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PARADOXES IN GREEN HUMAN RESOURCE MANAGEMENT: EVIDENCE FROM THE ITALIAN CONTEXT

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Abstract (in Italian)

Sostenibilità è un concetto a più dimensioni che include obiettivi sociali, economici oltre a quelli ambientali. La sua implementazione è considerata causare paradossi, intesi come posizioni conttraddittorie e incompatibili, che sono tutti supporati da argomentazioni apparentemente solide. Basandosi sulla teoria del paradosso, questo lavoro esplora i paradossi collegati alle risorse umane (HR) che sono percepiti dalle organizzazioni che sviluppano la sostenibilità ambientale attraverso la gestione delle risorse umane (HRM). Attraverso un case study multiplo e comparativo, sono state condotte interviste semi strutturate ed analisi documentali effettuate in sei aziende italiane che esplicitamente seguono una strategia ambientale. I risultati comprendono le principali caratteristiche dei sistemi green di HRM delle aziende analizzate ed identificano una lista di dieci paradossi legati alle HR avvertiti dalle organizzazioni. Per ogni paradosso, presentiamo i poli contrastanti e le componenti del sistema di HRM che vengono coinvolte. Il nostro principale contributo è che la sostenibilità ambientale è una sorgente di paradossi irresistibili per i manager delle risorse umane che devono imparare a conviverci e ad affrontarli piuttosto che ad ignorarli.

Abstract (in English)

Sustainability is a multidimensional concept that entails social and economic goals, along with environmental ones. Its implementation is considered to cause paradoxes, intended as contradictory and incompatible poles, all supported by apparently sound arguments. Rooted in paradox theory, this study explores the HR-related paradoxes perceived by the organizations developing environmental sustainability via human resource management.

Following a comparative multiple case study approach, semi-structured interviews and document analysis in six Italian companies, which explicitly pursue an environmental strategy, were conducted. The findings encompass the main characteristics of the green HRM systems of the analyzed organizations, and identify a list of ten HR-related paradoxes perceived by the organizations. For each paradox, we present the contrasting poles and the components of the HRM system that it affects. Our key advancement is that environmental sustainability is a source of irresistible paradoxes for HR managers, who have to learn to cope with paradoxes rather than to ignore them.

Executive Summary

In recent years, Human Resource Management (HRM) scholars have devoted considerable attention to the topic of sustainability, intended as the balance between economic, social and environmental performances of the firm (Epstein, 2008). As a consequence, the concept of sustainable HRM takes the development of social, environmental and human capital capitals into account, opposing to strategic HRM that is mostly focused on achieving economic goals and maximize profitability (Ehnert, 2009; Kramar, 2013) Within the broad field of sustainable HRM, a growing stream of studies explores the specific relation between HRM and environmental sustainability. Indeed, developing employees' commitment and involvement towards environmental sustainability have been found to be a key factor to realize sustainable organizations (e.g. Marchington &Wilkinson, 2005; Mesmer-Magnus et al., 2012; Renwick et al., 2013).

However, it seems that this approach, which is called Green HRM, overlooks some areas of intervention and possible obstacles. Indeed, since researches in the ambit heavily focused on content and design issues, Jackson (2012) claims for a more problem-focused agenda, which should aim to find solutions and clear recommendations for specific problems or outcomes. There is in particular a lack of studies that consider HRM in a system perspective, when analyzing "the interdependent and reinforcing" effect of different HRM policies and practices (Jackson & Seo, 2010; Jackson et al., 2011). In particular, emerging tensions have been considered in the literature principally from a "fit" perspective, whereas acknowledging the intrinsic contradictory nature of HRM activity could orient organization toward a positive learning and change process (Evans &Génandry, 1999; Smith &Lewis, 2011). Finally, in the HRM research ambit a paradox

perspective, which could help to identify the contrasting forces operating outside and within the boundaries of organization when pursuing green objectives, is still lacking.

Poole and Van de Ven (1989) define paradox as two contradictory and incompatible poles that are both supported by apparently sound arguments. In the specific field of HRM, Ehnert (2009 and 2014) calls for the use of the notion of paradox to identify the key oppositions or dualities in sustainable HRM. As we found that idea inspiring, we adopt a paradox perspective to explain conflicts and tensions that arise in the HRM area, when companies decide to incorporate environmental sustainability goals. The aim of this study is to contribute to HRM theory and extend our knowledge and comprehension of the HR-related paradoxes that affect companies developing environmental sustainability via HRM.

In this research, we make several important contributions to the HRM literature: we clarify that paradoxes are not sporadic accidents but occurs all over organizations and their HRM Systems when environmental sustainability goals are incorporated; we describe paradoxes as recurring elements in all the key components of a green HRM system; as a consequence, we provide a critical re-evaluation of the concept of "fit", in order to avoid simplistic solutions and take into account the complexity, ambiguity and diversity that characterize organizations and the HRM function. we identify ten clear paradoxes occurring in the setting of green HRM systems illustrating the positive and negative implications of every managerial choice. Consistently with the paradox theory of organizations (Poole &Van de Ven, 1989; Lewis, 2000), we agree that recognizing the presence of paradoxes is the first step for companies to start a "creative insight and

change process" (Eisenhardt &Westcott, 1988) and that organizations can achieve long-term success by coping with those paradoxes.

This summary gives a gist of my thesis – theoretical background, methodology employed in carrying out the research and the findings thereof. Further to this, managerial implications, discussion and conclusion are presented.

1. Theoretical Background

In this section we discuss the relations between human resource management (HRM), paradoxes and environmental sustainability and finally present the research question.

Studying the relation between HRM and environmental sustainability, researchers found that HRM can contribute to enhancing environmental performances (e.g. Jackson et al., 2012; Renwick et al., 2013). Indeed, different HRM practices can provide environmental abilities, develop motivation and commitment and offer to employees the opportunity to contribute to the greening of their organization. We argue here that a system perspective – i.e. a focus on the whole HRM system rather than a focus on specific HRM practices - could help to highlight the link between HRM and environmental sustainability.

The seminal work by Legge (1978) explains that ambiguities are intrinsic in the work of HR managers. Further contributions added that not only tensions cannot be solved by design (Evans, 1999), but that they might be a source of positive change by "challenging actors' cognitive limits, demanding creative sense-making, and seeking more fluid, reflexive, and sustainable management strategies" (Smith and Lewis, 2011, p. 395). Poole and Van de Ven (1989) defines paradoxes as "two contrary or even contradictory

propositions […] taking singly, each proposition is incontestable, but taken together they seem to be inconsistent" (p. 563). In this study we adopt paradox theory as theoretical lens to explore the relation between HRM and environmental sustainability.

Margolis et al. (2007) claim that not all environmental actions are lined up with the traditional organizational goals and that these practices are extraordinary hard to deal with, especially in the short-run. These reasons, along with decision making under uncertainty, bring complexity into organizations (March & Simon, 1993). As suggested by Ehnert (2009 and 2014), that complexity can be traced back to the concept of paradox.

Considering HRM, environmental sustainability and paradox theory together helps us to identify two key knowledge gaps: HRM can contribute to implement environmental performances, but empirical studies on the whole HRM system are still lacking; green objectives in the organization may be paradoxical and generate tensions, but this topic, addressed by several management disciplines (e.g. Supply Chain or Operation Management), seems to be neglected by HRM research.

