deviation	Qualitative Level
GRC1	3.22	1.376	Moderate
GRC2	3.14	1.367	Moderate
GRC3	3.33	1.322	Moderate
GRC4	3.42	1.422	High
GRC5	3.36	1.325	Moderate
Total	**3.29**	**1.243**	**Moderate**

Dimension 5: Green Empowerment and Participation

The descriptive statistics of green empowerment and participation in the Palestinian manufacturing companies are shown in Table 4.6. The results indicate that this dimension consists of five items. When looking at each of the five items making up this dimension, it is clear that GEP2 (Employees take part in problem solving regarding environmental problems) has the highest mean value whereas GEP5 (Using various formal and informal communication ways to develop green values) has the lowest mean value. The overall mean value of this dimension is 3.30 out of a possible maximum of 5, with a moderate qualitative level.

Table 4.6: Descriptive Statistics of Green Empowerment and Participation

Item	Mean Value	Standard Deviation	Qualitative Level
GEP1	3.31	1.349	Moderate
GEP2	3.38	1.368	Moderate
GEP3	3.32	1.351	Moderate
GEP4	3.29	1.399	Moderate
GEP5	3.19	1.263	Moderate
Total	**3.30**	**1.238**	**Moderate**

Summary of Green Human Resource Management Practices

The descriptive statistics of all dimensions of green human resource management practices in the Palestinian manufacturing companies are summarized in Table 4.7. The results indicate that the overall score of green human resource management practices is 3.32 out of a possible maximum of 5, with a moderate qualitative level.

The above conclusion confirms the conclusion of Arqawi et al. (2019) who also found that green human resource management practices are applied by the Palestinian

manufacturing companies at a moderate level with mean value of 3.07 on a five-point scale. This conclusion is not surprising because Palestinian manufacturing companies are still at an early stage of implementing environmental standards, particularly green human resource management practices (Masri and Jaaron, 2017).

In detail, all dimensions of green human resource management practices, with the exception of one, have moderate qualitative levels with the dimension of green recruitment and selection being the most practiced dimension among the five dimensions, followed by green training and development and green empowerment and participation, respectively. On the other hand, the two dimensions of green performance management and appraisal and green reward and compensation are the least practiced dimensions among all.

Table 4.7: Descriptive Statistics of Green Human Resource Management Practices

Dimension	Mean Value	Qualitative Level
Green recruitment and selection	3.41	High
Green training and development	3.35	Moderate
Green performance management and appraisal	3.25	Moderate
Green reward and compensation	3.29	Moderate
Green empowerment and participation	3.30	Moderate
Total	**3.32**	**Moderate**

4.2.3 Level of Sustainable Performance

This section analyzes, in a descriptive way, respondents' perceived level of sustainable performance (i.e. economic, operational, social, and environmental performance) of the Palestinian manufacturing companies.

Dimension 1: Economic Performance

The descriptive statistics of economic performance of the Palestinian manufacturing companies are shown in Table 4.8. The results indicate that this dimension consists of five items. When looking at each of the five items making up this dimension, it is clear that ECP4 (Reducing the fees for waste discharge) has the highest mean value whereas ECP1 (Reducing the cost of purchased materials) has the lowest mean value. The overall mean value of this dimension is 0.00 out of a possible maximum of 5, with a high qualitative level.

Table 4.8: Descriptive Statistics of Economic Performance

Item	Mean Value	Standard Deviation	Qualitative Level
ECP1	3.57	0.917	High
ECP2	3.78	0.953	High
ECP3	3.72	0.923	High
ECP4	3.82	1.012	High
ECP5	3.58	1.135	High
Total	**3.69**	**0.789**	**High**

Dimension 2: Operational Performance

The descriptive statistics of operational performance of the Palestinian manufacturing companies are shown in Table 4.9. The results indicate that this dimension consists of five items. When looking at each of the five items making up this dimension, it is clear that OPP5 (Improving product quality) has the highest mean value whereas OPP1 (Enhancing the company's situation in the market) and OPP4 (Enhancing the marketing of products in global markets) have the lowest mean values. The overall mean value of this dimension is 3.92 out of a possible maximum of 5, with a high qualitative level.

Table 4.9: Descriptive Statistics of Operational Performance

Item	Mean Value	Standard Deviation	Qualitative Level
OPP1	3.87	1.087	High
OPP2	3.90	1.023	High
OPP3	3.89	0.987	High
OPP4	3.87	0.887	High
OPP5	4.06	0.820	High
Total	**3.92**	**0.767**	**High**

Dimension 3: Social Performance

The descriptive statistics of social performance of the Palestinian manufacturing companies are shown in Table 4.10. The results indicate that this dimension consists of five items. When looking at each of the five items making up this dimension, it is clear that SOP1 (Improving health and safety of employees) and SOP2 (Improving health and safety of community) have the highest mean values whereas SOP4 (Reducing harmful effect of processes on local community) has the lowest mean value. The overall mean value of this dimension is 3.85 out of a possible maximum of 5, with a high qualitative level.

