Master Thesis Project Report

Sustainable Competitive Advantage through Green Human Resource Management

Aalborg University
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Synopsis

This master thesis evolves around obtaining sustainable competitive advantage through Green HRM. The master dissertation has been realised by two students studing M.Sc. in Management in the Building Industry at Aalborg University.

The purpose of the dissertation is to examine to what degree people in the Danish building sector are familiar with the concept of Green HRM and to analyse the influence of Green HRM practices on environmental sustainability and on the achievement of sustainable competitive advantage.

The primary data of this study were gathered through online questionnaire, where 181 employees from the Danish building sector were targeted and 31 of them participated in the questionnaire.

The data from the questionnaire are analysed using descriptive and inferential analyses with the help of the statistical tool SPSS. The strengths, weaknesses, opportunities and threats of Green HRM in the Danish building sector are also taken into consideration by conducting a SWOT analysis based on the outcome of the online questionnaire and the authors' own interpration. Last, in order to determine whether Green HRM can be a source of sustainable competitive advantage, a VRIO analysis is carried out using the resources and capabilities found through the SWOT analysis.

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Preface

The master thesis is completed during the fourth semester of the studies in MSc Management in the Building Industry programme offered by Aalborg University of the Civil Engineering department. The thesis was prepared during the period - 03.09.2018 to 10.01.2019. This master thesis is carried out by two students who have collaborated to deliver a thesis in accordance with the academic requirements of Aalborg University. The students have gained experience, knowledge and skills during the whole period of their Master studies at Aalborg University. The thesis was prepared under the supervision of Søren Munch Lindhard.

The theme of the master thesis named *"Sustainable Competitive Advantage through Green Human Resources Management"* is generated by the authors of the report after the approval from their supervisor. The selection of the topic is made after research of several scientific papers, journals and books regarding Green Human Resource Management and competitive advantage. Therefore, the focus of the authors was established on the above-mentioned topic which initiated in-depth investigation of the concept of Green Human Resource Management and competitive advantage in the construction industry.

The report is focused on the investigation of whether sustainable competitive advantage can be achieved through Green Human Resource Management by companies in the Danish building sector. The main objective is to argue that the human capital of companies represents their true competitive advantage when Human Resource Management is aligned with Environmental management. Human resource practices are taken in consideration for the development of Green Human Resource Management as well as the role of Human Resources Manager and leaders.

Finally, for the execution of the master thesis, the authors conducted a questionnaire with construction targeted at companies in the Danish building industry. Therefore, the questionnaire indicated whether Green Human Resource Management is currently applied in companies and based on the findings, whether companies can become more competitive on the market.

Acknowledgement

The authors of the thesis would like to express their appreciation of the support received from their supervisor, Søren Munch Lindhard. His guidance, encouragement and patience in correcting, reading and refining the authors' dissertation as well as his constructive feedback helped the authors to obtain new insights which improved the master thesis.

Last, the authors of the dissertation would like to register their gratitude to Aalborg University for the opportunity of working with the theme Sustainable Competitive Advantage through Green Human Resource Management.

Readers guide

The master thesis consists of six main chapters, numbered from 1 to 6, which are placed in chronological order following the sequence in which they were written. Each chapter includes a description of the presented topic. The references style and the sources are in accordance with the Harvard referring system. The authors of the thesis refer to themselves as "*the authors*". The conducted online questionnaire is referred to as "*the questionnaire*" and "*the survey*". The authors introduce the concept of GHRM practices together with their corresponding "*sub-practices*". For example, the green initiatives for HR practices includes sub-practices such as electronic filing, car sharing, online training, etc.

Some chapters of the thesis consist of sub-chapters. The sub-chapters are denoted with 1.1), 1.2), 1.3), etc. The sub-division of the sub-chapters is illustrated with 1.1.1), 1.2.1) ,1.3.1), etc. Also, some chapters are consisting of sub-sections of sub-divisions which are marked as 1.1.1.1), 1.2.1.1), 1.3.1.1), etc. See *Figure 1: Dissertation Structure*

1 Chapter

1.1 Sub-chapter

1.1.1 Sub- division

1.1.1.1 Sub-section of Sub-divisions

Figure 1: Dissertation Structure

The master thesis is structured using the IMRaD approach as a guide that is modified according to the purposes of the thesis (see *Figure 2:IMRaD diagram based on Improving the writing of research papers: IMRAD and beyond - Jianguo Wu*). The initials of IMRaD stand for Introduction: *What question was asked?,* Methods: *How was it studied?,* Results: *What was found?* and Discussion: *What do the findings mean?* (Ljubomir, 2003). Using the IMRaD structure the authors of the dissertation are able to explore the research focus of the thesis in a deliberate and effective way.

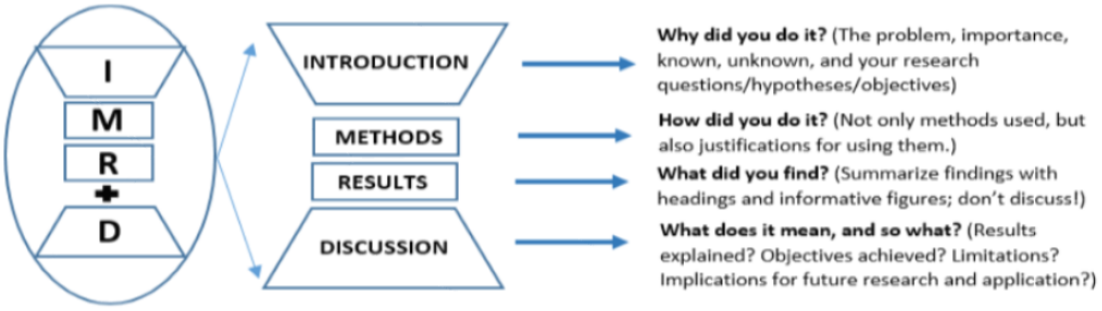

Figure 2:IMRaD diagram based on Improving the writing of research papers: IMRAD and beyond - Jianguo Wu

Chapter 1 introduces the project context of the dissertation as well as the scope of the study. It also includes objectives and delimitations of the master thesis together with the research methodology that is used for the realisation of the study

Chapter 2 provides a literature review concerning the concept and practices of Green HRM as well as the concept of sustainable competitive advantage and its alignment with Green HRM in the Danish building sector

Chapter 3 provides the research focus of the dissertation and the main research questions and sub-research questions that the authors of the dissertation aim to answer

Chapter 4 includes the findings and interpretation of the outcome of the online survey. In addition, the reliability and the importance of the gathered data are examined using SPSS tests

Chapter 5 presents detailed analyses of the questionnaire's output using additional SPSS tests. The analyses consist of descriptive and inferential analyses. A SWOT and a VRIO analyses are performed based on the descriptive analysis. The answers to the research questions are also included

Chapter 6 provides the conclusion together with the discussion and reflection of the thesis

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List of Abbreviations

A	Agree
AMO	Ability-Motivation-Opportunity
B2B	business to Business
B2C	Business to Costomer
BIM	Building Information Modelling
BREEAM	Building Research Establishment Environmental Assessment Method
COP	Conference of the Parties
CSR	Corporate social responsibility
D	Disagree
DFE	Design for Environment
DGNB	German Sustainable Building Council
EI	Employee Involvement
EM	Environmental Management
EMAS	Eco-Management and Audit Scheme
EMS	Environmental Management Systems
ES	Environmental Specialists
GHRM	Green Human Resource Management
GPM	Green performance management
GRI	Global Reporting Initiative
GRS	Green recruitment and selection
GT	Green training

HR	Human Resources
HRM	Human Resource Management
ISO	International Standards Organisation
LCA	Life Cycle Assesment
NRBV	Natural Resource Based View
PA	Performance Appraisal
PMS	Performance Management System
RBV	Resource Based View
SA	Stronlgy Agree
SD	Strongly Disagree
SER	Social and Environmentally Responsible
SHRM	Society for Human Resource Management
SPSS	Statistical Package for the Social Sciences
SWOT	strenghts, Weakness, Opportunites, Threats
UNEP	United Nations' Environment Programme
VRIO	Value Rarity Imitability and Organisation.
VWGB	Voluntary Workplace Green Behaviour
WCED	The United Nation's World Commission on Environment and Development

1 *Chapter* Introduction

The following chapter includes a description of the project context in which the study was conducted. The fundamental objectives and delimitations of the master thesis are also presented in the chapter together with the research methodology employed.

1.1 Project Context

Much recent interest has been paid to the environmental issue of climate change which is also regarded as "global warming." Greenhouse gasses associated with it are caused by human activities such as burning of fossil fuels, industrial production activities, etc. This necessitates the need for immediate action from the producers of greenhouse gasses in order to reduce their carbon footprints (Jackson, et al., 2012).

In 1992, the United Nations Environment Programme (UNEP) was established in response to the environmental concerns addressed by the combined efforts of various countries around the world. Its most well-known activity is the sponsorship of the United Nations Conferences on Environment and Development. Nowadays, they are referred to as the "Earth Summits" and their purpose is to convince governments to acknowledge and act on protecting the global environment. During the most important Earth Summit in 1997, the Kyoto Protocol was adopted which introduced emission reduction targets to be achieved by 2012 when the protocol would expire (Jackson, et al., 2012).

A country that is actively promoting environmental protection through the European Union and significant global conferences, specifically the Conference of the Parties (COP) under the Kyoto Protocol, is Denmark. It is undeniably regarded as an environmental leader especially in terms of its really strong climate policy. It is the most climate-friendly country in the world according to the 2015 Climate Change Performance Index of the Climate Action Network Europe (Laursen, et al., 2018). That can be explained by the fact that Denmark has continually concentrated on utilising and advancing green technologies such as renewable energy production and environmental protection. In order to achieve this objective, the government has introduced green taxes, but it also provides environmentally motivated subsidies to businesses, households and organisations (Bisgaard & Poulin, 2017). These subsidies can be employed in the context of soil and groundwater protection, waste management, better application of renewable energy resources and reductions in the exploitation of exhaustible natural resources. Environmental taxes, on the other hand, are established on the notion that the price of a product should indicate the costs associated with its environmental impact, so it can directly affect thes choice of producers and customers (Gravgård, 2018). By incorporating such measures, the Danish authorities are attempting to direct the country's economy towards greater eco-friendliness and preservation of natural resources (Bisgaard & Poulin, 2017). It is worth noting that Denmark has established rather ambitious future goals. Among them are the government's target of using renewable energy for 50% of the energy consumption by 2030 and the objective of eliminating the use of fossil fuels in energy production by 2050 (Laursen, et al., 2018).

A crucial report titled "Our Common Future" was produced in 1987 by the chairwoman at that time, Gro Harlem Brundtland, of The United Nations World Commission on Environment and Development (WCED) (Brundtland, 1987). The report emphasised the key role Human Resource Management (HRM) has in aiding companies in their pursuit of sustainable competitive advantage. According to the report sustainable development is *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs"* and also, *"a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development; and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations"* (Brundtland, 1987; Dumont, 2015).

It is to be expected that not only governments but also organisations are taking steps in terms of improving their environmental performance and reducing their ecological footprints. In addition, businesses are encouraged to find the balance between the concern for sustainable development and social responsibility on the one hand, and their profitability initiatives on the other. Companies can also report their environmental performance data with the help of generally accepted standard methods such as the ISO 14000 series of certifications, the Global Reporting Initiative (GRI) Index, etc. (Jackson, et al., 2012). The successful implementation of such sustainable corporate strategies heavily depends on all departments of the company, with the Human Resources (HR) department being the most influential when it comes to introducing "green" policies and changes. HRM is a crucial part of management which oversees the most valued assets of the organisation – its human capital. The stronger the green human resource policies, the easier it is for companies to implement the environmental management systems (EMS) (Ahmad, 2015).

The alignment between HRM practices, systems and activities with Environmental Management (EM) of organisations is the subject of ongoing research (Haddock-Millar, et al., 2016). However, it was not until 2008 that the unification of EM and human resources was named and the term "Green Human Resource Management" (GHRM) was coined (Jabbour & Jabbour, 2016). Some characterise GHRM as "*the use of HRM policies to encourage the sustainable use of resources within business enterprises and promote the cause of environmentalism which further boosts up employee morale and satisfaction"* (Ahmad, 2015), others determine that Green HRM deals with the "*systemic, planned alignment of typical human resource management practices with the organisation's environmental goals*." The extent to which companies handle green issues is reciprocal with the degree of integration of corporate Green HRM into their Performance Management System (PMS) (Haddock-Millar, et al., 2016).

Green HRM concerns the awareness of an organisation towards environmental issues but it also manages the social and economic well-being of both the company and its employees. It has the goal of developing a green workforce that comprehends, values and practices green initiatives actively (Ahmad, 2015). Hence, a key dimension is the actual engagement and commitment of employees (Haddock-Millar, et al., 2016). The focus is on spreading the knowledge of how to cope with the issues of sustainability, what actions are required in order to carry out the green programs and how the environment can benefit from them (Ahmad, 2015). Various practices related to

recruitment, performance and appraisal management, personnel development and reward systems are deemed powerful contributors when aligning employees with the environmental strategies of companies (Muster & Schrader, 2011).

That being said, careful consideration needs to be made with regard to the obstacles involved in applying Green HRM practices. Organisations are likely to meet certain risks when engaging in sustainability, some of which include lack of support from organisations' leaders, costs of maintaining, lack of internal capacity or knowledge (Jackson, et al., 2012). Another difficulty can be the uncertainty of whether the expected results can, in fact, be realised in which case, companies are advised to deliberately evaluate the risks of investing in such a strategy. Organisations are also encouraged to clearly communicate the purpose of undertaking green policies to their staff so that the voluntary participation becomes apparent and counterproductive effects eliminated (Muster & Schrader, 2011).

1.2 Objectives and Scope

This section introduces the aims of the thesis that the authors attempt to accomplish as well as any delimitations that are regarded as necessary.

The primary motive for writing the master thesis is to investigate how Green HRM can bring sustainable competitive advantage to organisations. However, such an endeavour would require really broad research that cannot be completed over the period of a few months and really in-depth knowledge that the authors are currently not in possession of. As a result, certain delimitations are applied and the thesis focus is narrowed down solely to Danish companies in the Building field. Even so, introduction of relevant international and EU data is also included so that a better picture of the research can be achieved.

To perform this study, the use of a questionnaire is deemed the most appropriate information collection method which can provide data essential for concluding on the current state of GHRM in Denmark. Factors impacting on the successful implementation of Green HRM strategies are to be analysed together with their importance to organisations. On the one hand, the role of employees as the potential driving force of executing green practices or completely disregarding them is discussed. On the other hand, the key function of HR managers is highlighted as the leaders who can either promote and secure environmental understanding and opportunities or strongly object to bringing in sustainable policies. Afterwards, the obtained knowledge about the Danish approach towards GHRM is to be applied to the determination of whether Green HR policies can promote sustainable competitive advantage in organisations in the building sector or not.

1.3 Methodology

In order to ensure the correct execution of the master thesis, the need for a suitable methodology emerged. Therefore, the aim of this sub-chapter is to provide the basis for the overall methodology used in the thesis. The following sub-sections present the research design, research strategies and the data collection techniques that are implemented. According to Creswell (2014), the selection of a research framework which aids the design and structure of the research strategy

is important in a research activity. Thus, the methodology of the thesis is conducted in accordance with the research onion, beginning from the outer layers towards the inner ones (Saunders, et al., 2009) (See Figure 3: Research onion in accordance to Saunders, et al,2009).

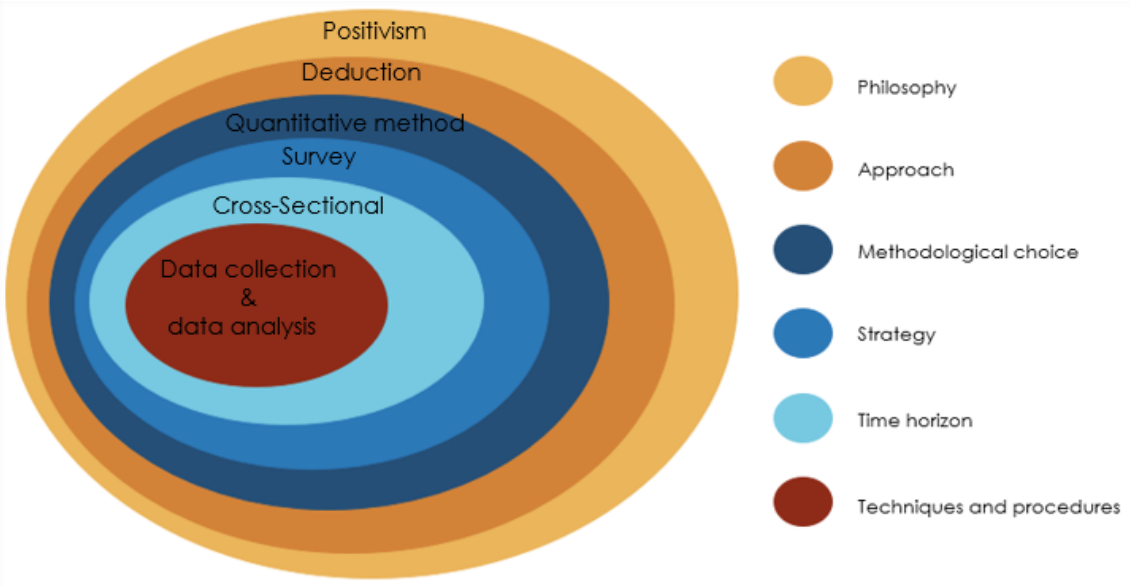

Figure 3: Research onion in accordance to Saunders, et al,2009

1.3.1 Research Design

A research design is necessary for the formulation of the research focus. Research design is defined as *"something people undertake in order to find things in a systematic way, thereby increasing their knowledge. (...) 'Systematic' suggests that research is based on logical relationship and not just beliefs. (...) 'To find out things' suggests there is a multiplicity of possible purposes for your research. These may include describing, explaining, understanding, criticising and analysing."* (Saunders, et al., 2009). Therefore, by establishing the research design the authors of the dissertation are able to state, analyse and approach the research focus.

Research philosophy

For the execution of the master thesis, the specific knowledge regarding sustainable competitive advantage achieved through Green Human Resource Management in Danish building organisations is required. Therefore, the need for a research philosophy emerged. The research philosophy used in the master thesis is the positivism approach. The positivism philosophy is based on quantitative observations which lead to statistical analyses that are used for testing the hypothesis (Saunders, et al., 2009). The focus of the authors of the thesis is to test the hypothesis "Gaining sustainable competitive advantage through Green HRM" through a questionnaire aimed at Danish construction companies.

Research approach

The authors of the dissertation need to illustrate the purpose of the research so that the research focus can be established. The thesis begins with theory regarding Green HRM and sustainable competitive advantage. Then, it proceeds to a hypothesis which states that Green HRM can bring sustainable competitive advantage to organisations. Afterwards, by conducting a questionnaire provided to Danish companies in the building sector as well as conducting multiple analyses, the authors aim to test the theory and either support or refute the hypothesis. The above-mentioned reasons guided the decision of selecting the deduction research approach as it is considered the most suitable one. The deduction approach or theory of testing stems from research in the natural sciences *"where laws present the basis of explanation, allow the anticipation of phenomena, predict their occurrence and therefore permit them to be controlled."* (Gill & Hussey, 2003), and it *"involves the development of a theory that is subjected to a rigorous test"* (Saunders, et al., 2009).

1.3.2 Methodological choice

For the selection of a suitable data collection method, it is important to define what data collection methods are to be utilised. In order to refute or support the chosen hypothesis for the master thesis, the theory needs to be tested. For that reason, the use of a questionnaire is very appropriate as it provides results that can be analysed using statistical tools. As a result, the selected methodological choice is quantitative method as it asks questions such as "How many", "How long", "The degree to which". The quantitative methodological choice focuses on quantities and creates results from a sample of the population of interest (Saunders, et al., 2009). In the case of this master thesis, the interest is placed on organisations in the Danish building industry.

1.3.3 Research strategies

The purpose of the dissertation is to examine to what extent Green HRM is implemented in Danish building companies and to measure how competitive they are on the market. Therefore, the master thesis is carried out using a survey design. According to Creswell 2014*," A survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. From sample results, the researcher generalises or draws inferences to the population"*. The survey strategy is associated with the deductive approach and serves to answer questions such as "What", "Who" and "How many" (Saunders, et al., 2009). The authors select this particular strategy because it allows the collection of a large amount of data from companies in the Danish building industry. The survey for this study is conducted through a questionnaire and the gathered data are later quantitatively analysed using statistical tools.

1.3.4 Time horizons

The research of this master thesis is conducted in a cross-sectional research study. The collected data provide information from a single point in time (Saunders, et al., 2009). Therefore,

through the cross-sectional survey the authors are able to measure the data provided by Danish companies in the building industry as well as their incidents over a specific time.

1.3.5 Data collection method - techniques and procedures

The research for this thesis is conducted using primary and secondary data collection. *"The primary data are those which are collected afresh and for the first time and thus happen to be original in character. The secondary data, on the other hand, are those which have been collected by someone else and which have been already been passed through the statistical process"* (Kothari, 2004)

1.3.5.1 Collection of primary data - Survey

The primary data for this study are collected from employees working in the Danish building sector. The method used for the collection of primary data is a self-administered online survey, which guarantees the anonymity of the respondents. The authors of the master thesis distribute the link to the online survey to the target population across the country. The aim of the survey is to examine to what degree employees in the Danish building sector are familiar with the concepts of Green HRM and its practices as well as to review whether sustainable competitive advantage can be achieved through an improved environmental performance. The respondents are given a series of options and are asked how much they agree or disagree with the statements by using a sliding scale: Strongly disagree, Disagree, Neither disagree nor agree, Agree, Strongly agree. Furthermore, the respondents are asked to complete the survey within 1 to 2 weeks and after that time a reminder e-mail is sent to them in order to minimise the non-response rate (MacDonald & Headlam, 2009). The authors of the dissertation choose to conduct an online questionnaire because of its easy design and administration. Among other benefits, electronic surveys are inexpensive and are delivered fast to the target population. On the other hand, a challenge for the electronic survey is that respondents must have access to a computer connected to the internet and willingness to participate in the questionnaire.

Target population

According to Cooper & Schindler (2003), target population includes all the elements from which the sample originates. The target population for this study is comprised of employees having different job positions in the Danish building sector. The questionnaire was sent to 187 employees, of which 13 (22%) completed the survey and 18 (30%) partially completed it. Therefore, the target population for the study was 187 employees in the Danish building sector. They represented a variety of positions such as HR managers, Health and Safety managers (ESH), Executive managers, Administrative managers, Sales managers, Architects, Engineers and others.

Response rate

Response rate is an important parameter for the evaluation of the data collection in any research study. The response rate is calculated by dividing the number of respondents by the total number of people to whom the questionnaire was distributed. The denominator includes every person in the target population (Fowler, 2012). The response rate of this study is:

$$\frac{Number\ of\ responses}{total\ number\ of\ people} \times 100 = \frac{18+13}{187} \times 100 = 16.57\%$$

Therefore, the response rate equals 16.57 %. As already mentioned, 13 people completed the survey and 18 partially completed it leading to a total number of 31 people who participated in the questionnaire. According to Manfreda, et al. (2008), the web-based surveys can result in low response rate compared to other survey models. The response rate for a web-based survey depends on the target population. According to Erwin & Wheelright (2002), achieving a high response rate from the target population is significant for the validity of the data and to be able to develop outcomes of the study. For this study, the survey was distributed to 187 employees of the Danish building sector, 16.57% of which responded to the survey. This relatively low rate can be explained as unwillingness of the employees to participate in the questionnaire, language barriers since the survey is written in English, lack of availability.

Probability sample

According to Sekaran (2013), *"When elements in the population have a known chance of being chosen as subjects in the sample, we resort to a probability sampling design".* The probability sampling used in this master thesis is restricted or complex probability sampling because it has less potential for bias. Additionally, more information can be obtained for a given sample size (Sekaran, 2013).

Sampling technique

For the purpose of the dissertation, the stratified random sampling is used for the identification of a representative sample. Through this basic generalisations are deduced. In the stratified random sampling method each member of the target group has an equal and independent possibility to be included in the sample. It is a technique where sub-groups within the population can be identified and selected to form a sample. According to Shiu, et al. (2009), the stratified random sampling is *"a probability sampling technique in which the defined target population is divided into groups"*. Stratification ensures homogeneity in each stratum to ensure fair representation of the population in the sample. Stratification is an effective research sampling method which obtains more information from a given sample size. (Sekaran, 2013)

Data collection instruments

The data collection for this study is carried out using a survey questionnaire. The survey is prepared by the authors of the dissertation using the online survey platform called SurveyXact offered by AAU. It is constructed with relevant questions for the topics of Green HRM and sustainable competitive advantage. The responses are measured by a ranking based on the sliding scale to determine to what degree the respondents agree or disagree with the statements of the questionnaire

Pilot testing

The research tool used for the survey is pre-tested before the final distribution. Respondents for the pre-test have a basis knowledge and understanding of HR. For the pre-test process they are asked to evaluate the questions in terms of their clarity, comprehension, relevance and meaning as

well as the completion time. According to Mugenda & Mugenda (2003), the pre-testing permits the researchers to detect errors in the survey or in the research instrument before the actual collection of data begins. Additionally, 1% of the population is considered acceptable for pilot study (Mugenda & Mugenda, 2003).

Reliability rests

According to Shiu, et al. (2009), it is important to identify whether the test instruments are consistent and whether the same results can be found if the test is repeated. Based on Hair, et al. (2007), a test is reliable if its scale or question consistently measures the concept. Bryman & Bell (2007) and Hair, et al. (2007) suggest the use of the Cronbach alpha test for the determination of the internal reliability. It is considered as a valuable test for multi-item scales at the internal level of measurements (Blumberg, et al., 2005). In this study the Cronbach alpha test is used to determine the internal consistency of the sample. Lastly, the results of Cronbach alpha range between 0 to 1 and a value bigger or equal to 0.7 is considered as a reliability indicator (Blumberg, et al., 2005). (See *4 Chapter Findings and Interpretation*)

Data processing and data analysis

The gathered data for this study are initially checked for their completeness and comprehensibility. The data are then analysed using the Statistical Package for the Social Sciences tool (SPSS) and both a descriptive and inferential analyses are performed. The descriptive analysis of the data is used to determine to what degree the Green HRM practices are implemented in the Danish building industry. Whereas, the inferential analysis is carried out through Pearson correlations where the authors of the dissertation test the correlations within each and among all the Green HRM practices. (See *5 Chapter Detailed Analysis*)

1.3.6 Collection of secondary data

For the realisation of this study the collection of secondary data was essential because *"secondary data can provide a useful source from which to answer, or partially to answer your research question"* (Saunders, et al., 2009). Secondary data are defined as the data that have already been collected by someone else. This thesis includes mainly published data such as scientific papers, books, journal articles and internet sources.

1.3.7 Literature review

According to Hart (1998), literature review is characterised as "*the use of ideas in the literature to justify the particular approach to the topic, the selection of methods, and demonstration that this research contributes something new"*. Webster and Watson (2002) provide a further explanation of what literature review is, stating that literature review "*creates a firm foundation for advancing knowledge. It facilitates theory development, closes areas where a plethora of research exists, and uncovers areas where research is needed."*

The data for the execution of this research are collected through comprehensive literature review so that the concept of Green HRM and the sustainable competitive advantage can be

determined. By doing so, the authors obtain a better understanding and are able to define the impacts, practices and benefits of Green HRM and how that can bring sustainable competitive advantage to organisations. Additionally, the authors of the thesis are able to identify potential limitations and barriers in the implementation of Green HRM and its practices.

The research as already mentioned includes several secondary data such as scientific papers and journal articles as well as environmental legislations. Last, the authors of the dissertation make use of the data with objectivity and trustworthiness from verified and recent sources.

The literature review used in this study is compiled by the authors employing resources from the University Library. The search of resources was narrowed down by typing several different headings in the library's base. For the validity of the sources, the authors decided to exclude some sources from the library's base such as audio visual, newspapers articles, scores and "others". Additionally, by typing "AND" or "OR" the authors of the report marked the explicit search criteria (See Table 1:Search Resources 1 & Table 2: Search Resources 2). Once the search criteria was set in the database, the wide range of available sources needed to be narrowed down again. Firstly, the authors were focusing strictly on English publications and on publication years from 1990 to 2018. Moreover, the most preferable sources were the latest sources so that a better overview of the current situation could be obtained. According to Oliver (2012), a source year of publication and its value depend on many factors. In some cases, it is more profitable to use older literature since some subjects can be old. In this dissertation, Green HRM is a relatively new concept, therefore, the majorities of the sources are published within the last 5 to 10 years with a few exceptions. Afterwards, the authors selected the most appropriate bibliography based on the title, headline, description of the content as well as reading briefly the abstract of the sources. However, due to the wide range of the library's available sources (See Table 1:Search Resources 1 & Table 2: Search Resources 2), it was impossible for the authors to review them all. Hence, the selected bibliography is based on the most relevant results from the first and second page of the library's database.

Firstly, the authors of the thesis had to find information regarding the Green Human Resource Management. Table 1:*Search Resources 1* presents the typing order and the results from the research that the authors carried out in connection to the concept of Green HRM.

Order	Typed words	Results
1	Green human resource management	217,116
2	Green human resource management AND Environmental performance	79,800
3	Environmental management AND human resource management	379,902
4	Sustainable human resource management	275,159

5	Human resources AND Denmark, Denmark OR Denmark	968,359

Table 1:Search Resources 1

The second research was related to the sustainable competitive advantage. Therefore, similarly to the GHRM research, Table 2: *Search Resources 2* presents the typing order and the results from the search the authors carried out for the concept of sustainable competitive advantage. The sources available in the database did cover the research focus. The process of choosing the most relevant bibliography for both researches was conducted in the same way as descripted earlier in this section.

Order	Typed words	Results
1	Sustainable competitive advantage	4,179
2	Sustained competitive advantage AND human resources	60,985
3	Competitive advantage AND environmental sustainability	69,161
4	Human resources management AND sustainable competitive advantage	126,483

Table 2: Search Resources 2

2 *Chapter* Literature Review

The purpose of the following chapter is to introduce the role of HRM in the Danish building sector, to explain the concept of Green HRM and how it relates to sustainable competitive advantage. Additionally, theoretical perspectives on the subjects are included.

2.1 The HRM in Denmark

Denmark is a country broadly considered very capable of bringing and developing innovation. In fact, Hollanders, et al. (2012) state that Denmark is an "innovation leader" primarily because of the strong performance of Hovedstaden and Midtjylland. However, the role that HRM plays in encouraging new ideas and other measures of organisational performance in Denmark is rather vague (Jørgensen & van Rossenberg, 2014). Danish HRM practices are characterised by less strategy, more devolvement and few personnel specialists (Brewster, et al., 1992). Flood (1998) argues that certain consequences of devolvement can be inefficiency resulting from each manager's own methods, unorganised, provisional personnel policies as well as a lack of consistency in working conditions. The successful decentralisation of operational HR duties depends on the degree to which line managers pay attention to these duties. If such steps are not taken, the gap between line managers and HR specialists can become a direct representation of popular (staff well-being) and unpopular (handling conflicts) HR duties. Furthermore, the level of satisfaction with leadership behaviour has been shown to affect employee commitment (Purcell & Hutchinson, 2007).

Denmark is one of the countries in which the engagement of line managers in HRM is prevalent while the responsibilities of HR specialists have usually been quite restricted (Hoogendoorn & Brewster, 1992; Rogaczewska, et al., 2004). Managers seems to regard the organisational structure of Danish companies as one strongly influenced by the high level of delegation of responsibilities as a result of the increased use of self-managing groups and project teams. This could be a possible explanation as to why line managers have become so involved into HR activities such as motivation and staff well-being but team building and conflict-solving tasks have been transferred to the groups (Brandl, et al., 2009). Staff motivation and staff well-being are regarded as very important for the maintenance of a good work environment. However, handling conflicts is viewed as being of less significance which is a typical characteristic of the Scandinavian manager who is consensus-oriented and conflict avoidant (Grenness, 2003; Brandl, et al., 2009). In this manner, Denmark represents an example of HRM where traditional methods are not in use, few formal HR policies exist and line managers are allowed the freedom to make their own decisions (Flood, et al., 1995; Purcell & Hutchinson, 2007).

A large-scale survey in Denmark has resulted in the conclusion that "new HRM" systems are being progressively used in Danish companies and as a result are influencing their innovative performance (Laursen & Foss, 2003). Such practices involve decentralisation which can lead to a better utilisation of the local knowledge in the organisation especially when the necessary initiatives for such discoveries are present (Hayek, 1945; Jensen & Meckling, 1992). The growing

use of teams can lead to better application of the knowledge in the company. That is particularly true because teams combine various human resource inputs which are likely to bring new ideas and improvements in processes (Laursen & Foss, 2003). The innovation performance of organisations can also be enhanced with the help of employee training, interdisciplinary work groups as well as performance rewards (Jørgensen & van Rossenberg, 2014).

2.2 The "Green Change"

The green movement began with social activists and scholars as a result of corporate manipulation in regard to environmental recklessness and political engagement (Waddock, 2004). People began to recognise that the planet is crowded, that together we are pressuring the world's resources and also jeopardising the globe's climate and other life support systems (Marcus, 2009). There are more than six billion people currently populating the planet and it is estimated that by the year 2050 the number will amount to more than nine billion (Marcus, et al., 2008). However, with the progress of human kind comes an extreme stress on the natural resources necessary for sustaining human life (Marcus & Fremeth, 2009). It is reasonable to believe that such influences pointed multinational companies and domestic firms towards the direction of accepting practices and policies aimed at protecting the environment, their employees, the consumers as well as the public (Waddock, 2004). Other factors such as laws, regulations and fear of shunning, loss of sales and even decline in reputation should also be mentioned when discussing green management and the commitment of companies to it (Sexton, et al., 1999). Without a doubt, almost every major business worldwide has now accepted and agreed with the demands of green management not only as a way of maintaining legitimacy and the right to operate but also as the core of its mission (Marcus & Fremeth, 2009). Companies are simultaneously trying to minimise the direct effects of their operational activities and develop the capabilities of their human capital, encourage and employ corporate best practices and improve their operational efficiencies (Dumont, 2015).

2.2.1 Sustainable Development

As already stated in *1.1 Project Context,* sustainable development sets current but also future demands on companies' management. However, the definition that was presented by the Brundtland Commission encompasses all aspects of life – economic, social, ecological, ethical, and political and many more areas (Ciegis, et al., 2009). In fact, many definitions of sustainability exist, all of which differ from one another. Some of them address it as the negotiated consequences between a business and the world surrounding it, others relate sustainability to financial outcomes (Ciegis, et al., 2009; Scerri & James, 2010). The Society for Human Resource Management (SHRM) has one of the latest work-related definitions of sustainability – "the commitment by organisations to balance financial performance with contributions to the quality of life of their employees, the society at large, and environmentally sensitive initiatives**"** (Society for Human Resource Management, 2013)**.** It describes the notion that sustainability links together three fundamental elements – social, environmental and economic/organisational or "people, planet, and profits" which is also known as the "triple bottom line" (Jackson, et al., 2012; Elkington, 1998). The social aspect is concerned with the influence an organisation's activities have on its employees, its customers, the community. Social performance guarantees a company's license to

operate and it also strengthens its ability to deliver excellent environmental and economic performance. The environmental dimension of sustainability refers to an organisation's impact on the natural resources – land, air, water. The economic element is connected to the disclosure of how an organisation affects the economies in which it functions usually done by creating financial reports. The goal of sustainable development is to reach the balance between these components, however, that is really challenging to accomplish (Marcus & Fremeth, 2009).

2.2.2 Corporate Social Responsibility

Corporate social responsibility (CSR) was created regarding the growing awareness and attitudes of society towards corporate irresponsibility (Dumont, 2015). CSR is defined as "*situations where a firm goes beyond compliance and engages in actions that appear to further some social good, beyond the interests of the firm and that which is required by law*" (McWilliams, et al., 2006).

It is worth mentioning that according to a study conducted on CSR and organisational commitment, employees favour working for companies that are socially responsible. Corporate social responsibility was determined to play a significant role in shaping an organisation's image which corresponded to the level of commitment employees were having to their company. The results of the survey suggest that the reputation of an organisation and community impression of it directly reflect on the self-esteem of employees as well as their commitment to it (Turker, 2009).

Another study focuses on the link between the social behaviour of employees and the way in which they identify with their organisation. It is argued that socially related behaviours can be recognised on the basis of employee values, exchanges in the workplace and individual position towards corporate social responsibility. As a conclusion, management should support employees' participation and contribution to policy development and the implementation of green programs (Ellis, 2009).

Corporate pro-activism can strengthen corporate image as it indicates to the community but also to employees that the company follows and applies environmentally sound business practices (Zutshi & Sohal, 2003). Furthermore, the human capital of the organisation can be even more encouraged to openly support these green initiatives by expressing desirable workplace behaviours and attitudes (Dumont, 2015).

2.2.3 Human Resource Management

Human capital is described as '*the most magical and tangible and ultimately the most important ingredient in the transformed landscape is people*' and '*our most important asset walks out the door every night*' (Luthans & Youssef, 2004). It is not surprising that companies are advised to transform their strategies and invest in their people management so that it brings them competitive advantage (Luthans & Youssef, 2004).

Since the mid 2000's, calls for studies into how companies can promote and attain environmental attitudes and employee green behaviors are actively being made (Jabbour, 2011; Jackson & Seo, 2010; Renwick, et al., 2008). However, no formalised HRM research exists on the topic of HRM and its impact on employee green related behaviours and stance which are directed towards realising corporate sustainability targets (Ehnert & Harry, 2012; Jabbour, 2011; Robertson & Barling, 2013).

Organisations are recommended to ensure there is coherence between their HRM approach and the company's values, ethics, characteristics and priorities when aiming to achieve their organisational objectives. The successful implementation of CSR and EM directives heavily depends on that congruence (Buchan, 2004; Carmona-Moreno, et al., 2012; Govindarajulu & Daily, 2004; Jackson & Seo, 2010). The unification of environmental goals and strategies together with the strategic development objectives of companies are translated into an effective environmental management system (Haden, et al., 2009). It is determined that the stronger the Green Human Resource policies, the bigger the intensity of utilising of EMS (Bohdanowicz, et al., 2011).