The present paper explores what are the paradoxes perceived by the organization when designing HRM systems aimed at supporting the development of environmental sustainability within the company.

2. Methodology

Since the aim of this research is exploratory, we adopted a qualitative and interpretative research approach. In particular, this research is based on a multiple case study design, in order to achieve a wide understanding of the topic and a robust base for data analysis

(Yin, 2003).

We centered our sampling procedures on companies that are renowned for their environmental efforts, being considered leaders in their industries with regards to environmental sustainability policies. We had a total number of 6 participating companies.

The case studies involved semi-structured interviews with key organizational actors, coupled with the use of documentary evidence. We interviewed CSR and Environmental managers, covering aspects such as the implementation of sustainability policies, current strategies and practices, the responsibility for environmental matters, the expected contribution from the HRM department and possible sources of tensions. In the interview with HR managers, we entered the details of the HRM process.

We referred our analysis to the applied thematic analysis method as elaborated by Guest et al. (2012). Two coders worked separately in order to avoid thinking inertia; the triangulation of analysis (Denzin, 1978) also helped to enhance the credibility and reliability of results. The whole process was supported by the software Atlas.ti 7.

3. Findings

In this section, research results are presented: we first present the key features of the green HRM systems of the companies we studied and then the paradoxes emerged.

3.1. Key Features of the Green HRM System(s)

Recruiting. HR managers recognize the positive impact of sustainability actions on potential applicants' quality and quantity, especially on young and educated ones, since it is considered a factor of attraction for young candidates. Only one interviewee affirmed not to rely on the opportunity of communicating green to labor market since, he argued, it is not considered advantageous for the company.

Selection. HR managers have two approaches in designing selection processes to improve environmental performances: (1) include environmental topics in job interviews to check candidates' alignment with the company view (three out of six companies); (2) include environmental sustainability issues in interviews, but focusing only on technical skills. Actually, HR managers do not consider "green credential" a discerning element when hiring: this happens only for specific roles that require environmental knowledge as essential part of the task skill baggage.

Training. While some HR managers set environmental training only for specific positions, which are related to environmental issues (one case), others arrange trainings for all employees (three companies). Since selection and training practices are considered together when developing necessary skills, a company can invest more in selection and less in training or vice versa.

Performance Management. The majority of HR managers are interested in measuring only those environmental performances that cause cost reduction. Nevertheless, it is possible to find individual or team performance targets aimed at improving environmental performances (four companies).

Incentives and compensation. HR managers assign both monetary and non-monetary incentives to motivate employees toward environmental sustainability plans. Examples of symbolic rewarding are the plantation of a tree for every employee, "employee of the month" prizes etc.

Employee involvement. Common tools for companies to increase the participation of their employees in sustainability plans are suggestion boxes, conferences, meetings or public events, sustainability reports and social networks.

Job Design. We found that environmental tasks are never included in the job description, with the exception of special technical positions or responsibility roles (e.g. site managers for companies in chemical and steel industries).

3.2. Emerging Paradoxes When HRM Meets Environmental Sustainability

Green Performances vs. Economic and Social Performances of the HRM System.

Setting environmental goals along with other goals, such as economic and social goals, may bring a paradox to light. Managers face this paradox when they want to set the objectives of the green HRM system.

The first pole concerns employing HRM to improve environmental plans. However, developing environmental plans increases the possibility of financial shortages and may hurt other plans. Thus, the second pole of this paradox entails using the potential of HRM to enhance financial and social performances.

The companies we studied are strongly committed to environmental sustainability; therefore, they all expressed the desire to improve their environmental performance.

Nevertheless, when there are other issues at stake, the same companies prefer to pursue sustainability as an "ancillary" goal, prioritizing other objectives.

Opened/outside vs. Closed/inside Green HRM System

Environmental sustainability raises the following question to HR managers: which is the context of our actions? HR policies and practices, the whole organization or should they involve also external actors?

Managers could undertake actions toward external parties like the employers' association, non-profit associations, public administration, suppliers, or even customers. Although this kind of actions positively affects the relations with the external environment of the organization, they may present limitations and difficulties.

The other pole thus consists of strategies that look exclusively at the internal side of organizations. HR managers affirm to rely especially on training instruments and intervention on work practices. This way, managers focus their action on the internal workforce, renouncing at the same time to create synergies and collaboration with a wider range of actors.

Time Horizon of the Green HRM System: Short vs. Long Term

In the companies we studied, a source evidently contributing to paradox is related to whether the organization and its HRM system are oriented in a short- or long-time perspective.

A short-term oriented HRM system enables managers to have a high control of the

overall system, intervening with rapid corrective actions when necessary. On the other hand, with a long-time horizon it is possible to influence a wider range of organizational outcomes, including social and environmental sustainability.

According to many interviewees, personnel and environmental management are source of problems when the company has to face possible trade-offs between short and long-term objectives. Setting the time orientation of their green HRM system companies always "need to balance", assuring immediate results as well as good performances in the long run.

Focusing the Green HRM System on Everyday Work vs. Symbolic Appointments

This paradox has to do with the formalization of the green HRM system: it actually resulted that sustainability can alternatively assume two faces in organizations.

On one hand, there is a conception of sustainability as a principally cultural dimension manifested in speeches, slogans, symbols or resounding initiatives. The "cultural aspect" creates enthusiasm, reinforcing companies' values and image, but at the same time, it is a signal that sustainability needs a periodic recall in the mind of everybody, otherwise it would be overlooked.

On the other hand, environmental sustainability could be more spread in the organization, since managers integrate it in employees' everyday work through regulation and procedures. However, a highly formalized green HRM system is not able to create involvement and to provide a general vision of the undertaken efforts. That is why, as an interviewee stated, companies "need to balance symbolic situations and daily business".

Collective vs. Individualized Green HR Practices

Every company is a mixture of employees with different characteristics, interests, perspectives: inner diversity can lead to a paradoxical situation. This paradox emerges at the time of setting the level of standardization of the green HRM system.

On one pole, there are undifferentiated messages and practices that clear up ambiguities regarding environmental plans. This universal approach results simple to manage and effective when there is a shared commitment regarding sustainability goals at all company levels. Conversely, it fails to address different values and interests of employees when there is high internal heterogeneity.

The alternative strategy is to focus on employees' differentiated interests, assigning suitable HRM practices to different categories. This approach needs time and preparation, but it is successful to take advantage of potential capabilities, even of those employees who are not green-oriented.

Visibility of the Green HRM System: Front Stage vs. Back Stage

Communication and corporate image result hot spots to manage: it is necessary to send the right message with the right timing, otherwise the risk is to cause dysfunctional behaviors, complaints, lower the commitment and decrease company credibility.

Companies usually benefit from showing their environmental actions. However, there are also companies that do not advertise at all their environmental efforts, since they feel it is not advantageous.

We have already seen (paradoxes 1 and 4) that it is not possible to put environmental investments always in the front stage, since different stakeholders within and outside the company have different priorities: working on the visibility of the green HRM system gets necessary when companies deal with different expectations.