Table 4.10: Descriptive Statistics of Social Performance

Item	Mean Value	Standard Deviation	Qualitative Level
SOP1	3.90	1.009	High
SOP2	3.90	0.995	High
SOP3	3.85	1.016	High
SOP4	3.76	1.028	High
SOP5	3.85	1.002	High
Total	**3.85**	**0.832**	**High**

Dimension 4: Environmental Performance

The descriptive statistics of environmental performance of the Palestinian manufacturing companies are shown in Table 4.11. The results indicate that this dimension consists of five items. When looking at each of the five items making up this dimension, it is clear that ENP3 (Reducing energy consumption) has the highest mean value whereas ENP4 (Reducing material usage) has the lowest mean value. The overall mean value of this dimension is 3.75 out of a possible maximum of 5, with a high qualitative level.

Table 4.11: Descriptive Statistics of Environmental Performance

Item	Mean Value	Standard Deviation	Qualitative Level
ENP1	3.71	1.131	High
ENP2	3.75	1.004	High
ENP3	3.92	0.931	High
ENP4	3.67	1.021	High
ENP5	3.69	1.043	High
Total	**3.75**	**0.859**	**High**

Summary of Sustainable Performance

The descriptive statistics of all dimensions of sustainable performance of the Palestinian manufacturing companies are summarized in Table 4.12. The results indicate that the overall score of sustainable performance is 3.80 out of a possible maximum of 5, with a high qualitative level. In detail, each of the four dimensions of sustainable performance has a high qualitative level with operational performance having the highest level of performance among the four dimensions, followed by social performance. On the other hand, economic performance and environmental performance are the two dimensions with the lowest levels of performance among all dimensions.

Table 4.12: Descriptive Statistics of Sustainable Performance

Dimension	Mean Value	Qualitative Level
Economic performance	3.69	High
Operational performance	3.92	High
Social performance	3.85	High
Environmental performance	3.75	High
Total	**3.80**	**High**

4.3 Inferential Statistical Analysis

This section presents inferential statistical analysis. More specifically, the correlation matrix is analyzed and the study hypotheses are formally tested using the multiple linear regression analysis technique.

4.3.1 Correlation Matrix

The Pearson correlation coefficient indicates the direction and strength of linear association between two variables that are measured at interval or ratio scales. This coefficient varies between the two extreme values of -1 (perfect negative correlation) and +1 (perfect positive correlation).

The correlation matrix between the dependent variable (i.e. sustainable performance) and the five independent variables (i.e. five dimensions of green human resource management practices) is shown in Table 4.13. The correlation matrix indicates that each of the five dimensions of green human resource management practices is positively correlated with sustainable performance. In addition, the correlation matrix shows that all of the Pearson correlation coefficients are statistically significant at the 0.05 level (Sekaran and Bougie, 2016).

Table 4.13: Correlation Matrix

	1	2	3	4	5	6
1	1					
2	0.923*	1				
3	0.888*	0.923*	1			
4	0.892*	0.913*	0.935*	1		
5	0.872*	0.907*	0.904*	0.934*	1	
6	0.514*	0.505*	0.500*	0.555*	0.526*	1

1 = green recruitment & selection; 2 = green training & development

3 = green performance management & appraisal; 4 = green reward & compensation

5 = green empowerment & participation; 6 = sustainable performance

* Correlation is significant at the 0.05 level.

4.3.2 Hypotheses Testing

In this section, the five hypotheses already developed are formally tested. Recall that these hypotheses are as follows:

H_1: Green recruitment and selection positively affect the sustainable performance of the Palestinian manufacturing companies.

H_2: Green training and development positively affect the sustainable performance of the Palestinian manufacturing companies.

H_3: Green performance management and appraisal positively affect the sustainable performance of the Palestinian manufacturing companies.

H_4: Green reward and compensation positively affect the sustainable performance of the Palestinian manufacturing companies.

H_5: Green empowerment and participation positively affect the sustainable performance of the Palestinian manufacturing companies.

To test the above hypotheses, the multiple linear regression analysis technique is used. This technique is specifically selected since we are interested in explaining the variance in one dependent variable (i.e. sustainable performance) using more than one independent variable (i.e. five dimensions of green human resource management practices).

The multiple linear regression model is run by regressing the five dimensions of green human resource management practices on the sustainable performance of the Palestinian manufacturing companies.

Overall Significance of Regression Model

The overall significance of the estimated linear regression model is assessed using the ANOVA as shown in Table 4.14. The results indicate that the F-statistic of 12.742 is significant at the 0.05 level. Therefore, it is concluded that the overall multiple linear regression model is significant.

Table 4.14: ANOVA for Testing Overall Significance of Regression Model

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-Statistic	Sig.
Regression	23.977	5	4.795	12.742	0.000*
Errors	51.937	138	0.376		
Total	75.913	143			

* Significant at the 0.05 level.