2.2.4 Aligning Environmental Management with HR Management

Human resource management plays a crucial part in the creation and application of sustainable business strategies throughout the organisation and inclusion of environmental responsibility as a key aspect of the corporate mission statement (Cohen, et al., 2012; Muster & Schrader, 2011). Even so, they do not perceive themselves as strategic initiators of sustainable policies and practices. The willingness of HR managers to defend sustainability at a strategic level may be inadequate because they view themselves only as coordinators of the green practices developed outside of the HR department (Haddock-Millar, et al., 2016). Renwick, et al. (2008) and Jabbour & Santos (2008) state that the reason why HRM is best at coordinating the introduction of green policies is because of their skills to communicate with the human capital of the organisation and to apply cultural change processes. The positioning of the environmental function and its alignment with the organisational performance are crucial for advancing sustainable development in companies (Haddock-Millar, et al., 2016). Multiple ways exist in which organisations become aware of the necessity to implement sustainability. Some take the defensive path in order to create policies that meet the legal responsibilities and regulations, others prefer the value-based route which is marked by individual involvement and passion (Cohen, et al., 2012).

An important dimension of the strategic positioning of the environmental function is integrating knowledge which generates competencies and builds a shared perception of sustainability by the human capital of the business (Haddock-Millar, et al., 2016). Brío, et al. (2007) argues that companies can enhance the attainment of competitive advantage by incorporating environmental management into their strategy. A critical step when contemplating the alignment of HR practices is to do it consistently so employees can be placed in charge of environmental management (Jabbour, 2011). An empirical study helped determine three phases of green management depending on the degree of alignment between environmental function and management practices – reactive, preventative and proactive (Jabbour, et al., 2010). The successful lining up of practices and HR policies with the aims of environmental management and performance can guarantee the achievement of environmental sustainability by organisations (Paillé, et al., 2014).

2.2.5 Defining Green HRM

A clear definition of the concept of Green HRM has yet to be clarified and the link between GHRM and EM, CSR and SHRM remains unclear. Despite the efforts of many scholars to come

to a conclusion regarding the notion of GHRM, its construct is still vague. (Dumont, 2015) However, the literature on the topic undoubtedly emphasises the role that environmental sustainability plays as a key component (Dubois & Dubois D. A., 2012).

Green HRM certainly differs from any other contemporary management conceptualisations. HRM has the primary focus on strategies in connection with general people management (Shen, 2011), CSR manages the ethical and moral basis of corporate social policy (Dahlsrud, 2006) while EM has the primary objective of environmental impact reduction using environmental and business policies (Cramer, 1998; Ormazabal & Sarriegi, 2012). Prathima & Misra (2012) & Renwick, et al. (2013) argue that Green HRM has the purpose of establishing processes and activities which are created to enhance employee skills, knowledge, motivation and behaviour so that organisational environmental objectives and green goals can be accomplished. This can be achieved by the application of appropriate green associated practices that can bring the desired changes in the way organisations act and affect the environment (Dumont, 2015).

The definition that Jabbour (2013) gave to GHRM is "*Green human resource management (GHRM) is concerned with the systematic, planned alignment of typical human resource management practices with the organisation's environmental goals."* He studies the relationship between human factors and environmental sustainability and especially how environmental training as the most extensive HR practice can enhance and improve environmental management, conservation and recycling of resources. Jabbour (2013) argues that the framework proposed in his paper may be helpful in the identification of restrictions and characteristics of a successful environmental training process. It may also contribute to improvements in both environmental management and Green HRM.

Mishra, et al. (2014) state that "*GHRM refers to practices promoting green initiatives by increasing employee awareness and commitment on the issues of environmental sustainability"*. The importance and value of the connection between employee engagement in environmental management programmes and the improved organisational environmental performance can be emphasised by focusing on waste management recycling and creating green products. By implementing GHRM practices and policies employee well-being and health can be promoted and improved according to Mishra, et al. (2014). GHRM is viewed as an initiative with the potential to be one of the best practices for sustainable growth of business.

Another definition of Green HRM is offered by Renwick, et al. (2013), which determines it as "*the HRM aspects of environmental management (EM)*". In the paper the authors discuss the integration of the largely disconnected literatures of EM and HRM research. Applying the Ability-Motivation-Opportunity (AMO) theory, the significance that GHRM processes have in relation to people-management practice is acknowledged. The conclusions from the review indicate a positive impact of employee involvement (EI) in EM associated with key outcomes of efficient use of resources and reduced waste but also with employee outcomes such as increased job satisfaction (Renwick, et al., 2013, pp. 8,10). Attracting and developing of staff (developing knowledge bases, pro-environment managers and leaders) is considered another crucial part of GHRM practices. However, the motivation of employees to actively engage in EM via performance appraisal (PA) and reward-managing practices is still not researched deeply (Renwick, et al., 2013, p. 10). Green

HRM practices promise potential benefits for improvement of the environmental performance and financial performance of organisations together with enhancement of the working environment (Renwick, et al., 2013, p. 11).

Wagner (2013) presents the concept that '*Green' HR management is thus a subset of sustainable HR management where the latter also comprises corporate social responsibility (CSR) issues*. In his article, Wagner (2013) claims that EMS application is positively linked to employee satisfaction and recruitment/staff retention benefits as well as that there is a positive association of the change in work satisfaction benefits with the change in EMS employment levels. The necessity for sustainability to have a central role in HR development is also discussed (Wagner, 2013). Another finding of the research is the developing correlation of EM and work satisfaction as a driver for the integration of health and safety and work-life balance in organisations. The inclusion of HR in this process can create socially complex and difficult-to-imitate resources which can eventually increase the competitive advantage of companies (Wagner, 2013).

Taking into account the contemporary descriptions of Green HRM, the definition that this thesis uses for GHRM is as follow:

"Green HRM relates to the HRM policies, practices and processes which are designed in such a way that they help the organisation meet its environmental objectives with enhanced green outcomes"

2.2.6 Green Human Resource Practices

If companies expect to improve their environmental performance, they need to translate their green aspirations and intentions into organisational policy and workplace behavior reform (Muster & Schrader, 2011). It is important that Green HRM practices and activities are facilitated by HRM so that environmental objectives can be targeted (Carmona-Moreno, et al., 2012) .Such practices include recruitment and selection, training and development, management development and leadership, performance management and appraisal, green rewards and compensation, green employment relations, green initiatives for human resource and green behaviour.

According to ES specialists, the adoption of pro-environmental behaviours in individual jobs is turned into employee green behaviour that is considered as the main contributor to organisational environmental performance (Ones & Dilchert, 2013). A study of different jobs in US and European industries shows that these jobs require between 13% to 29% employee green behaviour as it was part of the organisations' expectations or their duties (Ones & Dilchert, 2013).

According to Bissing-Olson, et al. (2013), in a study regarding the "affective states" that develop pro-environmental behaviours, it is shown that employees can complete their work in an environmentally friendly manner if they are relaxed, calm and content. Also, employees with greater pro-environmental attitudes present greater pro-green behaviour (Ones & Dilchert, 2013).

On a different study on US firms by Walls & Hoffman (2013) it occurred that organisational directors with environmental experience can "*practice positive environmental*

*devian*ce" (Andersson, et al., 2013). Furthermore, irresponsible behaviour is also present and it is considered counterproductive, including actions of not recycling or polluting.

2.2.6.1 Recruitment and Selection

Aligning the recruitment process with environment-friendly issues gives employers the opportunity to have higher chances at attracting the right candidates and retaining them after induction (Ahmad, 2015). Green recruitment and selection (GRS) is considered a key component in GHRM practices (Jackson, et al., 2011; Ahmad, 2015). GRS can be outlined in the three elements of candidates' green awareness, green employer branding, and green criteria to attract candidates (Tang, et al., 2018).

The fundamental aspect of GRS is the candidates' green awareness which encompasses personality factors that are necessary for the achievement of the company's environmental objectives. Such factors can be green consciousness and agreeableness of candidates (Tang, et al., 2018). According to Brío, et al. (2007), the environmental performance of an organisation can be improved as a result of the enhanced environmental knowledge of eco-conscious employees in regard to the operation process. Therefore, companies should target and select candidates with green awareness and green bend of mind, passionate to work with environment-friendly organisations (Ahmad, 2015).

The other element of GRS is green employer branding which concerns the image and reputation of the company in connection to its environmental management. (Ehnert, 2009) Environmental sustainability can play a very influential role in recruitment of new talent when companies manage to relate well their own initiatives to the candidates' own values and environmental attitudes (Jackson E, et al., 2012). People are genuinely attracted to those employers who possess similar views and values to their own and so job-seekers may feel proud of working with a company which has a good environmental reputation (Highhouse, et al., 2002; Willness & Jones, 2013). From this viewpoint, green branding is becoming more important in recruitment efforts (Renwick, et al., 2013).

The third aspect of GRS is green criteria on the basis of which employees are assessed and selected (Tang, et al., 2018). Companies should ensure that their job descriptions reflect their sustainability plan and their web page and similar research tools clearly indicate their greening stance and goals (Mandip, 2012). Interview questions should be pointed in the direction of environmental knowledge and beliefs so the candidates' fit with the company's values can be determined (Renwick, et al., 2013). Such a recruitment practice can help with the familiarisation of new talents with the company's environmental culture (Wehrmeyer, 1996).

Furthermore, green recruitment is not only related to making the environmental values of the organisation known in order to attract the right candidates, but also to implementing the proper approach to the entire process of recruitment – limiting the use of paper by turning to web-based platforms (Bombiak & Marciniuk-Kluska, 2018).

2.2.6.2 Training and Development

Green training (GT) is considered a crucial part of Green HRM for a number of reasons. Employee training and development programmes should encompass social and environmental issues in all departments. These can range from health and safety considerations at the shop floor, to strategic sustainability issues at executive management (Mandip, 2012). It helps bring more awareness of the environmental impact of the company's activities (Bansal & Roth, 2000), educate employees about conserving energy and reducing waste (Zoogah, 2011), but also raises the level of "eco-literacy" in the organisation (Roy & Thérin, 2008). As stated by Tang, et al. (2018), GT is comprised of three elements: awareness enhancement, knowledge management and climate building.

Green training can increase the awareness of employees in connection to pro-environmental activities in the workplace (Tang, et al., 2018). Fernández, et al. (2003) argue that in order to achieve emotional involvement in ecological concerns, integrated training in EM is a necessity. It can also be used as a tool to show the impact of poor behaviour and attitude towards the environment (Renwick, et al., 2013; Lee, 2009). Green training programmes can bring better understanding of the importance of environmental protection (Wong, 1998). Now controlling the environmental impact is considered a responsibility for all employees, thus applying their tacit knowledge in EM is very crucial for the identification of pollution sources, managing emergency situations and cultivating preventative solutions (Boiral, 2002).

Another beneficial aspect of green training is knowledge management which can empower employees to do environmental activities (Brío, et al., 2007). It can build technical and management capabilities and skills linked to green management and can enhance the abilities of employees to undertake required tasks (Dumont, 2015). Green knowledge management also trains the human capital to resolve complicated EM problems (Govindarajulu & Daily, 2004).

The third element of GT is the climate building. This is related to the encouragement of all employees to actively get involved in the environmental initiatives of the organisation (Fernández, et al., 2003). Such an environmental work climate can also be achieved by having the managers and supervisors clearly display green behaviour which both demonstrates to the employees what the organisation expects of them and invites them to participate in the green actions (Renwick, et al., 2013; Lee, 2009; Paillé, et al., 2014).

Govindarajulu & Daily (2004) point out that the success of the environmental management programmes depends on how appropriate the training is for the employees. They argue that insufficient training is likely to lead to staff who is unwilling and demotivated to engage in green initiatives. Therefore, it is critical that organisations supply the necessary resources and technical assistance.

2.2.6.3 Management development and Leadership

Another important GHRM practice is related to the training of management staff. Business schools are viewed to have a huge impact on the development of environmental leaders in the future because as Starkey & Crane (2003) state they are considered architects of a new view of

sustainability and environmental knowledge. Environmental management can be acknowledged as a business education that can encourage managers to develop EM projects (Fryxell & Lo, 2003). Even though in the past such links have not been considered, now there are more "eco-MBAs" which encompass ecological issues as a part of their curriculum (Aspen, 2010).

Robertson & Barling (2013) found that the pro-environmental behavior of the staff is encouraged and supported by transformational leadership behavior. Personal values are discovered to be more eco-centric and open to change and they play a crucial role when forming Green leadership behaviours (Egri & Herman, 2000; Bansal & Roth, 2000). Renwick, et al. (2013) introduces various HR roles in Environmental Management ranging from 'light green' to 'dark green' depending on competencies and experience. Another concept that has been the focus of discussion is Environmental Organisational Citizenship Behaviour which can affect the efficacy and efficiency of the greening process (Boiral, 2008). An empirical study shows that organisatonal citizenship behaviour for the environment can bring together strategic HR management and environmental performance (Paillé, et al., 2014).

2.2.6.4 Performance management and Appraisal

Green performance management (GPM) refers to a system of evaluating activities of employees' performance in the process of environmental management (Tang, et al., 2018). Renwick, et al. (2013) debates that it is critical for the enhancement of employee motivation to engage in organisation green initiatives. Performance management processes can also be implemented in order to ensure that the company's expectations are well communicated and that all employees are accountable for the accomplishment of individual and group green incentives (Dumont, 2015). Therefore, some companies are adopting a common GPM standard (Tang, et al., 2018). Yet, certain challenges are associated with GPM. Some are related to the problem of how to measure environmental performance standards across the different departments of the company and also how to gain useful data on their performance (Renwick, et al., 2013). GPM can be outlined in four aspects: setting green objectives, creating green performance indicators, evaluating employees' green outcomes and using dis-benefits (Renwick, et al., 2013; Milliman & Clair, 1996).

It is of great importance that green targets are translated into action plans for all the employees (Milliman & Clair, 1996). Senior executives and supervisors should clearly establish employees' expectations and responsibilities and recognise individual as well as group performance targets (Dwyer, 2009). The information regarding green initiatives and the company's environmental objectives should be undoubtedly be distributed to all levels throughout the company (Renwick, et al., 2013).

Performance appraisal (PA) is defined as the dimension of HR that is used for the analysis of employees' performance based a series of green criteria (Ivancevich , 1995; Tang, et al., 2018). PA can involve topics such as environmental incidents, use of environmental responsibilities and communication of environmental policies and reduction of carbon emissions (Anthony, 1993). E-HR systems can be introduced so management and employees can track their own carbon emissions. The utilisation of PA and clear performance indicators for each environmental risk area

is considered crucial for employees as well as managers as it influences the effectiveness of rewards and compensation (Ahmad, 2015; Renwick, et al., 2008).

Another aspect of GPM is the assessment of managers' green outcome. Companies need to make sure that their organisation environmental initiatives and the desired outcomes are clearly communicated to their managers (Renwick, et al., 2013). As a result, evaluating managers' green outcomes emphasises their role in EM and contributes to their growing responsibility towards EM performance (Tang, et al., 2018). Managers should be encourage to take responsibility for environmental PA so they need to become familiar with the compliance issues (Mandip, 2012).

Negative reinforcements such as suspension or criticism can also be part of PM systems. Govindarajulu & Daily (2004) and Renwick, et al. (2013) warn that such dis-incentives may have negative effects of employees and may cause them to refuse to engage in green actions. That is because they do not educate staff in good EM practices but rather provoke them to exhibit self-protective behavior. However, it is possible that such negative measurements caused by employees not meeting EM indicators or not achieving green goals if used properly can in fact encourage employees to become more environmentally conscious and strive for green goals in the future (Tang, et al., 2018).

2.2.6.5 Green Rewards and compensation

In the field of green job performance, it is underlined that green rewards help achieve employee satisfaction which contributes to the creation of a better environmental performance. Consequently, by rewarding the employees for their engagement in environmental practices, the corporate green goals can be accomplished (Jabbour & Jabbour, 2016; Jabbour & Santos, 2008). Additionally, EM could gain advantage from the reward and compensation systems if it focuses on the engagement of eco-friendly behaviour (Zoogah, 2011). To attain this, the reward systems need to be designed in such a way that they reflect the management commitment to EP whilst strengthening and prompting the employee's environmental behaviour (Daily & Huang, 2001). Through management commitment the employees' engagement is increased by participating in eco-friendly initiatives and developing a more environmentally responsible attitude (Renwick, et al., 2013). A successful reward program that has the purpose of motivating employees' environmental behaviour should be aligned with the results of green projects in the organisation or firm (Calia, et al., 2009).

There are several types of green reward practices such as monetary-based EM rewards (bonus, cash etc.), non-monetary-based EM rewards (gifts, leave, etc.), recognition-based EM rewards (awards, publicity, daily praise, etc.) and positive rewards in EM (positive feedback) (Renwick, et al., 2013). All the above-mentioned rewards prize the employees who are the most dedicated to achieving environmental goals and contribute to the environmental sustainability. Also, these rewards value the middle management who motivate their subordinate to follow green practices (Kapil, 2015; Arulrajah, et al., 2015).

According to Ramus (2001), praise letters and plaques as recognition-based rewards have greater impact on the employees' engagement to the environmental practices compared to other types of rewards. Additionally, organisations can adopt green reward management practices by

linking the employees' participation in green practices with benefits such as career promotion or by providing incentives to promote eco-friendly practices such as waste management and recycling. Last, the adoption of green reward practices can promote the employee's green creativity and innovative ideas in their individual jobs (Jabbar & Abid, 2014; Prasad, 2013; Ahmad, 2015).

2.2.6.6 Green employment relations

Green employee relations in HRM refers to the establishment of amicable relationships between the employer and the employee. Some of the benefits from this relationship are the employees' motivation and their increased productivity in the workplace.

The employee relations include employee participation and empowerment activities, which can also prevent and solve problems arising in the work environment and affecting the work processes. According to Ahmad (2015), *"positive employee relations are an intangible and enduring asset and a source of competitive advantage for any organisation."*

The employee involvement in green initiatives can create a greater green management as it lines up the employees' capabilities, goals and motivations with green management practices and systems (Ahmad, 2015). It is evident that by including employees in EM, the EM systems can be improved in ways such as reducing the waste and pollution from workplaces and making a more efficient usage of the resources (Florida & Davison, 2001; Kitazawa & Sarkis, 2000; May & Flannery, 1995). Additionally, individual empowerment can positively influence the employees' performance and productivity while it accommodates individual thinking and problem-solving capabilities (Renwick, et al., 2008; Wee & Quazi, 2005).

An organisation can encourage employee involvement by looking for entrepreneurs within the organisation who are ecologically and socially aware (Mandip, 2012). All the eco-friendly and innovative ideas coming from the employees in an organisation should be welcomed as this would strengthen their interest towards environmental issues. On the other hand, the management should develop a work environment where all employees would have freedom to present their ideas on green issues since they are responsible for the implementation of the corporate ethical behaviour in the everyday life of the company or organisation. Therefore, the accomplishment of green outcome is directly connected to the employees' eagerness to cooperate (Collier & Esteban, 2007).

2.2.6.7 Green initiatives for Human Resource

According to Lado & Wilson (1994), the HRM system is defined as a set of different but interconnected activities, processes and functions, which has the purpose to create, attract and maintain the organisation's human resources. The HR practices within an organisation are structured into systems that are compatible with the organisation's culture and strategy. Therefore, the green initiatives included in the HRM are part of the corporate social responsibility in the long term (Ahmad, 2015).

Nowadays, organisations adopt green initiatives with the help of their HR, while managers have to make sure that the HR is using the green HR practices right. Consequently, for the

implementation of an effective corporate green management system, firms have to promote and encourage management and technical skills among all employees (Daily, et al., 2009; Unnikrishnan & Hegde, 2007).

Several organisations worldwide adopt and implement Green HRM practices to achieve competitive advantage. However, the ful adoption and implementation of Green HRM in organisations is not possible. Therefore, an alternated approach to the existing HR practices is required from the management and the employees (Ahmad, 2015). The HR environmental executives could help managers in terms of achieving complete employee cooperation for the implementation of environmental policies. Thus, HR would have supporters and could develop a network of people who are willing to solve problems and change the organisation's current status (Sathyapriya, et al., 2012).

2.3 Sustainable Competitive Advantage

Nowadays, organisations compete in a complex and challenging environment which is continuously changing due to globalisation, technological development as well as due to development and use of knowledge. (Hitt, et al., 1998). Consequently, firms have to do things differently in order to gain sustainable competitive advantage, to thrive and survive in this competitive environment (Jackson E, et al., 2003). According to Barney (1991), *"A firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy."*

Hart in 1995 created the Natural Resource Based View (NRBV) theory which is based on the Resource Based View (RBV) theory by Barney from 1991. The Natural Resource Based View theory emphasises on environmental practices for sustainable competitive advantage through three strategic capabilities: pollution prevention, product stewardship and sustainable development (Hart, 1995). Resources and capabilities can also affect the ability of an organisation to sustain competitive advantage. Therefore, a resource or capability must be valuable and non-substitutable (Almada & Borges, 2018). According to Hart (1995), the resource must be tacit, socially complex or rare. In addition, Wright, et al. (1993) state that human resources contribute to the achievement of sustainable competitive advantage in an organisation. This can be attained if the human capital resources add value to the organisation, are rare, inimitable and non-substitutable with other resources. The three environmental strategies as already mentioned (pollution prevention, product stewardship and sustainable development) are characterised by Hart (1995) as *costly-to copy firm resources and capabilities* that promote competitive advantage and can reinforce and differentiate the organisation's position by building a good reputation (Hart, 1995).

Pollution prevention is a strategy that aims to reduce emissions by continuously improved methods that focus on well-defined environmental objectives and not on expensive capital investments to control emissions. This strategy depends on the development of tacit skills and on employee involvement (Cole, 1991; Lawler, 1986). According to Hart (1995), *"The decentralised and tacit nature of this capability makes it difficult to observe in practice (casually ambiguous) and, therefore, hard to duplicate quickly."* However, it is not always easy to separate pollution prevention from other productive activities. In accordance with total quality management, the business processes should not produce waste. From that perspective, pollution is acknowledged as

waste which must be eliminated by the total quality environmental management (TQEM). Companies that do not have a well-designed quality management process could face challenges in the implementation of pollution prevention strategies. That is because pollution prevention requires people involvement and especially the involvement of line employees in the continuous improvement efforts (Imai, 1986; Ishikawa & Lu, 1985). Buzzelli (1994) states that pollution prevention is people-centered rather than technology-centered, therefore organisations should make simultaneous reduction in capital spending for pollution control and emissions. However, an internal-competitive pollution prevention strategy cannot be fully implemented since external stakeholders and local communities demand corporate practices to be more transparent and visible. Therefore, companies have to open their operations to public scrutiny in order to build reputation and maintain legitimacy (Bozeman, 1987; Freeman, 1984; Roberts & King, 1989).

Competitive advantage can be achieved by improving the environmental quality of a product and thereby increasing the demand and revenue of it. This can be accomplished by using less polluting inputs (for example less harmful chemicals), renewable sources of energy or by adopting more sustainable production procedures that cause less damage to the ecosystem as well as making the products easier to be recycled (Jackson, et al., 2012). In order to achieve environmental quality companies must go beyond the government environmental standards. In other words, organisations must adopt *"an environmental policy that rewards the environmental quality of products beyond the legal standards"* and do *"some green purchasing by consumers"* (Jackson, et al., 2012). In terms of the green purchasing, environmental conscious customers are willing to pay more when a product is of a higher environmental quality. The *"environmental quality is a vertical differentiation strategy used by firms to attract those green consumers who are sensitive to the environmental quality of a product."* (Jackson, et al., 2012). Through this strategy organisations are not centred on the price-based competition, but they increase their revenue by taking advantage of the niche market of green customers (Jackson, et al., 2012).

Product stewardship is a strategy in which the "voice of environment" which is the external perspectives such as stakeholders is integrated in the product design and development processes (Allenby, 1991; Fiksel, 1993). In order to be implemented by an organisation, Life Cycle Assessment (LCA) should be incorporated into the company's product development process (Keoleian & Menerey, 1993). In accordance with the product stewardship strategy, an organisation should have an environmental proactive stance for raw materials and component suppliers through which the environmental impact of the whole supplier system could be minimised (Smart, 1992). Additionally, the close working relationships between customers, marketing and environmental staff are important if the environmental impact of a product is to be reduced and later the product is to be recycled or reused (Hunt & Auster, 1990; Post & Altman, 1991). According to Welford (1993), product stewardship indicates the organisational ability to coordinate functional groups in the company and to integrate key external perspectives (stakeholders', community leaders', environmentalists', regulators') into decisions about the product design and development. Product stewardship promotes sustainable competitive advantage through accumulation of socially complex resources. This involves fluid communication beyond departments, functions and organisational boundaries (Hart, 1995). According to Buzzelli (1991) and Westley & Vredenburg (1991), *"Competitive pre-emption creates initial competitive advantage, and LCA can be used as an internal planning tool to facilitate DfE, external stakeholders probable need to be involved*

substantially for the strategy to become accepted as socially legitimate". Involving the stakeholders in the strategic process is vital for the product stewardship strategy (Hart, 1995).

Sustainable development is a strategy that encourages a strong sense of social-environmental purpose and sets the scenery for an organisation's corporate and competitive strategies (Shrivastava & Hart, 1995; Stikker, 1992; Welford, 1995). Companies thriving for sustainability must work for a long period on the development and deployment of low impact technologies (Schmidheiny, 1992; Jansen & Vergragt, 1992). The core for innovation and change is the dedication of an organisation to its vision. Additionally, such a vision of the future demands a strong moral leadership and an empowering social process into the management ranks. (Bennis & Nanus, 1985; Hart, 1995; Selznick, 1957). Sustainable development promotes competitive advantage through *"accumulation of rare and firms-specific resources, involving a shared vision of the future and focus on new technology and competency development"* (Hart, 1995). Hart (1995) suggests the following propositions for companies that aim for sustainable development.

Proposition 1: *"Firms that have a demonstrated capability in establishing shared vision (rare skills) will be able to accumulate the resources necessary for sustainable development more quickly than firms without such prior capability"*

Proposition 2*: "Firms that adopt sustainable development strategies will evidence substantial development of new, low-impact technologies and competencies."*

Improving the organisation's environmental performance can be proved beneficial for firms. According to Michael Porter, well-designed environmental policies can boost innovation and lead to an increased productivity (Porter & Van der Linde, 1995; Porter, 1991).

Competitive advantage through an improved environmental performance can be achieved by complying with the environmental regulations when adopting a green technology. Companies apply pollution-control technologies in order to advance their manufacturing or waste management processes and consequently become more attractive for stakeholders or customers. Hence, when companies implement such a strategy they *"may also enjoy a "first- mover" advantage and may eventually lobby governments for stricter regulations."* (Ambec & Lanoie, 2008). Additionally, firms can develop their own pollution-control technology for their own pollution treatment and eventually sell it to other companies, which can increase their revenue. However, this requires the presence of a great amount of resources and research facilities. (Ambec & Lanoie, 2008).

Furthermore, achieving competitive advantage through an improved environmental performance is about changing management and business practices. This can be realised by implementing an environmental management system such as European Eco-Management Audit Scheme (EMAS) or ISO 14000. ISO 14000 is a popular certification which determines practices that measure and better the firm's environmental impact. It requires employee training for sustainable development, establishing a system for green accountability as well as creating a responsible management hierarchy to address environmental issues. In addition, by implementing ISO 14000 firms can review their production processes, determine their environmental impact as well as find different ways to improve their productivity. However, improving the environmental performance can lead to a change in the business relationships with distributors and suppliers. This

means that when companies negotiate with their potential suppliers, they must consider the environmental issues and the environmental performance of their products (Jackson, et al., 2012; Ambec & Lanoie, 2008).

Moreover, an improved environmental performance grants organisations the opportunity to have access to the needed financial capital. By having a good environmental performance, firms find it easier to establish better relationships with lending institutions. Nowadays, many banks value the social responsibility and the environmental practices of their potential borrowers. A study of Ambec and Lanoie in 2008 showed that a good environmental performance was connected with a better financial performance (Jackson, et al., 2012; Ambec & Lanoie, 2008).

Lastly, organisations can have the possibility of obtaining more qualified human capital which can also be a source of competitive advantage. It is evident that when a company has a good reputation for corporate social responsibility is more likely to attract more skilled future employees at a lower cost especially when they feel a sense of pride working for such an environmentally conscious organisation. Through the improved environmental performance employees are becoming more motivated and productive. Therefore, it can be concluded that being green is a strategy to achieve competitive advantage in the labour market (Jackson, et al., 2012).

2.3.1 HR Management and Sustainable competitive advantage

One of the requirements of HR management is to translate organisational objectives and values into HR practices and policies. From an environmental point of view, the human resource practices must be developed and be in accordance with the NRBV approach in order for organisations to achieve competitive advantage. Additionally, the environmental concerns should be included in the recruitment and in the selection processes (Dubois & Dubois D. A., 2012; Parkes & Borland, 2012). Also, HR systems can introduce training and rewards for tackling environmental issues that can improve the sustainability of the organisation. Thus, HR management systems can be transformed to meet the company's goals and strategies (Ulrich, 1998).

According to Hart (1995), competitive advantage is developed on the basis of social legitimacy. The tacit competence obtained from employees' participation to prevent pollution is a resource that cannot be duplicated by competitors. As mentioned before, product stewardship is associated with competitive advantage since it helps gain complex resources such as a smoother communication flow among departments and functions. Hart & Dowell (2011) state that sustainable development promotes competitive advantage by retaining a collective sense of the social environmental responsibility in organisations.

For the development of proactive dynamic environmental strategies, an organisation must analyse the resources that are necessary for their implementation (Aragón-Correa & Sharma, 2003). An environmental strategy is effective when the organisation obtains green skills. Therefore, the role of employees in the implementation of such a strategy is very important (Chan, 2005).

According to Ulrich (1998), the HR management is the core in organisational change management since it is responsible for the changes in a company's culture. Therefore, the HR professionals are the ones who identify and apply the necessary changes, helping the employees in the process of utilising the new patterns of activities and behaviours. As a consequence, the organisation is enabled to make constant changes since it is capable of building trust relationships, of managing problems, developing and executing planned actions. Parkes & Borland (2012) state that the HR management focuses on the development of leadership, culture, values, organisational development and communication. These processes require sustainable change strategies that can be implemented by changing the employees' behaviour to a more sustainable perspective (Dumont, et al., 2017).

Ployhart & Moliterno (2011) argue that human capital is a unique resource, developed from the individuals' knowledge and skills. They state that it is an important resource which is directly related to individual performance.

The alignment of HR practices with the NRBV environmental strategies discussed previously in this chapter can lead to a sustainable competitive advantage by building organisational sustainability. When a company systematically examines its environmental strategies from its operational practices to its strategic dynamics then it ensures sustainable development. According to Chan (2005) and Walls, et al. (2011), this view is directly connected to the organisation's sustainable capabilities. This is because the HR practices can affect the development of a sustainable culture and the implementation of NRBV strategies.

Many pioneers have analysed the HR management as a source of competitive advantage using the Resource Based View (RBV) approach. As reported by Barney & Hesterly (2008), "*The RBV is a model of firm performance that focuses on the resources and capabilities controlled by a firm as sources of competitive advantage"*. Therefore, based on this approach human resources can be valuable, rare, inimitable and non-substitutable leading to obtained sustainable competitive advantage (Wright, et al., 1993). Buller & McEvoy (2016) argue that HR practices define organisational capabilities, individual skills, knowledge and abilities as well as group capabilities and are an effective tool to enhance organisational performance. Delery & Roumpi (2017) state that HR management and sustainable competitive advantage are connected by two aspects. The first aspect is related to HR practices which are considered as a system. Therefore, if a company has a well-defined system then it can meet the conditions of RBV: valuable, rare, difficult to imitate and ambiguous. The second aspect refers to organisational workforce which is rare, non-substitutable and inimitable by itself. Therefore, the human capital is considered the core that brings organisations sustainable competitive advantage..

Valuable HRM

The labour market by itself is heterogeneous since individuals contribute differently based on their life experience and formal education (Wright, et al., 1993). This heterogeneity is hard to imitate. However, a qualified workforce is very often connected to the organisation's financial value (Wright, et al., 1993). The two major challenges in developing valuable HR management are increasing revenue and reducing costs (Wright, et al., 1993; Barney & Wright, 1998). A study in a company named Kronos showed that implementing an open vacation policy in which

employees decide how much time they need off work contributed to an improved employee performance and engagement as well as to a better economy (Almada & Borges, 2018).

Rare HRM

The quality of human resources is the consequence of the integration of abilities and skills that every employee brings or develops in the company. The recruitment process is the initial stage for developing high-quality workforce. Additionally, training and development practices are used to help employees to obtain the essential competencies and knowledge to perform their activities. On the other hand, motivation strategies and tools like social support and feedback are an important aid in the process of improving the quality of human resources as that quality is connected to the organisation's performance (Van Wingerden, et al., 2017). Bakker & Xanthopoulou (2013) provide an example of rare HRM. In their research they examined job resources, charismatic leadership and creativity. It showed that job practices that focus on the behaviour of individuals can affect abilities and skills, developing complexity and rareness (Almada & Borges, 2018).

Imitable HRM

Human capital is naturally difficult to be duplicated. Therefore, organisations who wishes to duplicate this competitive advantage must to identify completely contributions of employees' qualifications to organisational performance (Almada & Borges, 2018). According to Pardo Del Val & Fuentes (2003), human capital is a complex combination of individual characteristics such as emotions, cognition and behaviour. The relationship between performance and HR management is connected to the organisational capability to influence the employees' behaviour. Consequently, the perfect imitation of human resources is not possible to occur since it includes environmental contexts (Saá-Pérez & García-Falcón, 2002). Additionally, according to Barney & Wright (1998), Rothenberg, et al. (2017) and Wright, et al., (1993), human interactions promotes social complexity which a limitation for imitation.

Non-substitutable HRM

Employee's capabilities such as, adapting and learning are strategically imposed and encouraged from HR management practices and policies which rendering them a non-replaceable resource (Wright, et al., 1993).

Human capital can learn, innovate and develop in view of new technologies and needs. This type of resource is explored by organisations in accordance to their abilities and strategies to do so. Consequently, having the essential resources is not enough if one does not know how to exploit them (Almada & Borges, 2018). According to Barney & Wright (1998), organisations have to create systems and practices that permit the full usage of employees' potential both at team and individual level for being source of competitive advantage. Additionally, given that the use of employees' abilities is directly connected on how organisations manage the HR systems, HR management in total is difficult to substitute because of its nature.

Therefore, it can be concluded that HR management combines the factors of RBV since the quality of human resources in organisational context is valuable, rare, non-substitutable and difficult to imitate. Also, according to Almada & Borges (2018) since HR practices creates the

basis for employees to establish abilities, skills and knowledge they are considered as *"an organisational competency towards environmental strategies creating value to the organisation, stakeholders, consumers, and society."*

2.3.2 Competitive advantage in the building industry

The relationship between Green Human Resource Management and a company's performance has been widely studied in the literature review, however its application in the construction industry has not been discussed. According to Ferris, et al. (1990), construction companies with higher levels of strategic plans such as Human Resource plans have obtained better organisational performance including better cost effectiveness, higher productivity and overall efficiency. Maloney (1997) states that in the majority of construction companies the strategies that draw the least consideration are the ones concerning human resources - "*There is a very strong tendency to do what everyone else does, or simply, to continue using emergent (rather than deliberate) strategies that have evolved over time."* Brandenburg, et al. (2006) state that *"People and people processes are a source of competitive advantage for any company."*

Therefore, construction companies and sectors are urged to improve their competitiveness by including human resources as well as innovative solutions in their strategies. The exploration for competitive advantage is an important component of an enacted strategy (Elmualim, et al., 2016). However, it is not clear yet how to develop, implement and monitor the initiatives for an improved competitiveness. Thus, the need to analyse the competitiveness and the application of these initiatives in the construction industry emerged (Ericsson, et al., 2005). Michael Porter developed a framework known as Porter's Five Forces to define the external threats of any company's competitive environment by taking into consideration the human capital issues as well. Porter with his work contributed to how competitive advantage can be achieved, by also addressing human resource management (Ericsson, et al., 2005).

Porter's Five Forces framework is *a "useful starting point for strategic analysis even where profit criteria may not apply"* (Johnson, et al., 2008). It is of great importance for a company to be fully aware of the industry in which it operates so that it can form an appropriate strategy. Porter's Five Forces framework is composed of five characteristics: rivalry among existing competitors, threat of new entrants, bargaining power of suppliers, bargaining power of buyers and threat of substitutes. Therefore, the interaction of those characteristics is considered as a constant threat to the success of a construction company (Dälken, 2014).

Rivalry among existing competitors

According to Johnson, et al. (2008), *"competitive rivals are organisations with similar products and services aimed at the same customer group".* The rivalry among the existing competitors force contains different types of competition such as "*price discounting, new product introductions, advertising campaigns, and service improvements"* (Porter, 2008). A high level of rivalry among the existing competitor companies in the building sector can affect the industry's profitability. The rivalry depends on *"the intensity with which companies compete and, second, on the basis on which they compete"* (Porter, 2008). In relation to the Danish building sector, it could be stated that the market is represented by companies that provide similar products or services.

Therefore, to thrive in a competitive environment a construction company should approach things differently than its competitors. One strategy that can affect rivalry is differentiation. As already mentioned in sub-chapter *2.3 Sustainable Competitive Advantage*, corporate sustainable development is considered as vertical differentiation strategy. For the implementation of such a strategy and for the realisation of the corporate goals, qualified in green matters human capital is required. Thus, with the help of the working force construction companies can provide improved environmental quality of products or services as well as deploy green technologies and target environmentally conscious customers. Therefore, a construction company that implements a sustainable strategy and Green HRM can be considered differentiated in terms of its sustainable environmental practices while it keeps its focus on a niche market of green customers. (Jackson, et al., 2012; Shrivastava & Hart, 1995; Schuler & MacMillan, 1984).