Value-free vs. Value-based Employee Involvement

While managing human resources, some choices has to be done with regard to how much a company wants its employees engaged in sustainability efforts and what kind of involvement they should have in environmental plans. This paradox operates at the level of motivations and opportunities for employees to participate.

The paradox is essentially related to whether a company prefers "activated" employees, accepting the implication of raising their motivations and expectations; or whether a company prefers a value-free employees' involvement. Using benefit/sanction systems implies the risk to reinforce an instrumental attitude towards sustainability goals, with no ethical implications for employees. At the same time, this approach results less problematic from the managerial point of view and more effective in reaching the whole personnel.

Top-down vs. Bottom-up Change Processes

Environmental sustainability implementation can be traced back alternatively to top-down or bottom-up change processes: strategic actions are in the context of top-down practices, meaning that they start from top management and then change process follows

a structured direction. Conversely, companies can obtain involvement through bottom-up processes, directly emerging from the employee-level.

Many reasons push companies to choose top-down practices, e.g. the influence of top management decisions, the possibility of clear evaluation of interventions or the possibility to undertake prompt corrective actions. One problem with this approach is that it stresses very much on results. Moreover, following this pathway it seems that companies have difficulty to create commitment. Bottom up processes are more spontaneous, however they can lead to ambiguous outcomes, disagreement or even rejection since they have not a clear direction.

Centralization vs. Decentralization of Green HRM Systems

A key question is whether the company should have a separate environmental department or environmental professionals working in all departments. The 9th paradox concern the structuring of green HRM systems and affects the criteria defining employees' abilities, motivations and opportunities.

A centralized structure enables companies to have distinct environmental actions and specialized employees whose abilities, roles and responsibilities are clearly defined for the other departments. Nevertheless, centralized structures may pass on problems from one department to another, complicating companies' structure and decision-making.

Decentralization results attractive because it decreases the disconnection between departments. However, to become decentralized, companies need culture, time and trainings. Another possible downturn is that stakeholders within and outside the

organization could consider environmental goals secondary goals, since there is not an authoritative interlocutor.

Role of HR Managers: Personal vs. Professional Credibility

The 10th paradox concerns the role of HR managers in relation to environmental sustainability. The issue at stake is: is it preferable a "technical" support or a "personal" involvement?

On one hand, managers are "professional supporters" of sustainability, helping to design technically optimal green HRM systems through the traditional HRM tools. This way the action of managers would be limited to their professional role, leaving apart personal beliefs and lifestyle. The other option is to bring personal values in their work, in order to strength the effect of their interventions with the personal example and beliefs.

Some HR managers think that a professional approach gives them more power in supporting sustainability policies along with other objectives. Other interviewees think that their personal example when promoting sustainability at the company level, although less systematic, is more effective to carry on environmental efforts.

4. Discussion and Conclusion

Paradoxes were found to be pervasive in all the components of green HRM systems. This extends previous literature in two directions: first, it confirms that sustainability in general, and environmental sustainability in particular, are intrinsically paradoxical; second, it confirms that the adoption of paradox as theoretical lens for studying

sustainable HRM is a fertile and insightful perspective.

Moreover, this study contributes to the development of a more realistic and problematic view of the concept of fit. Indeed, this study supports the idea that "fit" (i) is a complex task, since both poles of a paradox are attractive; (ii) is multi-level, since we have paradoxes at different levels of green HRM systems; (iii) is dynamic, since it changes over time. As a result, we draw attention to the following question: can we really expect companies to have a "perfect fit"? Is it doable?

We suggest in conclusion that HR managers, when dealing with sustainability issues, should try to cope with them instead of avoiding them, in order to start a positive change process that can lead to the long-term success of organizations.

Chapter 1: Human Resource Management and Environmental Sustainability

In the first chapter, we are introducing and understanding the linkage between HRM and Environmental performances to form the research question that will be answered in the second chapter. For this reason, it is important to understand the gap between the above-mentioned issues is needed.

Different theories, determinants, and tasks classified under general management perspective and specifically, HRM perspective. In the first perspective, a comprehensive definition of environmental management system (EMS), motives, benefits, challenges, and steps implementing EMS are stated as start. Then the focus is given to the importance of leadership's tasks in order to achieve environmental sustainability. Besides, Green Five Taxonomy is described in order to understand employees green behaviors. Later on, the relationship between age, gender, education, and income differences with employees' environmental behaviors is described. Measuring and improving environmental sustainability are the eventual concerns of general management perspective.

The environmental sustainability from HRM perspective session specifically takes into consideration the role of commitment and the typology of corporate environmental strategies and corresponding initiatives. Furthermore, the usage of Green Five Taxonomy in HRM and HR practices facing different demographic characteristics are described. The final emphasizes of HRM perspective is AMO Theory. The last part of this chapter aims to gather future research questions on the basis of AMO Theory.

1. Environmental Sustainability from General Management Perspective

The aim of this part is to provide a better understanding of EMS and related issues in management science, starting with motives for applying environmental practices in an organization and why companies are willing to do so, different strategies toward environmental sustainability, steps for achieving environmental sustainability, leader's role, employees' green behavior and impact of different demographic characteristics in employees' behavior in workplace, and how to measure environmental sustainability both in individual and organization level.

1.1. What is EMS and Challenges and Motivations for Adopting it

By definition of EMS that is a systematic approach integrating organizations' environmental policies, programs and policies into routine operations in order to meet environmental and business goals (Morrow & Rondinelli, 2002; Rendell & McGinty, 2004; Stapleton et al., 1996), it is reasonable to claim adopting EMS can help company achieving environmental sustainability.

Florida and Davidson (2001) release top motivators that lead a significant number of companies to put environmental sustainability in their strategic goals through a large-scale survey in the U.S.A. These motivators are committing to environmental performance improvements (91.9%), moving along corporate strategies and goal (88.7%), economic gain (87.1%), increasing community relations (85.5%), obeying state and federal regulations (85.5% and 83.9%).

In recent years with emergence of three zero manufacturing paradigm which is zero defects (quality), zero inventory (just-in-time inventory and supplier relations), and zero waste and emissions, companies are forced to work on different issues simultaneously (Florida & Davison, 2001).

Companies know that communicating environmental performances has great influence on stakeholders' support and increasing the corporate reputation. They have to use corporate intelligence and external information to reevaluate their programs and come to equilibrium with environmental and business performances (Berry & Rondinelli, 1998).

While some scholars (Bansal & Hunter, 2003) focused on why organizations may adopt an EMS and what the potential environmental strategies may conducted for improving the environment, some others (Bansal & Clelland, 2004) presented that EMS is mostly about a symbolic set of actions to improve an organization's reputation in public as an intangible asset because external stakeholders have no way to verify and control if environmental performance improvements really implement (Rondinelli & Vastag, 2000). Additionally EMS do not force organization to increase and improve their environmental performance but only requires establishing and preserving environmental set of rules, processes and procedures (Krut and Gleckman, 1998).

As well as, Handfield et al. (2005) presented that these environmental related improvements take place within the organization's operational boundaries are more remarkable than being observed throughout the whole supply chain. In other instances, organizations that chose to implement environmentally sustainable management practices, can not go through success regardless of their environmental impacts beyond their organizational boundaries (Darnall et al., 2008). Although there are several studies

around the environmental performances, but the questions and doubts about whether or not the implementation of EMS guides companies to real and satisfying external environmental improvement remain for future researches (Honey & Stewart, 2002).