Coefficient of Determination (R^2)

The coefficient of determination (R^2) is used to assess how well the regression model fits data. It is the percentage of the variation in the dependent variable that is explained by all of the independent variables included in the regression model. The extreme R^2 value of 1 means that the independent variables totally explain the variation in the dependent variable (i.e. the regression model fits the data perfectly). In contrast, the extreme R^2 value of 0 indicates that no variation in the dependent variable is explained by the independent variables included in the regression model.

The coefficient of determination of the estimated multiple linear regression model is shown in Table 4.15. The results indicate that the adjusted R^2 for the estimated model is 0.291. This indicates that approximately 29% of the variation in sustainable performance of the Palestinian manufacturing companies is explained by the variation in the five dimensions of green human resource management practices that are included in the regression model. On the other hand, 71% of the variation in sustainable performance of these companies could be explained by some other significant variables that are not included in the regression model.

Table 4.15: Coefficient of Determination of Regression Model

R	R Square	Adjusted R Square	Std. Error of Estimate
0.562	0.316	0.291	0.61348

Individual Regression Coefficients

The output of regressing the five dimensions of green human resource management practices on the sustainable performance of the Palestinian manufacturing companies is shown in Table 4.16.

Table 4.16: Multiple Linear Regression Results

Constant and Variables	Coefficient	T-Value	Sig.
Constant	2.651	14.295	0.000
Green recruitment & selection	0.115	0.823	0.412
Green training & development	-0.035	-0.231	0.817
Green performance management & appraisal	-0.126	-0.917	0.361
Green reward & compensation	0.338	2.294	0.023*
Green empowerment & participation	0.053	0.420	0.675

* Significant at the 0.05 level.

The results of Table 4.15 indicate that the dimension of green recruitment and selection has a coefficient of 0.115. However, this coefficient is not significant at the 0.05 level (p-value = 0.412). This means that this dimension of green human resource management practices has no significant effect on the sustainable performance of the Palestinian manufacturing companies. To say it differently, practicing green recruitment and selection, as a dimension of green human resource management, does not necessarily lead to enhanced sustainable performance. Therefore, the first hypothesis, stating that green recruitment and selection positively affect the sustainable performance of the Palestinian manufacturing companies, is rejected.

The above conclusion is in line with the conclusion of Yong et al. (2020) who also confirmed that green selection has no significant impact on companies' sustainable performance.

Similarly, the results of Table 4.15 indicate indicate that the dimension of green training and development has a coefficient of -0.035. However, this coefficient is not significant at the 0.05 level (p-value = 0.817). This means that this dimension of green human

resource management practices has no significant effect on the sustainable performance of the Palestinian manufacturing companies. To say it differently, practicing green training and development, as a dimension of green human resource management, does not necessarily lead to enhanced sustainable performance. Therefore, the second hypothesis, stating that green training and development positively affect the sustainable performance of the Palestinian manufacturing companies, is rejected.

This conclusion is inconsistent with the conclusion of Yong et al. (2020) who found that green training has a significant positive impact on the sustainable performance of companies.

Likewise, the results of Table 4.15 indicate that the dimension of green performance management and appraisal has a coefficient of -0.126. However, this coefficient is not significant at the 0.05 level (p-value = 0.361). This means that this dimension of green human resource management practices has no significant effect on the sustainable performance of the Palestinian manufacturing companies. To say it differently, practicing green performance management and appraisal, as a dimension of green human resource management, does not necessarily lead to enhanced sustainable performance. Therefore, the third hypothesis, stating that green performance management and appraisal positively affect the sustainable performance of the Palestinian manufacturing companies, is rejected.

This conclusion is consistent with the conclusion of Yong et al. (2020) who also confirmed that green performance appraisal has no significant impact on companies' sustainable performance.

In the same way, the results of Table 4.15 indicate that the dimension of green reward and compensation has a coefficient of 0.338. This coefficient is significant at the 0.05 level (p-value = 0.023). The positive coefficient sign means that this dimension of green human resource management practices has a significant positive effect on the sustainable performance of the Palestinian manufacturing companies. To say it differently, practicing green reward and compensation, as a dimension of green human resource management, leads to enhanced sustainable performance. Therefore, the fourth hypothesis, stating that green reward and compensation positively affect the sustainable performance of the Palestinian manufacturing companies, is accepted.

This conclusion is exactly the same as that of Malik et al. (2020) who confirmed that green compensation has a significant positive effect on the sustainable performance of manufacturing companies. It is also consistent with the result of Jirawuttinunt and Limsuwan (2019) who concluded that green compensation positively affects the performance of firms. Finally, this conclusion agrees with the conclusion of Zaid et al. (2018) who found that green compensation has a significant positive effect on the environmental, economic, and social performance of companies.