Threat of new entrants

"Barriers to entry are factors that need to be overcome by new entrants if they are to compete successfully" (Johnson, et al., 2008). According to Porter (1979)*, "New entrants to an industry bring new capacity, the desire to gain market share, and often substantial resources."* The existence of entry barriers reduces the number of companies in the building industry and consequently affects the *'Rivalry Among Existing Competitors'* (Johnson, et al., 2008). Additionally, companies who wish to enter the market immediately influence the competitive advantages (Dälken, 2014). The lower the barriers to entry in the building market, the greater the threat of new entrants. *"The height of barriers to entry has been found consistently to be the most significant predictor of industry profitability"* (Rothaermel, 2008). Porter (1979) states six barriers to enter the market: (1) differentiation, (2) capital requirements, (3) economic on scale, (4) cost disadvantages, (5) government policy and (6) distribution channels. A construction company that is differentiated in regard to its green products or services can have access to distribution channels that share the same environmental values. Additionally, the human capital and the deployment of Green HR practices are difficult to be imitated and thereby new entrants can have difficulty to compete with them. If deployed efficiently, green HR abilities such as green motivation, encouragement, and compensation are hard to be duplicated. (See sub-division *2.2.6 Green Human Resource Practices*)

Bargaining power of supplier

According to Johnson, et al. (2008), *"Suppliers are those who supply the organisation with what it needs to produce the product or service"*. The bargaining power of suppliers refers to the power that the suppliers have over their buyers such as increasing the prices of services or goods. *"Powerful suppliers can thereby squeeze profitability out of an industry unable to recover cost increases in its own prices"* (Porter, 1979). There are several factors that indicate the bargaining power of suppliers. For instance, "*the industry is dominated by a few companies and is therefore more concentrated than the industry it sells to, or the industry is not the most important customer of the supplier group*" (Porter, 1979). The bargaining power of suppliers can be effected by the number of suppliers in the building industry, the size of suppliers and the availability of different customers (Slater & Olson, 2002). Similar to the rivalry force, the power of suppliers in the Danish building sector can be high based on products or services differentiation in terms of sustainability.

Such a differentiation requires the usage of green products or services and renewable production procedures. However, the acquisition of green products or services produced by less polluting inputs is rather expensive. Therefore, this gives suppliers the strong power over buyer companies or customers who are environmentally conscious (Jackson E, et al., 2012).

Bargaining power of buyers

According to Porter (2008), bargaining power of buyers is the "*flip side of powerful suppliers*". If buyers have a great bargaining power on the market, they can reduce the industry's profitability by reducing the prices, forcing expanded services and demanding better quality. (Slater & Olson, 2002). Buyers can influence the survival of any B2B or B2C business, their power determines how unique and differentiated a product or service in the building industry is. Therefore, if products or services are neither unique nor differentiated and customers do not receive any value from them, they have low switching costs (Johnson, et al., 2008). In connection with the Danish building sector and Green HRM, eco-conscious companies can attract environmentally-friendly customers. In all B2B and B2C businesses customer loyalty plays an important role and it depends on the value customers receive from the companies. To maintain long-term relationships and satisfied environmentally conscious buyers, companies must provide them with high quality products and services. According to Ali & Ahmad (2012), buyers are keen to persuade green products more often as long as quality and price are concerned. Additionally, customer service employees that are trained in environmental practices can influence the industry's potential for competitive advantage and shape customer loyalty and buying behaviour. This is due to the fact that human capital in customer service that has increased awareness of the products' or services' environmental impact can increase the company's sales through their interaction with environmentally responsible customers. However, in order to achieve this objective, the Danish building industry needs to hire employees with green knowledge, skills and ability to comply with the company's environmental goals (Ali & Ahmad, 2012; Batt, 1999).

Threat of substitutes

"Substitutes are products or services that offer a similar benefit to an industry's product or services, but by a different process" (Johnson, et al., 2008). With a broad view, companies in the building industry are competing with other industries proving substitutes of products or services. However, the substitutes limit the potential profit of companies, defining a cap for the prices of their services or products. The determination of substitutes is a search for services or products with the same functions as the ones of the considered industry. There are different factors that can affect the threat of substitutes in the building industry such as the buyer's addiction to substitutes or the switching cost among substitute services or products (Klemperer, 1995; Hubbard & Beamish, 2011). As mentioned before, differentiation in terms of sustainability is a source of sustainable competitive advantage. Therefore, a company can benefit from a sustainable strategy, from promoting products or services that are certificated for their environmental behaviour as well as are made with less polluting inputs and renewable sources of energy (Jackson, et al., 2012). Environmentally consious customers must be satisfied with the environmental impact of the products or services they pursuit. In order to keep the threat of substitutes low, a company in the Danish building industry must offer greater environmental value than its competitors. Hence, the

application of a sustainable strategy in a construction company's products and services along with the alignment of the Green HRM is an intangible asset that brings value to the organisation. Furthermore, it promotes an environmental corporate reputation and image of the company's products and services and increases the interest of eco-consious customers. Thereby, the environmental reputation of the company's products and services and their environmental production procedures minimise the risk of substitutes and switching costs of customers (Lam, et al., 2004; Jackson, et al., 2012).

2.4 Theoretical and Analytical perspectives on Green HRM

Having introduced the concept of Green HRM and the sustainable competitive advantage, the next step is to establish a link between the existing literature in Green HRM and organisational theories. Therefore, the aim of this section is to establish the required knowledge of Green HRM in connection with theoretical frameworks developed by scholars.

In order to determine the knowledge advancements in Green Human Resource Management research, it is important to obtain the key conceptual themes of the field. The key concepts have emerged during the process of knowledge development in Green HRM. Most specifically, these key concepts are *"meaning of Green HRM, Process Model of Green HRM, Outcomes of Green HRM as well as Stakeholders and Performance of Green HRM"* (Arulrajah & Opatha, 2016). As already mentioned in this chapter, Green HRM is the *"integration of corporate Environmental Management into Human Resource Management"* (Renwick, et al., 2008). However, organisations need a process model of Green HRM. The process model for Green HRM is a set of Green HRM practices with activities and functions for HRM (See sub-division *2.2.6 Green Human Resource Practices*). Practicing Green HRM in companies contributes to the organisation's environmental performance, reputation as well as to legal and standard compliance while it reflects on both the organisational and employee level. Stakeholders such as employees, employers, customers and suppliers are important factors for the determination of the Green HRM performance since their actions influence the natural environment while according to Renwick, et al. (2013), the full use of Green HRM practices improves the company's environmental performance (Arulrajah & Opatha, 2016).

Many theories such as institutional theory, system theory, process theory, stakeholder theory, resource-based theory and ability-motivation-opportunity (AMO) theory from the field of organisational and human relations have influenced the above-mentioned concepts of Green HRM. By exploring them in detail a greater understanding of Green HRM can be obtained (Arulrajah & Opatha, 2016). Boxall, et al. (2008) use the notion of "*analytical HRM*" as an activity whose main task is to build theory and gather empirical data to support it. They also identifued three characteristics of the analytical HRM. The first characteric refers to "*what*" and "*why*" of HRM (in this case, *what and why of Green HRM*) which concerns the understanding of "*what management tries to do with work and people in different contexts and with explaining why"* (Boxall, et al., 2008). For the first characteristic, the instututional theory, the system theory and the resource-based theory are applied (Arulrajah & Opatha, 2016). The second characteristic refers to "*how of HRM*" (in this case, *how of Green HRM*) which is related to *"the processes that make*

models of HRM work well (or poorly), thus building much stronger links to companion disciplines such as strategic management and organisational behavior" (Boxall, et al., 2008). For the second characteric, the procees theory, the instutional theiry and the system theory are employed (Arulrajah & Opatha, 2016). The third characteristic refers to the question of "*for whom*" and "*how well*" by "*assessing the outcomes of HRM, taking account of both employee and managerial interests, and laying a basis for theories of wider social consequence.*" (Boxall, et al., 2008). For the thist characteric, the stakeholder theory and the ability-motivation-opportunity (AMO) theory are applyied (Arulrajah & Opatha, 2016).

Figure 4: *Analytical conceptual themes of Green HRM & Corresponding theories*, presents how the upcoming frameworks of analyses and theories obtained by scholars are related to the already discussed Green HRM themes.

Analytical HRM & Key conceptual themes of Green HRM	Corresponding Theory
What and why of Green HRM ○ Meaning of Green HRM ○ Need of Green HRM ○ Outcomes of Green HRM	○ Institutional Theory ○ Resource Based Theory ○ System Theory
How of Green HRM ○ Process Model of Green HRM	○ Process theory ○ System Theory ○ Institutional Theory
For Whom and How Well of Green HRM ○ Stakeholders and Performance of Green HRM ○ Outcomes of Green HRM	○ Stakeholder Theory ○ AMO Theory

Figure 4: Analytical conceptual themes of Green HRM & Corresponding theories

What and why of Green HRM

In this study the questions of what Green HRM is and why organisations need it has already been discussed in sub-division *2.2.5 Defining Green HRM.* However, the analytical framework of HRM has not been addressed yet. The key concepts of meaning, need and outcomes of Green HRM meet the first characteristic of the analytical HRM framework of Boxall, et al. (2008). According to Arulrajah & Opatha (2016), "*the meaning of Green HRM, needs for Green HRM (why) as well as outcomes of Green HRM has a strong analytical framework.*" Therefore, in order to argue that the knowledge which has been developed by the meaning, needs and outcomes of Green HRM has a theoretical framework, the institutional, system and resource-based theory are applied.

The institutional theory suggests that external pressures can shape organisational action (Arulrajah & Opatha, 2016). Additionally, Arulrajah & Opatha (2016) state that "*Applied to the natural environment, most institutional studies have emphasised the effects of coercion from regulatory and social pressures and how they encourage homogeneous outcomes*". The

institutional theory often displays organisations as passive particants who responds to instutional expectations (Perrow, 1986; & Oliver, 1997). Even so, the institutional theory can provide the basis as to why Green HRM is a necessity for an organisation. This theory fits with the assumptios of the ecosystem context.

Ecosystems present the construct of goodness-of-fit, the extent to which one's goals, needs, capacities and rights meet the qualities of one's social and physical environment (Germain & Gitterman, 1995) & (Greene, 1999). Therefore, if no fit is present, the introduction of initiatives that can establish a good fit is needed. Consequenty, Green HRM in an organisation is considered as a permanent initiative. The institutionalisation theory advocates that the lack or non-match of goodness-of-fit among residents and their institutional environment is the main cause of the institutionalism syndrom. Based on the institutional theory, it becomes evident that because of external pressures such as social and regulatory pressures, Green HRM is necessary in every organisation today (Arulrajah & Opatha, 2016). Therefore, for the purposes of this study the meaning and needs of Green HRM are supported by the institutional theory from an external perspective.

On the other hand, the resource-based theory indicates that resources which are specialised and non-replaceable develop opportunities for heterogeneity which drives the organisation to competitive advantage (Wernerfelt, 1984). Both environmental and business strategies depend on specific organisational capabilities as well as on the firm's ability to make an efficient use of them (Wernerfelt, 1984). According to Hart (1995), the achievement of a better internal environmental capability is a function of the organisation's main environmental competencies like pollution prevention. To sustain these capabilities, an organisation needs to continuously improve its internal operations as well as to invest in employees over capital (Russo & Fouts, 1997; Sharma & Vredenburg, 1998; Hart, 1995). Organisations that implement environmental strategies without the basic competencies have less possibilities to attain their strategic goals (Christmann, 2000). This is the reason why this study underlines the outcomes of Green HRM at employee level such as employee green capabilities, employee green behaviour and attitude as critical for the improvement of the overall environmental performance of the company. Therefore, based on the resource-based view theory, the green outcomes of employees are crucial from an internal perspective (Wernerfelt, 1984; Barney, 1991; Bowman & Ambrosini, 2000; Lockett, et al., 2009). (See sub-chapter *2.3 Sustainable Competitive Advantage*)

The next theoretical framework applied in this study is the system theory or open system model. According to Katz & Kahn (1978), in the system theory the organisation is considered as a "*system built by energetic input-output where the energy coming from the output reactivates the system.*" The HRM is viewed as a sub-system that exchanges both energy and information with the environment to motivate, develop and keep the employees who assure the survival and efficient performance of the organisation (Jackson & Schuler, 1995). In order to serve these purposes, Green HRM practices and policies can be used as instruments to enhance the Green HRM outcomes and obtain organisational environmental performance (Arulrajah & Opatha, 2016). Additionally, HRM has to serve the strategic goals of the organisation regarding the maintenance of a good personnel structure, achievement of optimal skills and knowledge as well as to keep the workforce costs

acceptable. Furthermore, HR management should adopt an integrated way of thinking of the systems and become familiar with their concept (Arulrajah & Opatha, 2016). This is because managers need to plan structural adjustments to ensure the survival of the overall system and to continually formulate new interpretations of the business concepts, to find a suitable positioning and when necessary to introduce periods of transformation, adjustment and re-interpretation of the organisational structure (Arulrajah & Opatha, 2016). This adjustive and proactive behaviour has to be based on the system theory to promote a long-lasting and sustainable performance.

How of Green HRM

The second characteristic is related to *"how of Green HRM"*, which refers to the actions through which GHRM is accomplished. The focal point of this review is to connect the existing literature with the second characteristic of the analytical HRM framework created by Boxall et al. (2008). According to Arulrajah & Opatha (2016), the knowledge that has been developed under functional or process models of Green HRM have a strong analytical framework. In order to prove that statement, the process theory, the system theory and the institutional theory are applied. The process theory aims to explain whether particular conditions are realised by identifying sequences of actions that lead to outcomes (Whitehead, 1933; Russell, 1961; Mohr, 1982). Therefore, in the management research the process theory explains *"how"* something happens (Arulrajah & Opatha, 2016). Maxwell (2004) states that *"Process theory deals with events and the processes that connect them; it is based on an analysis of the causal processes by which some events influence others"*. Additionally, he adds that *"A realistic, process-oriented approach to explanation, recognises the explanatory importance of context of the phenomena studied, and relies fundamentally on an understanding of the processes by which an event or situation occurs, rather than simply a comparison of situations involving the presence or absence of the presumed cause"*. As a result, the process theory can answer the question of "*How of Green HRM*" by greening the functional dimensions of HRM. However, the system theory is also able to support this review. That is because the system theory also explains how something can be materialised by taking inputs, processing them and gaining outcomes (outputs) (Arulrajah & Opatha, 2016).

On the other hand, the institutionalisation of Green HRM practices by the functional dimension of HRM has to be realised within the organisation (Arulrajah & Opatha, 2016). Consequently, the institutionalisation of Green HRM requires two steps: (1) the legitimization such as cognitive, normative and law or legal aspect at organisational level and (2) the institutionalisation of Green aspects into HRM functions (Arulrajah & Opatha, 2016). The conceptual model of this study at a process or functional level deals with the institutionalisation of Green aspects into HRM functions. Thus, the process theory, the system theory and the institutional theory can provide an answer for "*how of Green HRM*".

For Whom and How Well Green HRM

The third characteristic concerns the questions "*for whom and how well of Green HRM"*. The outcomes of HRM are assessed and both managerial and employee interests are taken into consideration as well as the basis for theories of wider social consequences is developed (Arulrajah & Opatha, 2016). The review that is to be presented is related to the stakeholders and performance of

Green HRM which are connected to the third characteristic of the analytical HRM framework. Therefore, the stakeholder theory and ability-motivation-opportunity theory are examined.

In order to answer the question of "*for whom of Green HRM*", the stakeholder theory is applied. The stakeholder theory refers to all the stakeholders of the organisation such as indirect, direct, external, internal, future and current ones. According to Jackson & Schuler (2003) *"the principle that effective management requires attending to all relevant stakeholders is as true for managing human resources as for other management tasks. Human resource management practices cannot be designed solely to meet the concerns of the employees. Nor can they be designed by considering only their consequences for the bottom line. Organisations that are the most effective in managing people develop HR systems that meet the needs of all key stakeholders."* Based on this statement, there is a consistency with the current discussion on sustainability in social, environmental and economic goals. Therefore, Green HRM has to meet the needs of all stakeholders.

For the last characteristic of *"how well*", the AMO theory is applied. Green HRM relies on the ability, motivation and opportunities at any level such as department or organisational level, team level or at individual employee level. At the same time, employees in an organisation are required to have green abilities so as to engage in green matters and have an internal state that drives them towards a greater degree of willingness to perform their job in an environmental-friendly way (Arulrajah & Opatha, 2016). Furthermore, employers and supervisors need to supply the employees with opportunities in green matters. Regarding motivation, Opatha (2015) acknowledgs an internal state of employees which gives them meaning and enthusiasm to do something because they find it important or they enjoy or like doing it. For that reason, employees need to like, act and think in green ways. On the other hand, Opatha (2015) states that motivation is an activity that is performed by one person to encourage another in order to carry out successfully a duty on the job to achieve established objectives. Therefore, top managers of construction organisations should create programmes to stimulate their employees to perform green duties so that green objectives can be achieved (Arulrajah & Opatha, 2016). Hence, the AMO theory covers the overall Green HRM performance.

3 *Chapter* Research Focus

Having introduced the concepts of Green HRM and sustainable competitive advantage, a general knowledge on the thesis topic has been obtained. Since the scope of this master thesis is to determine whether sustainable competitive advantage can be achieved through Green HRM, the focus lays on the following research questions:

Can the potential of Green HRM be fully realised in practice and as consequence bring sustainable competitive advantage in the Danish building sector?

In order to be able to give a proper and coherent answer, the research question requires deeper research questions. For the purposes of the master thesis, the following research-sub-questions aid to understand the main research question.

- To what extent are Green HRM practices currently implemented?
- Which sub-practices have the most significant correlation within each GHRM practice and among all GHRM practices, and how are they implemented in Denmark?
- Can the competencies of human capital engaged in Green HRM exploit external opportunities or neutralise external threats?
- Does Danish building companies possess similar Green HRM resources and capabilities?
- Are resources and capabilities in companies which are implementing Green HRM practices difficult to imitate?
- Do companies possess HR systems that promote and exploit the full competitive potential of Green HRM resources and capabilities?

4 *Chapter* Findings and Interpretation

The aim of this chapter is to present the findings and interpretation of the outcome from the online survey. For the purpose of determining the Cronbach's Alpha and Relative Importance Index, the software "*Statistical Package for the Social Sciences* (SPSS)" is used (See: *1.3.5.1Collection of primary data* - Survey).

4.1 Reliability Analysis

The reliability analysis is carried out in order to examine the internal consistency of each measure through the analysis of Cronbach's Alpha coefficient. Cronbach's Alpha coefficient is denoted by the following formula:

$$\alpha = \frac{N^2 * \overline{Cov}}{\Sigma e^2_{item} + \Sigma Cov_{item}}$$ (Field, 2013)

in order to have an internal consistent measure, it can be assumed that the unique variance within variables (s^2) should be small compared to the covariance among scale items (Cov) (Cortina, 1993). According to Malhotra, (2004) the ideal scale for reliability is above 0.7. However, a big coefficient alpha does not always indicate high degree of internal consistency. This is since alpha is affected from the length of the test. Therefore, in cases that the length of the test is low then the value of alpha is reduced (Tavakol & Dennick, 2011). However, before the determination of the Cronbach's Alpha coefficient some pre-requisites need to be taken into consideration such as giving numerical value to each of the responses of the sliding scale. Starting from a value of 1 for Strongly disagree through to a value of 5 for Strongly agree, the values were entered into SPSS. The participants were also asked to answer Yes and No questions, which were given a value of 1 for the No response and a value of 5 for the Yes response. The particular values were decided based on the sliding scale values where 1 indicates the lowest negative response and 5 corresponds to the highest positive response. Another argument for the specific value choices is to avoid entering ambiguous values in the program that can negatively affect the results of the analyses. The final consideration that was taken is connected to the negative statements in the questionnaire. A reverse scale was used where 1 = strongly agree, 2 = agree, 3 = neither agree not disagree, 4 =disagree and 5 =strongly disagree in order to eliminate the possibility of involuntarily affecting the results from the SPSS analyses. For the purposes of the analyses of this study the traditional significance level of 0.005 is used which provides 95% probability of the results (Ayyub & McCuen, 2003). (See *1.3.5 Data collection method - techniques and procedures*)

The results of the reliability tests conducted for each group of questions such as Green HRM, Green HRM practices, Green HRM challenges and competitive advantage are summarised in Table 3: *Cronbach's Alpha in relation to GHRM Practices and Competitive advantage*

The most significant is the value of the total Cronbach's Alpha (***0,878***) which is well above 0,7, thus indicating that the collected data is reliable. Nevertheless, the overall outcome of the analyses of the questionnaire is strongly influenced by the authors' own interpretation of the findings.

Next, the value of each category is also calculated so that the internal consistency of each one of them is also measured against the 0,7 minimum. The majority of the categories possess a high validity with the exception of two categories. The first one is ***Green learning, training and development*** with Cronbach's alpha value of ***0,463***. The second category is "***Do you believe that****"* which studies general statements regarding the adoption of GHRM and it has a value of ***0,314***.

In conclusion, while the overall results gathered through the questionnaire can be considered valid and reliable, the results from the two above-mentioned categories need to be carefully considered and used carefully.

Categories	**Cronbach's Alpha**
Concept of GHRM	0,746
Green recruitment	0,791
Green learning, training and development	0,463
Green employee relations	0,881
Green initiatives for HR	0,761
Green performance management	0,906
Green rewards and compensation	0,823
Challenges for the HR professional	0,942
Environmental quality	0,787
Green technology	0,742
Financial capital	0,927
Do you believe that *	0,314
Are you familiar with **	0,777
Total	**0,878**
*** Category of questions beginning with "Do you believe that…?"**	
**** Category of questions beginning with "Are you familiar with…?"**	

Table 3: Cronbach's Alpha in relation to GHRM Practices and Competitive advantage

4.2 Relative Importance Index (RII)

According Kometa, et al., (1994) and Sambasivan & Soon, (2007) the Relative Importance Index is a method used to examine the relative importance. The method is applied so a better understading of the importance of Green HRM practices in relation to the degree of their implementation is obtained. The RII is denoted and calculated by the following formula:

$RII = \frac{\Sigma * W}{A * N}$, where

W = Weighting given to each concept or statement by respondents (ranging from 1 to 5)

A = Highest weight

N = Total number of respondents

The Relative Importance Index contains values from 0 to 1 (zero not inclusive) while the higher the Relative Importance Index, the more important the concept or statement is. The mean

relative importance indexes for each category from the questionnaire are shown in *Table 4:Mean RII and Ranking of GHRM Practices*, while the complete results are presented in *8.1 RII and Ranking of sub- GHRM practices.* The categories are ranked according to their implementation level in the Danish building companies which is determined by calculating their mean RII value.

The category that is ranked the highest is ***Green initiatives for HR with*** a mean RII of 0,577, followed by ***Green performance management*** which has a mean RII of 0,449 while the third highest ranked category is ***Green recruitment*** and its mean RII is 0,397. A potential connection might exist between all three categories as they connect green methods of selection of future employees in the Danish building industry and the active involvement of this human capital in the environmental actions and objectives of companies. Further analyses are conducted in the following chapters, therefore, the connection between these highly rated categories is to be examined in greater detail.

Categories	**RII**	**Ranking**
Green recruitment	0,397	3
Green learning, training and development	0,320	6
Green employee relations	0,345	4
Green initiatives for HR	0,577	1
Green performance management	0,449	2
Green rewards and compensation	0,324	5

Table 4:Mean RII and Ranking of GHRM Practices

5 *Chapter* Detailed Analysis

Having presented the results from the conducted questionnaire in *4 Chapter Findings and Interpretation,* further analyses of the data are carried out in the current chapter. The study uses the questionnaire findings as a basis for the in-depth analyses which have the purpose of answering the sub-research questions stated in *3 Chapter Research Focus*.

The following chapter is structured according to the order the sub-research questions are stated in. Firstly, a descriptive analysis as well as an inferential analysis are performed so that the findings in terms of both GHRM practices and Competitive advantage can be organised in a way that makes examining them more convenient. By presenting the data in such a manner, the extraction of the most important correlations becomes quite clear which is crucial for achieving the goals of the master thesis. Afterwards, the results from the analyses are actively applied in the proposed solutions to the sub-research questions.

5.1 Descriptive Analysis

According to Cooper & Schindle (2013), the descriptive analysis aims to describe the main features of the data in a given study. The descriptive analysis is carried out so the data concerning the Green HRM concept, Green HRM practices, Green HRM challenges, Competitive Advantage and their impact on environmental sustainability at the Danish building sector are studied further. The complete analysis can be found in *8.2 Descriptive Analysis*. In this chapter a summary of the descriptive analysis is presented showing the most significant findings from each category in terms of the most responses they produced. The questionnaire uses the sliding scale from Not at all to To a very great extent, another sliding scale from Strongly disagree to Strongly agree as well as Yes and No answers. Each category from the survey is analysed in a separate table. Each table is comprised of sub-practices which the majority of the respondents were positive about (agreed and strongly agreed), as well as negative about (disagreed and strongly disagreed). Included in the table are also statements which most of the participants were neutral about (neither disagreed nor agreed).

Concept of GHRM

Q #		1. Not at all		2. To a little extent		3. To some extent		4. To a great extent		5. To a very great extent		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
1	Are you familiar with the concept of Green HRM (Green Human Resource Management)?	**80,6%**	**25**	6,5%	2	12,9%	4	0,0%	0	0,0%	0	1,32	0,702
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
5	Save cost	**0,0%**	**0**	**15,4%**	**2**	23,1%	3	46,2%	6	15,4%	2	3,62	0,961
7	Reduce intervention from the government and other law enforcing agencies	0,0%	0	0,0%	0	**69,2%**	**9**	23,1%	3	7,7%	1	3,38	0,650

11	Maximise the use of resources and reduce waste	0,0%	0	7,7%	1	7,7%	1	**53,8%**	**7**	**30,8%**	**4**	4,08	0,862

Table 5:Descriptive Analysis of Concept of GHRM

The first category of questions that the participants had to answer relates to the *Concept of GHRM* (See Table 5*:Descriptive Analysis of Concept of GHRM*). The majority of the results indicate that with a score of 80,6% the respondents are not at all knowledgeable about the idea of Green HRM.

The statement that organisations consider to or already adopt GHRM in order to "*save costs*" yielded the majority (15,4%) of the disagree responses.

The statement which yielded the majority (69,2%) of the neutral responses is "*Reduce intervention from the government and other law enforcing agencies*".

However, despite the lack of familiarity with the concept, most of the participants agreed (53,8%) and strongly agreed (30,8%) that their companies would adopt or already adopt the principle of GHRM in order to "*maximise the use of resources and reduce waste*".

GHRM practices that are currently being implemented in the Danish building companies. The purpose of that particular part of the questionnaire was to discover whether the respondents were knowledgeable about each of the six practices and which of their components were applied in the real working environment.

Green recruitment													
Q #		1. No		5. Yes								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green recruitment?	**82,4%**	**14**	17,6%	3							1,71	1,572
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
3	Seeking candidates environmentally responsible in the preparation of their job application	**18,2%**	**2**	**27,3%**	**3**	**54,5%**	**6**	0,0%	0	0,0%	0	2,36	0,809
5	Applying online job seeking	7,7%	1	0,0%	0	30,8%	4	**46,2%**	**6**	**15,4%**	**2**	3,62	1,044

Table 6: Descriptive Analysis of Green Recruitment

The *Green recruitment* category evaluates the knowledge of the participants in regard to the concept of Green recruitment See: Table 6: *Descriptive Analysis of Green Recruitment*). The results of the questionnaire indicate that the majority (82,4%) are not familiar with the concept.

The statement that produced the most negative responses (27,3% disagreed and 18,2% strongly disagreed with it) relates to the practice of "*Seeking candidates environmentally responsible in the preparation of their job application*".

The above-mentioned practice is also the one which yielded the most neutral responses among the participants (54,5%).

Most of the participants agreed (46,2%) and strongly agreed (15,4%) with the statement of "*Applying online job seeking"* which implies that this is the most widely adopted practice within the category.

Green learning, training and development													
Q #		1. No		5. Yes								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green learning, training and development?	**87,5%**	**14**	12,5%	2							1,50	1,366
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Programs (online and web-based training modules and tools for green management)	**9,1%**	**1**	**54,5%**	**6**	18,2%	2	9,1%	1	9,1%	1	2,55	1,128
3	Workshops (training supervisors to use online course materials and case studies)	9,1%	1	36,4%	4	27,3%	3	**27,3%**	**3**	**0,0%**	**0**	2,73	1,009
4	Seminars, sessions and presentations that help employees to acquire knowledge in green management skills	9,1%	1	27,3%	3	**45,5%**	**5**	18,2%	2	0,0%	0	2,73	0,905

Table 7:Descriptive Analysis of Green learning, training and development

The analysis of the *Green learning, training and development* category begins by examining whether the respondents are familiar with the concept of the practice (See Table 7:Descriptive *Analysis of Green learning, training and development*). The majority (87,5%) have no knowledge about that practice.

The most positive scores were produced by the statement "*Workshops (training supervisors to use online course materials and case studies)"* with 27,3% of the participants agreeing with it.

The statement which gathered the most negative results is "*Programs (online and web-based training modules and tools for green management)"* with 54,5% who disagree with it and 9,1% who strongly disagree.

Lastly, the majority of the respondents (45,5%) seem to be neutral about the practice of "*Seminars, sessions and presentations that help employees to acquire knowledge in green management skills"*.

Green Employee Relations								
Q #		1. No		5. Yes			Mean	St. Dev.
		%	#	%	#			
1	Are you familiar with the concept of Green employee relations?	**93,8%**	**15**	6,3%	1		1,25	1,00

S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently	**0,0%**	**0**	**9,1%**	**1**	**45,5%**	**5**	**36,4%**	**4**	**9,1%**	**1**	3,45	0,820
3	Through employees' motivation, participation and involvement in ecological initiatives	**0,0%**	**0**	**9,1%**	**1**	**45,5%**	**5**	**36,4%**	**4**	**9,1%**	**1**	3,45	0,820

Table 8:Descriptive Analysis of Green employee relations

Table 8:Descriptive *Analysis of Green employee relations***,** represents the most significant results in terms of the *Green employee relations* category. The high score of 93,8% implies that most of the participants are not knowledgeable about the concept of this practice.

There are two statements which the respondents rated the highest in relation to practices they apply – "*Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently"* and "*Through employees' motivation, participation and involvement in ecological initiatives"*, both with 36,4% who agree and 9,1% who strongly agree. However, around the same percentage of people (45,5%) are neutral towards the two statements.

The same practices are also the ones which generated the majority (9,1%) of the negative responses in terms of practices that are not implemented in organisations.

Green initiatives for HR

Q #		1. No		5. Yes								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green initiatives for HR?	**81,3%**	**13**	18,8%	3							1,75	1,612
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Electronic filing	0,0%	0	14,3%	2	7,1%	1	**42,9%**	**6**	**35,7%**	**5**	4,00	1,038
3	Car sharing	**0,0%**	**0**	**46,2%**	**6**	15,4%	2	23,1%	3	15,4%	2	3,08	1,188
6	Online training	0,0%	0	0,0%	0	**35,7%**	**5**	42,9%	6	21,4%	3	3,86	0,770
7	Energy-efficient office spaces	0,0%	0	14,3%	2	**35,7%**	**5**	42,9%	6	7,1%	1	3,43	0,852

Table 9:Descriptive Analysis of Green initiatives for HR

The study continues with the results of the practice of *Green initiatives* (See Table 9:Descriptive *Analysis of Green initiatives for HR*). The concept of *Green initiatives for HR* is analysed in terms of the knowledge currently possessed by the participants. The majority (81,3%) are not familiar with the idea of the discussed practice.

The statement that produced the most positive results is the practice of using "*Electronic filing"* with 42,9% agreeing and 35,7% strongly agreeing with it.

The most negative scores were produced by the statement "*Car sharing"* – 46,2% disagreed that this practice is implemented in their company.

Lastly, there are two statements with the same high score (35,7%) in terms of neutrality – '*Online training"* and '*Energy-efficient office spaces"*.

Green performance management													
Q #		1. No		5. Yes								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green performance management?	**81,3%**	**13**	18,8%	3							1,75	1,612
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Incorporating environmental performance indicators in performance management systems (ISO 14000, GRI, EMAS, etc.)	**18,2%**	**2**	**18,2%**	**2**	27,3%	3	36,4%	4	0,0%	0	2,82	1,168
3	Holding discussions on environmental matters	0,0%	0	18,2%	2	**45,5%**	**5**	36,4%	4	0,0%	0	3,18	0,751
4	Incorporating environmental targets, goals and responsibilities	0,0%	0	9,1%	1	18,2%	2	**72,7%**	**8**	**0,0%**	**0**	3,64	0,674
5	Evaluating environmental initiatives of employees through appraisal ratings	**9,1%**	**1**	**27,3%**	**3**	27,3%	3	36,4%	4	0,0%	0	2,91	1,044

Table 10:Descriptive Analysis of Green performance management

The next practice that the study focuses on is the *Green performance management* category (See *Table 10:Descriptive Analysis of Green performance management*).First, the concept of Green performance management is studied in relation to the knowledge the participants currently have. The results show that the majority (81,3%) are not familiar with the concept.

The statements that have gathered the most negative scores in terms of their actual application in the companies in the building industry are "*Incorporating environmental performance indicators in performance management systems"* and "*Evaluating environmental initiatives of employees through appraisal ratings"*. However, 18,2% disagree and 18,2% strongly disagree with the former, while 27,3% disagree and 9,1% strongly disagree with the latter.

"Holding discussions on environmental matters" is the statement that most participants (45,5%) find themselves to be neutral about.

As for the statement that the majority feel positive towards, that is "*Incorporating environmental targets, goals and responsibilities"* - 72,7% of the respondents agree that this practice is being employed in their company.

Green rewards and compensation													
Q #		1. No		5. Yes								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green rewards and compensation?	**93,8%**	**15**	6,3%	1							1,25	1,00
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Rewarding green skills and achievement	18,2%	2	27,3%	3	**18,2%**	**2**	**27,3%**	**3**	**9,1%**	**1**	2,82	1,328
3	Special bonuses to the employees for extraordinary environmental effort in the workplace	**18,2%**	**2**	**36,4%**	**4**	9,1%	1	**36,4%**	**4**	**0,0%**	**0**	2,64	1,206
4	Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)	**9,1%**	**1**	**45,5%**	**5**	**18,2%**	**2**	27,3%	3	0,0%	0	2,64	1,027

Table 11:Descriptive Analysis of Green rewards and compensation

The last GHRM practice included in the survey is connected to *Green rewards and compensation*. The category examines whether the respondents are familiar with the concept of rewarding green behaviour and whether companies in the Danish Building sector apply any of the above-mentioned practices (See table *Table 11:Descriptive Analysis of Green rewards and compensation*). The results indicate that the majority (93,8%) do not possess any knowledge about the concept.

Two of the statements yielded the highest positive scores in relation to their implementation – "*Rewarding green skills and achievement"* and *"Special bonuses to the employees for extraordinary environmental effort in the workplace"*. On the one hand, 27,3% agreed and 9,1% strongly agreed with the first statement and on the other hand, 36,4% agreed with the second one.

The statements that yielded the most neutral responses (18,2%) are "*Rewarding green skills and achievement"* and "*Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)*.

The highest negative responses were gathered by the practices of "*Special bonuses to the employees for extraordinary environmental effort in the workplace"* and "*Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)"*. The former statement has a score of 36,4% of the participants disagreeing with it and 18,2% strongly disagreeing with it. While the latter has 45,5% disagreeing and 9,1% strongly disagreeing that the practice is being applied in their organisation.

After having presented the results of the six GHRM practices, the study continues with the investigation of the potential challenges that companies might experience with the introduction of Green HRM. The following categories are connected with the concepts of Environmental quality, Green technology and Financial capital.

Challenges for the HR professional

Q #		1. No		5. Yes								Mean	St. Dev.
		%	#	%	#								
1	Are there any challenges for the HR professional in regard to Green HRM?	**50,0%**	**8**	**50,0%**	**8**							3,00	2,066
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	To select and develop future Green leaders	0,0%	0	0,0%	0	**50,0%**	**6**	41,7%	5	8,3%	1	3,58	0,669
3	To create a Green working structure	**0,0%**	**0**	**27,3%**	**3**	36,4%	4	27,3%	3	9,1%	1	3,18	0,982
4	To set up Green working processes	**0,0%**	**0**	**27,3%**	**3**	27,3%	3	27,3%	3	18,2%	2	3,36	1,120
6	To provoke Green thinking among employees	0,0%	0	16,7%	2	25,0%	3	**50,0%**	**6**	**8,3%**	**1**	3,50	0,905

Table 12:Descriptive Analysis of Challenges for the HR professional

The study continues with the results of the *Challenges for the HR professional* category which relates to the potential difficulties that HR managers might face during the adoption of GHRM (See Table 12:Descriptive *Analysis of Challenges for the HR professional*). The participants are equally separated in their views towards the presence of such obstacles – half of them agree that such challenges exist while the other half believe that GHRM does not pose any such difficulties.

The statement that the majority of the respondents (50%) are neutral about is the challenge "*To select and develop future Green leaders"*.

The highest negative scores were produced by two statements - *"To create a Green working structure"* and *"To set up Green working processes"* - 27,3% of the participants disagreed that both of the statements can be considered challenges.

Lastly, the statement *"To provoke Green thinking among employees"* yielded the highest positive score. 50% of the participants agree with it and 8,3% strongly agree that it is in fact a very common challenge.

Environmental quality

Q #		1. No		5. Yes					Mean	St. Dev.
		%	#	%	#					
1	Do you believe that the company can increase the demand and revenue of its products/services through improved environmental quality?	6,3%	1	**93,8%**	**15**				4,75	1,00
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree	4. Agree	5. Strongly agree	Mean	St. Dev.

		%	#	%	#	%	#	%	#	%	#		
2	Using less polluting inputs	0,0%	0	0,0%	0	7,7%	1	**92,3%**	**12**	**0,0%**	**0**	3,92	0,277
4	Using sustainable production procedures	0,0%	0	0,0%	0	7,7%	1	**76,9%**	**10**	**15,4%**	**2**	4,08	0,494
5	Applying environmental policies that reward the environmental quality of products beyond the legal standards	**7,7%**	**1**	**0,0%**	0	30,8%	4	46,2%	6	15,4%	2	3,62	1,044
6	Applying environmental policies designed to encourage the adoption of renewable sources of energy	**7,7%**	**1**	**0,0%**	0	30,8%	4	38,5%	5	23,1%	3	3,69	1,109
7	Promoting green purchasing by customers (customers pay more for products of higher environmental quality)	**7,7%**	**1**	**0,0%**	0	**53,8%**	**7**	23,1%	3	15,4%	2	3,38	1,044

Table 13:Descriptive Analysis of Environmental quality

The *Environmental quality* category is the next category that the study examines (See *Table 13:Descriptive Analysis of Environmental quality*). The majority of the respondents (93,8%) believe that an improved EQ can bring higher demands for and revenue of the products or services that their companies provide.