By implementing EMSs, differentiated firms in terms of forms can reach better public image and reputation (Stapleton et al., 2001). Additionally, with increasing operational efficiencies, EMS can cause more economic gains (Russo & Fouts, 1997).

When a company became green, it will inform its buyers about their way to decreasing waste and pollution for increasing reputation that has both direct and indirect environmental impacts on the company's final product. Direct impacts are related to reducing waste during storage, transportation, processing, use or recycling and indirect impacts originate from an organization's second tier suppliers' products, which means that the supplier uses the green company's product in its production procedure (Handfield et al., 2005).

Another encouraging factor through EMS is that the governments and regulators are interested is EMS since its benefits is related to the reducing pollution, so it is favorable to society (Conglianese & Nash, 2001).

HRM needs to be linked and collaborate with other strategies and dimensions (Boxall & Purcell, 2000) and must be searched in other study fields to emerge innovative ideas (Welbourne, 2011). Also, De Leede and Looise (2005) state that we can find several common path linking HRM with innovation.

During last decade, many companies have focused on creating value for end customers and increasing business performances (Handfield & Nichols, 2002) by collaborating and

asking suppliers more frequent than before to create innovative ideas leads to new technologies results in reducing cost or increasing customer satisfaction (Handfield et al., 1999).

Defined by Ramus and Steger (2000), eco-initiatives are "any action taken by an employee that she or he thought would improve the environmental performance of the company". According to Fernandez et al. (2003), there are three different kinds of eco-initiatives in a company, resulting from employees' creativity in different levels, as following: (1) Innovations trying to decrease environmental impacts of the company (like recycling), (2) Innovations aiming solve an environmental issue (like reduction in use of hazardous substances), and (3) Innovations meaning to a more eco-efficient new product/ service development (like less resources or energy intensive).

Focusing on suppliers originates from this idea that minimizing environmental impacts from planning and designing steps is related to the company's ability in managing their relationship with suppliers which is complex and becoming more intensives in future (Darnall et al., 2008). For this reason, companies are paying significant attention not only to their own core competencies, but also relying on their suppliers as a non-core activities for new product development in early stages and concurrent engineering (Ragatz et al., 2002). Becoming green from early players in supply chain is to reduce environmental risks (Klassan & Whybark, 1999).

As a conclusion, what seems to be crucial is finding linkages between innovation and EMS. Importance of both fields are clear but a structured way through getting EMS in an innovative form is not yet studied. Additionally, Follows and Jobber (2000) could not prove the environmental value consistency between an individual and an organization

advertising a product consequently increase the profitability by making an impression on individual and encourage him/her to get involve in environmentally responsible purchasing behavior.

1.2. Corporate Environmental Strategies

A company can choose one of the three types of initiatives: type A, type A/B, and type B.

If a company chooses type A initiatives, it means that the company considers environmental issues as threats and a control strategy might be implemented in potential areas to diminish environmental issues. According to scholars (Lubin & Esty, 2010; Jabbour et al., 2010) a compliance strategy is the key strategy in type A initiatives that can be achieved by executing as following: (1) Active participation to reduce negative effects on costs, (2) Reaching conformity to regulations and standards, and (3) Improving the environmental key performance indicators (KPIs) (i.e. greenhouse gas emissions).

In leadership perspective, Bass and Riggio (2005) looked at this process as a transactional rather than a transformational process.

In contrast, much wider and more extensive than type A, type B initiatives, has a friendly viewpoint to environmental issues which typically aim to not only reach minimum requirements, as type A initiatives does, but also achieve much more than this level. This significant transformation process will begin with changes in employees and managements' outlook, increasing the awareness, planning for long-term profitability and impact all the value chain (including primary and supportive functions). Type B initiatives, which integrate all stakeholders to the process from early stages, benefit from running planning, goal setting and executing stages simultaneously and can be reached

through passing two main steps: First, positioning environmental policies close to company, Second, Company will improve environmental understanding of employee level, increasing their trust, commitment and motivation, and simultaneously improving relevant KPIs.

In leadership perspective, Bass and Riggio (2005) looked at this process as a transformational rather than a transactional process. Type B initiatives support innovations and creation of new business opportunities.

1.3. Step by step to achieve EMS

The ISO 14000 environmental series of standards is to manage an organization's environmental goals but it also has number of weaknesses (Elefsiniotis & Wareham, 2005). ISO 14001 published with robust framework. It contains a cycle beginning from commitment to environmental policies that should be communicated to all employees in public (Woodside et al., 1998) to shape the structure for the second phase that is planning for environmental management program which should be very precise in assigning individuals responsibility for environmental improvements (Jackson, 1997).

In the third phase (Implementation and operation) an organization should identify qualified resources, train employees of all levels, promote internal and external communication specially for important environmentally issues from the top to the bottom, complete documentation to better meet the requirements for reporting, prevent conditions that causes harmful environmental impacts and also to have a vigilance to

response in negative circumstance (Woodside et al., 1998). Implementation and continuing EMS has to be aligned with HRM (Wee & Quazi, 2005).

Corrective and preventive actions and support of top management are two last steps. Managers may change policies, targets and elements to improve EMS (Woodside et al., 1998). Considering organizational culture has a great importance as Harris and Ogbonna (1998) stated that one of the reasons that prevents organizational change is neglecting the importance of culture. Once an organization implement EMS successfully, it may select to receive ISO 14001 certification (Darnall et al., 2008). ISO 14001 certification allows the certified company to improve its communication with customers (Morrow & Rondinelli, 2002).

1.4. Leadership and Environmentally Sustainability

Main leadership tasks are: setting direction, creating alignment, and building commitment (DAC) related to environmental sustainability. Building organizational culture, which is aware of DAC, is a supporting activity playing an important role in organizations' strategy encompassing environmental sustainability (Drath et al., 2008).

Due to Osborn and Hunt (2002) environmental sustainability leadership includes challenges beyond traditional organizational leadership frame, involve both individual and collective leadership in, of, and beyond the organization.

Competency and practice base approach can be applied to individual and collective leadership. While practice approach focuses on what actually people/organization

do, competency approach tries to think about one stop beyond, what is needed to be developed in future, and what are potential actions that people/organization will able to do (Carroll et al., 2008; D'Amato et al., 2010). Organizational culture can lever, support, and motivate competencies to come into real actions in organization (not only remain potentially) and support new individual and group behaviors (Van Veslor & Quinn, 2012).

Setting Direction. Developing environment-related visions (the "why"), strategies (the "how"), and long-term sustainability goals that can be divided into shorter-term goals (the "what") into all levels of business, communicating organizational direction to emphasize the importance of environmental responsibility, current activities, and in-progress goals, and resetting all of them during time based on changes in stakeholder issues, unexpected events, changes in market, and increased understanding of context are key factors shape direction toward environmental sustainability (Van Veslor & Quinn, 2012; Fowler & Hope, 2007).