Finally, the results of Table 4.15 indicate that the dimension of green empowerment and participation has a coefficient of 0.053. However, this coefficient is not significant at the 0.05 level (p-value = 0.675). This means that this dimension of green human resource management practices has no significant effect on the sustainable performance of the Palestinian manufacturing companies. To say it differently, practicing green empowerment and participation, as a dimension of green human resource management, does not necessarily lead to enhanced sustainable performance. Therefore, the fifth

hypothesis, stating that green empowerment and participation positively affect the sustainable performance of the Palestinian manufacturing companies, is rejected.

This conclusion is consistent with the conclusion of AnuSingh and Shikha (2015) who confirmed that employee engagement has no significant effect on the sustainable performance of companies.

4.3.3 Summary of Hypotheses Testing

The results of hypotheses testing are summarized in Table 4.17. The results confirm that only one dimension (i.e. green reward and compensation) has a significant positive impact on the sustainable performance of the Palestinian manufacturing companies among the five dimensions of green human resource management practices.

Table 4.17: Summary of Hypotheses Testing

Hypothesis	Result
Green recruitment & selection → sustainable performance	Rejected
Green training & selection → sustainable performance	Rejected
Green performance management & appraisal → sustainable performance	Rejected
Green reward & compensation → sustainable performance	Accepted
Green empowerment & participation → sustainable performance	Rejected

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

This chapter summarizes the main conclusions of the study, provides the necessary recommendations, discusses some limitations to the study, and finally gives directions for future researchers.

5.2 Conclusions

The main conclusions of the study are summarized as follows:

1. The Palestinian manufacturing companies apply green human resource management practices at a moderate qualitative level, with a mean score of 3.32 on a five-point scale.
2. The Palestinian manufacturing companies apply all of the five dimensions of green human resource management practices at moderate qualitative levels with the dimension of green recruitment and selection being the most practiced dimension among the five dimensions, followed by green training and development and green empowerment and participation, respectively. On the other hand, the two dimensions of green performance management and appraisal and green reward and compensation are the least practiced dimensions among all.
3. The Palestinian manufacturing companies have a high qualitative level of sustainable performance, with a mean score of 3.80 on a five-point scale.
4. The Palestinian manufacturing companies have high qualitative levels in each of the four dimensions of sustainable performance with operational performance

having the highest level among the four dimensions, followed by social performance. On the other hand, economic performance and environmental performance are the two dimensions with the lowest levels of performance among all dimensions.

5. The results of the developed regression model, with adjusted R^2 of 0.291, confirm that green reward and compensation is the only dimension among the five dimensions of green human resource management practices that has a significant positive impact on the sustainable performance of the Palestinian manufacturing companies.

5.3 Recommendations

In light of the conclusions of the study, the following recommendations are provided:

1. Since the Palestinian manufacturing companies apply the dimension of green training and development to a moderate level, these companies are recommended to pay increasing attention to this dimension. To do this, companies should, among others, set green training as a priority, invest more in green training, and determine areas of green training in which employees need more training.

2. Since the Palestinian manufacturing companies apply the dimension of green performance management and appraisal to a moderate level, these companies are recommended to take more actions to improve this dimension. To do this, companies should, among other actions, set green targets, goals, and responsibilities for employees, communicate green goals among employees, use green performance indicators, keep track of non- compliance with green objectives, and provide regular feedback to employees to improve their environmental performance.

3. Since the Palestinian manufacturing companies apply the dimension of green reward and compensation at a moderate level, these companies are advised to deal with this dimension more seriously. This could be achieved by providing monetary and non-monetary rewards for green accomplishments, recognizing environmental performance publicly, rewarding employees for green skills acquisition, and appreciating green initiatives of employees, just to list a few actions.

4. Since the Palestinian manufacturing companies apply the dimension of green empowerment and participation at a moderate level, these companies are advised to devote increasing effort to enhance this dimension. Some of the recommended steps include using green whistle-blowing and help-lines, engaging employees in solving problems with respect to environmental issues, offering forums for employees to improve their environmental behavior, involving employees in the formulation of environmental strategies, and using various communication ways to develop green values.

5. Palestinian manufacturing companies are encouraged to assess their sustainable performance on a regular basis rather than just focusing on assessing financial performance.

6. Governmental bodies should provide incentives, mainly in the form of tax reductions, to manufacturing companies that apply green initiatives and strategies to encourage them "go green".

5.4 Limitations of Study

Despite the theoretical and practical importance of this study, it is not free from some limitations that are worth mentioning. First, the primary data used in the study are cross-

sectional in nature since they are gathered at a specific point of time. However, green human resource management practices may need long time to intervene and thus have an impact on sustainable performance. Second, the results of the study are solely based on the perceptions of HR managers regarding green human resource management practices and sustainable performance. Finally, the level of sustainable performance is assessed using subjective rather than objective measures.

5.5 Directions for Future Research

Some directions for future researchers are worth discussing. First, since the developed regression model has an adjusted R^2 value of 0.291, researchers are advised to use dimensions of green human resource management practices other than those used in this study to improve the explanatory power of the model. Second, researchers are encouraged to include mediating variables (e.g. management support and organizational culture) and moderating variables (e.g. participation in decision making and employee training). Third, researchers are directed to carry out similar studies using longitudinal rather than cross-sectional data. Finally, researchers are recommended to carry out similar studies using larger sample sizes and in other economic sectors (e.g. hospitality and health care sectors).