The highest positively rated statements related to EQ include *"Using less polluting inputs"* and *"Using sustainable production procedures"*. 92,3% of the participants agree with the first statement whereas 76,9% agree and 15,4% strongly agree with the accuracy of the second statement.

On the other hand, three of the statements - *"Applying environmental policies that reward the environmental quality of products beyond the legal standards"*, *"Applying environmental policies designed to encourage the adoption of renewable sources of energy"*, *"Promoting green purchasing by customers (customers pay more for products of higher environmental quality)"*, gathered the majority of the negative scores. 7,7% of the respondents disagree that Environmental quality can be achieved through any of the three above-mentioned statements.

"Promoting green purchasing by customers (customers pay more for products of higher environmental quality)" is the statement that the majority of the participants (53,8%) found themselves to be neutral about.

Green technology

Q #		1. No		5. Yes					Mean	St. Dev.
		%	#	%	#					
1	Do you believe that going beyond the environmental regulations inspires the company to use Green technology to gain advantage on the market?	31,3%	5	**68,8%**	**11**				3,75	1,915
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree	4. Agree	5. Strongly agree	Mean	St. Dev.

		%	#	%	#	%	#	%	#	%	#		
2	Exploiting Green technology to diversify and expand its business	8,3%	1	8,3%	1	16,7%	2	**50,0%**	**6**	**16,7%**	**2**	3,58	1,165
3	Selling Green technology to competitors.	**9,1%**	**1**	**18,2%**	**2**	**45,5%**	**5**	18,2%	2	9,1%	1	3,00	1,095

Table 14:Descriptive Analysis of Green technology

Table 14:Descriptive *Analysis of Green technology*, represents the findings in the *Green technology* category. The questionnaire aimed to examine whether Danish companies in the building sector believe that utilising Green technology can bring them market advantages. The majority (68,8%) agreed with that statement.

The statement that yielded the most positive scores with 50% of the people agreeing and 16,7% strongly agreeing with it is *"Exploiting Green technology to diversify and expand its business"*. It implies that most of the participants believe this to be the most advantageous usage of the Green technology.

The statement that they felt the most negative about is *"Selling Green technology to competitors."* 18,2% disagreed that this is a good application of Green technology while 9,1% were strongly against it.

The same statement gathered the most neutrality among the participants (45,5%).

Financial capital

Q #		1. No		5. Yes								Mean	St. Dev.
		%	#	%	#								
1	Do you believe that the company can raise its financial capital by implementing Green HRM?	40,0%	6	**60,0%**	**9**							3,40	2,028
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Attracting socially responsible investments	8,3%	1	16,7%	2	**33,3%**	**4**	33,3%	4	8,3%	1	3,17	1,115
3	Creating better relationships with lending institutions (i.e. banks)	**8,3%**	**1**	**50,0%**	**6**	25,0%	3	16,7%	2	0,0%	0	2,50	0,905
4	Increasing shareholders' interest in the company	0,0%	0	23,1%	3	23,1%	3	**53,8%**	**7**	**0,0%**	**0**	3,31	0,855

Table 15:Descriptive Analysis of Financial capital

Next, the study focuses on the category which asks the participants whether they believe that GHRM can increase the *Financial capital* of the Danish companies in the building sector (See Table 15:Descriptive *Analysis of Financial capital*). The majority (60%) do agree that by applying the practices of Green HRM the financial assets can be raised.

The statement *"Attracting socially responsible investments*" produced the highest score in terms of neutrality of 33,3% among all other statements in the category.

The respondents evaluated the statement *"Creating better relationships with lending institutions (i.e. banks)"* as the one they are the most negative towards – 50% disagreeing and 8,3% strongly disagreeing that it can lead to increased financial capital.

The most positively evaluated statement - *"Increasing shareholders' interest in the company"*, received a score of 53,8% implying that the majority of the participants agree with the benefits it brings.

Do you believe that:													
S #		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	The employees in the company are NOT equally motivated to adopt Green HRM practices	**6,7%**	**1**	**46,7%**	**7**	20,0%	3	26,7%	4	0,0%	0	2,67	0,976
3	Developing and maintaining a culture of Green HRM is a lengthy and time-consuming process	0,0%	0	7,1%	1	7,1%	1	**64,3%**	**9**	**21,4%**	**3**	4,00	0,784
4	At the initial stage of implementation, Green HRM requires a high investment and might bring a low return	0,0%	0	6,7%	1	**46,7%**	**7**	46,7%	7	0,0%	0	3,40	0,632
6	It is difficult to assess the Green performance of employees' behaviour	0,0%	0	7,1%	1	7,1%	1	**57,1%**	**8**	**28,6%**	**4**	4,06	0,829

Table16: Descriptive Analysis of Do you believe that: statements

The final category of the questionnaire corresponds to various statements that help obtain a better picture of the current attitude towards the concept of GHRM in the Danish Building industry (See Table16: *Descriptive Analysis of Do you believe that: statements*).

The statement that gathered the most negative responses is *"The employees in the company are NOT equally motivated to adopt Green HRM practices"*. 46,7% disagree and 6,7% strongly disagree with the validity of it, which actually indicates that the majority believe that their companies encourage them to behave sustainably and take green actions.

"At the initial stage of implementation, Green HRM requires a high investment and might bring a low return" received the majority of the neutral responses with 46,7% of the participants neither disagreeing nor agreeing with the statement.

Two of the statements in the category collected the most positive scores – *"Developing and maintaining a culture of Green HRM is a lengthy and time-consuming process"* and *"It is difficult to assess the Green performance of employees' behaviour"*. 64,3% of the respondents agree and 21,4% strongly agree with the accuracy of the first statement while 57,1% agree and 28,6% strongly agree with the truthfulness of the second statement.

5.1.1 To what extent are Green HRM sub-practices currently implemented?

The first sub-research question is related to GHRM practices and the level of their actual application. In order to obtain an overview of the extent to which sub-practices from each of the GHRM practice categories are being implemented, the authors turn to the findings from sub-chapter *5.1 Descriptive Analysis*. The highest and lowest RII from each GHRM practice category supplement the conduction of the analysis. (See *8.1 RII and Ranking of sub- GHRM practices*) The ranking of the sub-practices is based on the highest cumulative sum of the Agree (A) and Strongly agree (SA) responses (refer to sub-chapter *5.1 Descriptive Analysis*). The degrees of agreement are different, however, they both indicate a positive attitude. The same principle is applied to the calculation of the highest cumulative sum of the Disagree (D) and Strongly disagree (SD) responses which show the negative attitude towards the statements in the questionnaire. (refer to sub-chapter *5.1 Descriptive Analysis*) As a result,*Table 17:Ranking of GHRM Practices Application*, is prepared to demonstrate the degree to which the most positively and negatively ranked sub-practices from each GHRM practice category are employed in the Danish building industry.

The most widely applied practice (78,6%) in accordance with the questionnaire findings is *Electronic filing* which is part of the Green initiatives for HR category. The result implies that the majority of Danish organisations in the Building sector are actively employing the practice of e-filing which reduces waste but also improves performance. This can be contributed to the fact that Denmark has the most advanced digital economies in the EU (European Commission, 2018) and is among the most environmentally-conscious countries globally (Laursen & Foss, 2003). Another possible reason for this high ranking is that Denmark is a leader in BIM utilisation and the concept has been promoted since 2007 (Jensen & Jóhannesson, 2013). In the same year a legislation was passed that announced all public construction projects need to be carried out with the use of BIM. Among some of the requirements are use of digital communication, use of 3D models, use of digital handover, to mention a few (Sielker & Allmendinger, 2018).

The second most implemented GHRM practice (72,7%) is *Incorporating environmental targets, goals and responsibilities* which is related to the category of Green performance management. The high percentage indicates that most of the companies have established environmental aims as part of their practices and policies and are working towards achieving them. The statement is further examined in a report by Copenhagen Cleantech Cluster (2013). According to the report, the building industry has an important part to play in Denmark obtaining its goal of becoming fossil fuel-free by 2050 (Copenhagen Cleantech Cluster, 2013, p. 9). The country possesses one of the strictest green building legislations in the world which also affects the demands for new building projects (Regeringen, 2009). Another evidence that organisations in the Danish Building sector are focusing on the inclusion of eco targets is that the new Danish Energy Deal specifically concentrates on energy renovations in relation to existing buildings because they bring the most energy savings (Copenhagen Cleantech Cluster, 2013, p. 9). It is worth mentioning that 88% of the companies presented in the Green and Smart Buildings in Denmark report state

that sustainable building comprises a great or a very great segment of their work 2050 (Copenhagen Cleantech Cluster, 2013, p. 10)

The least incorporated practice (27,3%) according to the questionnaire results is connected to *Workshops (training supervisors to use online course materials and case studies)* which are part of the Green learning, training and development category. The minority of respondents stated that their companies apply it, however, the result is the lowest among the actually applied practices. Yet, a study on the relationship between HRM practices and organisational performance discovered that Danish companies are among the leaders in terms of providing training for their supervisors (Jørgensen & van Rossenberg, 2014, p. 10). The managers also indicated that their organisations arrange satisfactory external training opportunities for them (Jørgensen & van Rossenberg, 2014, p. 20).

The practices which the majority of participants agreed are not applied in their companies are also presented in *Table 17:Ranking of GHRM Practices Application,* under the column GHRM Practices Currently Not Applied. The highest score (63,6%) was produced by *Programs (online and web-based training modules and tools for green management)* which is a practice related to the Green learning, training and development category. This implies that employees are not provided with opportunities to get involved in green management or to enhance their green knowledge and skills. However, introducing such online training programs can help increase their environmental awareness but also engage them in knowledge sharing and problem-solving activities related to green management (Langat, 2016). In fact, research argues that training is the most critical element of HRM and it promotes the achievement of environmental objectives (Daily, et al., 2007 & Ramus, 2002).

The next practices which the majority of companies (54,6%) are not implementing are *Special bonuses to the employees for extraordinary environmental effort in the workplace* and *Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)* which are part of the Green rewards and compensation category. The findings of the analysis show that neither green bonuses nor green benefits are present in the Danish building sector. However, according to a study conducted by Jørgensen & van Rossenberg (2014), such incentives are highly rated in terms of their importance for employees. Therefore, companies should consider seeking the proper bonuses and benefits and apply them in relation to their green management so the employees can become more encouraged and motivated to actively participate in the GM. As a result, they are more likely to feel more responsibility towards the company's environmental targets and act in the direction of their attainment.

The last practices companies do not apply are *Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently* and *Employees' motivation, participation and involvement in ecological initiatives* which are related to the Green employee relations category. They scored 9,1% which makes them the last ones on the list of practices that are actually not implemented. Based on these findings, the conclusion that organisations do not focus on advertising their green products/services can be made. According to the participants' responses the companies do not support employees' motivation either. However, studies conducted in Denmark reveal that green motivation programs are an efficient instrument for increasing the

participation of employees in eco initiatives (Forman & Jørgensen, 2001). Motivation is a principal area necessary for the effectiveness of environmental HRM practices (Bombiak & Marciniuk-Kluska, 2018). Florida & Davison (2001) argue that more effective resource usage can be achieved as a result of increased employee participation in Green HRM. An improved working environment which encourages involvement in green matters can also contribute to a better and more sufficicent resource use (Bombiak & Marciniuk-Kluska, 2018).

GHRM PRACTICES CURRENTLY ***APPLIED***	*SA*	*A*	***OVERALL SCORE: SA + A***	*GHRM PRACTICES CURRENTLY* ***NOT APPLIED***	*SD*	*D*	***OVERALL SCORE: SD + D***
Green initiatives for HR Electronic filing	35,7%	42,9%	**78,6%**	**Green learning, training and development** Programs (online and web-based training modules and tools for green management)	9,1%	54,5%	**63,6%**
Green performance management Incorporating environmental targets, goals and responsibilities	0 %	72,7%	**72,7%**	**Green rewards and compensation** Special bonuses to the employees for extraordinary environmental effort in the workplace & Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)	18,2% & 9,1%	36,4% & 45,5%	**54,6%**
Green recruitment Applying online job seeking	15,4%	46,2%	**61,6%**	**Green initiatives for HR** Car sharing	0%	46,2%	**46,2%**
Green employee relations Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently & Employees' motivation, participation and involvement in ecological initiatives	9,1% & 9,1%	36,4% & 36,4%	**45,5%**	**Green recruitment** Seeking candidates environmentally responsible in the preparation of their job application	18,2%	27,3%	**45,5%**
Green rewards and compensation Rewarding green skills and achievement & Special bonuses to the employees for extraordinary environmental effort in the workplace	9,1% & 0%	27,3% & 36,4%	**36,4%**	**Green performance management** Incorporating environmental performance indicators in performance management systems (ISO 14000, GRI, EMAS, etc.) & Evaluating environmental initiatives of employees through appraisal ratings	18,2% & 9,1%	18,2% & 27,3%	**36,4%**

Green learning, training and development Workshops (training supervisors to use online course materials and case studies)	0 %	27,3%	**27,3%**	**Green employee relations** Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently & Employees' motivation, participation and involvement in ecological initiatives	0% & 0%	9,1% & 9,1%	**9,1%**

Table 17:Ranking of GHRM Practices Application

5.2 Inferential Analysis

According to Bryman & Bell, (2015), the inferential analysis has as point of attention the strength among variables and inferring the findings from the sample of population. The strength correlation table by Cohen (1988) shows the degree of association between variables. (See Figure 5: *Strength correlation by Cohen (1988)*

	Coefficient, *r*	
Strength of Association	Positive	Negative
Small	.1 to .3	-0.1 to -0.3
Medium	.3 to .5	-0.3 to -0.5
Large	.5 to 1.0	-0.5 to -1.0

Figure 5: Strength correlation by Cohen (1988)

The inferential analysis is based on the responses regarding the GHRM practices. The purpose of conducting it is to identify if there are any significant correlations between the sub-practices within each category according to the conducted questionnaire. The level of significance selected for the study is 99%, therefore, the tables presented in this sub-division contain only the most significant correlations between the sub-practices within each of the GHRM practices (with the except of the practice of Green learning, training and development because no significant correlations are present). The choice of the significance level of 99% is based on the decision to restrict the correlations to as few as possible and only to the most critical ones while at the same time limiting the probability of error to only 1%. The complete table showing all the correlations can be found in *8.3 Inferential Analysis for each GHRM practice*.

The first category which is analysed is Green recruitment. According to the results from the conducted questionnaire three significant correlations are present within the Green recruitment practices applied in the Danish building industry. *Seeking candidates personally committed to environmental sustainability* is strongly correlated with *Seeking candidates environmentally responsible in the preparation of their job application* (r=0.777). The next finding is that a strong and correlation (r=0.860) exists between *Seeking candidates personally committed to environmental sustainability* and *Stating its environmental goals in their annual report*. The last

strong and correlation is between *Stating its (the company's) environmental goals in their annual report* and *Applying online job seeking* (r=0.741).(See Table 18:Summary *of correlation analysis of Green recruitment practices*)

CATEGORIES		PEARSON CORRELATION
Green recruitment		
Seeking candidates personally committed to environmental sustainability	Seeking candidates environmentally responsible in the preparation of their job application	,777**
Seeking candidates personally committed to environmental sustainability	Stating its environmental goals in their annual report	,860**
Stating its environmental goals in their annual report	Applying online job seeking	,741**

Table 18:Summary of correlation analysis of Green recruitment practices

The study continues with the analysis of the Green employee relations practices. The only significant but also strongly correlation exists between the practice of *Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently* and *Employees' motivation, participation and involvement in ecological initiatives* (r=0.851).(See Table 19:Summary *of correlation analysis of Green employee relations practices*)

Green employee relations		
Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently	Through employees' motivation, participation and involvement in ecological initiatives	,851**

Table 19:Summary of correlation analysis of Green employee relations practices

Next the category of Green initiatives for HR is examined. There are two significant correlations based on the results from the questionnaire. *Electronic filing* is strongly correlated with *Teleconferencing and virtual interviews* (r=0.684). The second correlation is also strong (r=0.862) and it is between *Recycling and waste disposal* and *Conservation of energy - turning off PCs and TVs when not in use, solar lighting, etc.* (See Table 20:Summary *of correlation analysis of Green initiatives for HR practices*)

Green initiatives for HR		
Electronic filing	Teleconferencing and virtual interviews	,684**

Recycling and waste disposal	Conservation of energy - turning off PCs and TVs when not in use, solar lighting, etc.	,862**

Table 20:Summary of correlation analysis of Green initiatives for HR practices

The forth category is connected to Green performance management. This category possesses three significant correlations according to the conducted analysis. *Incorporating environmental performance indicators in performance management systems* and *Clear communication of environmental policy* are strongly correlated (r=0.767). A strong correlation is evident between *Holding discussions on environmental matters* and *Incorporating environmental targets, goals and responsibilities* (r=0.736). The final correlation is again strong (r=0.935) and it relates *Evaluating environmental initiatives of employees through appraisal ratings* with *Clear communication of environmental policy*. (See Table 21:Summary *of correlation analysis of Green performance management practices*)

Green performance management		
Incorporating environmental performance indicators in performance management systems (ISO 14000, GRI, EMAS, etc.)	Clear communication of environmental policy	,767**
Holding discussions on environmental matters	Incorporating environmental targets, goals and responsibilities	,736**
Evaluating environmental initiatives of employees through appraisal ratings	Clear communication of environmental policy	,935**

Table 21:Summary of correlation analysis of Green performance management practices

The final category that the study analyses involves Green rewards and compensation practices. The only significant but also strong correlation exists between the practice of *Rewarding green skills and achievement* and *Special bonuses to the employees for extraordinary environmental effort in the workplace* (r=0.766).(See Table 22: *Summary of correlation analysis of Green rewards and compensation* practices)

Green rewards and compensation		
Rewarding green skills and achievement	Special bonuses to the employees for extraordinary environmental effort in the workplace	,766**

Table 22: Summary of correlation analysis of Green rewards and compensation practices

5.2.1 *Which sub-practices have the most significant correlation within each GHRM practice and among all GHRM practices, and how are they implemented in Denmark?*

The second sub-research question is connected to the most significant correlations between sub-practices within each GHRM practice but also among all the GHRM practices. For that reason, the findings from *5.2 Inferential Analysis* are used as part of the basis for determining the strongest correlations based on the responses gathered from the questionnaire. Another inferential analysis is performed so the correlations between the sub-practices from all categories can also be examined (See *8.3 Inferential Analysis for each GHRM practice*). The correlations presented in Table 23: *Strongest correlations of sub-practices within GHRM practices and among all GHRM practices*, are the result of combining the findings from the two analyses and selecting only the correlations above 0,8 which are in fact the strongest ones.

The strongest correlation (0,935) exists within the Green performance management category and it is between the practices of *Evaluating environmental initiatives of employees through appraisal ratings* and *Clear communication of environmental policy*. This can be contributed to the fact that when the environmental goals of companies are well conveyed and the employees are familiar with them, attaining these objectives becomes more likely. Research argues that employees are more likely to participate in environmental initiatives when their supervisors openly communicate the ecological ideas of their company (Ramus, 2001) but also when they are actively engaged by their supervisors in these initiatives (Govindarajulu & Daily, 2004). Therefore, the implementation of PA systems is very crucial for both managers and employees (Ahmad, 2015). Such PM appraisals assess the effectiveness of employees' responsibility while at the same time provide them with a feedback on the company's environmental outcomes (Rahimian, 2014). By applying such practices, the human capital can be kept motivated and encouraged to take part in environmental initiatives and make suggestions for tackling green issues (Renwick, et al., 2013).

The next strongest correlation (0,862) is found to be between the practices of *Recycling and waste disposal* and *Conservation of energy,* part of the Green initiatives for HR. In 1978, Denmark became the first country in the world to introduce a law on recycling which had the goal of recycling at least 50% of all beverage packaging waste as well as paper waste (State of Green, 2018). The collection rate of one-way packaging is around 89% which ranks it among the first in the world in relation to its efficiency (State of Green, 2018). A sector that generates a lot of waste is the service sector, which is almost 50% more than the industry sector (The Danish Government, 2013). Some of the initiatives introduced for this field include projects that secure sustainable consumption or partnership for plastic waste in which organisations and knowledge institutions jointly advertise treatment technologies which can increase recycling (The Danish Government, 2013). Still, the Building and construction sector produces by far the largest amount of total waste (35%) (Toft, et al., 2016), of which 87% is recycled (The Danish Government, 2013). This can be explained by the large quantity of crushed building waste and asphalt for recovery in building and construction projects (Toft, et al., 2016). Yet, the construction sector possesses a great potential

for energy and resource savings which has made it into one of the most significant pillars of the global green growth agenda (Copenhagen Cleantech Cluster, 2013). Therefore, the building industry has a very important part in the attainment of the Danish fossil fuel-free goal by 2050, as was previously mentioned (Copenhagen Cleantech Cluster, 2013). Another measurement that Denmark has taken is the introduction of building class 2020 (a voluntary building class) which has the purpose of reducing the energy consumption of buildings by 75% compared to the 2006 level (Centre for Energy Efficiency, 2017). However, the requirement will not be officially accepted before 31 December 2018 for publicly owned and used buildings and 31 December 2020 for other (private) buildings (Centre for Energy Efficiency, 2017).

The third pair of strongly correlated Green HR practices (0,860) involves *Seeking candidates personally committed to environmental sustainability* and *Stating (the company's) environmental goals in their annual report* which are part of the Green recruitment category. According to the responses from the questionnaire, personal involvement in environmental initiatives is among the characteristics that employers highly value when recruiting new human resources in their companies. Denmark is a country with very strict regulations in terms of environmental effects of wastewater and emissions from both the public and the private sector (Madsen, 2009). This has contributed to the high level of awareness to turn to eco-friendly technologies as well as energy-saving equipment which has created the need for human capital educated and skilled in the relevant fields (Madsen, 2009). Furthermore, some companies pride themselves on the numerous voluntary activities related to social or ecological improvements that their employees actively participate in (Jeppesen & Somerville, 2017). By employing people who are genuinely concerned about the state of the environment they live in and engage in actions to preserve nature, organisations ensure that their work force is willing to not only thrive towards achieving the environmental aims but also bring their own ideas and innovations into companies. A great tool to promote the eco-conscious goals of companies is to include these statements in their annual reports. Taking such steps, companies are more likely to attract the right candidates who share the same green mindset and are willing to contribute to these objectives and even further develop them. Some Danish organisations are EMAS certified which indicates that they are continually trying to reduce their direct environmental impact in relation to waste production, resource and energy consumption, in addition to reducing their indirect ecological impacts (The Danish Environmental Protection Agency, 2018). EMAS is used as a management instrument which is created by the European Commission so companies can evaluate, report and improve their environmental performance while being transparent in their efforts (European Commission, 2018). Some of the Danish companies in the building industry work with international systems such as BREEAM or DGNB, while others choose specific office locations which possess such certifications (NCC AB (2017), Jeppesen & Somerville (2017) and ZÜBLIN A/S (2018). BREEAM was introduced in 1990, making it the first assessment tool for buildings (Baldwin & Bordoli, 2014). It measures the environmental performance of buildings in ten categories – Management, Health and well-being, Energy, Transport, Water, Materials, Waste, Land use and ecology, Pollution and Innovation (Baldwin & Bordoli, 2014). Afterwards, the buildings are rated from Acceptable to Pass, Good, Very Good, Excellent to Outstanding (The BRE Group, 2018). The DGNB system is used to measure sustainability in buildings in five main theme areas - Environmental quality, Economic quality, Sociocultural and Functional quality, Technical quality,

and Process quality together with the building site (Cottrell, 2015). In addition, the certification is awarded as Bronze, Silver or Gold (Cottrell, 2015).

The next strongly correlated pair of practices (0,851) includes *Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently* and *Through employees' motivation, participation and involvement in ecological* initiatives. Green employee relations is the category they are a part of. One of the consulting engineering companies in Denmark, SWECO, states that because their greatest environmental impact occurs in their customer projects, they focus on solutions which help reduce their customers' total eco, social and economic footprint (SWECO, 2017). The company conducts systematic evaluations in order to make sure that resources are invested in the right environmental issues – by employing audit procedures according to the requirements of ISO audits (SWECO, 2017). SWECO also thrives to have environmental certification at their new offices, provide digital tools (such as SKYPE) that allow employees to work remotely and also avoid unnecessary travel by holding virtual meetings (SWECO, 2017). The organisation implements various energy labelling schemes to their certifies office spaces – BREEAM and LEED for Level 1, narrower national eco certifications for Level 2 and eco labels focused on only one issue – Level 3 (SWECO, 2017). Another company in the Danish building sector which actively engages employees in ecological initiatives is NCC. The company highly prioritises sustainability training and thus provides digital interactive courses in sustainability for its employees (NCC AB, 2017). This is part of the actions NCC takes in order to ensure that the human capital has the opportunity for further skills development through traditional courses, e-learning or mentorship, all adapted to the individual's needs (NCC AB, 2017). Not only this, but the organisation is also eagerly trying to reduce the climate impact of its operations by increasing efficient energy consumption and internal process improvements as well as to influence external players to improve sustainability work in the whole sector (NCC AB, 2017). Yet another multidisciplinary engineering firm, MOE, is also actively engaging in efficiently utilising all of their resources and developing common environmental standards for the industry while at the same time motivating their employees to take part in eco initiatives (MOE, 2018). One example of the company's goals is the indoor climate of their office environment. Their new office building located at Amerika Plads uses high-efficiency solar cells which produce 30% more energy than standard panels. Improving the indoor climate is a good investment not only for the increased employee satisfaction but also for their increased productivity (MOE, 2018).

The last pair that is very strongly correlated (0,843) is comprised of the practice of *Electronic filing* (part of Green initiatives for HR) *and Incorporating environmental targets, goals and responsibilities* (part of Green performance management). Keeping in mind that Denmark is among the first countries that are actively promoting environmental protection (refer to *0 The following* chapter includes a description of the project context in which the study was conducted. The fundamental objectives and delimitations of the master thesis are also presented in the chapter together with the research methodology employed.

Project Context), it is to be expected that companies in the building sector are also working towards minimising their ecological impact. NCC AB (2017) attempts to reduce their climate effect, phase out fossil fuels and work towards a more circular usage of raw materials. Jeppesen & Somerville

(2017) state that RAMBOLL sets the targets of minimising their environmental impact, working towards zero harm in health and safety, engaging with clients to improve sustainability performance and integrating sustainability in consultancy, planning and engineering design and tools as well as increasing employes' involvement in sustainability and innovation. The company also applies the use of BIM as it allows projects to be evaluated based on sustainable criteria during all of the project's phases. BIM aids the cost and scheduling of decisions which ensures a more efficient use of resources and enables an easier cross-disciplinary collaboration (Jeppesen & Somerville, 2017). MOE (2018) is another Danish company which also employs the use of the BIM tool. Among its benefits are 3D models with a great level of detail which can be used by contractors and suppliers bringing the whole construction process together. Another great advantage of turning to digital tools is the early identification and solution of problems which can otherwise be very costly to resolve later in the construction process.

STRONGEST CORRELATIONS OF SUB-GHRM PRACTICES		**PEARSON CORRELATION**
Evaluating environmental initiatives of employees through appraisal ratings ***(Green performance management)***	Clear communication of environmental policy ***(Green performance management)***	,935**
Recycling and waste disposal ***(Green initiatives for HR)***	Conservation of energy - turning off PCs and TVs when not in use, solar lighting, etc. ***(Green initiatives for HR)***	,862**
Seeking candidates personally committed to environmental sustainability ***(Green recruitment)***	Stating its environmental goals in their annual report ***(Green recruitment)***	,860**
Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently ***(Green employee relations)***	Through employees' motivation, participation and involvement in ecological initiatives (***Green employee relations)***	,851**
Electronic filing ***(Green initiatives for HR)***	Incorporating environmental targets, goals and responsibilities ***(Green performance management)***	,843**

Table 23: Strongest correlations of sub-practices within GHRM practices and among all GHRM practices

5.3 SWOT Analysis

After conducting descriptive and inferential analyses of the Green HRM concepts and practices, the authors of the dissertation perform a SWOT analysis. The SWOT analysis is an approach that can help identify the competitive advantage in the Danish building sector. The aim of the SWOT analysis is to summarise all the internal strengths and weaknesses of the Green HRM that companies in Denmark possess as well as the external opportunities and threats that exist in the external environment. According to Kousholt (2012), the strengths in the SWOT framework show the internal and strong aspects of the industry. The weaknesses reflect the internal negatives aspects of the industry that can affect the current implementation of Green HRM practices. Opportunities provide the potential capabilities offered to the industry by the Green HRM, whereas the threats show the aspects that can negatively impact on the implementation of Green HRM in the Danish building industry.

The authors identify the SWOT elements based on the scores from the questionnaire. More analytically, the respondents in the survey were asked to answer to what degree they agree or disagree that certain Green HRM practices are applied in their companies and what they believe about some Green HRM statements. As strengths, the authors take the sub-practices from each Green HRM practice category that received the most positive score (over 50%) by combining both Agree and Strongly agree. For weaknesses, the authors also use the statements from the questionnaire regarding Green HR practices, as well as statements from the "Challenges for the HR professional" category and the "Do you believe that" category. The statements acknowledged as weaknesses received the most negative score (less than 50%) by combining both Disagree and Strongly disagree. The opportunities of the SWOT analysis are identified based on the authors' interpretations of what can be an opportunity for obtaining competitive advantage. These interpretations are established on the statements selected in accordance with the responses they received in the "Financial capital", "Green technology" and "Do you believe that" category. Similarly, for the threat element of the SWOT framework, the statements used are based on the authors' interpretation using the "Do you believe that" group of questions (See Table 24:SWOT *Analysis framework*. Additionally, the authors of the master thesis compare the elements of the SWOT analysis with another survey conducted in the Danish building sector in order to compare the validity of the responses as well as to align the responses they obtain with potential opportunities identified in a different survey.

As can be seen from Table 24:SWOT *Analysis framework*, one strength of the Danish building industry is the online job seeking. This competency can substitute the traditional recruitment process and services using new technologies (i.e. LinkedIn) and can minimise the threat of substitutes in terms of services Additionally, Danish companies provide good basis for collaboration with non-profit institutes (i.e. Aalborg University, Aarhus University and Technological University of Denmark) for the generation and dissemination of knowledge in sustainable construction practices and technologies (Copenhagen Cleantech Cluster, 2013). By seeking graduates from universities or through collaboration with non-profit institutes the development of green technologies can be achieved. Speaking of technologies, employees that participate in green initiatives are more likely to use and promote the usage of a green technology.

In the online survey the authors of the dissertation identify that the Danish building industry has difficulty promoting Green thinking among employees. (See Table 24:SWOT *Analysis framework*). Moreover, based on a case study in Bornholm, it is evident that educating employees in green matters allows them to obtain distinctive sustainable skills in energy saving, to develop new sustainable competencies and thereby increase their environmental awareness and think green (Copenhagen Cleantech Cluster, 2013).

One of the threats identified in the online survey is that Green HRM requires high investment at the initial stage of its implementation which might result in low return (See Table 24:SWOT *Analysis framework*). It is true that going green can be costly, however, according to a different study in the Danish building sector, 80% of the companies are expecting to increase their turnovers within a time period of five years (Copenhagen Cleantech Cluster, 2013). Therefore, while implementing Green HRM can be costly at the beginning, in the long term it can bring benefits to the organisation.

The outcome of the survey shows that the Danish building industry is making use of less polluting inputs, renewable sources of energy and usage of sustainable production (See Table 24:SWOT *Analysis framework*). This can also be validated from a different study in the Danish building sector which indicates that construction companies participate in energy saving activities and in sustainable building operations and management. Also, the Danish building sector has more than 90% re-use and recycling rate of building materials compared to other countries (Copenhagen Cleantech Cluster, 2013). As a result, it can be concluded that the sector has the potential for sustainable operations.

Based on the survey, the authors of the dissertation observe that the business relationships with suppliers/distributors in accordance with the company's performance goals can be both a potential opportunity and a threat (See Table 24:SWOT *Analysis framework*). They can be a threat when the business relationships are not aligned with the company's environmental performance and thereby harm its image and reputation. On the other hand, business relationships with suppliers/distributors who share the same environmental values with the company can strengthen its reputation. From another study in the Danish building sector, it becomes apparent that Danish companies create partnerships with foreign companies with sufficient know-how and expertise in innovative solutions and sustainable services (Copenhagen Cleantech Cluster, 2013). Therefore, since the Danish building sector provides possibilities for the development of business relationships with foreign sustainable suppliers/distributions, such business relationships are acknowledged as an opportunity.

Strengths	Weaknesses
▪ Online job seeking ▪ Electronic filling ▪ Environmental goals in companies' annual reports ▪ Teleconferencing and virtual interviews ▪ Recycling and waste disposal ▪ Energy conversation by turning off PCs, TVs etc... ▪ Incorporation of environmental targets, goals and responsibilities ▪ Clear communication of environmental policy ▪ Usage of less polluting inputs ▪ Usage of renewable sources of energy ▪ Usage of sustainable production procedures ▪ New ideas from employees for the approach of environmental topics	▪ Lack of online and web-based green training programs in companies ▪ Lack of workplace and lifestyle benefits (from carbon credit offsets to free bicycles) ▪ Selection and development of future Green leaders ▪ Challenge to promote Green thinking among employees ▪ The development and the maintenance of Green HRM culture is lengthy and time - consuming process ▪ Challenges in recruitment and training of employees in Green HRM ▪ Difficulty to transform employees'' attitude to Green HRM in short period of time ▪ Not approaching candidates personally committed to environmental sustainability ▪ Not approaching candidates environmental responsible in the preparation of their job application
Opportunities	**Threats**
▪ Usage of Green technology ▪ Sell green technology to competitors ▪ Attract socially responsible investments ▪ Create better relationships with lending institutions ▪ Increase stakeholders' interest ▪ Develop business relationships with suppliers/distributors in accordance to the company's performance goals ▪ Obtain better economic performance by an improved environmental performance	▪ Green HRM requires high investment at the initial stage of its implementation which might result to low return ▪ Difficulty to asses Green performance of employees' behavior ▪ Current business relationships with suppliers/ distributors which are in non-accordance with the company's environmental goals risk the company's overall environmental performance and reputation

Table 24:SWOT Analysis framework

5.4 VRIO framework

As already stated in *2 Chapter Literature Review*, the human capital can be a key source of competitive advantage in companies. However, in this sub-chapter, the authors of the thesis aim to identify whether Green HRM can be a source of competitive advantage for organisations in the Danish building sector. The purpose of the sub-chapter is to approach the second half of the research focus: *"**Can the potential of Green HRM be fully realised in practice and as consequence bring sustainable competitive advantage in the Danish building sector?**"* For the realisation of this study the need for a VRIO analysis emerged. The acronym VRIO stands for Valuable, Rarity, Imitability and Organisational support. It is composed of four fundamental questions (Barney & Hesterly, 2008). The questions based on VRIO are formulated in accordance with the needs of Green HRM for sustainable competitive advantage and each of them is to be analysed and answered into depth. (See *Table 25: VRIO elements for Green HRM*)

Valuable	Can the competencies of human capital engaged in Green HRM exploit external opportunities or neutralise external threats?
Rarity	Does Danish building companies possess similar Green HRM resources and capabilities?
Imitability	Are resources and capabilities in companies which are implementing Green HRM practices difficult to imitate?
Organisation	Do companies possess HR systems that promote and exploit the full competitive potential of Green HRM resources and capabilities?

Table 25: VRIO elements for Green HRM

According to Barney (1991), if the resources are valuable, rare and inimitable, organisations can achieve sustained competitive advantage. Additionally, Barney & Clark (2007) state that *"The HR function can also adopt a strategic focus, applying the VRIO (Value, Rarity, Imitability and Organisation) framework to identify specific HR resources that provide sources of temporary and/or sustainable competitive advantage."* In the case of this study, the VRIO framework is applied so that the specific Green HRM resources that can provide sustainable competitice advantage can be determined.

Valuable Green HRM

The development of both traditional HR and Green HR is essential as it is the result of the changes happening in the environment in which companies operate. Valuable resources "*are those which create a product or a service that is of a value to customer and enables the organisation to respond to environmental opportunities and threats*" (Whittington, et al., 2017). Green HRM is considered valuable if it allows the elimination of threats and uses the opportunities that arise when focusing on innovation and quality. To answer the question of value "*Can the competencies of human capital engaged in Green HRM exploit external opportunities or neutralise external threats?*", the authors of the thesis need to determine the most valuable Green HRM resources and capabilities. Resources are defined as the assets, knowledge and skills of the Danish building sector and capabilities are defined as the abilities of the Danish building sector to make an efficient usage

of its resources (Nijssen & Frambach, 2001). Using the results of the SWOT analysis, the resources and capabilities are identified. For the purpose of this analysis, the output of the SWOT element Strengths is used for the resources and capabilities. As already explained in sub-chapter *5.3 SWOT Analysis*, these inputs received the most positive responses in the survey regarding their application in the Danish building sector. Once the resources and capabilities of Green HRM are identified, they need to be examined in terms of what opportunities they can exploit and what threats they can neutralise in order to determine the ones that bring the most value to building companies (See Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats*). Hence, the authors relate these resources and capabilities with the corresponding opportunities and threats obtained from the SWOT analysis (See Table 24:*SWOT Analysis framework*)

In order to be able to provide an answer to the question of value, the authors match these resources and capabilities with the opportunities and threats that are associated in the Green HRM. The reason for doing so is to determine the valuable resources or capabilities that can exploit an external opportunity or to neutralise an external threat. More analytically, in*Table* 26: What competencies of the human capital engaged in Green *HRM exploit external opportunities or neutralise external threats* on the left side, the resources and capabilities of Green HRM are summarised and on the right side, the external opportunities and threats are shown. In the middle, resources or capabilities that correspond to specific opportunities or threats (shown with capital letters) are presented.