Creating Alignment. According to Van Veslor and Quinn (2012) for creating alignment, operationalizing sustainability, engaging across boundaries, and performance accountability has to be taken into account: (1) Operationalizing sustainability with specific employee job roles and descriptions enables company to bring environmental strategies into daily development and production in a way in which waste are managed, and all employees know how their own task and functions impact the environment. Discovering and taking into account the local stakeholders needs and connecting abstract vision, strategy, and job tasks of all employees are significant details of operationalizing the sustainability, (2) Engaging across boundaries emphasizes that leading organizations

to environment sustainability calls for a relevant involvement of external stakeholders (i.e. local and national governments, media, etc.) and (3) Performance accountability forces organizations to monitor high–level standards set by senior managements and provide sustainable working process and standards for each goal (Crawford & Scaletta, 2005). Furthermore, organization must be committed to arrange feedbacks about their performances implementing sustainable procedures and business operations. Reports should address the materiality, transparency, reliability, context, and completeness of the information (www.global reporting.org).

Building and Maintaining Commitment. After including commitment to company's environment sustainability vision and strategy, for a company that is seeking for all employees engagement in environmental issues, maintaining the motivation and facing inevitable challenges (i.e. economic challenges) are necessary to be done. In more details, following points have mentioned: noticeable support from top management for environmental sustainability, empower employee to take action in the direction of environmental sustainability, and supporting ethical actions.

Noticeable support from top management for environmental sustainability has significant role in forming environment-related strategies, increasing the awareness, motivation, and commitment. Top managers should explicitly show their support (i.e. provide especial resources, write/talk about environmental sustainability through communication channels, and forming formal groups to focus on environmental goals and improve the work. Top management's clear communication is crucial to avoid setting boundaries around groups. Otherwise, those who are not in groups will may not communicate to groups and would lost their responsibility (Starik & Rands, 1995).

Empower employee to take action in the direction of environmental sustainability means to participate them in decision making, encouraging them to generate new ideas facing challenges, and train/coach/monitor them to gain knowledge needed to implement environmental sustainability.

Supporting ethical actions means supporting what is really right to be done (and not advertising). Providing an ethical atmosphere encourage employees to get attached using participative processes for decision making, to present wider set of views, and to have more focused actions and innovation (Quinn & Van Velsor, 2010). To avoid "green washing" (company says that it will do something "sustainable" but not take any actions) regular reporting including financial status and in-progress environmental and social goals is suggested (Van Veslor & Quinn, 2012).

1.5. A Content-Based Model of Employee Green Behavior: The Green Five Taxonomy

Boiral (2009) developed the concept of environmental organizational citizenship behavior that is those individual and discretionary social behaviors that are not explicitly recognized by the formal reward system and can improve the effectiveness of environmental management of organization. Furthermore, Ramus and Killmer (2007) suggest that volunteer workplace green behaviors, which may cause environmental changes (Stern, 1992) and may be a potential source for value creation (Brief & Motowidlo, 1986), can be as pro-social and citizenship behaviors of not only managers and staff but also majority of employees. These researches also state that these behaviors can reduce pollution and increase resource efficiency.

Hill et al. (2011) have introduced major behavioral categories of employee green behaviors as following: (1) Working Sustainability, (2) Avoiding Harm, (3) Conserving, (4) Influencing Others, and (5) Taking Initiative.

Working Sustainability. This category defines those behaviors that employees are engaged with in order to increase the environmental sustainability of work products and processes. In other words, these behaviors aim to adapt work products and processes to minimize their negative effects on environment. There are two ways achieving working sustainable behavior: (1) Focus on current products and processes to improve them (choosing responsible alternatives and changing how work is done), and (2) Going beyond simply changing: creating and innovating new ideas (creating sustainable products and processes).

Avoiding Harm. Since most economics activities effect environment, it is very crucial to diminish interruptions in the Earth's ecosystem. Avoiding harms can be done through decreasing pollutions, monitoring environmental impact (i.e. monitoring emissions), and strengthening ecosystems (i.e. do not ruining wildlife area around work facilities)

Conserving. Reducing use, reusing, repurposing, and recycling are logic of this category. Reducing the use is the strongest approach since it minimizes the initial environmental impact and recycling is the least responsible way since it only diminishes environmental impacts and it also needs extra energy and materials to recover wastes for future needs.

Influencing Others. Influencing others focuses on those employees' behaviors that can increase environmental sustainable behaviors on others. This category is the only category that has explicit social underpinnings. There are two main ways influencing

others behavior: (1) Educating and training for sustainability, and (2) Encouraging and supporting environmentally sustainable behaviors.

Taking Initiative. This approach might be riskier than previous approaches since sometimes it is against societal expectations. Frohman (1999) described that individuals taking initiatives are those seeking changes. Taking initiative that starts with deploying new policy and programs (i.e. initiating a new policy on reduced energy use) needs a level of risk taking and willingness to sacrifice (i.e. money). Next, lobbying and activism begins standing up for environmental causes (i.e. arguing for environmental issues on board). Green five taking initiative's cluster ends up with putting environmental interest first (i.e. stopping an environmentally unfriendly project) and requires high level of self-sacrifice.

1.6. Demographic Characteristics and Employee Sustainability

Individuals' gender, age, education level, and income level affect the behaviors. Many researches have been done to demonstrate the scale of these factors on employees' behavior in workplace.

Gender Differences. Women are raised to be nurturing, warm, and cooperative in order to take the responsibilities of children, housework, and health related issues. On the other hand, men are raised to be independent and competitive in order to take the responsibility of financially needs satisfaction in the public domain (Gilligan, 1982).

Blocker and Eckber (1997) stated that women are more concerned about pollution on their health than men. Another research done by Mohai (1992) presented that men tend to

perform public behaviors (i.e. protesting environmental issues, attend public meetings, and etc.) more often than women; Women tend to participate in private green behaviors (i.e. recycling at home).

Klein et al. (2010) found that female employees are more engaged with pro-environmental workplace behavior than men considering the difference is small.

Age Differences. Savickas et al. (2009) stated that since younger generations are in a different stage in their life compare to older people, on average, the remaining lifespan of them is longer so it is more likely for them to encounter the consequences of their own environmental actions. Therefore, it is more probable that younger individuals should be more concern about environmental issues.

Another research has confirmed a direct relationship between age and personality characteristics change (Roberts et al., 2006). Many personality characteristics change as individual age and mature.

Morris and Venkatesh (2000) focused their research on employees' age. They demonstrated that younger employees not only tend to accept new ideas and changes more than older employees, but also like to be in social positions that motivate them to think about future more than older individuals. Younger employees get involve in environmental issues and green behaviors more than older employees while older employees only want to be opposed to new ideas until a clear map consists befits is showed or the social pressure is quite high. But, the point that older employees are more careful, economical and cautious should not be neglected.

Education and Income Differences. Education and income levels are not necessarily fixed characteristics of an individual and a company can equipped its employees with better education or resources so they may be better engaged with pro-environmental behaviors (Klein et al., 2012).

Fransson and Gärling (1999) represented that maybe in past years educated people have more access to environmental knowledge and awareness, but in recent years, because of digital revolution, access to information is less reliant on formal education. Also, D'Mello et al. (2011) found a small to moderate positive relationship between the level of education and environmental behaviors, specially conserving behaviors such as recycling, avoiding waste, and reusing material.