REFERENCES

Alhadid, A. and Abu-Rumman, A. (2014), "The impact of green innovation on organizational performance, environmental management behavior as a moderate variable: an analytical study on Nuqul Group in Jordan", *International Journal of Business and Management*, Vol. 9 No. 7, pp. 51-58.

Anusingh, L. and Shikha, G. (2015), "Impact of green human resource factors on environmental performance in manufacturing companies: an empirical evidence", *International Journal of Engineering and Management Sciences*, Vol. 6 No. 1, pp. 23-30.

Arqawi, S., Zaid, A., Jaaron, A. and Alhila, A. (2019), "Green human resource management practices among Palestinian manufacturing firms: an exploratory study", Journal of Resources Development and Management, Vol. 52, pp. 62-69.

Ashraf, F., Ashraf, I. and Anam, W. (2015), "Green HR for businesses", *International Journal of Academic Research in Business and Social Sciences*, Vol. 5 No. 8, pp. 149-156.

Ayuso, S., Rodriguez, M., Garcia-Castro, R. and Arino, M. (2014), "Maximizing stakeholders' interests: an empirical analysis of the stakeholder approach to corporate governance", *Business Society*, Vol. 53 No. 3, pp. 414-439.

Bhutto, S. and Aurangzeb, D. (2016), "Effects of green human resources management on firm performance: an empirical study on Pakistani firms", *European Journal of Business and Management*, Vol. 8 No. 16, pp. 119-125.

Bombiak, E. and Marciniuk-Kluska, A. (2018), “Green human resource management as a tool for the sustainable development of enterprises: Polish young company experience”, *Sustainability*, Vol. 10 No. 6, pp. 1739-1761.

Bombiak, E. and Marciniuk-Kluska., A. (2018), “Green human resource management as a tool for the sustainable development of enterprises: Polish young company experience”, *Sustainability*, Vol. 10 No. 6, pp. 1739.

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

Cherian, J. and Jacob, J. (2012), “A study of green HR practices and its effective implementation in the organization: a review”, *International Journal of Business and Management*, Vol. 7 No. 21, pp. 1-15.

De Giovanni, P. (2012), “Do internal and external environmental management contribute to the triple bottom line?” *International Journal of Operations and Production Management*, Vol. 32 No. 3, pp. 265-290.

Diabat, A., Khodaverdi, R. and Olfat, L. (2013), “An exploration of green supply chain practices and performances in an automotive industry”, *The International Journal of Advanced Manufacturing Technology*, Vol. 68 No. 1-4, pp. 949-961.

Dubois, C. and Dubois, D. (2012), “Strategic HRM as social design for environmental sustainability in organization”, *Human Resource Management*, Vol. 51 No. 6, pp. 799-826.

Faleye, O. and Trahan, E. (2011), "Labor-friendly corporate practices: is what is good for employees good for shareholders?" *Journal of Business Ethics*, Vol. 101 No. 1, pp. 1-27.

Florida, R. and Davison, D. (2001), "Gaining from green management: environmental management systems inside and outside the factory", *California Management Review*, Vol. 43 No. 3, pp. 64-8.

Gardberg, N. and Fombrun, C. (2006), "Corporate citizenship: creating intangible assets across institutional environments", *Academy of Management Review*, Vol. 31 No. 2, pp. 329-346.

Garza-Reyes, J., Yu, M., Kumar, V. and Upadhyay, A. (2018), "Total quality environmental management: adoption status in the Chinese manufacturing sector", *The Total Quality Management Journal*, Vol. 30 No. 1, pp. 2-19.

GIZ (2014), "Country report on the solid waste management in occupied Palestinian territories".

Gotschol, A., Giovanni, P. and Vinzi, V. (2014), "Is environmental management an economically sustainable business?", *Journal of Environmental Management*, Vol. 144, pp. 73-82.

Green, K., Zelbst, P., Meacham, J. and Bhadauria, V. (2012), "Green supply chain management practices: impact on performance", *Supply Chain Management: An International Journal*, Vol. 17 No. 3, pp. 290-305.

Grolleau, G., Mzoughi, N. and Pekovic, S. (2012), "Green not only for profit: an empirical examination of the effect of environmental-related standards on employees' recruitment", *Resource and Energy Economics*, Vol. 34, pp. 74-92.

Guerci, M., Longoni, A. and Luzzini, D. (2016), "Translating stakeholder pressures into environmental performance: the mediating role of green HRM practices", *International Journal of Human Resource Management*, Vol. 27 No. 2, pp. 262-289.

Haridas, P. and Sivasubramanaian, C. (2016), "Impact of green HRM practices on company performance with special reference to manufacturing industry", *International Journal of Engineering Technology Science and Research*, Vol. 3 No. 12, pp. 49-54.