To begin with, the resource *New ideas from employees for the approach of environmental topics* is considered valuable because employees who introduce innovative ideas and solutions are usually engaged in green matters and promote the usage of green technology. Also, through innovative ideas companies' operating costs such as day-to-day administrations can also be reduced. Hence, the possibility of obtaining low return through the implementation of Green HRM can be minimised. As a result, the authors of the master thesis believe that the discussed resource can exploit one opportunity and neutralise one threat (A, H) (See Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats*).

By *Incorporating environmental targets, goals and responsibilities*, companies can collect more funds from lending institutions. For example, many banks value the corporate environmental performance of a potential borrower (Jackson E, et al., 2012). In addition, companies can collect funds from socially responsible investors who also highly assess the social and environmental criteria. Hence, by the alignment of the corporate goals, targets and responsibilities, a company can also influence its supply chain by creating business relationships with suppliers/distributors who also share its environmental performance criteria (Jackson E, et al., 2012). Lastly, employees who are aware of the company's ecological goals and targets can adjust their environmental responsibilities in accordance with the organisation's policies. Having a human capital engaged in corporate environmental matters can make the assessment of its green performance easier. Therefore, the resource *Incorporation of environmental targets, goals and responsibilities* is believed to exploit three opportunities and neutralise one threat. (C, D, F, I). (See Table 26: *What*

competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats)

By *Clear communication of environmental policy*, a company can obtain better economic performance since an improved environmental performance can enhance the firm's financial capital and reduce its costs. Additionally, innovations promoted by environmental regulations and policies can reduce a company's operating costs. Furthermore, when a company clearly communicates its environmental policy it is able to change its current business relationships with suppliers/distributors who are not in accordance with the company's environmental goals. On the other hand, it can inspire its existing suppliers or distributors to improve their own environmental performance. It is evident that governments support suppliers and products "*with better environmental performance through green purchasing policies"* (Jackson E, et al., 2012). Therefore, the authors of the report believe that the resource *Clear communication of environmental policy* can exploit two opportunities and two threats. (F, G, H, J). (See Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats*).

Practices such as *Online job seeking, Teleconferencing and virtual interviews,* and *Electronic filing* can efficiently reduce the carbon footprints of the building sector. These practices are leading to enhanced efficiencies by reducing the operational costs, making the building sector more aware of social responsibilities and improving the environmental performance (Hussain, 2018). Thus, the authors believe that by implementing these practices, the opportunity to obtain a better economic performance by an enhanced environmental performance can be exploited. Additionally, the usage of green technology can be introduced. Both the company and the recruiters can reduce paperwork and travelling. Also, from the very beginning job seekers and employees can obtain a knowledge of how to approach the corporate environmental requirements and culture through online training programs (Sarkar, 2014). Therefore, the authors of the report believe that the capabilities *Online job seeking Teleconferencing and virtual interviews,* and *Electronic filing* can exploit two opportunities. (A, G). (See Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats*)

By providing *Environmental goals in companies' annual reports,* the roles of Green HR functions and the companies' environmental initiatives and environmental strategies are clearly conveyed. Therefore, by addressing environmental objectives in annual reports, organisations promote and encourage transparency, reliability as well as the competences and the environmental context of the organisation. By taking such actions, companies build a green reputation and image, and are able to attract more eco-conscious investors. They can also develop a supply chain with suppliers or distributors who share their environmental profile, goals and reputation. Additionally, when companies include their environmental aims in their annual reports, they show their commitment to green initiatives to the market. Moreover, an organisation committed to green matters is also able to use green technology in the production of materials or in electronics as well as to develop their own green technology and sell it to their competitors. The same applies to stakeholders and lending institutions that might become more interested in the organisation

because of its transparency in regard to its ecological aims. Nowadays, the environmental performance of a potential borrower is examined, thus by making known and being committed to the corporate environmental goals stated in the annual reports, companies can have better relationships with lending institutions. Therefore, the authors of the master thesis believe that the capability *Environmental goals in companies' annual reports* can exploit seven opportunities. (A, B, C, D, E, F, G). (See Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats*).

While it is true that the implementation of Green HRM requires high investment, during the initial stage of implementation companies can reduce some of their costs by introducing *Recycling and waste disposal* because they are associated with minimum costs. Recycling and disposal of waste are directly connected to employees' environmental behaviour. Therefore, companies need to communicate the importance of these practices and promote commitment among employees. Also, *Energy conservation by turning off electronic devices* is related to zero costs and leads to an improved environmental performance. Therefore, the capabilities of *Recycling and waste disposal* and *Energy consumption by turning off the electronics devices* are believed to neutralise one threat (H). (See Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats*).

The *Usage of less polluting inputs* in the production of goods or services reflects on the market and makes companies more attractive for socially responsible investments. In addition, organisations can attract stakeholders and develop better relationships with lending institutions that are interested in the companies' environmental performance and reputation. Finally, by using less polluting inputs in production, the companies' environmental performance is improved and access to financial capital and cost reduction is easier (Jackson E, et al., 2012). Therefore, the authors of the dissertation believe that the capability *Usage of less polluting inputs* can exploit four opportunities (C, D, E, G). (See Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats*).

Lastly, an improved environmental performance can also be achieved using renewable sources of energy and sustainable production procedures. This strategy reduces the negative impact on the environment and can prove to be profitable for organisations. A better economic performance can be achieved by attracting socially responsible investors and customers. Many customers are expressing their environmental consciousness and are willing to pay more for a better environmental quality of a product. For that reason, a company is able to increase the interest of eco-conscious stakeholders as well as to obtain easily potential loans on the basis of its environmental evaluation. Therefore, the authors of the thesis believe that both capabilities *Usage renewable source of energy* and *Usage of sustainable production procedures* can exploit four opportunities (C, D, E, G). (See Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats*)

Resources	Resources corresponds to Opportunities & Threats	Opportunities	#
New ideas from employees for the approach of environmental topics	A, H	Usage of Green technology	A
Incorporation of environmental targets, goals and responsibilities	C, D, F, I,	Sell green technology to competitors	B
Clear communication of environmental policy	F, G, H, J	Attract socially responsible investments	C
Capabilites		Create better relationships with lending institutions	D
Online job seeking	A, G	Increase stakeholders' interest	E
Electronic filling	A, G	Develop business relationships with suppliers/distributors in accordance to the company's performance goals	F
Environmental goals in companies' annual reports	A, B, C, D, E, F, G	Obtain better economic performance by an improved environmental performance	G
Usage of sustainable production procedures	C, D, E, G	**Threats**	
Teleconferencing and virtual interviews	A, G	Green HRM requires high investment at the initial stage of its implementation which might result to low return	H
Recycling and waste disposal	H	Difficulty to assess Green performance of employees' behavior	I
Energy conservation by turning off PCs, TVs etc...	H	Current business relationships with suppliers/ distributors which are in non-accordance with the company's environmental goals risk the company's overall environmental performance and reputation	J
Usage of less polluting inputs	C, D, E, G		
Usage of renewable sources of energy	C, D, E, G		
Usage of sustainable production procedures	C, D, E, G		

Table 26: What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats

Based on the above-mentioned argumentations and on Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats*, all the resources and capabilities of Green HRM are considered valuable for its future development. However, the authors of the thesis believe that the resources and capabilities that exploit the most opportunities and neutralise the most threats are the ones that bring more value to the Danish building companies. Hence, the question of value "*Can the competencies of human capital engaged in Green HRM exploit external opportunities or neutralise external threats?"* can be answered. According Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats,* the ability of the Danish building companies to incorporate their environmental targets, goals and responsibilities as well as to clearly communicate their environmental policy can exploit two opportunities and neutralise two threat for the future development of Green HRM. Also, through their capability to use less polluting inputs, renewable sources of energy, sustainable production procedures, they can exploit exploit four opportunities. Lastly, by providing the environmental goals in their annual report can exploit seven opportunities for the future development of Green HRM. Therefore, based on these justifications and on Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats*, the Danish building sector has many abilities and capabilities which if used properly, can lead the companies to sustainable development through Green HRM.

Rare Green HRM

Valuable human resources are important for a company, however, alone they cannot bring competitive advantage to an organisation. Rare resources and capabilities *"are those possessed uniquely by one organisation or by a few others"* (Whittington, et al., 2017). Green Human resources in a company must possess features that other companies do not have in order for them to bring competitive advantage. Additionally, if Green HRM is valuable but not rare then all companies in the Danish building sector are in an equal position and none of them possesses the potential for competitive advantage. A building company must develop and exploit rare features of human resources such as special characterises of employees (Pesic, et al., 2012). As valuable resources and capabilities for the Danish Building sector are considered the following seven features: *incorporation of environmental targets, goals and responsibilities; clear communication of environmental policy; environmental goals in companies' annual reports; eco-friendliness of companies' products using the existing resources efficiently; usage of less polluting inputs; usage of renewable source of energy; and usage of sustainable production procedures*. The authors consider these resources and capabilities as the most valuable because as shown Table 26: *What competencies of the human capital engaged in Green HRM exploit external opportunities or neutralise external threats,* they can exploit the most opportunities and neutralise the most threats. In order to answer the question of rarity *"Does Danish building companies possess similar Green HRM resources and capabilities?"*, the above-mentioned valuable resources and capabilities are examined in terms of their rarity. As discussed sub-chapter 1.3 Methodology, 31 people from the Danish building sector participated in the online survey. Therefore, the authors consider as rare the valuable resources and capabilities of Green HRM that received the most positive responses by less than half of the total amount of people who completed the questionnaire.

Table 27: *Rare Resources and Capabilities of Green HRM*, presents the resources and capabilities which according to the authors bring value to the building industry.

Valuable Green HRM resource/ capability	Strongly Disagree	Disagree	Neither disagree not agree	Agree	Strongly agree	No of people responded positively (out of 31)
Incorporating environmental targets, goals and responsibilities	0,0%	9,1%	18,2%	72,7%	0,0%	8
Clear communication of environmental policy	8,3%	25,0%	8,3%	58,3%	0,0%	7
Environmental goals in companies' annual reports	16.7%	8.3%	16.7%	50%	8.3%	7
Using less polluting inputs	0,0%	0,0%	7,7%	92,3%	0,0%	12
Using renewable sources of energy	0,0%	0,0%	15,4%	69,2%	15,4%	11
Using sustainable production procedures	0,0%	0,0%	7,7%	76,9%	15,4%	12
Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently	0,0%	9,1%	45,5%	36,4%	9,1%	5

Table 27: Rare Resources and Capabilities of Green HRM

Observing the Table 27: *Rare Resources and Capabilities of Green HRM* , it occurs that all the determined valuable resources and capabilities show rarity since the number of people who agreed and strongly agreed with the statements is below 15. However, the most significant rare capabilities of Green HRM are the capability to promote eco-friendliness of the company's products and services utilising the existing resources efficiently, the clear communication of environmental policy and the incorporation of environmental goals in companies' annual reports. This number could possibly explain the existence of companies without corporate environmental strategy policies and thereby without implemented Green HRM.

Imitable Green HRM

Imitability resources *are "those that competitors find difficult and costly to imitate or obtain or substitute"* (Whittington, et al., 2017). Companies that have both valuable and rare resources are considered strategic innovators since they are able to capture and engage in strategies while competitor companies are not able to do so if they are lacking rare resources and capabilities. To answer the question of imitability "*Are resources and capabilities in companies which are*

implementing Green HRM practices difficult to imitate?", one has to consider the social imitation form in which according to Barney & Hesterly (2008), "*Social complexity is when the resources and capabilities a firm uses to gain a competitive advantage involve interpersonal relationships, trust, culture and other social resources that are costly to imitate in the short term*." As already mentioned in chapter 2 *Chapter* Literature Review (See 2.3.1 HR Management and Sustainable competitive advantage), human resources are difficult to be imitated. Hence, Green HRM is also difficult to be imitated. That is so because one cannot duplicate green employee behaviour, emotions as well as human interactions and thereby HRM practices associated with green matters. In regard to the difficulty of duplicating resources, Barney & Hesterly (2010) divide the resources into two groups such as tangible and intangible. Tangible are the resources in which imitation is more likely to occur. For example, a green technology or machinery is considered as tangible resource and it is more likely to be imitated by competitors (Almada & Borges, 2018). On the other hand, intangible resources refer to the ones that possess a degree of difficulty to be imitated. For example, the company's culture, employees' attitudes, values, behaviour, cooperation and relationships among employees are human resources characteristics which are considered intangible resources and are challenging to be imitated by competitors. Green HRM practices involve green recruitment, training, development, green performance appraisal of employees, employee engagement and compensation in green matters (See 2.2.6 16Green Human Resource Practices) which are part of the corporate social responsibility (Rani & Mishra, 2014). HRM practices are translated into human interactions which creates a social complexity that is not easy to be imitated and thereby brings value to the company. Therefore, an answer to the research sub-question "*Are resources and capabilities in companies which are implementing Green HRM practices difficult to imitate?*" is that Green HRM practices are difficult to be imitated due to their social complexity.

From the identified valuable and rare resources and capabililities of this study, tangible resources and capabilities are the usage of less polluting inputs, the renewable sources of energy and the sustainable production procedures, since they are more likely to be duplicated by competitors. Also, by looking at Table 27: *Rare Resources and Capabilities of Green HRM*, these capabilities seem to be applied by more compaies compared to other resources and capabilites. The intangible resources and capabilities are the incorporation of environmental targets, goals and responsibilities, the environmental goals in the companies' annual reports, the clear communication of environmental policy and the promotion of eco-friendliness of the company's products and services utilising the existing resources efficiently. They are regarded as intangible resources because they involve the human factor which is not easy to imitate. As can be seen Table 27: *Rare Resources and Capabilities of Green HRM*, these resources and capabilities are the ones employed by very few companies.

Organisational Support

To achieve organisational support, a company must "*fully exploit the competitive potential of its resources and capabilities, a firm must be organised to capture value – that is, it must have in place an effective organisational structure and coordinating systems."* (Whittington, et al., 2017).

A company's potential depends on the value, rarity and imitability of its resources and capabilities in order to achieve organisation support and consequently sustainable competitive advantage. All the previously mentioned characteristics of Green HRM can become sources of competitive advantage if the company is well organised.

Based on the previous argumentations, the question related to organisational support is "*Do companies possess HR systems that promote and exploit the full competitive potential of Green HRM resources and capabilities?*" From this perspective, organisation means the creation of systems and procedures that allow the full utilisation of the potential of green human resources. Hence, companies must develop mechanisms that are focused on the establishment of employees' knowledge and abilities which would also motivate and encourage their exploitation. Additionally, the building sector must be organised in a way that the continuous improvement of employees' knowledge and abilities is promoted. According to Yukl & Becker (2006), the empowerment, the informal communication, the transparent strategy and corporate objectives, the welcoming of new ideas as well as the rewards play a significant role in employees' engagement and motivation which is essential for the use of knowledge and abilities in the function of value creation. As a result, the companies that have the best management system, the best green training program of employees as well as the best green reward system, etc. are having advantage over their competitors. According to the responses from the online survey, 18.2 % of the Danish building companies provide seminars to their employees so they can acquire knowledge in green management skill. 34.4 % of them promote green employee relations through employee motivation, participation and involvement in ecological initiatives. 36.4 % of the companies incorporate environmental performance indicators in their performance management systems such as ISO14000 and they evaluate the environmental initiatives of employees through appraisal ratings. 34.4 % of them provide special bonuses to employees for extraordinary environmental effort in the workplace. Finally, 73.3% of the Danish building companies are welcoming new ideas from employees on how to approach environmental topics (See sub-chapter 5.1 Descriptive Analysis)

It needs to be mentioned that the provided findings do not represent the overall Danish building sector. However, based on these findings, it can be concluded that the Danish building industry possesses the necessary HR systems for the implementation of Green HRM but not for its full realisation.

Based on the majorities of the Danish building companies' responses, this sector is making use of some green initiatives such as electronic filing, teleconferencing and virtual interviews as well as of same basic green practices such as usage of less polluting inputs, sustainable production procedures and renewable sources of energy (See *8.2 Descriptive Analysis*). Moreover, the complete implementation of Green HRM practices through the currently existing resources and capabilities in the building industry has not been achieved yet. The authors believe that the Danish building sector owns the potential to promote and exploit the competitive potential of Green HRM resources and capabilities with the employment of environmental strategies.

According to the previously conducted analyses, the Green HRM resources and capabilities employed in the Danish building sector are valuable, rare and imitable and the sector has the organisational support but not to a great extent. Hence, to answer the question of organisational support, the Danish companies do possess HR systems that promote and exploit the competitive potential of Green HRM resources and capabilities but not to its fullest.

6 *Chapter* Conclusion

The aim of this chapter is to review and summarise the findings from *5 Chapter Detailed Analysis* in order to provide a coherent answer to the main research question presented in *3 Chapter Research Focus*. Additionally, another aim of the conclusion is to discuss and reflect on the findings and on the procedure that the master thesis followed.

6.1 Conclusion

This sub-chapter serves the purpose of listing all the sub-research questions and summarises their answers in order to ensure that the conducted research covers the research focus. The main research question of this dissertation thesis is:

"Can the potential of Green HRM be fully realised in practice and as a consequence bring sustainable competitive advantage to the Danish building sector?"

To provide a coherent answer to the main question, the need for the following sub-research questions emerged.

To what extent are Green HRM practices currently implemented?

In order to answer the question, the findings from sub-division *5.1.1* are applied. According to the responses gathered from the questionnaire, the two practices which are most widely implemented are *E-filing* and *Incorporation of environmental targets, goals and responsibilities*. Least implemented is the practice of *Workshops (training supervisors to use online course materials and case studies)*.

In the category of practices which the participants rated as not implemented, the three highest ranked ones are *Programs (online and web-based training modules and tools for green management)*, *Special bonuses to the employees for extraordinary environmental effort in the workplace* and *Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)*. The lowest rated practices are *Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently* and *Employees' motivation, participation and involvement in ecological initiatives*.

Which sub-practices have the most significant correlation within each GHRM practice and among all GHRM practices, and how are they implemented in Denmark?

The second sub-research question is solved using the results of the Inferential analysis (see sub-division *5.2.1*). The findings indicate that currently the strongest correlation exists between the practices of *Evaluating environmental initiatives of employees through appraisal ratings* and *Clear communication of environmental policy*. Following is the combination of the practices of *Recycling and waste disposal* and *Conservation of energy*. Next, the respondents' results point to

the pair of practices of *Seeking candidates personally committed to environmental sustainability* and *Stating (the company's) environmental goals in their annual report*. The next strongest correlation is present between the practices of *Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently* and *Employees' motivation, participation and involvement in ecological initiatives*. The final strongest correlation exists between the practices of *E-filing* and *Incorporating environmental targets, goals and responsibilities*.

Can the competencies of human capital engaged in Green HRM exploit external opportunities or neutralise external threats?

Based on the findings from the analysis in sub-chapter 5.4 VRIO framework, it becomes evident that human capital engaged in Green HRM can exploit external opportunities and neutralise external threats. Based on the outcome of the online survey, the authors of the dissertation determine the most valuable resources and capabilities associated with Green HRM. The most valuable resources and capabilities are the *Incorporation of the environmental targets, goals and responsibiilites*, the *clear communication of environmental policy*, the *usage of lees polluting inputs, renewable sources of energy and sutainable production procedures* as well as *the environmental goals in the companies' annual reports*. If they are used efficiently, they can exploit many external opportunities and threats from the Danish building sector.

Do Danish building companies possess similar Green HRM resources and capabilities?

The above stated research question refers to the rarity of the valuable resources and capabilities of Green HRM that are implemented in the Danish building industry. Despite the small amount of participants in the online questionnaire, the authors of the dissertation determine that there is a very small number of Danish building companies that possess similar Green HRM resources and capabilities. Therefore, the building sector can obtain the potential for competitive advantage. Moreover, based on the descriptive analysis (See *8.2 Descriptive Analysis*), there are companies in the Danish building sector who are aware of the concepts of Green HRM but do not implement any of its practices or the number of those who implement them is still very low. Also, there are companies that apply Green HRM practices, but are not familiar with the concepts of Green HRM. This indicates the lack of knowledge about Green HRM and the related practices and can serve as a possible explanation why Green HRM resources and capabilities are rare in the Danish building sector.

Are resources and capabilities in companies which are implementing Green HRM practices difficult to imitate?

Since this master thesis is regarding the Green HRM and its practices, the social complexity factor is taken into consideration. The identified valuable and rare resources and capabilities

cannot be imitated because they are associated with the Green HR actions and show social complexity. However, there are Green HRM practices that are associated with tangible and intangible resources and capabilities which makes some of them easier to be imitated by competitors. Such intangible resources and capabilities are the incorporation of environmental targets, goals and responsibilities, the environmental goals in the companies' annual reports, the clear communication of the environmental policy and the promotion of eco-friendliness of the company's products and services utilising the existing resources efficiently. These intangible resources and capabilities are hard to be imitated because they are directly connected to the human capital and its environmental behaviour, knowledge and emotions on green matters. Tangible resources and capabilities are the usage of less polluting inputs, the usage of renewable sources of energy and the usage of sustainable production procedures. These resources and capabilities in comparison to the intangible ones are more easily imitated by a competitor company.

Do companies possess HR systems that promote and exploit the full competitive potential of Green HRM resources and capabilities?

Since the Danish building industry possesses valuable, rare and imitable Green HRM resources and capabilities, the answer is that Danish companies can exploit the full competitive potential of Green HR resources and capabilities and thereby they are in possession of organisation support. With the help of the VRIO framework template (See Table 28: *VRIO Framework Template*), it can be concluded that the potential of Green HRM can bring sustainable competitive advantage to the Danish building sector. However, it is still not used to its fullest.

V valuable	**R** Rare	**I** Inimitable	**O** Organised	
NO				Competitive Disadvantage
YES	NO			Competitive Parity
YES	YES	NO		Temporary Competitive Advantage
YES	YES	YES	NO	Unused Competitive Advantage
YES	**YES**	**YES**	**YES**	**Sustainable Competitive Advantage**

Table 28: VRIO Framework Template

6.2 Discussion and Reflection

The study sough to identify whether the employment of Green Human Resource Management can bring sustainable competitive advantage in the Danish building industry. In order to become more familiar with the concept of Green HRM and sustainable competitive advantage, the authors carried out an in-depth literature review. Through the literature review the necessary knowledge regarding the concepts was obtained as well as the theoretical guidelines for its implementation were established.

The primary data for the execution of the analyses were gathered with the help of an online survey which was distributed to employees with different specialities in Danish building companies. In order to obtain a greater knowledge in connection with the current application and awareness of the Green HRM concept and its practices, the authors carried out a series of analyses. First, the authors examined the degree to which the building sector in Denmark implements Green HRM practices through a descriptive analysis based on the responses obtained from the survey. Then, with the help of an inferential analysis, the authors identified which sub-practices have the most significant correlation within each Green HRM practice as well as among all the Green HRM practices. Additionally, through a SWOT analysis, the authors identified the strengths and weaknesses the building sector in Denmark has. This was done by considering the most positive and most negative responses that the statements regarding the Green HRM practices yielded. Afterwards, the opportunities were identified based on the authors' interpretation of what can be an opportunity to achieve competitive advantage and the threats were determined again based on the authors' interpretation of what can be a threat that limits the employment of Green HRM. For both opportunities and threats the questionnaire tool was used. Lastly, using the strengths from the SWOT analysis, the authors determine the resources and capabilities that the Danish building sector has in its posessession. These resources and capabilities are examined using the VRIO analysis in regard to whether they bring value to companies, are rare and are inimitable. These Green HRM resources and capabilities are also studied in terms of whether the building sector can be organised in a way that it is able to exploit their full potential of bringing sustainable competitive advantage.

Based on the responses received from the questionnaire, it becomes clear that many companies in the Danish building sector are not familiar with the concept of Green HRM. However, they employ some of the Green HR practices in their workplace. This can be explained by the fact that the concept of Green HRM is relatively new and is not well-known yet. In relation to the question regarding the reason why companies consider adopting or adopt Green HRM a response that was obtained states *"Customers' demand, Government demand and ensure healthy working environment and raise employee morale."* (See online survey in Appendix). This can be explained by the increased attention developed among customers, governors, managerial employees as well as owners of organisations regarding environmental sustainability (Halawi & Zaraket, 2018). Hence, as already mentioned in *2 Chapter Literature Review*, by developing a Green organisation, the interest and loyalty of environmentally conscious customers and employees is increased. Based on the findings from the analyses, it occurred that since the concept of Green HRM is not very known in the Danish building sector, all the Green HR practices are not fully implemented. However, some practices such as usage of less polluting, renewable sources of energy and sustainable production procedures are employed by some companies. Regarding the practice of Green recruitment, not all of its sub-practices are implemented by the Danish building sector. A response received to a question about what Green recruitment practices the company implements states "*Job interviews with people based in other countries will be conducted by Skype or similar to avoid flying in too many candidates. Physical meetings only organised with final candidates."* (See online survey in Appendix). It also includes practices such as teleconferencing and virtual interviews through which the carbon footprints of the company can be reduced (Hussain, 2018).

Recommendations for further studies

The authors believe that a further research of the study would be necessary since the findings that were obtained in the thesis came from a relatively small target population. It is important to expand the participations in the questionnaire by conducting a similar research in the Danish building sector. Hence, an additional research focusing on the Green HRM practices and sustainable competitive advantage in the Danish building industry needs to be carried out.

In addition, the authors conclude the thesis with the following suggestions aimed at Danish building companies that are not implementing Green HRM yet, but would be interested to do so in the future. The following recommendations could be used as initial steps for the implementation of Green HRM:

- To implement environmental strategies
- To invest in environmentally conscious employees
- To value employees as human capital since they are an important source of competitive advantage
- To develop employee green behaviour through green training and learning
- To encourage employees participation in Green HRM matters
- To communicate the Green policies in their workplace
- To establish Green HR as a source of competitive advantage by being valuable, rare, difficult to be imitated and the HR department to be supported by the organisation's environmental values

Reflection

As every new beginning, the authors on this dissertation started with a lot of research. The authors had to accumulate, cover, develop and discover a big amount of information in a short amount of time that could not have been done without a good cooperation and support. The authors believe that the execution of the master thesis was performed in an in-depth and comprehensive way that could set the guidelines for a further future investigation. However, a personal preference of the authors is that more responses could have been obtained from the online questionnaire in order for them to capture a clearer image of the Danish building sector in regards to Green HRM. Nevertheless, the authors believe that they managed to deliver a master thesis that fulfils the university's, the supervisor's and their own standards. Lastly, the authors believe that a successful connection was established between the areas of Green HRM and sustainable competitive advantage within the Danish building sector environment.

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8 Annexes

8.1 RII and Ranking of sub- GHRM practices

RII and Ranking of sub- GHRM Practices, Respondent Scores

Green recruitment									
		Respondent scores							
		5. Strongly agree	4. Agree	3. Neither disagree not agree	2. Disagree	1. Strongly disagree	RII	RANKING WITHIN CATEGORY	OVERALL RANKING
1	Seeking candidates personally committed to environmental sustainability	0	2	6	2	2	0,533	3	21
2	Seeking candidates environmentally responsible in the preparation of their job application	0	0	6	3	2	0,473	4	25
3	Stating its environmental goals in their annual report	1	6	2	1	2	0,650	2	11
4	Applying online job seeking	2	6	4	0	1	0,723	1	7

Green learning, training and development									
		Respondent scores							
		5. Strongly agree	4. Agree	3. Neither disagree not agree	2. Disagree	1. Strongly disagree	RII	RANKING WITHIN CATEGORY	OVERALL RANKING Cont.
1	Programs (online and web-based training modules and tools for green management)	1	1	2	6	1	0,509	3	24
2	Workshops (training supervisors to use online course materials and case studies)	0	3	3	4	1	0,545	1	19
3	Seminars, sessions and presentations that help employees to acquire knowledge in green management skills	0	2	5	3	1	0,545	1	19

Green Employee Relations									
		Respondent scores							
		5. Strongly agree	4. Agree	3. Neither disagree not agree	2. Disagree	1. Strongly disagree	RII	RANKING WITHIN CATEGORY	OVERALL RANKING Cont.
1	Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently	1	4	5	1	0	0,691	1	8
2	Through employees' motivation, participation and involvement in ecological initiatives	1	4	5	1	0	0,691	1	8

Green initiatives for HR									
		Respondent scores							
		5. Strongly agree	4. Agree	3. Neither disagree not agree	2. Disagree	1. Strongly disagree	RII	RANKING WITHIN CATEGORY	OVERALL RANKING Cont.
1	Electronic filing	5	6	1	2	0	0,800	1	1
2	Car sharing	2	3	2	6	0	0,615	8	15
3	Teleconferencing and virtual interviews	3	7	2	2	0	0,757	3	3
4	Recycling and waste disposal	3	7	2	2	0	0,757	3	3
5	Online training	3	6	5	0	0	0,771	2	2
6	Energy-efficient office spaces	1	6	5	2	0	0,686	6	10
7	Paperless office	1	5	3	5	0	0,629	7	14
8	Conservation of energy - turning off PCs and TVs when not in use, solar lighting, etc.	2	6	3	1	0	0,750	5	5

Green performance management		
	Respondent scores	

		5. Strongly agree	4. Agree	3. Neither disagree not agree	2. Disagree	1. Strongly disagree	RII	RANKING WITHIN CATEGORY	OVERALL RANKING Cont.
1	Incorporating environmental performance indicators in performance management systems (ISO 14000, GRI, EMAS, etc.)	0	4	3	2	2	0,564	5	17
2	Holding discussions on environmental matters	0	4	5	2	0	0,636	2	12
3	Incorporating environmental targets, goals and responsibilities	0	8	2	1	0	0,727	1	6
4	Evaluating environmental initiatives of employees through appraisal ratings	0	4	3	3	1	0,582	4	16
5	Clear communication of environmental policy	0	7	1	3	1	0,633	3	13

Green rewards and compensation									
		RESPONDENT SCORES							
		5. Strongly agree	4. Agree	3. Neither disagree not agree	2. Disagree	1. Strongly disagree	RII	RANKING WITHIN CATEGORY	OVERALL RANKING Cont.
1	Rewarding green skills and achievement	1	3	2	3	2	0,564	1	17
2	Special bonuses to the employees for extraordinary environmental effort in the workplace	0	4	1	4	2	0,527	2	22
3	Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)	0	3	2	5	1	0,527	2	22

8.2 Descriptive Analysis

[Overall descriptive analysis of Concept of GHRM]

Concept of GHRM													
		1. Not at all		2. To a little extent		3. To some extent		4. To a great extent		5. To a very great extent		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
1	Are you familiar with the concept of Green HRM (Green Human Resource Management)?	80,6%	25	6,5%	2	12,9%	4	0,0%	0	0,0%	0	1,32	0,702
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Preserve the natural environment	0,0%	0	7,7%	1	15,4%	2	61,5%	8	15,4%	2	3,85	0,801
3	Ensure healthy working environment and raise employee morale	0,0%	0	0,0%	0	23,1%	3	46,2%	6	30,8%	4	4,08	0,760
4	Gain competitive advantage through ensuring corporate responsibility	0,0%	0	7,7%	1	15,4%	2	61,5%	8	15,4%	2	3,85	0,801
5	Save cost	0,0%	0	15,4%	2	23,1%	3	46,2%	6	15,4%	2	3,62	0,961
6	Increase the company's image	0,0%	0	0,0%	0	16,7%	2	66,7%	8	16,7%	2	4,00	0,603
7	Reduce intervention from the government and other law enforcing agencies	0,0%	0	0,0%	0	69,2%	9	23,1%	3	7,7%	1	3,38	0,650
8	Develop eco-friendliness and environmental learning among the employees	0,0%	0	0,0%	0	46,2%	6	53,8%	7	0,0%	0	3,54	0,519
9	Stimulate innovation and growth	0,0%	0	7,7%	1	23,1%	3	61,5%	8	7,7%	1	3,69	0,751
10	Facilitate green learning and shape green behaviour	0,0%	0	8,3%	1	41,7%	5	41,7%	5	8,3%	1	3,50	0,798
11	Maximize the use of resources and reduce waste	0,0%	0	7,7%	1	7,7%	1	53,8%	7	30,8%	4	4,08	0,862

Green recruitment

		1. Yes		2. No								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green recruitment?	17,6%	3	82,4%	14							1,82	0,393
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Seeking candidates personally committed to environmental sustainability	16,7%	2	16,7%	2	50,0%	6	16,7%	2	0,0%	0	2,67	0,985
3	Seeking candidates environmentally responsible in the preparation of their job application	18,2%	2	27,3%	3	54,5%	6	0,0%	0	0,0%	0	2,36	0,809
4	Stating its environmental goals in their annual report	16,7%	2	8,3%	1	16,7%	2	50,0%	6	8,3%	1	3,25	1,288
5	Applying online job seeking	7,7%	1	0,0%	0	30,8%	4	46,2%	6	15,4%	2	3,62	1,044

Green learning, training and development

		1. Yes		2. No								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green learning, training and development?	12,5%	2	87,5%	14							1,875	0,342
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Programs (online and web-based training modules and tools for green management)	9,1%	1	54,5%	6	18,2%	2	9,1%	1	9,1%	1	2,55	1,128
3	Workshops (training supervisors to use online course materials and case studies)	9,1%	1	36,4%	4	27,3%	3	27,3%	3	0,0%	0	2,73	1,009
4	Seminars, sessions and presentations that help employees to acquire knowledge in green management skills	9,1%	1	27,3%	3	45,5%	5	18,2%	2	0,0%	0	2,73	0,905

Green Employee Relations

		1. Yes		2. No								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green employee relations?	6,3%	1	93,8%	15							1,94	0,250
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently	0,0%	0	9,1%	1	45,5%	5	36,4%	4	9,1%	1	3,45	0,820
3	Through employees' motivation, participation and involvement in ecological initiatives	0,0%	0	9,1%	1	45,5%	5	36,4%	4	9,1%	1	3,45	0,820

Green initiatives for HR

		Yes		No								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green initiatives for HR?	18,8%	3	81,3%	13							1,80	0,403
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Electronic filing	0,0%	0	14,3%	2	7,1%	1	42,9%	6	35,7%	5	4,00	1,038
3	Car sharing	0,0%	0	46,2%	6	15,4%	2	23,1%	3	15,4%	2	3,08	1,188
4	Teleconferencing and virtual interviews	0,0%	0	14,3%	2	14,3%	2	50,0%	7	21,4%	3	3,79	0,975
5	Recycling and waste disposal	0,0%	0	14,3%	2	14,3%	2	50,0%	7	21,4%	3	3,79	0,975
6	Online training	0,0%	0	0,0%	0	35,7%	5	42,9%	6	21,4%	3	3,86	0,770
7	Energy-efficient office spaces	0,0%	0	14,3%	2	35,7%	5	42,9%	6	7,1%	1	3,43	0,852
8	Paperless office	0,0%	0	35,7%	5	21,4%	3	35,7%	5	7,1%	1	3,14	1,027
9	Conservation of energy - turning off PCs and TVs when not in use, solar lighting, etc.	0,0%	0	8,3%	1	25,0%	3	50,0%	6	16,7%	2	3,75	0,866

Green performance management

		Yes		No								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green performance management?	18,8%	3	81,3%	13							1,81	0,403
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Incorporating environmental performance indicators in performance management systems (ISO 14000, GRI, EMAS, etc.)	18,2%	2	18,2%	2	27,3%	3	36,4%	4	0,0%	0	2,82	1,168
3	Holding discussions on environmental matters	0,0%	0	18,2%	2	45,5%	5	36,4%	4	0,0%	0	3,18	0,751
4	Incorporating environmental targets, goals and responsibilities	0,0%	0	9,1%	1	18,2%	2	72,7%	8	0,0%	0	3,64	0,674
5	Evaluating environmental initiatives of employees through appraisal ratings	9,1%	1	27,3%	3	27,3%	3	36,4%	4	0,0%	0	2,91	1,044
6	Clear communication of environmental policy	8,3%	1	25,0%	3	8,3%	1	58,3%	7	0,0%	0	3,17	1,115

Green rewards and compensation

		Yes		No								Mean	St. Dev.
		%	#	%	#								
1	Are you familiar with the concept of Green rewards and compensation?	6,3%	1	93,8%	15							1,94	0,250
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Rewarding green skills and achievement	18,2%	2	27,3%	3	18,2%	2	27,3%	3	9,1%	1	2,82	1,328
3	Special bonuses to the employees for extraordinary environmental effort in the workplace	18,2%	2	36,4%	4	9,1%	1	36,4%	4	0,0%	0	2,64	1,206
4	Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)	9,1%	1	45,5%	5	18,2%	2	27,3%	3	0,0%	0	2,64	1,027

Challenges for the HR professional

		Yes		No								Mean	St. Dev.
		%	#	%	#								
1	Are there any challenges for the HR professional in regard to Green HRM?	50,0%	8	50,0%	8							1,50	0,516
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	To select and develop future Green leaders	0,0%	0	0,0%	0	50,0%	6	41,7%	5	8,3%	1	3,58	0,669
3	To create a Green working structure	0,0%	0	27,3%	3	36,4%	4	27,3%	3	9,1%	1	3,18	0,982
4	To set up Green working processes	0,0%	0	27,3%	3	27,3%	3	27,3%	3	18,2%	2	3,36	1,120
5	To provide Green tools	0,0%	0	25,0%	3	41,7%	5	25,0%	3	8,3%	1	3,17	0,937
6	To provoke Green thinking among employees	0,0%	0	16,7%	2	25,0%	3	50,0%	6	8,3%	1	3,50	0,905

Environmental quality

		Yes		No								Mean	St. Dev.
		%	#	%	#								
1	Do you believe that the company can increase the demand and revenue of its products/services through improved environmental quality?	93,8%	15	6,3%	1							1,06	0,250
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Using less polluting inputs	0,0%	0	0,0%	0	7,7%	1	92,3%	12	0,0%	0	3,92	0,277
3	Using renewable sources of energy	0,0%	0	0,0%	0	15,4%	2	69,2%	9	15,4%	2	4,00	0,577
4	Using sustainable production procedures	0,0%	0	0,0%	0	7,7%	1	76,9%	10	15,4%	2	4,08	0,494
5	Applying environmental policies that reward the environmental quality of products beyond the legal standards	7,7%	1	0,0%	0	30,8%	4	46,2%	6	15,4%	2	3,62	1,044
6	Applying environmental policies designed to encourage the adoption of renewable sources of energy	7,7%	1	0,0%	0	30,8%	4	38,5%	5	23,1%	3	3,69	1,109

7	Promoting green purchasing by customers (customers pay more for products of higher environmental quality)	7,7%	1	0,0%	0	53,8%	7	23,1%	3	15,4%	2	3,38	1,044

Green technology

		Yes		No								Mean	St. Dev.
		%	#	%	#								
1	Do you believe that going beyond the environmental regulations inspires the company to use Green technology to gain advantage on the market?	68,8%	11	31,3%	5							1,31	0,479
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Exploiting Green technology to diversify and expand its business	8,3%	1	8,3%	1	16,7%	2	50,0%	6	16,7%	2	3,58	1,165
3	Selling Green technology to competitors.	9,1%	1	18,2%	2	45,5%	5	18,2%	2	9,1%	1	3,00	1,095

Financial capital

		Yes		No								Mean	St. Dev.
		%	#	%	#								
1	Do you believe that the company can raise its financial capital by implementing Green HRM?	60,0%	9	40,0%	6							1,40	0,507
		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
2	Attracting socially responsible investments	8,3%	1	16,7%	2	33,3%	4	33,3%	4	8,3%	1	3,17	1,115
3	Creating better relationships with lending institutions (i.e. banks)	8,3%	1	50,0%	6	25,0%	3	16,7%	2	0,0%	0	2,50	0,905
4	Increasing shareholders' interest in the company	0,0%	0	23,1%	3	23,1%	3	53,8%	7	0,0%	0	3,31	0,855

Do you believe that:		1. Strongly disagree		2. Disagree		3. Neither disagree not agree		4. Agree		5. Strongly agree		Mean	St. Dev.
		%	#	%	#	%	#	%	#	%	#		
1	The company welcomes new ideas from employees on how to approach environmental topics	0,0%	0	0,0%	0	26,7%	4	73,3%	11	0,0%	0	3,73	0,458
2	The employees in the company are NOT equally motivated to adopt Green HRM practices	6,7%	1	46,7%	7	20,0%	3	26,7%	4	0,0%	0	2,67	0,976
3	Developing and maintaining a culture of Green HRM is a lengthy and time-consuming process	0,0%	0	7,1%	1	7,1%	1	64,3%	9	21,4%	3	4,00	0,784
4	At the initial stage of implementation, Green HRM requires a high investment and might bring a low return	0,0%	0	6,7%	1	46,7%	7	46,7%	7	0,0%	0	3,40	0,632
5	Recruitment and training of employees about Green HRM is a challenging job to do	0,0%	0	7,7%	1	15,4%	2	53,8%	7	23,1%	3	3,92	0,862
6	It is difficult to assess the Green performance of employees' behaviour	0,0%	0	7,1%	1	7,1%	1	57,1%	8	28,6%	4	4,06	0,829
7	It is difficult to transform employees' attitude to Green HRM from traditional HRM in a short period of time	0,0%	0	21,4%	3	0,0%	0	35,7%	5	42,9%	6	4,00	1,177
8	The company changes its business relationships with its suppliers/ distributors in accordance with its environmental performance goals	0,0%	0	7,7%	1	46,2%	6	46,2%	6	0,0%	0	3,38	0,650
9	An improved environmental performance is associated with better economic performance	0,0%	0	15,4%	2	38,5%	5	46,2%	6	0,0%	0	3,31	0,751

8.3 Inferential Analysis for each GHRM practice

GREEN RECRUITMENT					
CORRELATIONS					
		Seeking candidates personally committed to environmental sustainability	Seeking candidates environmentally responsible in the preparation of their job application	Stating its environmental goals in their annual report	Applying online job seeking
Seeking candidates personally committed to environmental sustainability	Pearson Correlation	1	,777**	,860**	0,547
	Sig. (2-tailed)		0,005	0,001	0,082
	N	12	11	11	11
Seeking candidates environmentally responsible in the preparation of their job application	Pearson Correlation	,777**	1	,677*	0,380
	Sig. (2-tailed)	0,005		0,022	0,249
	N	11	11	11	11
Stating its environmental goals in their annual report	Pearson Correlation	,860**	,677*	1	,741**
	Sig. (2-tailed)	0,001	0,022		0,006
	N	11	11	12	12
Applying online job seeking	Pearson Correlation	0,547	0,380	,741**	1
	Sig. (2-tailed)	0,082	0,249	0,006	
	N	11	11	12	13
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

GREEN EMPLOYEE RELATIONS			
CORRELATIONS			
		Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently	Through employees' motivation, participation and involvement in ecological initiatives
Promoting eco-friendliness of the company's products and services utilising the existing resources efficiently	Pearson Correlation	1	,851**
	Sig. (2-tailed)		0,001
	N	11	11

Through employees' motivation, participation and involvement in ecological initiatives	Pearson Correlation	,851**	1
	Sig. (2-tailed)	0,001	
	N	11	11
**. Correlation is significant at the 0.01 level (2-tailed).			