There is not a certain relationship between income level and environmental concern. While some scholars (Kinnear et al., 1974; McEvoy, 1972) defend a positive relationship between them, some other (Roberts, 1996; Samdahl & Robertson, 1989) confirm a negative relationship among them.

In term of green behaviors, behaviors such as reusing or reduction of use are more encouraged by lower income individuals, while behaviors with greater monetary cost are in the center of attention in higher income individuals (Gatersleben et al., 2002).

1.7. Measuring and Improving Environmental Sustainability

In order to manage the approach towards environmental sustainability, individual and organizational behavior must be measured. In individual level, each employee's contribution and impact on environmental sustainability, and in organizational level,

collective performances can be observed and conceptualized to help company control the triple bottom line (Savitz & Weber, 2006).

There are features in behaviors that are important in measuring pro-environmental behaviors as following: (1) Public (directed at affecting change) and private (personal choice) behaviors are not same (McAdam et al., 1988), (2) efficiency (i.e. eco-innovations to reduce environmental impact) and curtailment behaviors (i.e. conservation behaviors) are not same (Stern & Gardner, 1981), (3) Based on the place where people live (country, rural/urban area) and based on the industry and sector that they work, they may not have same environmentally friendly options (Kaiser, 1998), (4) Specific and base rates of pro-environmental behaviors are expected to be not equally easy or difficult to perform them, and (5) specific pro-environmental behaviors have not same effect on or value for environment (Stern, 2000b).

Environmental Sustainability at Individual Level: Determinants on Pro-Environmental Behaviors. Dilchert and Ones (2012) stated that understanding, predicting, and modifying pro-environmental behaviors, factors and determinants impacting on contribution/detraction in environmental sustainability must be identified. They mentioned about three main determinants as following: (1) Environmental awareness and knowledge, (2) Attitudinal variables, and (3) Contextual variables.

Hansla et al. (2008) believed that awareness about environmental issues and individuals' behaviors has great role as pre-condition for pro-environmental actions and lack of awareness brings barriers and difficulties to pro-environmental behaviors. Environmental knowledge, both declarative and procedural (i.e. "How to take action on a particular environmental problem", Hines et al., 1987) has also the same effect.

Hines et al. (1987) represented that between knowledge and high-level education/awareness, environmental knowledge has more significant role for leading to pro-environmental behavior and helps employees setting their behavioral prioritize based on their effectiveness and environmental values. In other word, in is crucial to know what and how things need to be done.

There are three theories based on attitudinal variables focusing on processes motivate individuals to take environmental friendly actions. Theories are as following: (1) Norm Activation Model (NAM), (2) Value-Belief-Norm (VBN), and (3) Theory of Planned Behavior (TPB).

NAM's center of attention is key moral norms to understand pro-environmental behaviors. Schwartz (1977) described that if individuals feel responsible and personally obliged to take environmental friendly actions, pro-environmental behaviors are likely to follow.

VBN theory presented by Stern (2000b) takes by granted that personal moral norms are determinants of pro-environmental behaviors. This theory believes that values shape beliefs (mediating mechanism), and beliefs form moral norm. VBN theory is not a comprehensive theory since till now no researches have introduced a relationship between VBN theory variables and pro-environmental behaviors (Bratt, 1999; Stern et al., 1999).

Both NAM and VBN theory can describe only low-cost pro-environmental behaviors (Steg & Vlek, 2009). On the other hand, TPB can provide explanation also for high-cost pro-environmental behaviors even under stronger constraints linking social norm, perceived behavioral control, attitudes, and behavioral intensions with actual behavior

(Bamberg & Schmidt, 2003). While social norm, perceived behavioral control, and attitudes have moderate relationship with pro-environmental variables, behavioral intensions, namely "verbal commitment" and "environmental behavioral intensions", are the most proximal antecedents to pro-environmental variables.

A research by Black et al., (1985) released that in the case of conserving energy, there is an inverse relationship between cost and effort associated with the behaviors, and the social-psychological variables' variance. Therefore, it can be concluded that maybe attitudinal variables not have significant effect on pro-environmental variables.

Scholars have not conceptualized contextual variables like the other two determinants since they have not used the entire range of contexts or the full spectrum of context variables for sampling. They only focused on some specific contextual variables such as social influence (i.e. community norms, expectations, and behavioral modeling), incentives, pro-environmental behaviors' costs, and legal requirements and governmental issues (Ölander & Thøgersen, 1995; Stern et al., 1999; Thøgersen, 2005). Dilchert and Ones (2012) also asserted that individual pro-environmental behaviors have effective influence shaping contextual variables.

Contextual variables have different roles in predicting pro-environmental behaviors. They can stand direct, proximal, or far from the determinants, and also can moderate/mediate the relationship between other variables (Dilchert & Ones, 2012).

Totally, researches around pro-environmental behaviors are general studies around ecological behaviors and have not focused on workplace. But, there is an expectation that declarative knowledge, procedural knowledge, and motivation (including motivation

related personality characteristics, values, attitudes, etc.) can be categorized as direct determinants.

Biga et al. (2010) declared green behaviors of employees is directly affected by their perception about the ethical climates of workplace. Managements' green behaviors are strongly director. As Wilms et al. (1994) stated that what, where, and how management pushes employees, is where they go eventually.

Environmental Sustainability at Organizational Level. Stern (2000a) discussed that although an organization cannot exist, operate, and pollute without its employees, but majority of organization's impacts on the environment are seen in the organizational level. First it should be cleared what organizational environmental performances are. There are two main methods for measuring environmental performances: Environmental Performances Indices (EPI) and Kinder, Lydenberg and Domini Research and Analytics (KLD)**.**

EPI consists of a various indicators to figure out a comprehensive evaluation of an organization's environmental performances including both overall scores (numerical), and facet-level scores (sustainability assessment on different key domains). EPI can be benchmarked against a base year, or can use normalized indicators in order to have complete comparisons between different businesses and industries about their environmental performances (GEMI, 1998).

Since EPI's output is easy to be understandable between different stakeholders and to make a comparison with other organizations and sectors, is preserving the simplicity. Meanwhile, it is possible to give different weights to different indicators in EPI based on their importance that increase the usage of EPI.

EPI's disadvantages arise since the scale properties of scores/rankings are not sufficient enough and a subjective judgment in favor of some organizations/sectors may be assigned to an individual indicator's weight, consequently the result may have skew. Singh et al. (2007) pointed to another EPI's problem as it aggregates indices while some poor environmental performances are not compensatory and by aggregating indices, EPI may cover them. The last disadvantage occurs in most of the cases. The problem is that the lagging indicators demonstrating past environmental performances are unsuited for moving toward corrective actions (Dilchert & Ones, 2012).

KLD provided the most popular and widely used measurement for environmental performances focusing on financial sector and based on corporate social responsibility criteria to provide a better understanding for investment decisions (Deckop et al., 2006). KLD ratings' advantages are mostly because of their performance coverage, including both past environmental performances (i.e. hazardous waste, regulatory problems, etc.) and potential future environmental performances (seven environmental "strengths" categories: beneficial products/services; pollution; prevention; recycling; clean energy; communications; property; plant and equipment; and other strengths). Nevertheless, KLD ratings based on fourteen groups and dichotomous scoring system (not continuous scoring) may cause problems (Chatterji et al., 2009).