Higgins, C. and Coffey, B. (2016), "Improving how sustainability reports drive change: a critical discourse analysis", *Journal of Cleaner Production*, Vol. 136, pp. 18-29.

Hosain, S. and Rahman, S. (2016), "Green human resource management: a theoretical overview", *Journal of Business and Management*, Vol. 8 No. 16, pp. 54-59.

Hussain, N., Rigoni, U. and Orij, R. (2018), "Corporate governance and sustainability performance: analysis of triple bottom line performance", *Journal of Business Ethics*, Vol. 149 No. 2, pp. 411-432.

Jabbour, C. (2013), "Environmental training in organizations: from a literature review to a framework for future research", *Resources, Conservation and Recycling*, Vol. 74, pp. 144-155.

Jabbour, C. and Santos, F. (2008), "The central role of human resource management in the search for sustainable organizations", *The International Journal of Human Resource Management,* Vol. 19 No. 12, pp. 2133-2154.

Jabbour, C., Jabbour, A., Teixeira, A. and Freitas, W. (2012), "Environmental development in Brazilian companies: the role of human resource management", *Environmental Development,* Vol. 3, pp. 137-147.

Jabbour, C., Jabbour, L., Govindan, K., Teixeira, A. and Freitas, W. (2013), "Environmental management and operational performance in automotive companies in Brazil: the role of human resource management and lean manufacturing", *Journal of Cleaner Production,* Vol. 47, pp. 129-140.

Jablonski, A. (2016), "Scalability of sustainable business models in hybrid organizations", *Sustainability,* Vol. 8 No. 3, pp. 194-230.

Jackson, S., Renwick, D., Jabbour, C. and Muller-Camen, M. (2011), "State-of-the-art and future directions for green human resource management: introduction to the special issue", *German Journal of Human Resource Management,* Vol. 25 No. 2, pp. 99-116.

Jackson, S., Schuler, R. and Jiang, K. (2014), "An aspirational framework for strategic human resource management", *Academy of Management Annals,* Vol. 8 No. 1, pp. 1-56.

Jirawuttinunt, S. and Limsuwan, K. (2019), "The effect of green human resource management on performance of certified ISO 14000 businesses in Thailand", *UTCC International Journal of Business and Economics,* Vol. 11 No. 1, pp. 168-185.

Kennedy, K. and Toffler, B. (2014), "Sustainable management and business sustainability: conceptual models", *International Journal of Business Strategy*, Vol. 4 No. 2, pp. 45-67.

Laosirihongthong, T., Adebanjo, D. and Choon Tan, K. (2013), "Green supply chain management practices and performance", *Industrial Management and Data Systems*, Vol. 113 No. 8, pp. 1088-1109.

Leonidou, L., Christodoulides, P., Kyrgidou, L. and Palihawadana, D. (2017), "Internal drivers and performance consequences of small company green business strategy: the moderating role of external forces", *Journal of Business Ethics*, Vol. 140 No. 3, pp. 585-606.

Li, S., Fetscherin, M., Alon, I., Lattemann, C. and Yeh, K. (2010), "Corporate social responsibility in emerging markets: the importance of the governance environment", *Management International Review*, Vol. 50, pp. 635-654.

Linnenluecke, M. and Griffiths, A. (2010), "Corporate sustainability and organizational culture", *Journal of World Business*, Vol. 45 No. 4, pp. 357-366.

Longoni, A., Luzzini, D. and Guerci, M. (2016), "Deploying environmental management across functions: the relationship between green human resource management and green supply chain management", *Journal of Business Ethics*, Vol. 151 No. 4, pp. 1-15.

Luzzini, D., Longoni, A. and Guerci, M. (2014), "Green HRM and SCM practices and their effects on environmental and economic performance", *Paper Presented at the Academy of Management Proceedings*.

Macke, J. and Genari, D. (2018), "Systematic literature review on sustainable human resource management", *Journal of Cleaner Production*, Vol. 208, pp. 806-15.

Malik, S., Cao, Y., Mughal, Y., Kundi, G., Mughal, M. and Ramayah, T. (2020), "Pathways towards sustainability in organizations: empirical evidence on the role of green human resource management practices and green intellectual capital", *Sustainability*, Vol. 12, pp. 1-24.

Mandip, G. (2012), "Green HRM: people management commitment to environmental sustainability", *Research Journal of Recent Sciences*, Vol. 1, pp. 244-252.

Masri H. and Jaaron A. (2017), "Assessing green human resources management practices in Palestinian manufacturing context: an empirical study", *Journal of Cleaner Production*, Vol. 143, pp. 474-489.

Moraes, S., Jabbour, C., Battistelle, R., Rodrigues, J., Renwick, D., Foropon, C. and Roubaud, D. (2018), "When knowledge management matters: interplay between green human resources and eco-efficiency in the financial service industry", *Journal of Knowledge Management*, Vol. 23 No. 9, pp. 1691-1707.