GREEN INITIATIVES FOR HR									
CORRELATIONS									
		Electronic filing	Car sharing	Teleconferencing and virtual interviews	Recycling and waste disposal	Online training	Energy-efficient office spaces	Paperless office	Conservation of energy - turning off PCs and TVs when not in use, solar lighting, etc.
Electronic filing	Pearson Correlation	1	0,260	,684**	0,456	0,192	0,522	0,217	0,322
	Sig. (2-tailed)		0,391	0,007	0,101	0,510	0,055	0,457	0,307
	N	14	13	14	14	14	14	14	12
Car sharing	Pearson Correlation	0,260	1	0,432	0,224	0,539	0,292	0,198	0,568
	Sig. (2-tailed)	0,391		0,141	0,462	0,057	0,334	0,517	0,068
	N	13	13	13	13	13	13	13	11
Teleconferencing and virtual interviews	Pearson Correlation	,684**	0,432	1	0,272	0,366	0,212	0,263	0,369
	Sig. (2-tailed)	0,007	0,141		0,347	0,198	0,467	0,363	0,237
	N	14	13	14	14	14	14	14	12
Recycling and waste disposal	Pearson Correlation	0,456	0,224	0,272	1	,571*	0,490	0,263	,862**
	Sig. (2-tailed)	0,101	0,462	0,347		0,033	0,076	0,363	0,000
	N	14	13	14	14	14	14	14	12
Online training	Pearson Correlation	0,192	0,539	0,366	,571*	1	0,218	0,222	,629*
	Sig. (2-tailed)	0,510	0,057	0,198	0,033		0,455	0,445	0,029
	N	14	13	14	14	14	14	14	12
Energy-efficient office spaces	Pearson Correlation	0,522	0,292	0,212	0,490	0,218	1	-0,075	0,232

	Sig. (2-tailed)	0,055	0,334	0,467	0,076	0,455		0,798	0,469
	N	14	13	14	14	14	14	14	12
Paperless office	Pearson Correlation	0,217	0,198	0,263	0,263	0,222	-0,075	1	0,174
	Sig. (2-tailed)	0,457	0,517	0,363	0,363	0,445	0,798		0,588
	N	14	13	14	14	14	14	14	12
Conservation of energy - turning off PCs and TVs when not in use, solar lighting, etc.	Pearson Correlation	0,322	0,568	0,369	,862**	,629*	0,232	0,174	1
	Sig. (2-tailed)	0,307	0,068	0,237	0,000	0,029	0,469	0,588	
	N	12	11	12	12	12	12	12	12
**. Correlation is significant at the 0.01 level (2-tailed).									
*. Correlation is significant at the 0.05 level (2-tailed).									

GREEN PERFORMANCE MANAGEMENT						
CORRELATIONS						
		Incorporating environmental performance indicators in performance management systems (ISO 14000, GRI, EMAS, etc.)	Holding discussions on environmental matters	The company applies the following strategies: (Please, answer if relevant) - Incorporating environmental targets, goals and responsibilities	Evaluating environmental initiatives of employees through appraisal ratings	Clear communication of environmental policy
Incorporating environmental performance indicators in performance management systems (ISO 14000, GRI, EMAS, etc.)	Pearson Correlation	1	,612*	0,416	,723*	,767**
	Sig. (2-tailed)		0,045	0,204	0,012	0,006
	N	11	11	11	11	11
Holding discussions on environmental matters	Pearson Correlation	,612*	1	,736**	,661*	,682*
	Sig. (2-tailed)	0,045		0,010	0,027	0,021
	N	11	11	11	11	11
Incorporating environmental targets, goals and responsibilities	Pearson Correlation	0,416	,736**	1	0,374	0,439
	Sig. (2-tailed)	0,204	0,010		0,257	0,177

	N	11	11	11	11	11
Evaluating environmental initiatives of employees through appraisal ratings	Pearson Correlation	,723*	,661*	0,374	1	,935**
	Sig. (2-tailed)	0,012	0,027	0,257		0,000
	N	11	11	11	11	11
Clear communication of environmental policy	Pearson Correlation	,767**	,682*	0,439	,935**	1
	Sig. (2-tailed)	0,006	0,021	0,177	0,000	
	N	11	11	11	11	12
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

GREEN REWARDS AND COMPENSATION

CORRELATIONS

		Rewarding green skills and achievement	Special bonuses to the employees for extraordinary environmental effort in the workplace	Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)
Rewarding green skills and achievement	Pearson Correlation	1	,766**	0,533
	Sig. (2-tailed)		0,006	0,091
	N	11	11	11
Special bonuses to the employees for extraordinary environmental effort in the workplace	Pearson Correlation	,766**	1	0,125
	Sig. (2-tailed)	0,006		0,715
	N	11	11	11
Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)	Pearson Correlation	0,533	0,125	1
	Sig. (2-tailed)	0,091	0,715	
	N	11	11	11
**. Correlation is significant at the 0.01 level (2-tailed).				

8.4 Inferential Analysis among all GHRM practices

The following sub-practices are included in the Inferential analysis conducted among all GHRM practices. Each number corresponds to a different sub-practice from the analysis.

1. Seeking candidates personally committed to environmental sustainability
2. Seeking candidates environmentally responsible in the preparation of their job application
3. Stating its environmental goals in their annual report
4. Applying online job seeking
5. Programs (online and web-based training modules and tools for green management)
6. Workshops (training supervisors to use online course materials and case studies)
7. Seminars, sessions and presentations that help employees to acquire knowledge in green management skills
8. Promoting eco-friendliness of the company's products and services utilizing the existing resources efficiently
9. Through employees' motivation, participation and involvement in ecological initiatives
10. Electronic filing
11. Car sharing
12. Teleconferencing and virtual interviews
13. Recycling and waste disposal
14. Online training
15. Energy-efficient office spaces
16. Paperless office
17. Conservation of energy - turning off PCs and TVs when not in use, solar lighting, etc.
18. Incorporating environmental performance indicators in performance management systems (ISO 14000, GRI, EMAS, etc.)
19. Holding discussions on environmental matters
20. Incorporating environmental targets, goals and responsibilities
21. Evaluating environmental initiatives of employees through appraisal ratings
22. Clear communication of environmental policy
23. Rewarding green skills and achievement
24. Special bonuses to the employees for extraordinary environmental effort in the workplace
25. Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)

Correlations

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Pearson Correlation	1																								
	Sig. (2-tailed)																									
	N	12																								
2	Pearson Correlation	,777**	1																							
	Sig. (2-tailed)	0,005																								
	N	11	11																							
3	Pearson Correlation	,860**	,677*	1																						
	Sig. (2-tailed)	0,001	0,022																							
	N	11	11	12																						
4	Pearson Correlation	0,547	0,380	,741**	1																					
	Sig. (2-tailed)	0,082	0,249	0,006																						
	N	11	11	12	13																					
5	Pearson Correlation	,740*	0,368	,663*	0,613	1																				
	Sig. (2-tailed)	0,014	0,296	0,037	0,059																					
	N	10	10	10	10	11																				
6	Pearson Correlation	,685*	0,447	,724*	,639*	0,407	1																			
	Sig. (2-tailed)	0,029	0,195	0,018	0,047	0,214																				
	N	10	10	10	10	11	11																			
7	Pearson Correlation	0,294	0,512	0,358	0,366	0,062	,677*	1																		
	Sig. (2-tailed)	0,409	0,130	0,310	0,298	0,855	0,022																			
	N	10	10	10	10	11	11	11																		
8	Pearson Correlation	0,453	0,608	0,584	0,244	0,292	0,218	0,406	1																	
	Sig. (2-tailed)	0,161	0,062	0,076	0,497	0,413	0,545	0,244																		
	N	11	10	10	10	10	10	10	11																	
9	Pearson Correlation	0,335	0,448	0,490	0,122	0,292	0,218	0,563	,851**	1																
	Sig. (2-tailed)	0,315	0,194	0,151	0,737	0,413	0,545	0,091	0,001																	
	N	11	10	10	10	10	10	10	11	11																
10	Pearson Correlation	0,000	0,000	0,313	0,245	0,075	-0,084	-0,374	0,309	0,103	1															
	Sig. (2-tailed)	1,000	1,000	0,348	0,468	0,827	0,807	0,258	0,355	0,763																
	N	11	10	11	11	11	11	11	11	11	14															
11	Pearson Correlation	-0,483	-,828**	-0,425	-0,214	-0,047	-0,348	-,760**	-,652*	-,652*	0,260	1														
	Sig. (2-tailed)	0,132	0,003	0,193	0,528	0,890	0,294	0,007	0,030	0,030	0,391															
	N	11	10	11	11	11	11	11	11	11	13	13														
12	Pearson Correlation	-0,233	-0,477	-0,012	0,056	0,102	-0,298	-,656*	-0,140	-0,259	,684**	0,432	1													
	Sig. (2-tailed)	0,491	0,163	0,972	0,871	0,765	0,373	0,028	0,681	0,442	0,007	0,141														
	N	11	10	11	11	11	11	11	11	11	14	13	14													
13	Pearson Correlation	0,115	-0,048	0,175	0,008	0,212	0,196	-0,182	0,329	0,103	0,456	0,224	0,272	1												
	Sig. (2-tailed)	0,737	0,896	0,607	0,981	0,532	0,564	0,592	0,324	0,764	0,101	0,462	0,347													
	N	11	10	11	11	11	11	11	11	11	14	13	14	14												
14	Pearson Correlation	0,075	-0,165	0,000	-0,249	0,378	-0,152	-0,568	-0,080	-0,227	0,192	0,539	0,366	,571*	1											
	Sig. (2-tailed)	0,828	0,648	1,000	0,460	0,252	0,656	0,068	0,815	0,503	0,510	0,057	0,198	0,033												
	N	11	10	11	11	11	11	11	11	11	14	13	14	14	14											
15	Pearson Correlation	0,496	0,238	0,600	,621*	0,366	0,224	-0,348	0,189	-0,108	0,522	0,292	0,212	0,490	0,218	1										
	Sig. (2-tailed)	0,120	0,507	0,051	0,042	0,268	0,508	0,294	0,577	0,752	0,055	0,334	0,467	0,076	0,455											

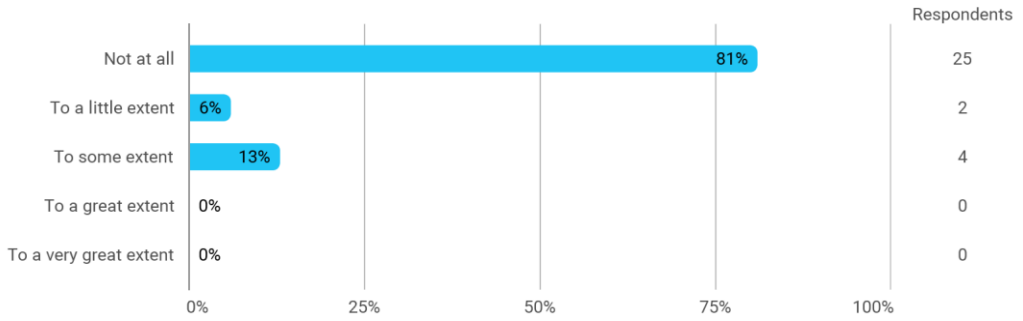
	N	11	10	11	11	11	11	11	11	11	14	13	14	14	14	14									
16	Pearson Correlation	-0,432	-0,384	-0,478	-0,597	-0,471	-0,354	-0,289	0,180	-0,053	0,217	0,198	0,263	0,263	0,222	-0,075	1								
	Sig. (2-tailed)	0,184	0,273	0,137	0,053	0,144	0,286	0,389	0,596	0,877	0,457	0,517	0,363	0,363	0,445	0,798									
	N	11	10	11	11	11	11	11	11	11	14	13	14	14	14	14	14								
17	Pearson Correlation	-0,248	-0,702	-0,170	-0,161	0,220	-0,052	-0,343	0,020	-0,016	0,322	0,568	0,369	,862**	,629*	0,232	0,174	1							
	Sig. (2-tailed)	0,521	0,052	0,663	0,680	0,570	0,894	0,366	0,960	0,967	0,307	0,068	0,237	0,000	0,029	0,469	0,588								
	N	9	8	9	9	9	9	9	9	9	12	11	12	12	12	12	12	12							
18	Pearson Correlation	0,235	0,475	0,499	,688*	0,451	0,194	0,225	0,270	0,039	0,198	-0,008	0,074	-0,084	0,221	0,218	-0,051	0,000	1						
	Sig. (2-tailed)	0,543	0,234	0,172	0,041	0,263	0,645	0,592	0,482	0,922	0,560	0,983	0,828	0,805	0,514	0,519	0,883	1,000							
	N	9	8	9	9	8	8	8	9	9	11	10	11	11	11	11	11	10	11						
19	Pearson Correlation	0,164	0,604	0,446	0,365	0,018	0,204	0,236	0,529	0,189	0,539	-0,068	-0,115	0,452	0,172	0,310	0,079	0,247	,612*	1					
	Sig. (2-tailed)	0,673	0,113	0,229	0,334	0,965	0,629	0,574	0,143	0,626	0,087	0,853	0,735	0,163	0,613	0,353	0,818	0,492	0,045						
	N	9	8	9	9	8	8	8	9	9	11	10	11	11	11	11	11	10	11	11					
20	Pearson Correlation	0,302	0,316	0,527	0,261	0,129	0,158	-0,236	0,542	0,152	,843**	0,025	0,414	,779**	0,383	0,575	0,238	,791**	0,416	,736**	1				
	Sig. (2-tailed)	0,430	0,445	0,145	0,498	0,761	0,708	0,574	0,132	0,697	0,001	0,944	0,205	0,005	0,245	0,064	0,482	0,006	0,204	0,010					
	N	9	8	9	9	8	8	8	9	9	11	10	11	11	11	11	11	10	11	11	11				
21	Pearson Correlation	0,403	0,641	0,499	,688*	0,205	0,630	0,583	0,329	0,060	0,111	-0,120	-0,415	0,126	-0,124	0,531	-0,073	-0,158	,723*	,661*	0,374	1			
	Sig. (2-tailed)	0,282	0,087	0,172	0,041	0,626	0,094	0,129	0,388	0,879	0,746	0,741	0,204	0,713	0,717	0,093	0,832	0,663	0,012	0,027	0,257				
	N	9	8	9	9	8	8	8	9	9	11	10	11	11	11	11	11	10	11	11	11	11			
22	Pearson Correlation	0,619	,716*	,672*	,725*	0,548	,671*	0,516	0,461	0,230	0,088	-0,154	-0,348	0,096	0,000	0,511	-0,185	0,000	,767**	,682*	0,439	,935**	1		
	Sig. (2-tailed)	0,056	0,030	0,033	0,018	0,127	0,048	0,155	0,180	0,522	0,786	0,652	0,268	0,767	1,000	0,089	0,565	1,000	0,006	0,021	0,177	0,000			
	N	10	9	10	10	9	9	9	10	10	12	11	12	12	12	12	12	10	11	11	11	11	12		
23	Pearson Correlation	0,121	0,424	0,070	-0,188	-0,433	0,088	0,204	0,334	0,048	-0,145	-0,219	-0,515	0,084	0,000	0,083	0,374	-0,162	0,229	,696*	0,460	0,568	0,410	1	
	Sig. (2-tailed)	0,740	0,255	0,849	0,604	0,244	0,821	0,598	0,346	0,896	0,671	0,518	0,105	0,806	1,000	0,807	0,258	0,678	0,525	0,025	0,181	0,087	0,211		
	N	10	9	10	10	9	9	9	10	10	11	11	11	11	11	11	11	9	10	10	10	10	11	11	
24	Pearson Correlation	-0,182	0,157	-0,112	-0,544	-0,642	-0,036	0,206	0,157	0,157	-0,100	-0,018	-0,458	0,093	0,107	-0,221	0,267	0,143	-0,041	0,478	0,270	0,183	0,100	,766**	1
	Sig. (2-tailed)	0,615	0,686	0,758	0,104	0,063	0,927	0,595	0,666	0,666	0,771	0,958	0,157	0,786	0,754	0,515	0,427	0,714	0,911	0,162	0,451	0,614	0,771	0,006	
	N	10	9	10	10	9	9	9	10	10	11	11	11	11	11	11	11	9	10	10	10	10	11	11	11
25	Pearson Correlation	0,371	0,335	0,345	0,437	0,218	0,381	0,176	0,062	-0,185	-0,203	0,057	-0,273	-0,218	0,126	0,335	0,034	-0,174	,740*	0,435	0,164	,775**	,717*	0,533	0,125
	Sig. (2-tailed)	0,292	0,377	0,329	0,207	0,573	0,311	0,650	0,866	0,609	0,550	0,869	0,417	0,520	0,713	0,315	0,921	0,654	0,014	0,209	0,652	0,008	0,013	0,091	0,715
	N	10	9	10	10	9	9	9	10	10	11	11	11	11	11	11	11	9	10	10	10	10	11	11	11

**. Correlation is significant at the 0.01 level (2-tailed).

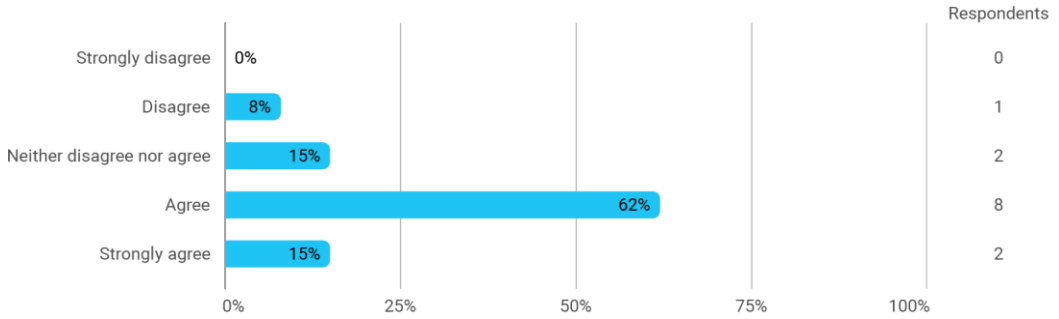
*. Correlation is significant at the 0.05 level (2-tailed).

8.5 Survey

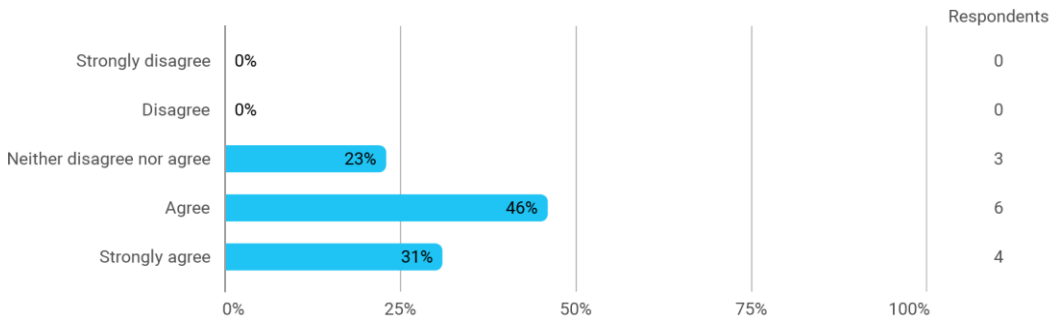
Are you familiar with the concept **of Green HRM (Green Human Resource Management)**?



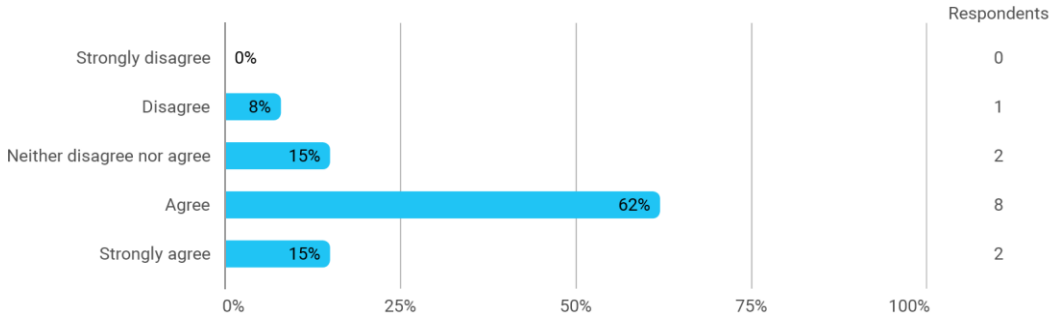
The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **Preserve the natural environment**



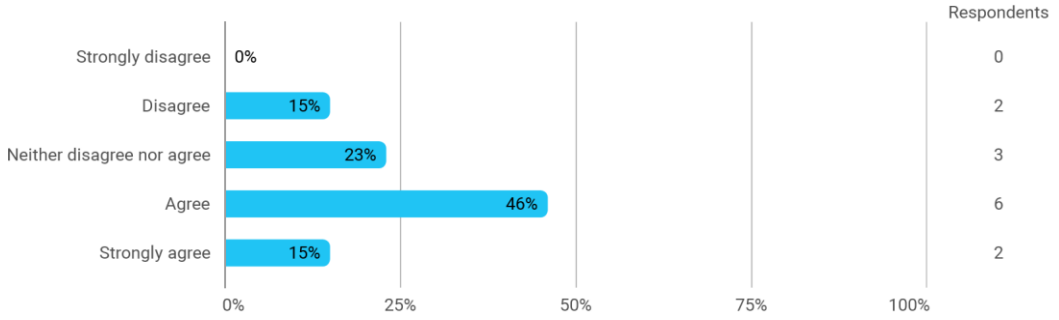
The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **Ensure healthy working environment and raise employee morale**



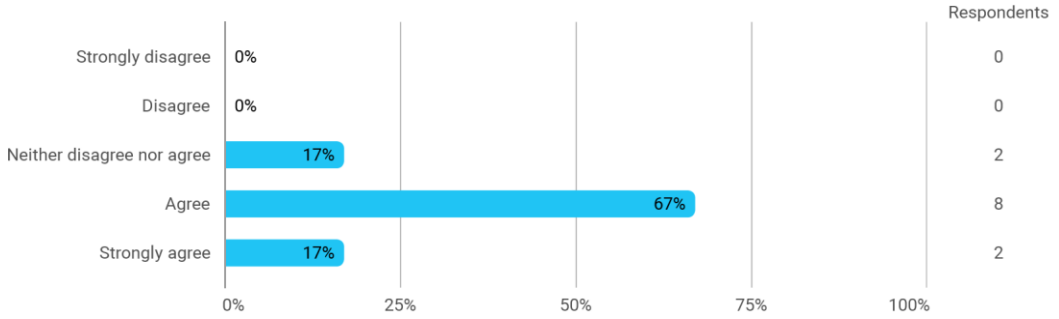
The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **Gain competitive advantage through ensuring corporate responsibility**



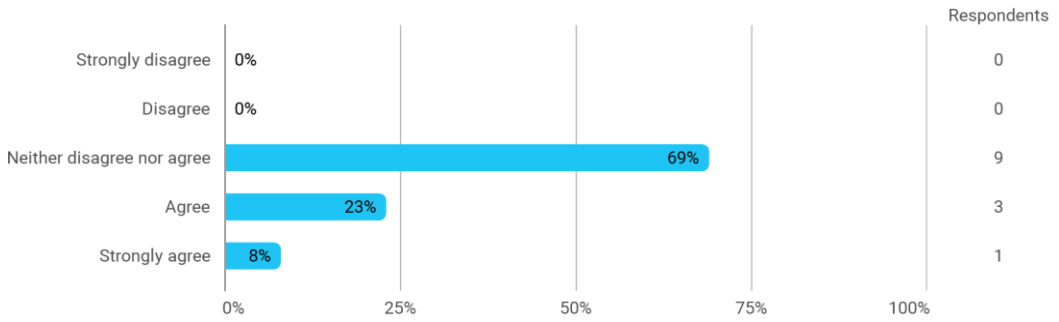
The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **Save cost**



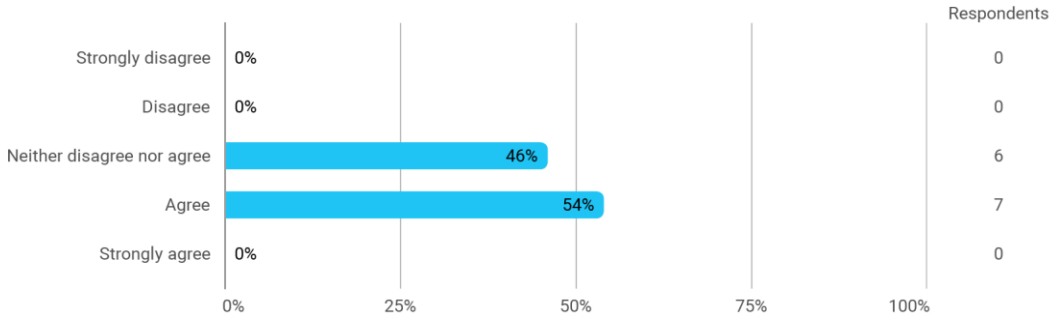
The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **Increase the company's image**



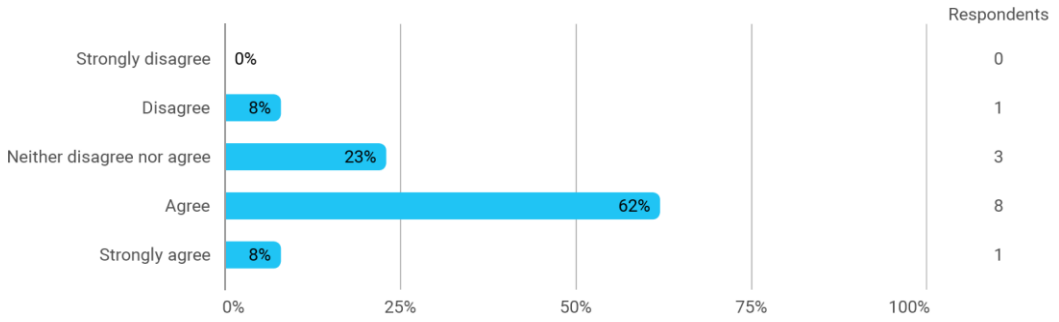
The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **Reduce intervention from the government and other law enforcing agencies**



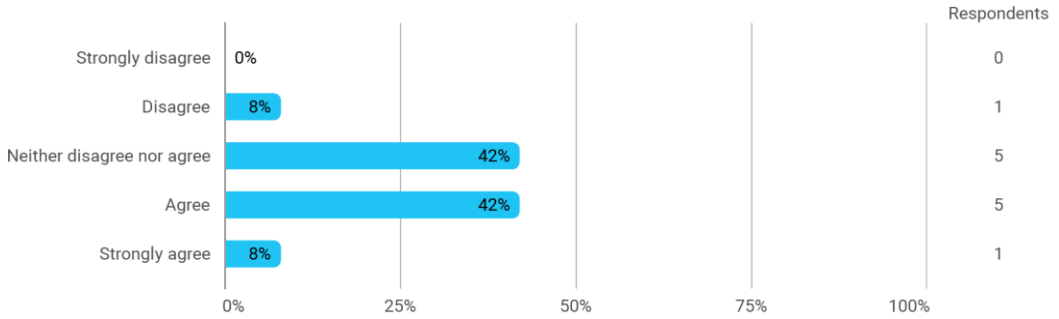
The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **Develop eco-friendliness and environmental learning among the employees**



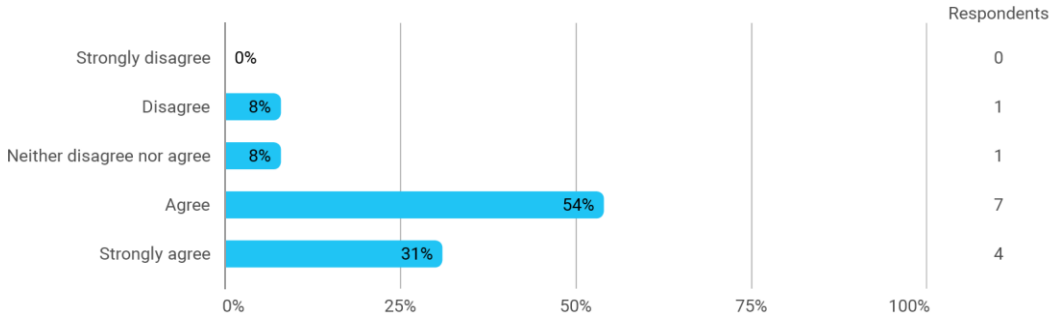
The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **Stimulate innovation and growth.**



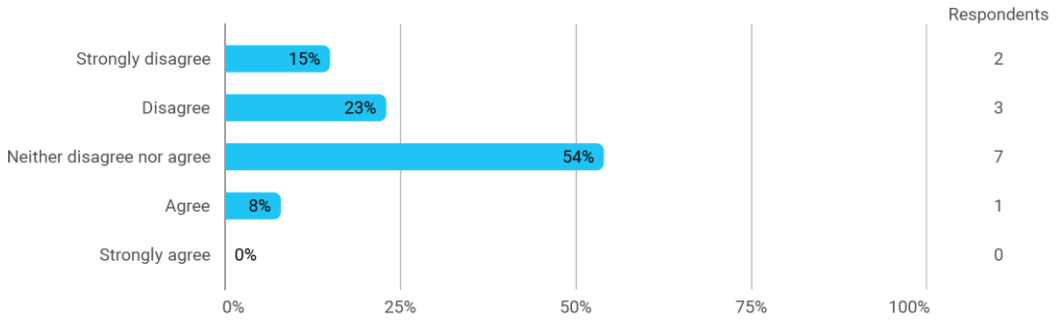
The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **Facilitate green learning and shape green behavior**



The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **Maximize the use of resources and reduce waste**



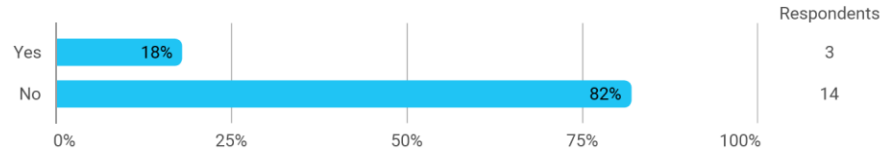
The company adopts or considers to adopt Green HRM in order to: (Please, answer if relevant) - **The company does NOT adopt any Green HRM**



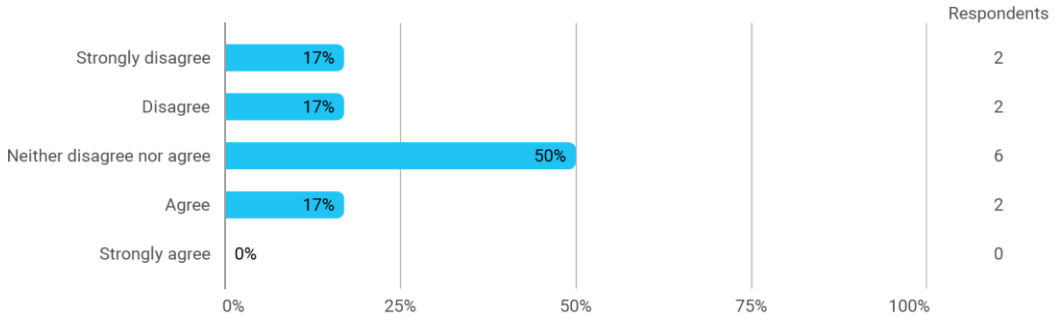
The company adopts or considers to adopt Green HRM because of other reasons? (Please, state them below)

- *1. Customers demand*
- *2.Government demand*
- *Ensure healthy working environment and raise employee morale*

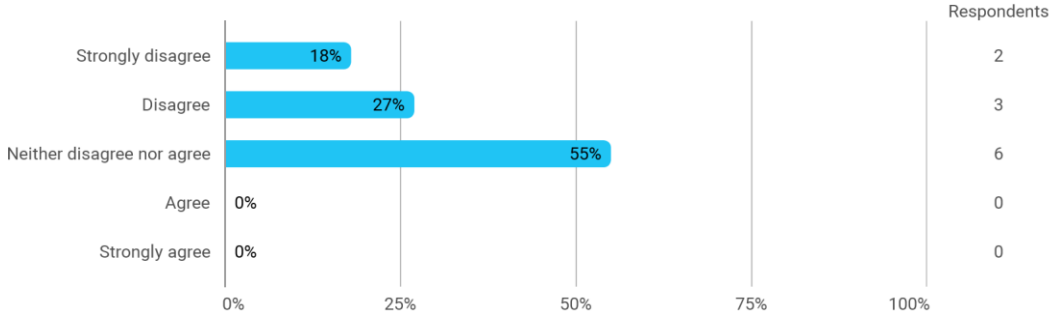
Are you familiar with the concept of **Green recruitment**?