Walls et al. (2011) pointed to a problem of both EPI and KLD ratings: they are not based in theory. They used a content analytic approach to cover the lack of theory. Their research resulted in a framework containing six organizational capabilities, (one of them is HR). In general, it is offered to use both EPI and KLD ratings with theoretical models

of environmental performances and differentiate the organizational environmental efforts/initiatives from outcomes (Dilchert & Ones, 2012).

Above all, Dilchert and Ones (2012) defined corporate financial performance, firm size, and industry as variables correlated with performances in organizational level.

Catterji et al. (2009) stated that eco-friendly organizations can financially perform better because they have ability to attract environmentally responsible customers, gain better reputation, and obey regulations due to two theories: "Instrumental stakeholders" and "good management theory".

Fombrun and Shanley (1990) described that larger firms have at least better social image. Etzion (2007) commented that since smaller firms are more concern with economic issues, they might not invest on environment as larger firms can do, but they have less constraint in implementing environmental initiatives.

It is obvious that different industries have different level of impact on environment. It is important to pay attention to this note when running a study about environmental performances between industries (Etzion, 2007). Even factors stimulating for taking environmentally friendly action differ between industries. In industries with higher environmental impact, public concern and regulations force them to move toward becoming green while in sectors having lower impact on environment, gaining reputation and competitive advantage motivate them to get engaged with environmental issues. Delmas and Toffel (2004) remark that in both mentioned sectors, top managements' commitments have crucial role for succeeding.

In summary, this section has brought forward five key elements of environmental sustainability from general management perspective after clarifying the benefits and challenges adopting EMS. First, different types of initiatives (A, B, A/B) that can be adopted by companies are introduced. Companies may consider environmental issues as threats or may have friendly viewpoint for it. Second, different tasks under the three main leadership duties, which is setting direction, creating alignment, and building commitment, are identified. Each task aims to operationalize, maintain, and support environmental objectives. The third concept emphasizes on major behavioral categories of employees green behaviors as followings: working sustainability, avoiding harm, conserving, influencing others, and taking initiatives. Connecting demographic characteristics to employees' behavior in workplace is the primary purpose of the forth part. In this part it has been mentioned that while both the gender and age can make influence environmental behaviors, education and income differences have lost their impact on people toward environmental concerns. The last part is associated with measuring environmental sustainability both at individual and organizational levels. Environmental awareness and knowledge, attitudinal variables, and contextual variables are main determinants on pro-environmental behaviors and must be considered in monitoring individual level's environmental sustainable behaviors. EPI and KLD are introduced as widely used measurements for environmental performances at corporate-level analysis.

2. Environmental Sustainability from Human Resource Management Perspective

What is the role and usage of HR in implementing EMS? This is the general question that this section aims to describe more details. Also, this section tries to gather the HR practices of theories and studies in the previous section.

First the model of three commitments provides the basic requirement for applying EMS and making a bridge between environmental sustainability and organizational sustainability. Then, a three-dimension framework illustrates the position of a company in terms of corporate environmental strategies, HR activities, and role of HR. The usage of the 'green five taxonomy' in HRM comes next, listing practices of HR related to this theory. In the end, AMO theory, a complete and structured theory, emphasizes the importance of HR in HRM and help to shape future work on its basis.

2.1. How to Fill the Gap Between Organizational Sustainability and Environmental Sustainability: The Role of Commitment

Mesmer-Magnus et al. (2012) discussed that companies can reach organizational sustainability and environmental sustainability simultaneously when both sides (organization and employees) are committed. The focus of their research was on three types of commitment: (1) Employee commitment to organization, (2) Individual commitment to environment (this part is already discussed in "Employee Green Behavior" section), and (3) Organizational commitment to environmental sustainability.

If there are all three kinds of commitments in a company and they are aligned, the company can reach sustainability.

Employee Commitment to Organization. Allen and Meyer (1996) described three ways in which employees are committed to a company that are majority of organizational commitment work in the past decade: (1) Affective (describes emotional attachment, identification with, and involvement in the organization), (2) Normative (includes "a perceived obligation to remain in the organization"), and (3) Continuance (refers to "the perceived costs associated with leaving the organization" (Meyer et al., 2002).

Variety of researches tried to demonstrate the role of commitment in the workplace. Based on Mathieu and Zajac (1990) and Meyer et al. (2002), the variables related to organizational commitment are as following: (1) Personal characteristics (age, education, tenure, ability, etc.), (2) Role states (role conflict, ambiguity, overload, etc.), (3) Job characteristics (skill variety, autonomy, challenge, etc.), (4) Group/leader relations (cohesiveness, leader communication, leader consideration, task interdependence, etc.), (5) Organizational characteristics (size, centralization, etc.), (6) Motivation (job involvement, stress, occupational commitment, etc.), and (7) Job satisfaction (overall job satisfaction, workgroup satisfaction, supervisor satisfaction, etc.).

Riketta and Dick (2005) discussed about an important predictor for employee commitment to organization. If the turnover is low then the organizational commitment is high, employee do not search for new job and leave the company. With low turnover, company will not invest on training for large amount of new employees since existing employees will coach them and preserve the organization's culture, values, and competitiveness (Saks et al., 2007).

In sum, it is obvious that if employees are committed to the company they will take actions for organizational sustainability initiatives (corporate social responsibility initiatives, environmental sustainability programs, etc.) to enhance organizational reputation and performances (Rettab et al., 2009).

Organizational commitment to environmental sustainability. There are different levels of engagement to environment sustainability (D'Mello et al., 2011). Two dimensions can be used in order to define the degree of engagement: (1) environmental sustainability initiatives, and (2) incorporation of environmental sustainability goals with organization's goals, operations (logistics, operations, etc.), and functions (marketing, HR, etc.) as an explicit recognition (environmental initiatives reported on company website, etc.).

If employees perceive the organizational commitment to the sustainability, organizational commitment will increase. Also, it can shape trust to management (McWilliams & Siegel, 2001; D'Mello et al., 2011; Mesmer-Magnus et al., 2012)

The Three Cs. Mesmer-Magnus et al. (2012) expressed that employees with high degree of environmentally committed are less likely to remain in companies where environment issues are not one of their priorities. These employees tend to have pro-environmental behaviors and the only atmosphere they can have their environmental friendly behaviors is in a company committed to environmental sustainability initiatives and operational integration of environmental sustainability. This aim cannot be reached without the commitment of employees to the organization. With employees committed to the organization, who are passionate about their job, the bridge connecting organizational sustainability to environmental sustainability is completed and the two types of sustainability are not competing with each other anymore.

2.2. Typology of Corporate Environmental Strategies and Corresponding Initiatives

Staffelbach et al. (2012) introduced a three-dimension framework to show different corporate environmental frameworks. Dimensions are: (1) Corporate environmental strategies (has been described in general management perspective), (2) HR activities, and (3) Role of HR.

***HR Activities in Environmental Initiatives*.** Based on the framework suggested by Staffelbach et al. (2012), HRM activities related to environmental initiatives are HR company policies, individual compensation, employee training and development, talent management, and recruitment.