Mousa, S. and Othman, M. (2019), "The impact of green human resource management practices on sustainable performance in healthcare organizations: a conceptual framework", *Journal of Cleaner Production*, Vol. 243, pp. 9-25.

Mwita, K. (2019), "Conceptual review of green human resource management practices", *East African Journal of Social and Applied Sciences*, Vol. 1 No. 2, pp. 13-20.

Newman, A., Miao, Q., Hofman, P. and Zhu, C. (2016), "The impact of socially responsible human resource management on employees' organizational citizenship behavior: the mediating role of organizational identification", *The International Journal of Human Resource Management*, Vol. 27 No. 4, pp. 440-455.

Nijhawan, G. (2014), "Green HRM: a requirement for sustainable organization", *Indian Journal of Research*, Vol. 3 No. 10, pp. 69-70.

Norton, T., Zacher, H., Parker, S. and Ashkanasy, N. (2017), "Bridging the gap between green behavioral intentions and employee green behavior: the role of green psychological climate", *Journal of Organizational Behavior*, Vol. 38, pp. 996-1015.

Ong, J. and Riyanto, S. (2020), "Green Human Resource Management in Manufacturing Companies", *IOSR Journal of Business and Management*, Vol. 22 No. 4, pp. 48-57.

Opatha, H. and Arulrajah, A. (2014), "Green human resource management: simplified general reflections", *International Business Research*, Vol. 7, pp. 101-112.

Opatha, H. and Arulrajah, A. (2014), "Green human resource management: simplified general reflections", *International Business Research*, Vol. 7 No. 8, pp. 101-112.

Opatha, R. and Arulrajah, S. (2014), "Revolutionizing the business through sustainable business: conceptual review", *International Management Review*, Vol. 23 No. 8, pp. 56-69.

Palestinian Central Bureau of Statistics, Ministry of National Economy, Palestinian Federation of Industries (2020), *The Industrial Survey 2019: Main Results*, Ramallah, Palestine.

Peter, B. and Lanos, T. (2015), "Introduction to sustainable HR and implications in business sustainability", *International Journal of Management and Commerce*, Vol. 6 No. 2, pp. 45-78.

Pham, N., Hoang, H. and Phan, Q. (2019), "Green human resource management: a comprehensive review and future research agenda", *International Journal of Manpower*, Vol. 41 No. 7, pp. 845-878.

Phillips, L. (2007), "Go green to gain the edge over rivals", *People Management*, Vol. 23 No. 9.

Ren, S., Tang, G. and Jackson, S. (2018), "Green human resource management research in emergence: a review and future directions", *Asia Pacific Journal of Management*, Vol. 35, pp. 769-803.

Renwick, D., 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.

Roca-Puig, V. (2019), "The circular path of social sustainability: an empirical analysis", *Journal of Cleaner Production*, Vol. 212, pp. 916-924.

Roscoe, S., Subramanian, N., Jabbour, C. and Chong, T. (2019), "Green human resource management and the enablers of green organizational culture: enhancing a firm's environmental performance for sustainable development", *Business Strategy and the Environment*, Vol. 28 No. 5, pp. 737-749.

Selier, G. (2007), *Sustainability in manufacturing, recovery of resources in product and material cycles*, Springer: Berlin/Heidelberg, Germany.

Shah, M. (2019), "Green human resource management: development of a valid measurement scale", *Business Strategy Environment*, Vol. 28 No. 5, pp. 771-785.

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.

Sudin, S. (2011), "Strategic green HRM: a proposed model that supports corporate environmental citizenship", *International Conference on Sociality and Economics Development*, Vol.10, pp. 79-83.

Svensson, G., Ferro, C., Hogevold, N., Padin, C., Varela, J. and Sarstedt, M. (2018), "Framing the triple bottom line approach: direct and mediation effects between economic, social and environmental elements", *Journal of Cleaner Production*, Vol. 197, pp. 972-991.

Tang, G., Chen, Y., Jiang, Y., Paille, 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.

Uddin, M. and Islam, R. (2015), "Green HRM: goal attainment through environmental sustainability", *The Journal of Nepalese Business Studies*, Vol. 9 No. 1, pp. 13-19.

Unnikrishnan, S. and Hegde, D. (2007), "Environmental training and cleaner production in Indian industry: a micro-level study", *Resources Conservation and Recycling*, Vol. 50, pp. 427-441.1

Watson, K. and Kavid, T. (2014), "Green HR: an ideology or practice in possibility", *Journal of Business Sustainability*, Vol. 6 No. 2, pp. 129-39.

Wiernik, B., Dilchert, S. and Ones, D. (2016), "Age and employee green behaviors: a meta-analysis", *Frontiers in Psychology*, Vol. 7, pp. 1-15.

Wu, K., Tseng, M., Lim, M. and Chiu, A. (2019), "Causal sustainable resource management model using a hierarchical structure and linguistic preferences", *Journal of Cleaner Production*, Vol. 229, pp. 640-651.

Yong, J., Yusliza, M., Ramayah, T., Jabbour, C., 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. 2, pp. 1-17.