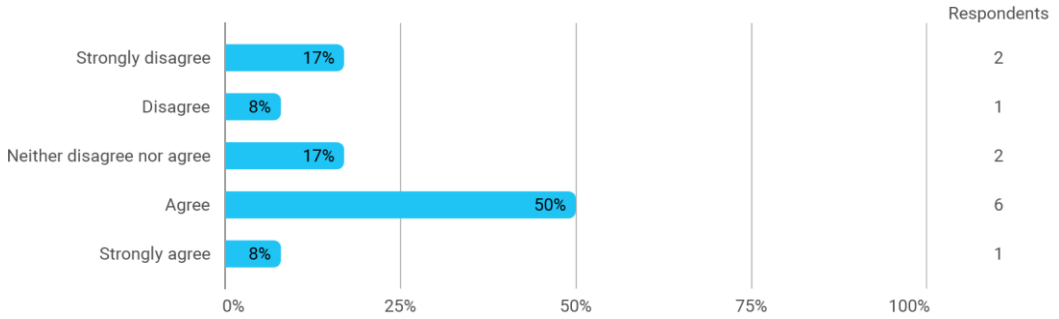
The company implements the following practices: (Please, answer if relevant) - **Seeking candidates personally committed to environmental sustainability**



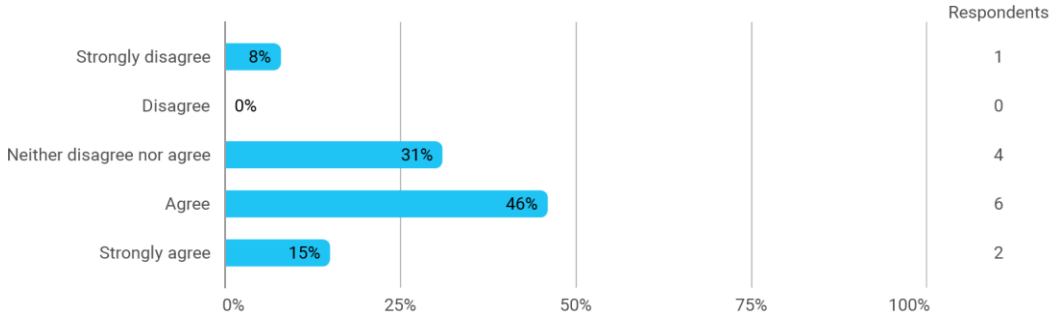
The company implements the following practices: (Please, answer if relevant) - Seeking candidates environmentally responsible in the preparation of their job application



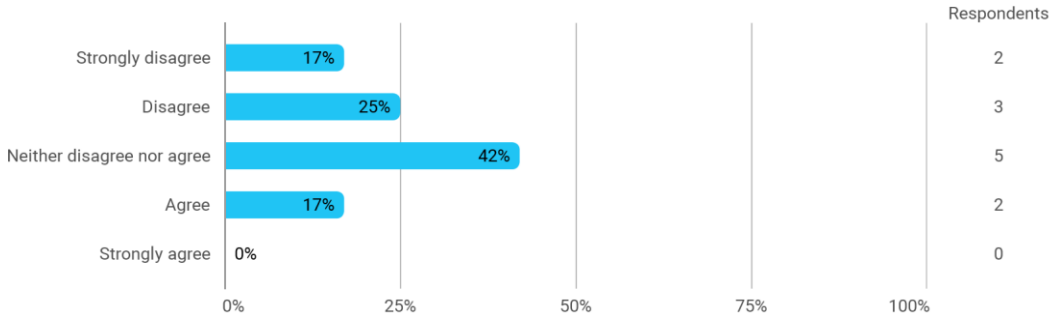
The company implements the following practices: (Please, answer if relevant) - **Stating its environmental goals in their annual report**



The company implements the following practices: (Please, answer if relevant) - **Applying online job seeking**



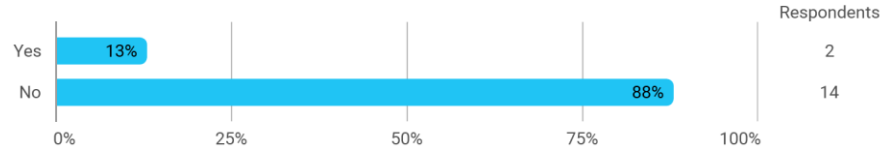
The company implements the following practices: (Please, answer if relevant) - **The company does NOT apply any of the above-mentioned practices**



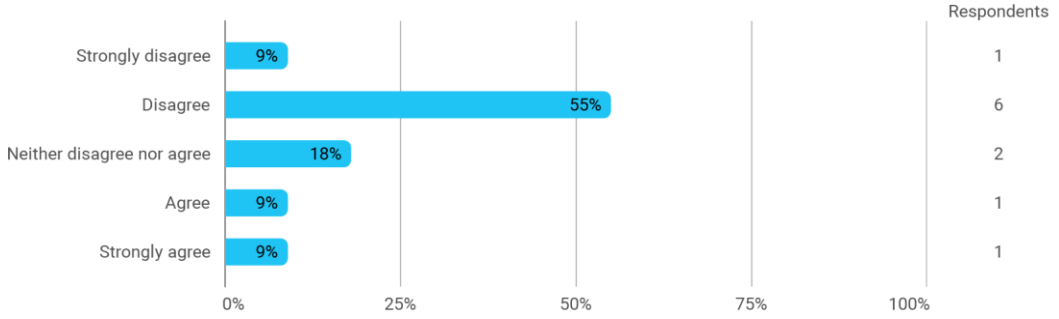
Does the company implement any other Green recruitment practices? (Please, state them below)

- *Job interviews with people based in other countries will be conducted by Skype or similar to avoid flying in too many candidates. Physical meetings only organized with final candidates.*

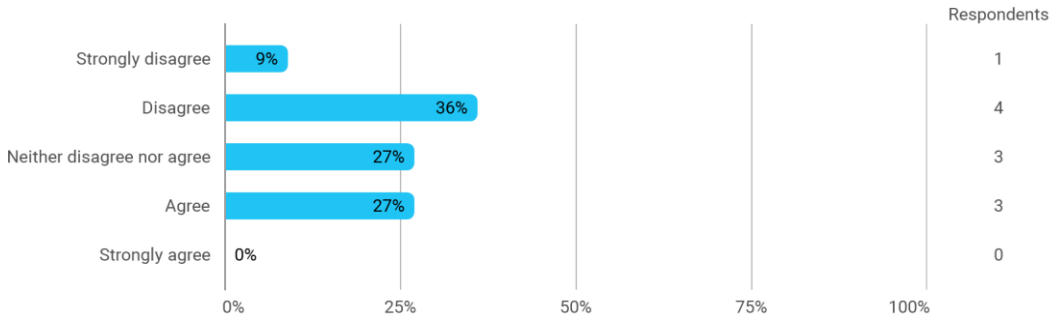
Are you familiar with the concept of Green learning, training and development?



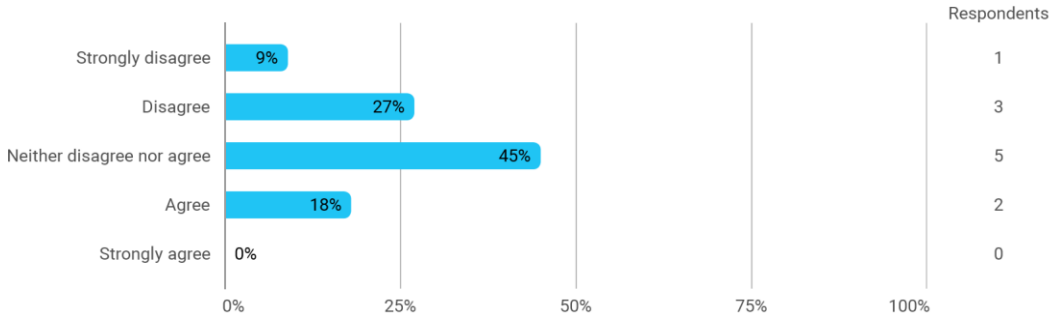
The company uses the following learning, training and development methods: (Please, answer if relevant) - **Programs (online and web-based training modules and tools for green management)**



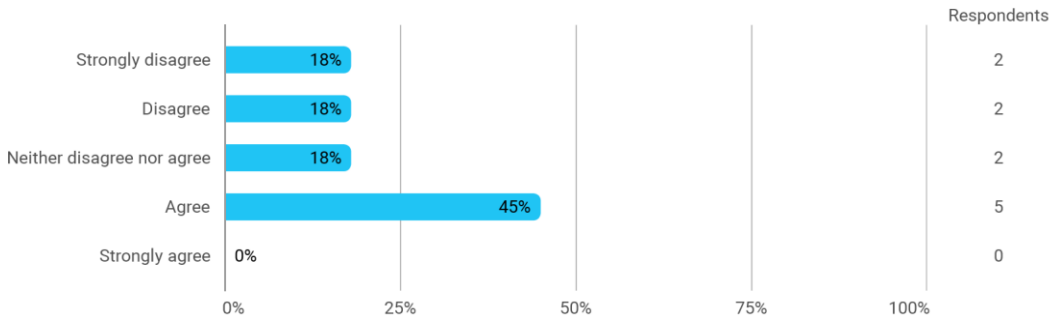
The company uses the following learning, training and development methods: (Please, answer if relevant) - **Workshops (training supervisors to use online course materials and case studies)**



The company uses the following learning, training and development methods: (Please, answer if relevant) - **Seminars, sessions and presentations that help employees to acquire knowledge in green management skills**



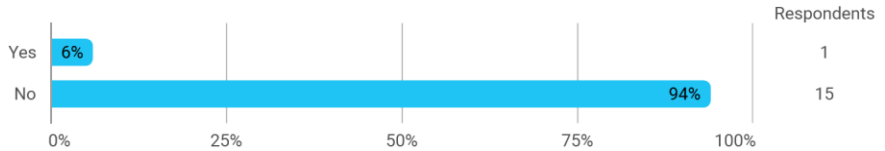
The company uses the following learning, training and development methods: (Please, answer if relevant) - **The company does NOT use any of the above-mentioned methods**



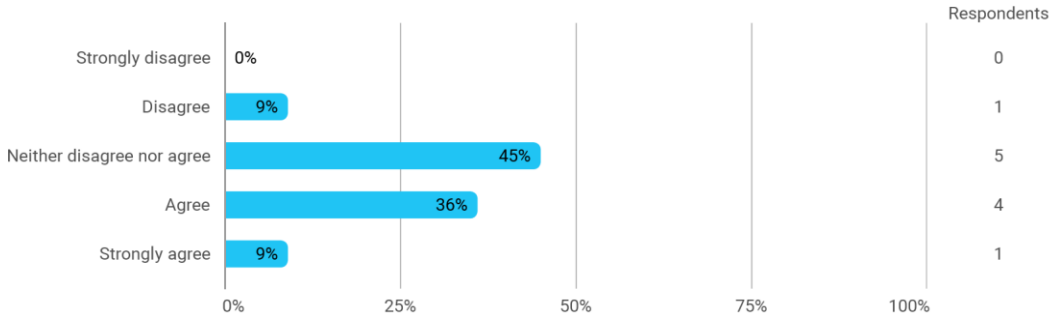
Does the company provide Green learning, training and development with the help of other tools? (Please, state them below)

(--)

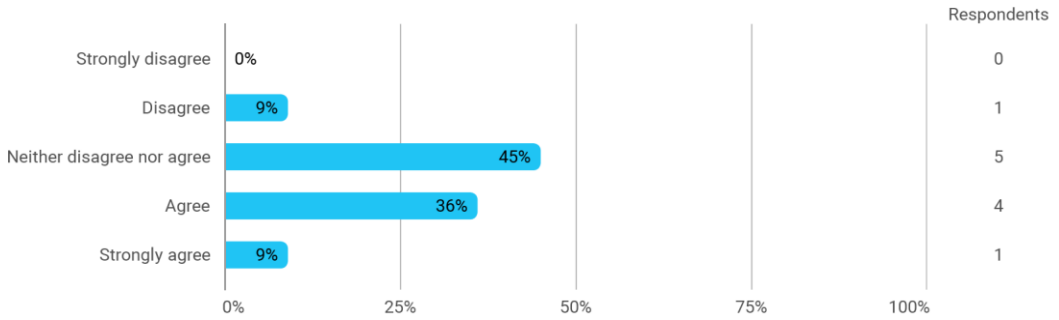
Are you familiar with the concept **of Green employee relations**?



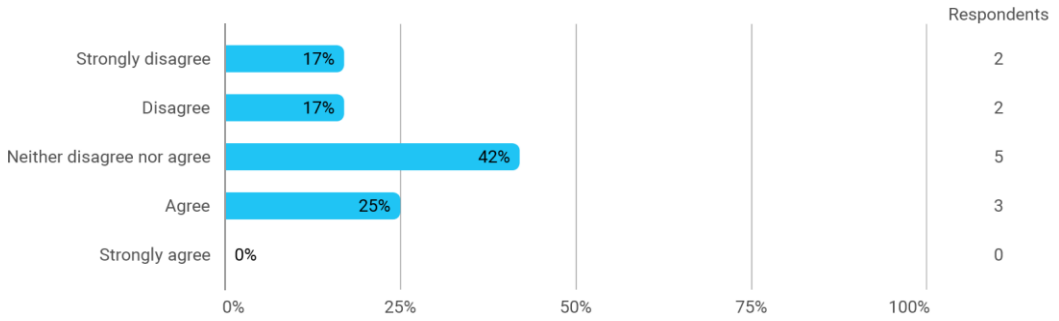
The company focuses on the following strategies: (Please, answer if relevant) - Promoting eco-friendliness of the company's products and services utilizing the existing resources efficiently



The company focuses on the following strategies: (Please, answer if relevant) - Through employees' motivation, participation and involvement in ecological initiatives



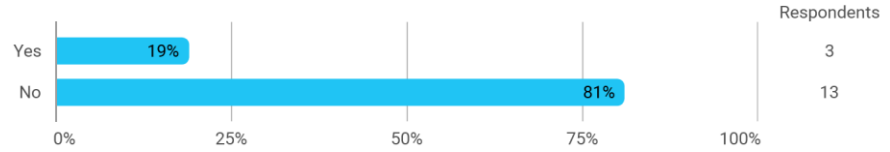
The company focuses on the following strategies: (Please, answer if relevant) - **The company does NOT focus on the above-mentioned strategies**



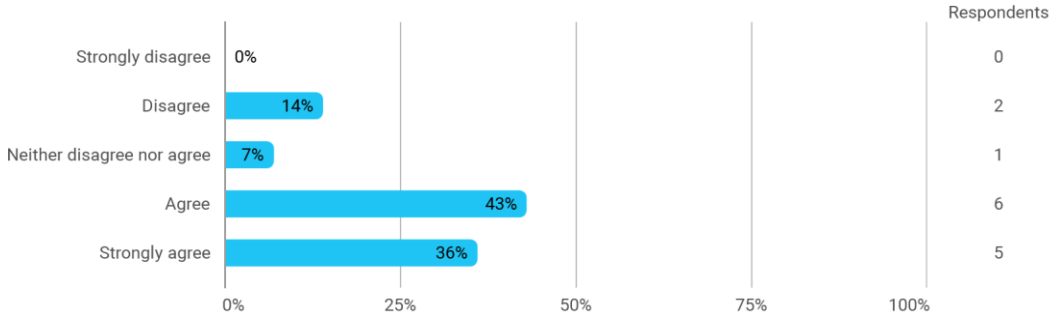
Does the company focus on Green employee relations by using other strategies? (Please, state below)

(--)

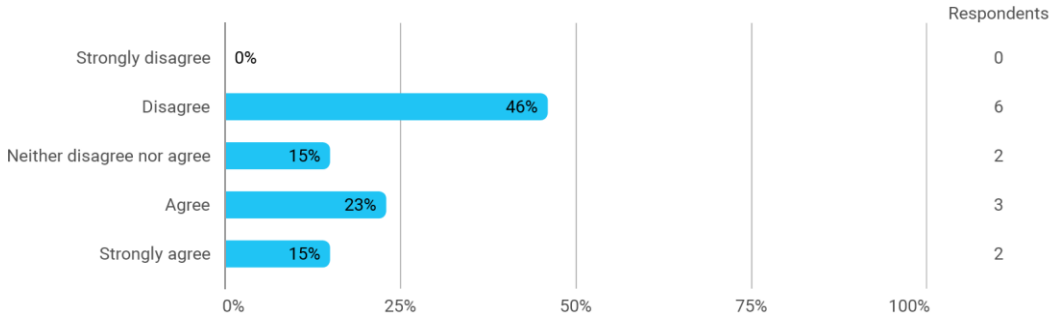
Are you familiar with the concept of **Green initiatives for HR**?



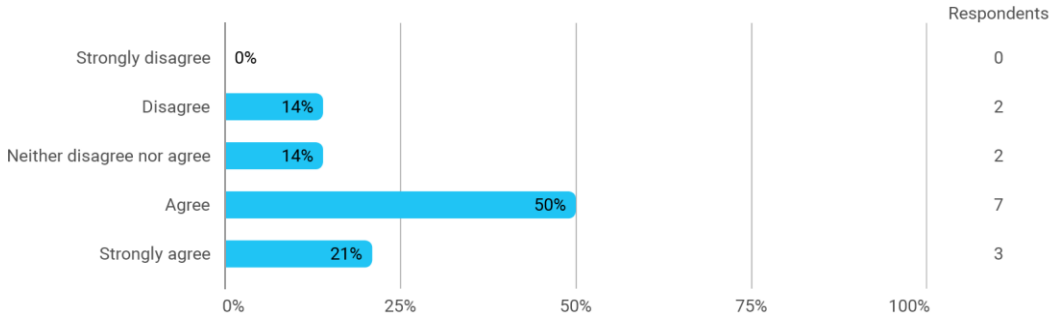
The company introduces the following initiatives: (Please, answer if relevant) - **Electronic filing**



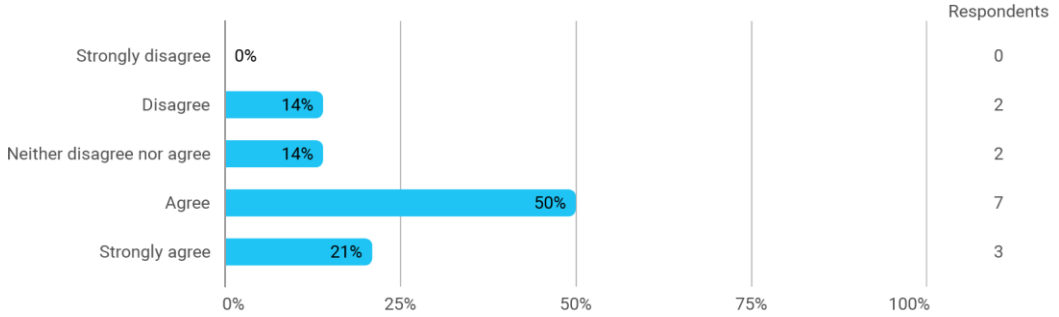
The company introduces the following initiatives: (Please, answer if relevant) - **Car sharing**



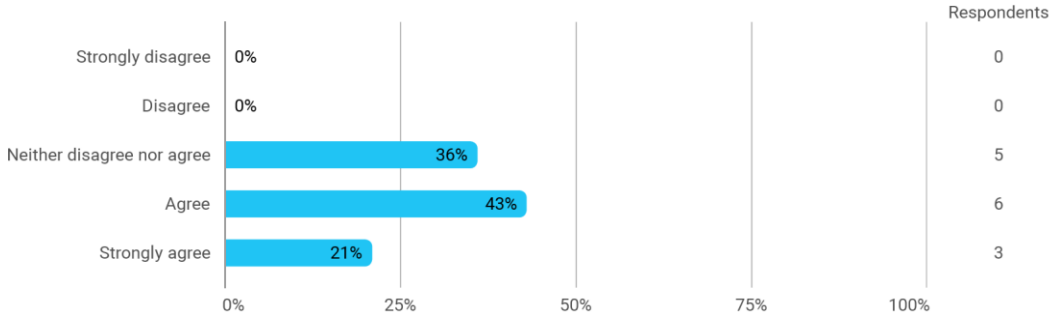
The company introduces the following initiatives: (Please, answer if relevant) - **Teleconferencing and virtual interviews**



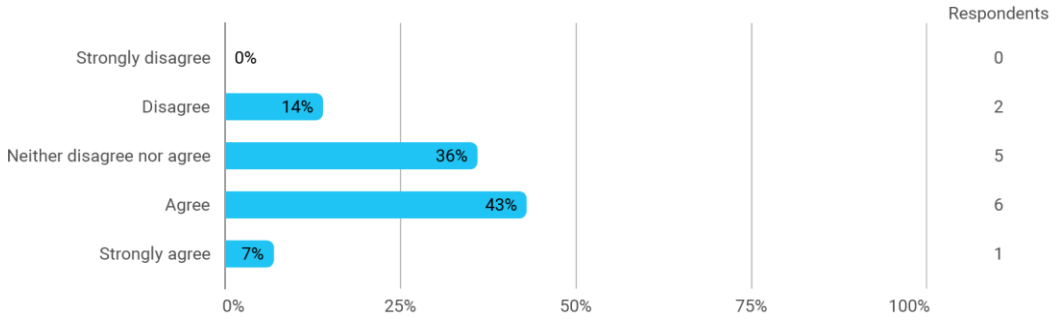
The company introduces the following initiatives: (Please, answer if relevant) - **Recycling and waste disposal**



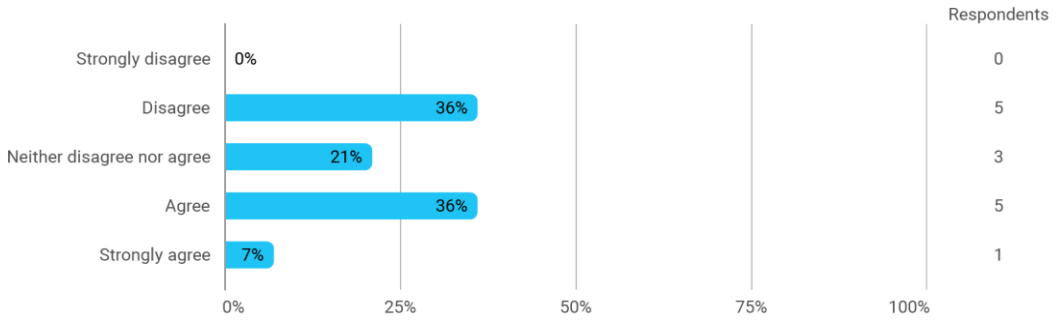
The company introduces the following initiatives: (Please, answer if relevant) - **Online training**



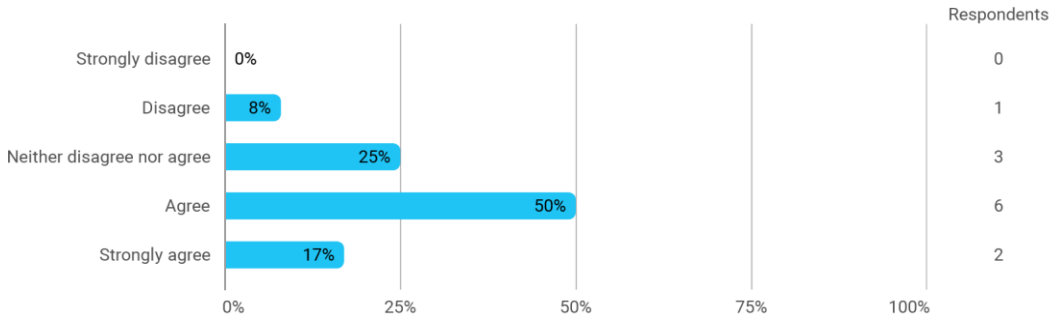
The company introduces the following initiatives: (Please, answer if relevant) - **Energy-efficient office spaces**



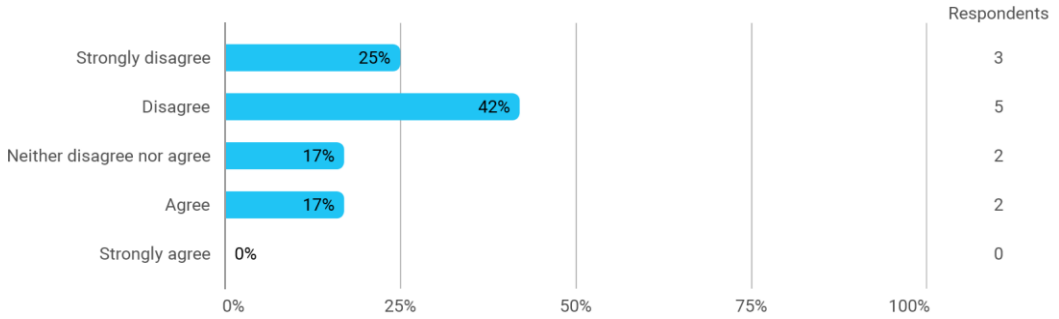
The company introduces the following initiatives: (Please, answer if relevant) - **Paperless office**



The company introduces the following initiatives: (Please, answer if relevant) **- Conservation of energy - turning off PCs and TVs when not in use, solar lighting, etc.**



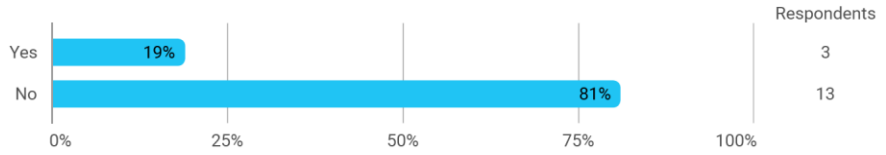
The company introduces the following initiatives: (Please, answer if relevant) - **The company does NOT introduce any of the above-mentioned initiatives**



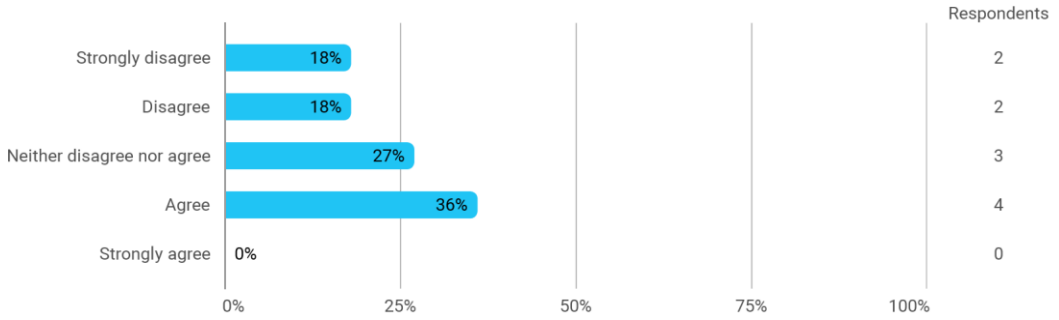
Does the company introduce other Green initiatives for HR? (Please, state them below)

(--)

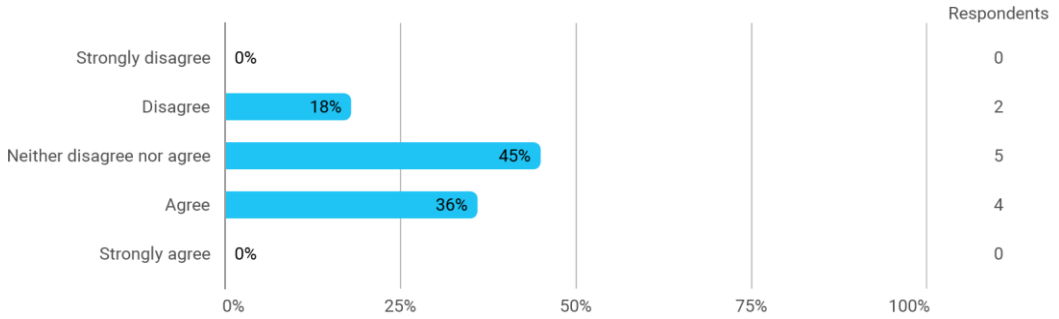
Are you familiar with the concept of **Green performance management?**



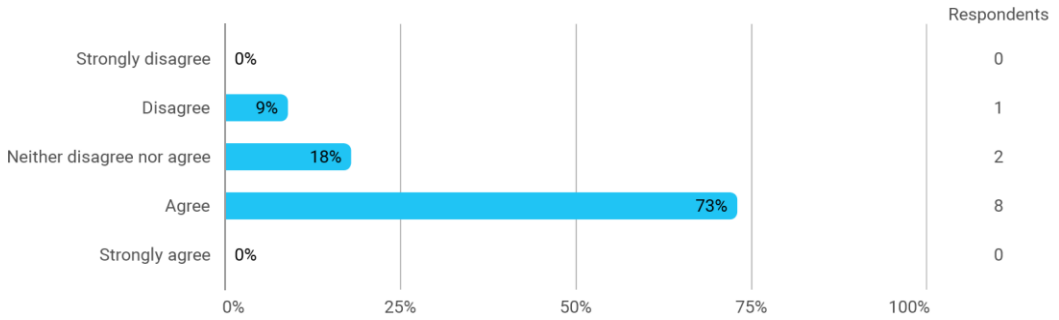
The company applies the following strategies: (Please, answer if relevant) - **Incorporating environmental performance indicators in performance management systems (ISO 14000, GRI, EMAS, etc.)**



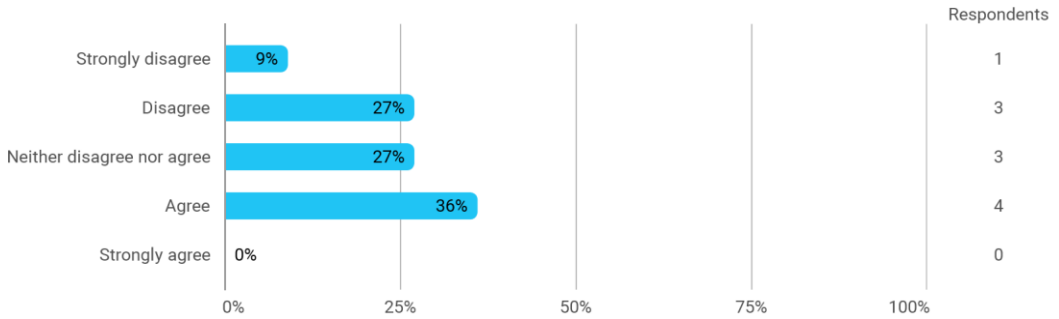
The company applies the following strategies: (Please, answer if relevant) - **Holding discussions on environmental matters**



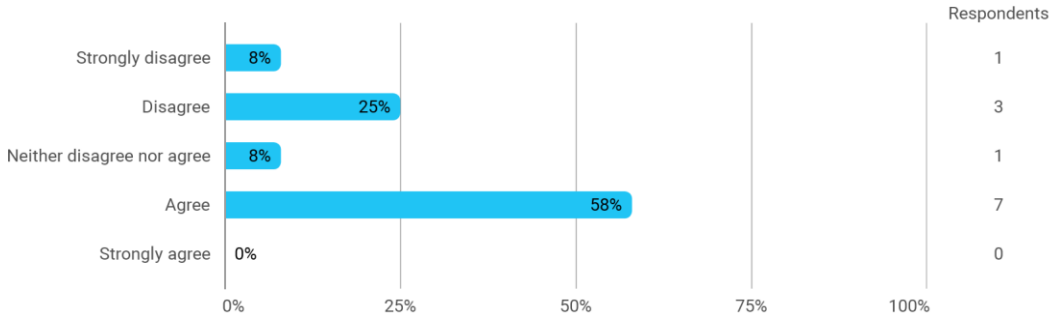
The company applies the following strategies: (Please, answer if relevant) - **Incorporating environmental targets, goals and responsibilities**



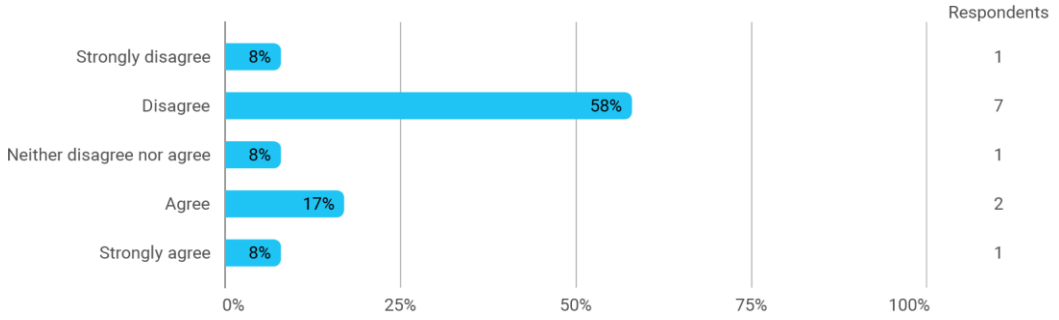
The company applies the following strategies: (Please, answer if relevant) - **Evaluating environmental initiatives of employees through appraisal ratings**



The company applies the following strategies: (Please, answer if relevant) - **Clear communication of environmental policy**



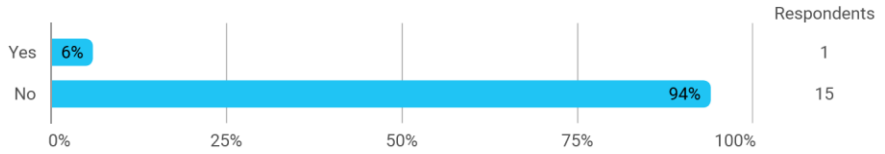
The company applies the following strategies: (Please, answer if relevant) - **The company does NOT apply any of the above-mentioned strategies**



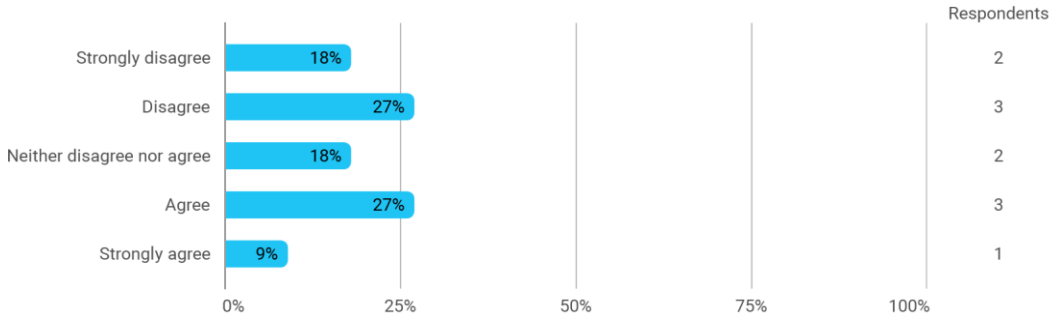
Does the company use any other Green performance management strategies? (Please, state them below)

(--)

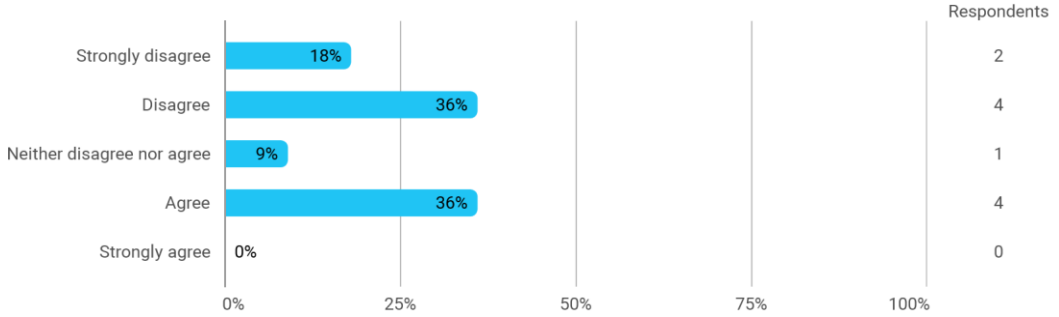
Are you familiar with the concept of **Green rewards and compensation?**



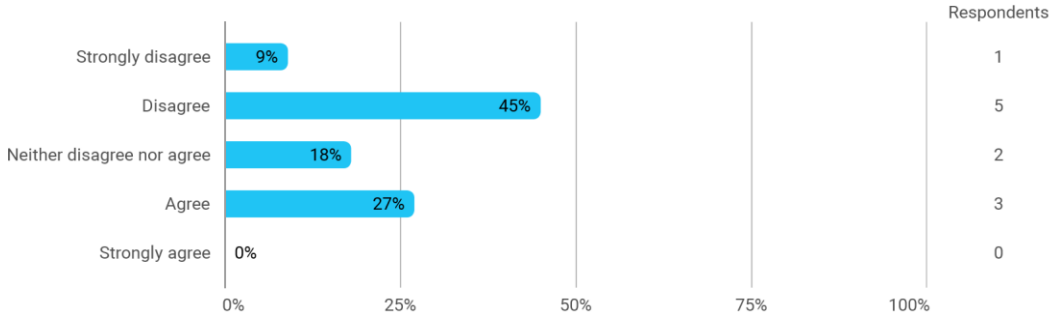
The company uses the following approaches: (Please, answer if relevant) - **Rewarding green skills and achievement**



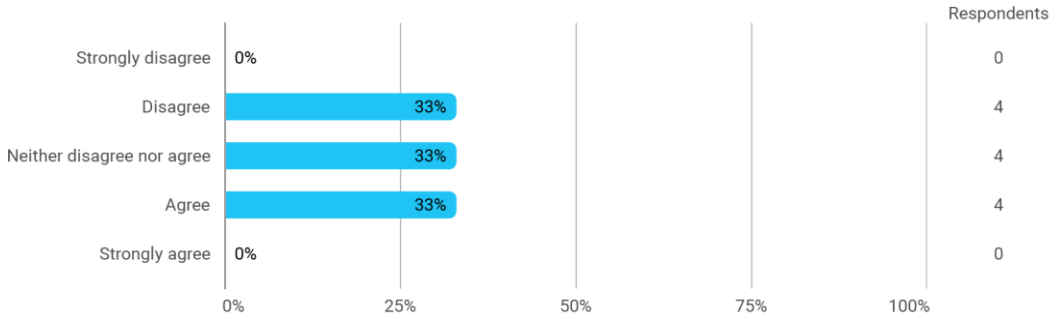
The company uses the following approaches: (Please, answer if relevant) - **Special bonuses to the employees for extraordinary environmental effort in the workplace**



The company uses the following approaches: (Please, answer if relevant) - **Workplace and lifestyle benefits (from carbon credit offsets to free bicycles)**



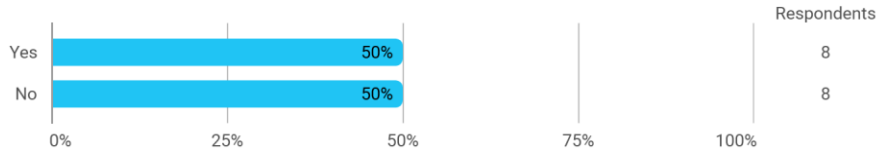
The company uses the following approaches: (Please, answer if relevant) - **The company does NOT use any of the above-mentioned approaches**



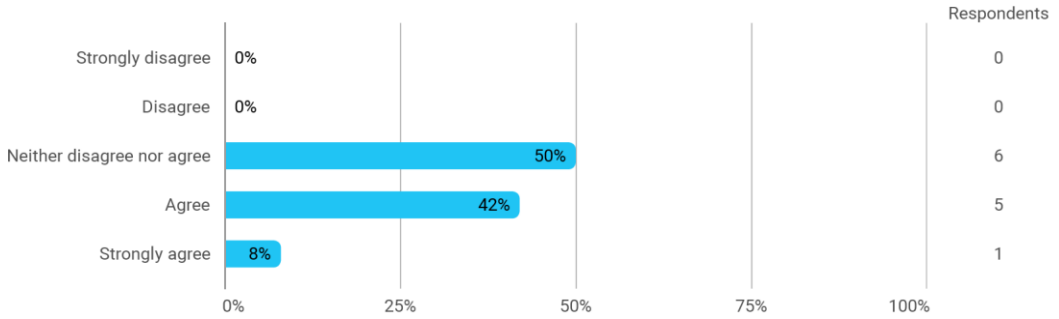
Does the company use any other types of Green rewards and compensation? (Please, state them below)

(--)

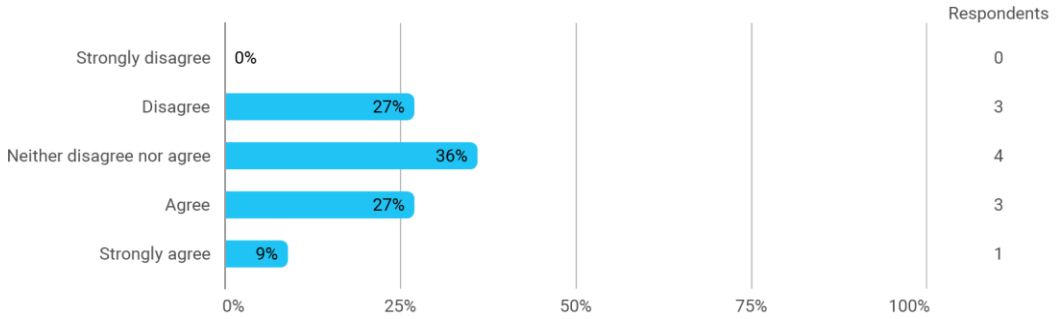
Are there any **challenges for the HR professional in regard to Green HRM**?



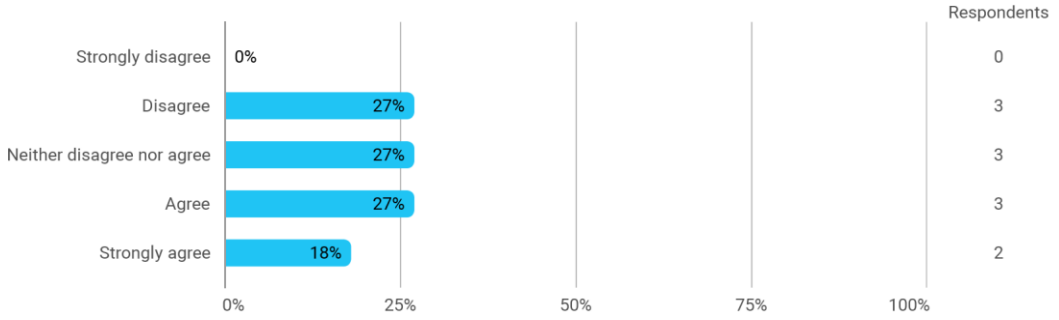
A challenge for the HR professional is: (Please, answer if relevant) - **To select and develop future Green leaders**



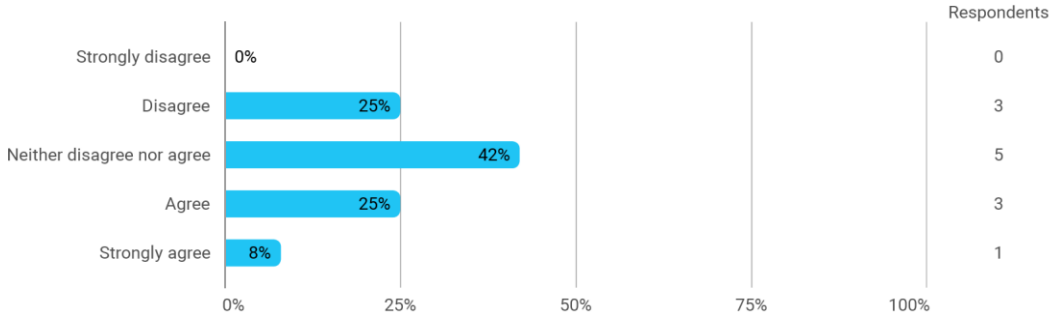
A challenge for the HR professional is: (Please, answer if relevant) - **To create a Green working structure**



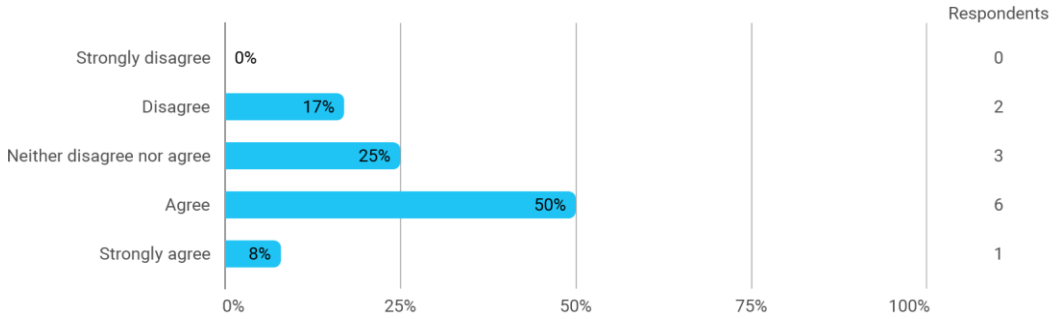
A challenge for the HR professional is: (Please, answer if relevant) - **To set up Green working processes**



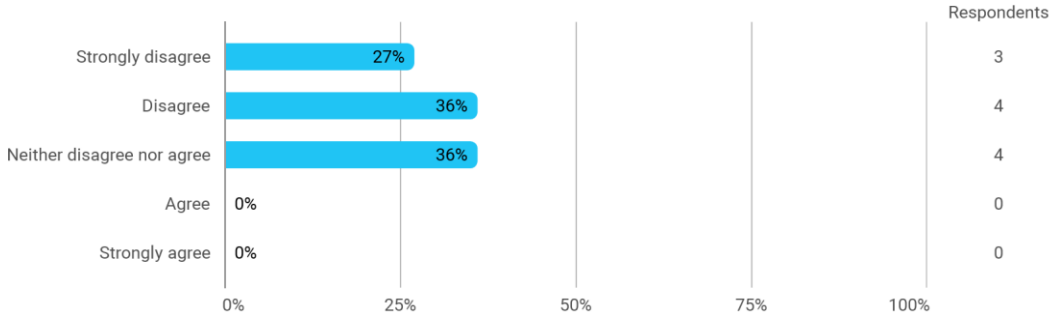
A challenge for the HR professional is: (Please, answer if relevant) - **To provide Green tools**



A challenge for the HR professional is: (Please, answer if relevant) - **To provoke Green thinking among employees**



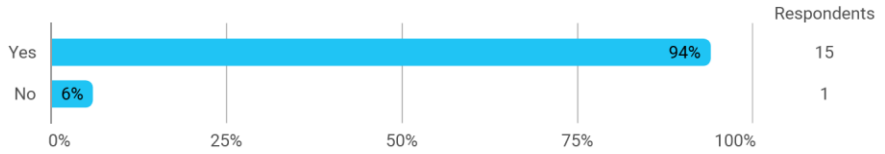
A challenge for the HR professional is: (Please, answer if relevant) - **There are NO challenges for the HR professional**



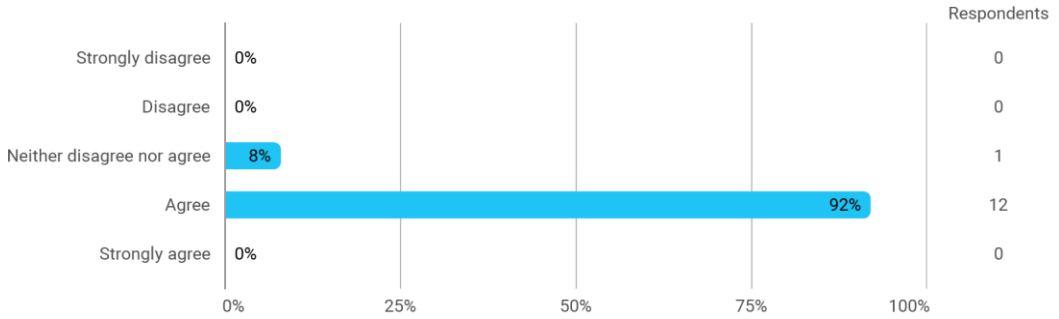
Are there any other challenges for the HR professional? (Please, state them below)

Since the concept is unknown in our company - we have all the challenges...

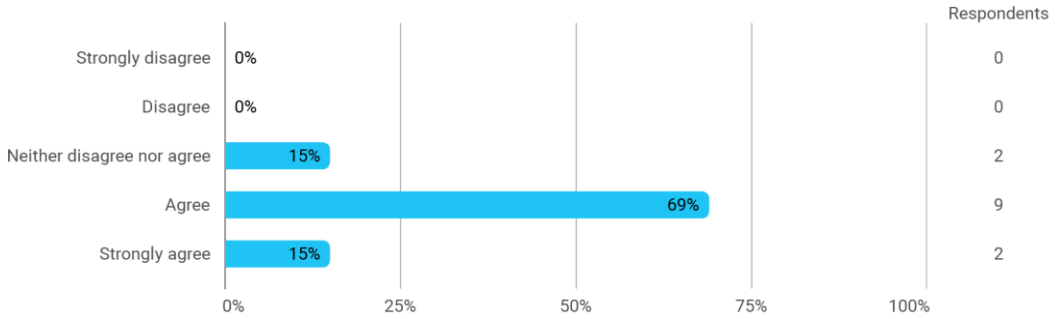
Do you believe that **the company can increase the demand and revenue of its products/services through improved environmental quality?**



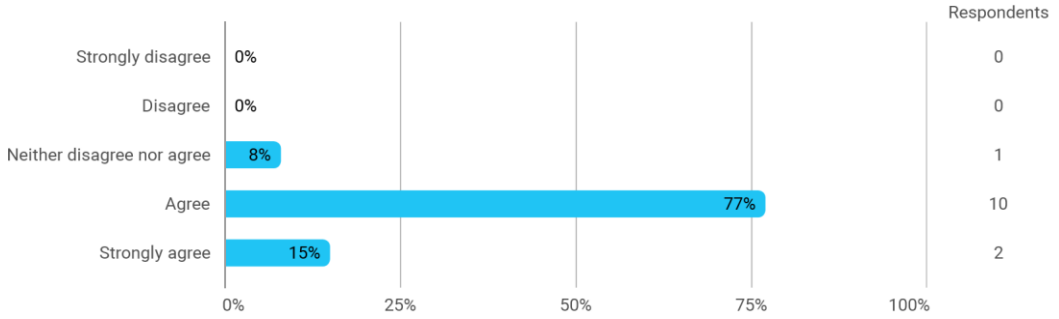
The company achieves improved environmental quality of its products/ services as a result of: (Please, answer if relevant) - **Using less polluting inputs**



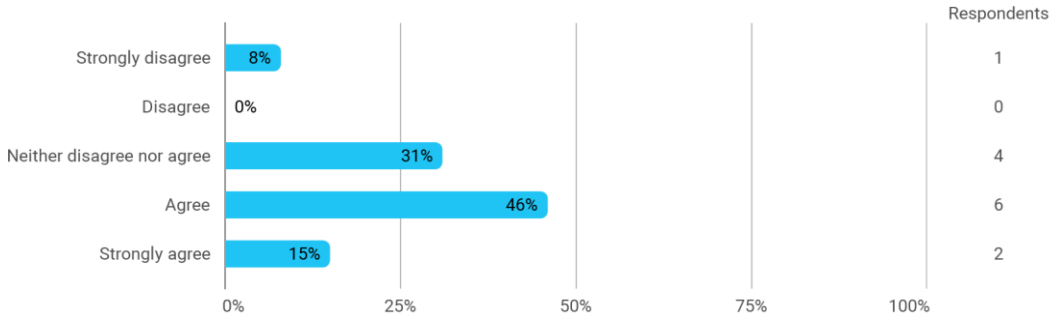
The company achieves improved environmental quality of its products/ services as a result of: (Please, answer if relevant) - **Using renewable sources of energy**



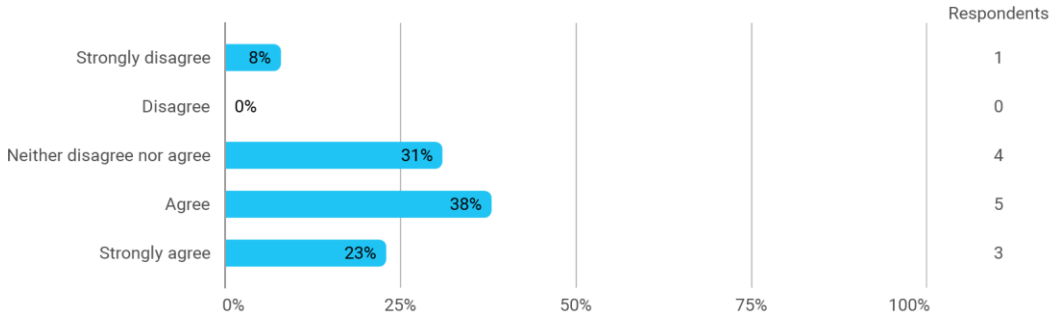
The company achieves improved environmental quality of its products/ services as a result of: (Please, answer if relevant) - **Using sustainable production procedures**



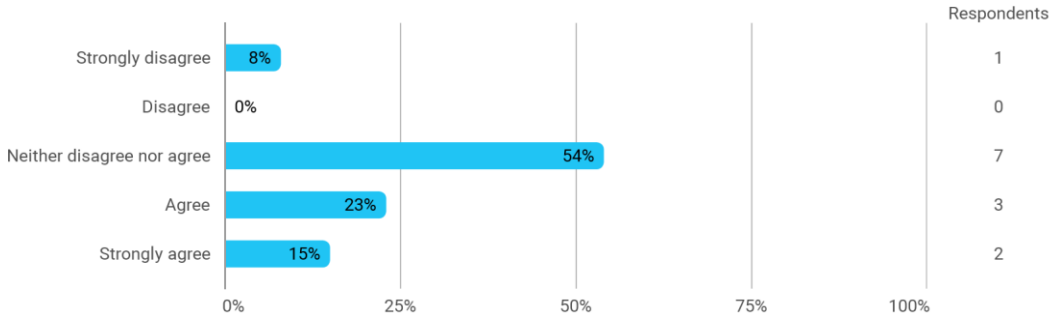
The company achieves improved environmental quality of its products/ services as a result of: (Please, answer if relevant) - **Applying environmental policies that reward the environmental quality of products beyond the legal standards**



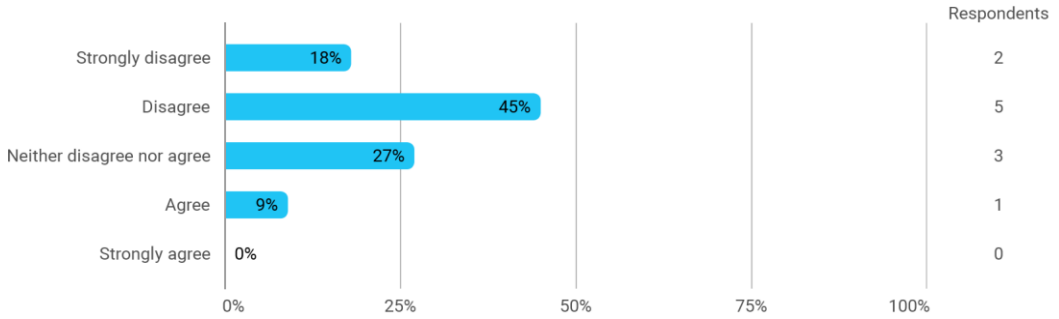
The company achieves improved environmental quality of its products/ services as a result of: (Please, answer if relevant) - **Applying environmental policies designed to encourage the adoption of renewable sources of energy**



The company achieves improved environmental quality of its products/ services as a result of: (Please, answer if relevant) - **Promoting green purchasing by customers (customers pay more for products of higher environmental quality)**



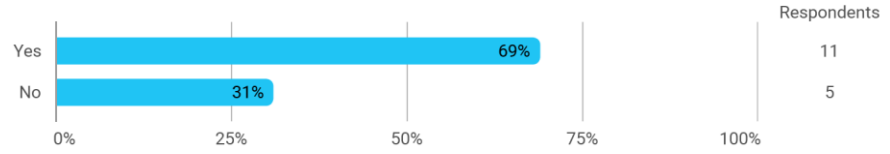
The company achieves improved environmental quality of its products/ services as a result of: (Please, answer if relevant) - **The company does NOT achieve improved environmental quality using any of the above-mentioned practices**



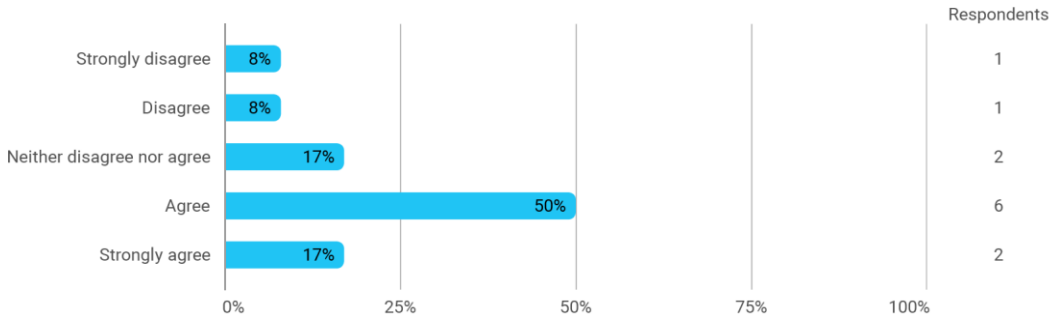
Does the company achieve improved environmental quality of its products/ services as a result of other practices? (Please, state them below)

(--)

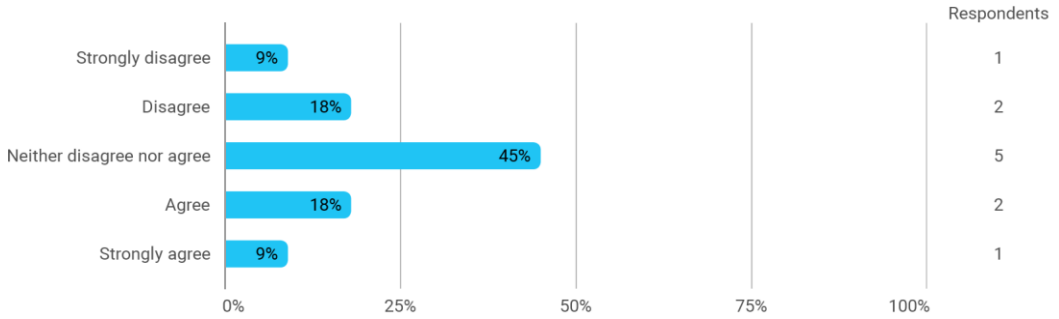
Do you believe that **going beyond the environmental regulations inspires the company to use Green technology to gain advantage on the market**?



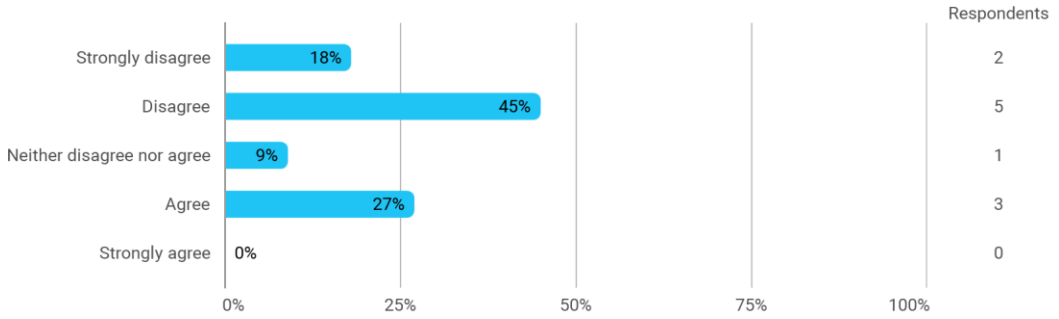
Going beyond the environmental regulations inspires the company to use Green technology to gain advantage on the market by: (Please, answer if relevant) - **Exploiting Green technology to diversify and expand its business**



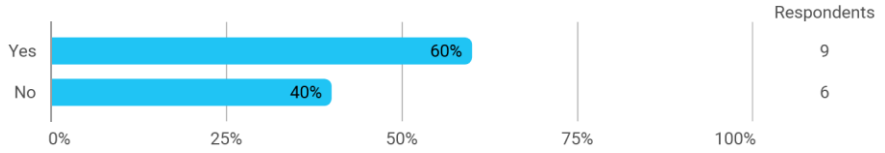
Going beyond the environmental regulations inspires the company to use Green technology to gain advantage on the market by: (Please, answer if relevant) - **Selling Green technology to competitors**.



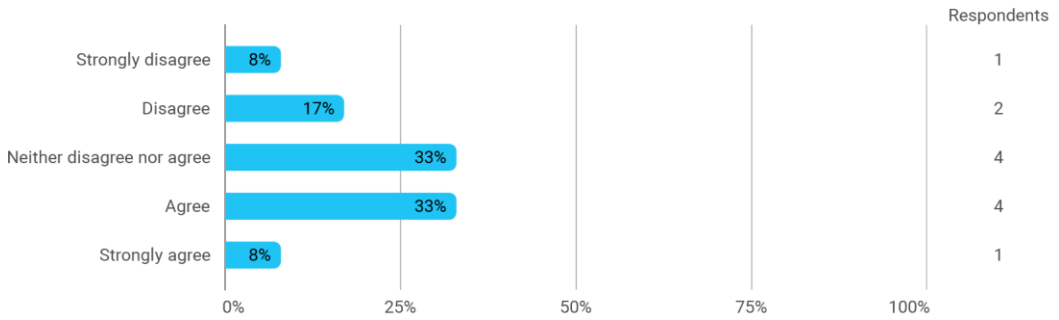
Going beyond the environmental regulations inspires the company to use Green technology to gain advantage on the market by: (Please, answer if relevant) - **The company does NOT use Green technology to gain advantage on the market**



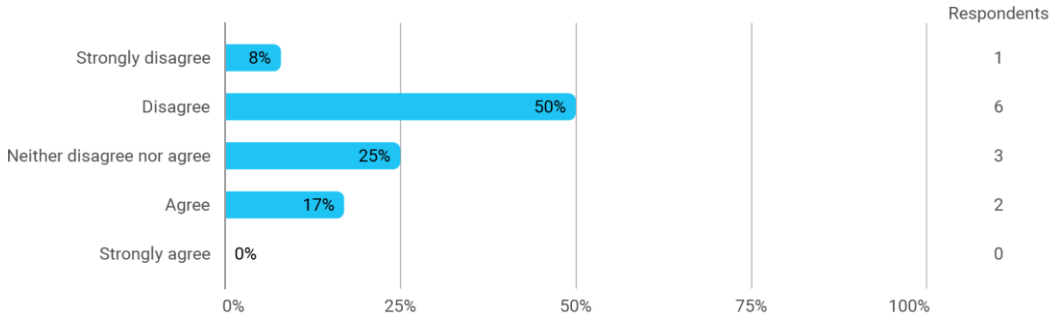
Do you believe that the company **can raise its financial capital by implementing Green HRM**?



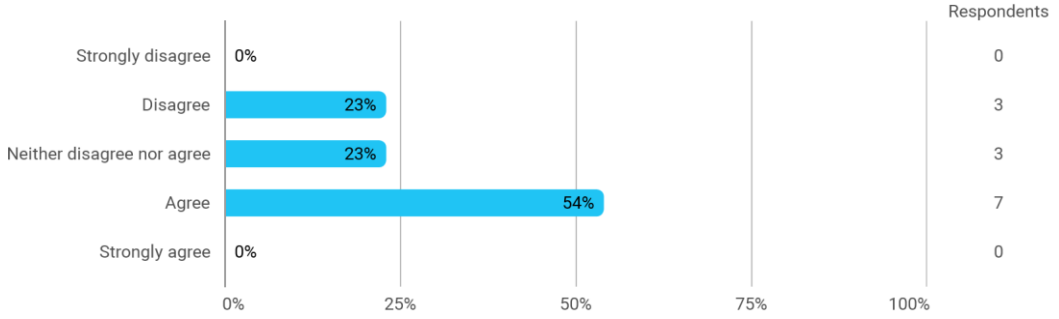
Adopting Green HRM helps the company to raise its financial capital by: (Please, answer if relevant) - **Attracting socially responsible investments**



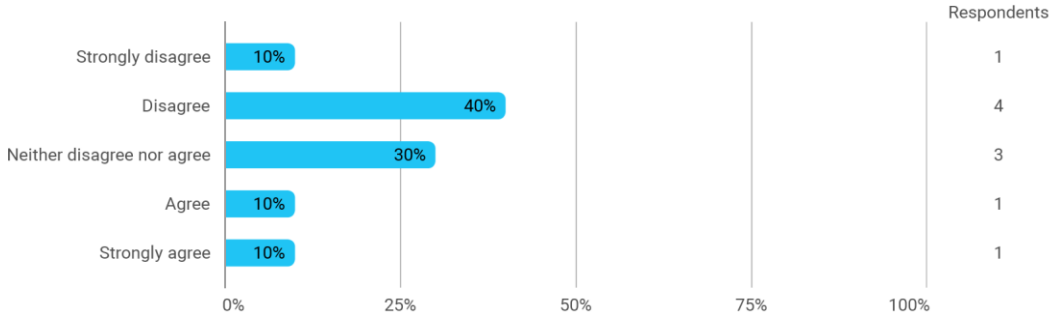
Adopting Green HRM helps the company to raise its financial capital by: (Please, answer if relevant) - **Creating better relationships with lending institutions (i.e. banks)**



Adopting Green HRM helps the company to raise its financial capital by: (Please, answer if relevant) - **Increasing shareholders' interest in the company**



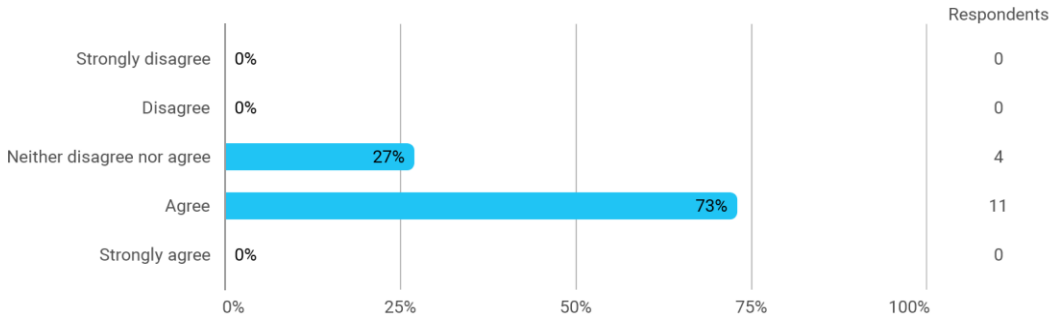
Adopting Green HRM helps the company to raise its financial capital by: (Please, answer if relevant) - **The company does NOT raise its financial capital by adopting Green HRM**



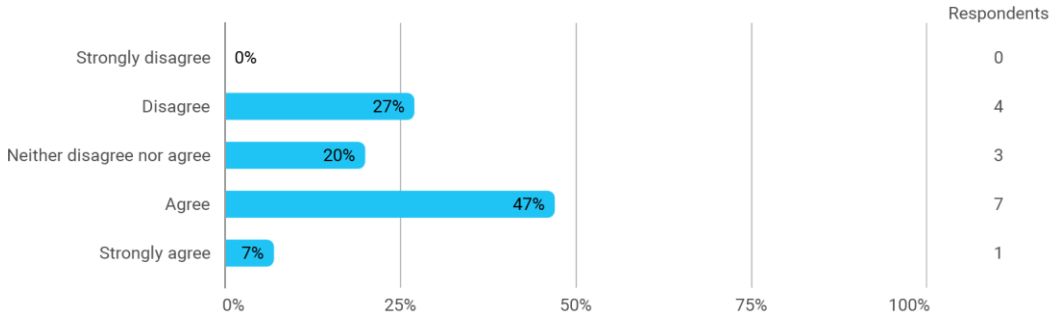
Adopting Green HRM helps the company to raise its financial capital using other strategies: (Please, state them below)

I think we could do something here, but today we don't and I doubt it is on the agenda as we are owned by a private equity fund.

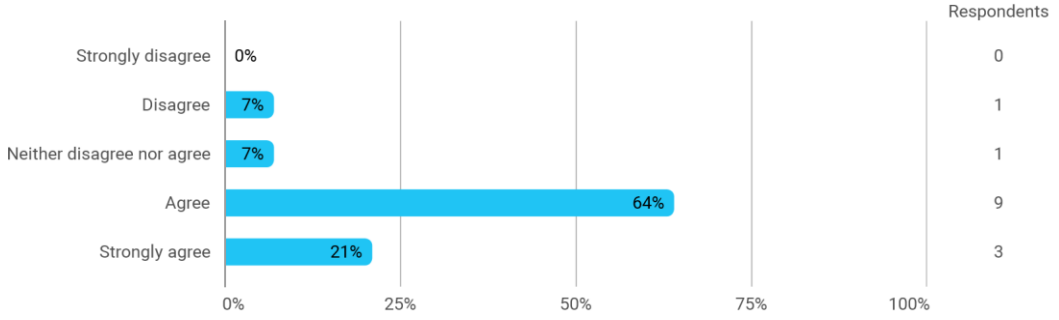
Do you believe that: (Please, answer if relevant) - **The company welcomes new ideas from employees on how to approach environmental topics**



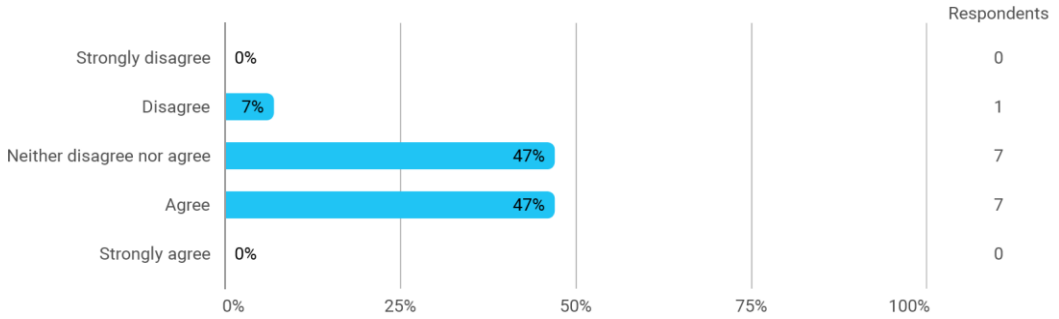
Do you believe that: (Please, answer if relevant) - **The employees in the company are NOT equally motivated to adopt Green HRM practices**



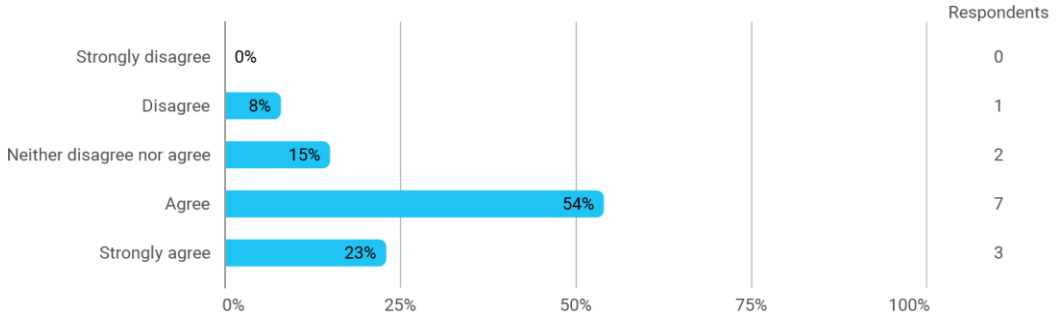
Do you believe that: (Please, answer if relevant) - **Developing and maintaining a culture of Green HRM is a lengthy and time-consuming process.**



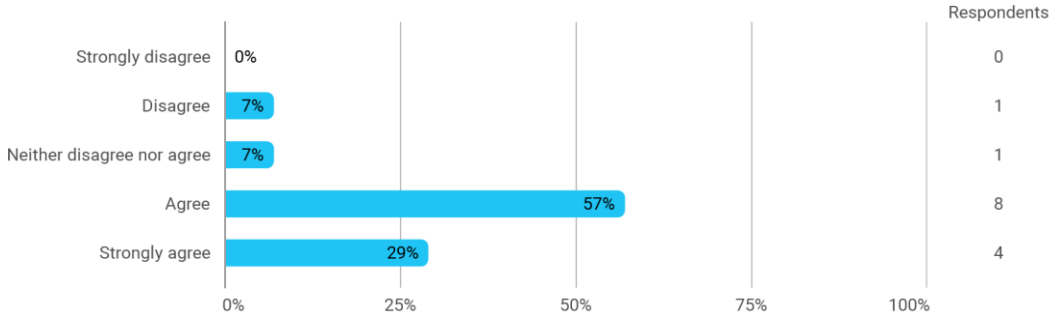
Do you believe that: (Please, answer if relevant) - **At the initial stage of implementation, Green HRM requires a high investment and might bring a low return**



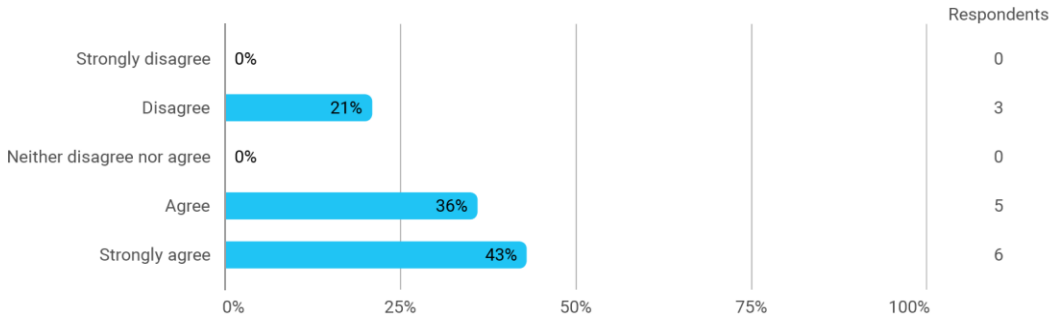
Do you believe that: (Please, answer if relevant) - **Recruitment and training of employees about Green HRM is a challenging job to do**



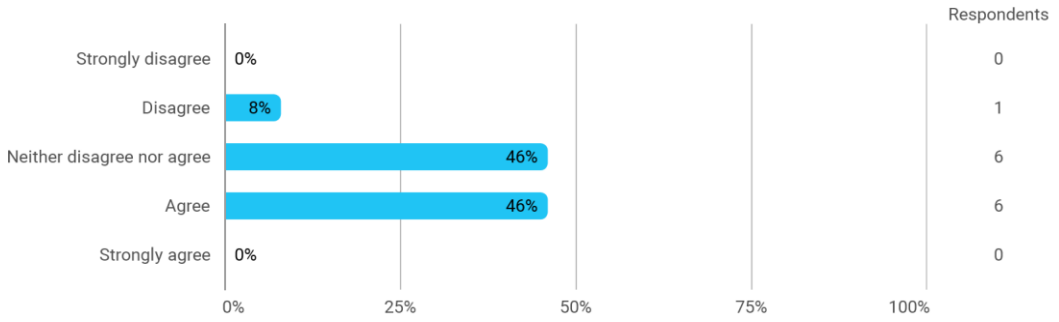
Do you believe that: (Please, answer if relevant) - **It is difficult to assess the Green performance of employees' behaviour**



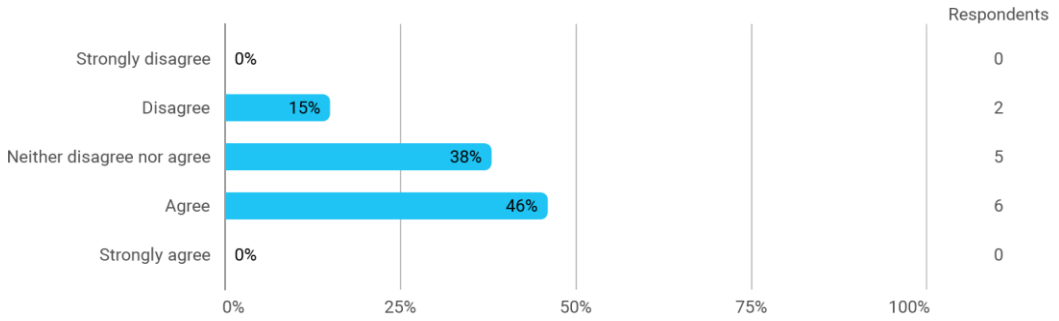
Do you believe that: (Please, answer if relevant) **- It is difficult to transform employees' attitude to Green HRM from traditional HRM in a short period of time**



Do you believe that: (Please, answer if relevant) - **The company changes its business relationships with its suppliers/ distributors in accordance with its environmental performance goals**



Do you believe that: (Please, answer if relevant) - **An improved environmental performance is associated with better economic performance**



Overall Status