Yong, Y., Yusliza, M., Fawehinmi, O. (2019), "Green human resource management: a systematic literature review from 2007 to 2019", *Benchmarking International Journal*, Vol. 27, pp. 2005-2027.

Younis, H., Younis, H., Sundarakani, B., Sundarakani, B., Vel, P. and Vel, P. (2016), "The impact of implementing green supply chain management practices on corporate performance", *Competitiveness Review*, Vol. 26 No. 3, pp 216-245.

Yu, T., Lin, F., Kao, K., Chao, C. and Yu, T. (2019), “An innovative environmental citizen behavior model: recycling intention as climate change mitigation strategies”, *Journal of Environmental Management,* Vol. 247, pp. 499-508.

Yusliza, M., Norazmi, N., Jabbour, C., Fernando, Y., Fawehinmi, O. and Seles, B. (2019), “Top management commitment, corporate social responsibility and green human resource management: a Malaysian study”, *Benchmarking*, Vol. 26, pp. 2051-2078.

Yusliza, M., Yong, J., Tanveer, M., Ramayah, T., Faezah, J. and Muhammad, Z. (2020), “A structural model of the impact of green intellectual capital on sustainable performance”, *Journal of Cleaner Production*, Vol. 249.

Zaid, A. and Jaaron, A. (2020), “Green human resource management bundle practices and sustainable manufacturing performance: understanding potential relationships”, *International Journal of Scientific and Technology Research*, Vol. 9 No. 3, pp. 7125-7132.

Zaid, A., Jaaron, A. and Talib Bon, A. (2018), “The impact of green human resource management and green supply chain management practices on sustainable performance: an empirical study”, *Journal of Cleaner Production*, Vol. 204, pp. 965-979.

Zhu, Q., Sarkis, J. and Geng, Y. (2005), “Green supply chain management in China: pressures, practices and performance”, *International Journal of Operations and Production Management*, Vol. 25 No. 5, pp. 449-468.

Zhu, Q., Sarkis, J. and Lai, K. (2008), “Confirmation of a measurement model for green supply chain management practices implementation”, *International Journal of Production Economics*, Vol. 111, No. 2, pp. 261-273.

Zoogah, D. (2011), “The dynamics of Green HRM behaviors: a cognitive social information processing approach, *Zeitschrift fur Personalforschung*, Vol. 25 No. 2, pp. 117-139.

الملخص

إنّ تنامي الوعي بالقضايا البيئية بين أصحاب المصالح يخلق مزيداً من الضغوط على الشركات الصناعية لتبني الإستراتيجيات الخضراء بما في ذلك ممارسات إدارة الموارد البشرية الخضراء. وعليه، تهدف هذه الدراسة إلى تقييم العلاقة بين ممارسات إدارة الموارد البشرية الخضراء والأداء المستدام للشركات الصناعية الفلسطينية. ولتحقيق هذا الهدف، تم استخدام المنهج الكمي من خلال اختبار الفرضيات الكمية. وتم جمع البيانات الأولية باستخدام استبانة تم توزيعها إلكترونياً على عينة من (144) من مدراء الموارد البشرية العاملين في الشركات الصناعية.

وتتكون الاستبانة التي تم تطويرها من ثلاثة أجزاء: (1) خصائص الشركات، و(2) تطبيق ممارسات إدارة الموارد البشرية الخضراء، و(3) الأداء المستدام. وتم استخدام مقياس ليكرت المكون من خمس درجات، والذي يتراوح من "لا أوافق بشدة" إلى "أوافق بشدة"، في الجزأين الأخيرين من الاستبانة. وتم تحليل البيانات باستخدام الإحصاءات الوصفية وتحليل الانحدار الخطي المتعدد. وتم استخدام برنامج الرزم الإحصائية في العلوم الاجتماعية (SPSS) في تحليل البيانات.

وتشير نتائج الدراسة إلى أن الشركات الصناعية الفلسطينية تطبق ممارسات إدارة الموارد البشرية الخضراء بمستوى متوسط بوسط حسابي يبلغ (3.32) على مقياس مكون من خمس درجات. إضافة إلى ذلك، تظهر النتائج أن الأداء المستدام لهذه الشركات مرتفع بوسط حسابي يبلغ (3.80) على مقياس مكون من خمس درجات. وأخيراً، يؤكد تحليل الانحدار أن مجال المكافآت والتعويضات الخضراء هو المجال الوحيد من بين المجالات الخمسة لممارسات إدارة الموارد البشرية الخضراء الذي له أثر إيجابي ذو دلالة إحصائية على الأداء المستدام للشركات الصناعية الفلسطينية.

وفي ضوء نتائج الدراسة، يوصي الباحث الشركات الصناعية الفلسطينية بإيلاء مزيد من الاهتمام لمجالات التدريب والتطوير الأخضر، وإدارة وتقييم الأداء الأخضر، والمكافآت والتعويضات الخضراء، والتمكين والمشاركة الخضراء.