HR company policies are about writing regulations for employees including behavioral guidelines facing environmental, social, and legal issues. Individual compensation or performance appraisal can adjust organizational goals to employees' target. Employee training and development aim for improving employees' knowledge and skills, and must be consistent with the objective of an initiative. Talent development deals with high performance employees since changes in organizational objectives will affect the criteria for talent. As a result, talent managements should be applied as a necessity. By recruitment's guidelines company can decide whom to choose as an employee between potential candidates. Qualities, competencies, and skills referred to guidelines can approximately clarify the success of an employee in the company.

Roles of HRM. Based on the model of Schuler et al. (2001) about key roles and responsibilities for HR professionals, Staffelbach et al. (2012) described the HR roles in the context of environmental initiatives as following:

- **Strategic partner** who understands the business model and gather the relevant stakeholders together.
- **Innovator** who enable the organization to develop the learning culture, guiding and direction people on environmental aspects to the initiatives.
- **Collaborator** who brings specific competences of each function together to make a win-win situation.
- **Change Facilitator** who manage and supervises the implementation of the initiative.

Note that type B initiatives requires much more involvement from HR function and huge amount of effort for training and restructuring the employees in comparison with type A initiatives since the company aims for understanding the environmental issues deeply and type B initiatives operate in the field of core HR activities.

2.3. The Usage of Green Five Taxonomy in HRM

The Green Five Taxonomy gives hints and approaches to human resource managers to use them for reaching sustainability (Bauer et al., 2012). The usages of this taxonomy are mentioned in following: (1) Recruitment: Corporate social responsibility makes a company more attractive for candidates, (2) Employee Selection: Green Five Taxonomy is a framework presenting performance domain of employee green behaviors by

providing both empirical knowledge on predictor-criterion relationships and applied prediction of employee behavior (Hogan & Holland, 2003), (3) Motivating and Engaging Employees: In identifying motivational factors for green behaviors Green Five taxonomy has great importance to organization that are planning for sustainability in their current workforce, and (4) Employee Appraisals and Development: Identifying strengths and weaknesses of each employee for assessing the environmental performances and running normative comparisons between different actors are possible through conducting Green Five Taxonomy's framework that acts like an appraisal tool. In addition, in order to find behavior gaps that need improvements, feedbacks and appraisals are required to be framed in terms of employee behavior.

Trainings for employee green behaviors, like other knowledge-based trainings, need an evaluation of what is needed to be taught to employees. Again, Green Five provides required framework for expanding interventions for employee training in order to increase sustainability.

Overall, some scholars suggested doing an organizational benchmarking beyond the individual employee level is needed to have a deeper understanding of organizations' performances in terms of employee green behaviors.

2.4. HR Practices Facing Different Demographic Characteristics

Gender Differences. Men and women can have distinct contribution in company's environmental efforts. Companies must contribute woman employees to environmentally sustainable decision making, in designing job duties and training programs related to

sustainability. On the other hand, men are active in influencing others, informing stakeholders and the public about organization's initiatives, supporting and promoting green initiatives, etc. If green performances are aligned with job performances results in higher motivation to undertake green behavior by men (Klein et al., 2012; Wolfers, 2006).

Age Differences. According to Klein and colleagues (2012) and Czaja et al. (2006), since the impact of age differences in sustainability variables is not significant, companies do not need to be concern about this issue. But, it may useful if companies focus on showing older workers the benefits of environmental actions through some programs such as management seminars and training programs, while encouraging younger workers to pursue their environmental interests, express their environmental ideas, and turn them into actions. Companies need to help younger employees to be more aware about the way they use resources as well as the ways to reduce/avoid harm in their tasks.

Education and Income Differences. Morrison et al. (1972) pointed to the importance of workplaces' roles in encouraging individuals with low incomes to recognize and care about environment. Employees notice that their contributions have impact on and improve environmental issues when environmentally friendly work settings are applied to the company. But first of all, companies must be sure about the availability of opportunities for taking sustainable actions and behaviors to all employees without high cost or constraints. While low income employees motivated by monetary or highly valued awards to conduct environmentally friendly behaviors, and need more training on green products/processes.

In conclusion, the overall education level of employees is an important issue to be considered shaping the environmentally sustainable initiatives Companies with high level of education, and normally higher salaries, face less difficulty in terms of training employees and increasing the environmental awareness (Klein et al., 2012).

2.5. AMO Theory

HR practices are highly related to business performance (Cappelli & Neumark, 2001). Katou (2008) represented points for management and decision makers' level as following:

- Undeniable link between HRM policies and business strategies leads organizations to consider HRM policies in their business strategy to attain selected goals.
- HRM outcomes (i.e., abilities, approach, behavior) have strong influences on the overall organization performance. Consequently, all developments in HRM policies and business strategies should be addressed in such way that increases HRM outcomes.

Researches who link HR with business performances introduce "AMO theory", which identified to positively shape discretionary behavior (Boxall & Purcell, 2003). Appelbaum et al. (2000), introduces AMO framework that describe components of a high performance work systems, stands for Ability (e.g., selective hiring, training, education and developing talented staffs), Motivation (e.g., incentive system, performance based

payments) and Opportunity (e.g., expanding communication, team membership, suggestion systems).

Lepak et al. (2006) defined three main HR policy domains that can increase employees contribution: (1) the knowledge, skills, and abilities (KSAs) domain, (2) the motivation and effort domain, and (3) the opportunities to contribute domain. Based on their classification, a recent research by Jiang et al. (2012), established related HR policies for each domain as followings: (1) for KSAs domain that targeted employees competencies, recruitment policies, selection policies, and training policies are related, (2) for the second domain which aims at impacting employees motivation and effort, performance management policies, compensation policies, and incentive and rewards policies are presented, and (3) for the last mentioned domain that intends to provide an atmosphere in order to let employees apply their KSAs and efforts, they proposed job design policies and involvement policies as main influencing policies.

Employee involvement (EI) and participation has great influence on providing mentioned opportunities and also motivating employees to utilize their abilities (Dietz et al., 2009; Gollan & Wilkinson, 2007). Environmental policy without commitment to quality, services, and EI is meaningless. For this reason, successful companies in EMS try to implement environmental policies in a way that is linked to organizational culture and every actor even suppliers and customers should be involved (Berry & Rondinelli, 1998).

Employee ability goes beyond the limit of performance, motivation is the spark to turning abilities into taking an action and opportunity is about removing barriers, increasing channels and chances for motivated employee's ability to get a voice within organization that forces it directly to modify performance behavior (e.g., pay for performance) and

provide employee a ground to effect their work through high-involvement practices (Macky & Boxall, 2007).

While contingency theory (i.e., HRM has an impact on performance via contingent factors such as business strategies) (Schuler & Jackson, 1987), resource-based view (RBV) (i.e., HRM effects performance in accordance with human and social capital supported through the organization) (Barney, 1991) challenge HRM at the organizational level and are mainly focus on its performance effect from a business perspective, AMO frameworks traditional logic, is interested in industrial/ organizational psychology (Paauwe, 2009). Then, the HR practices role is to define steps for an organization to attract, recruit, develop and train employee ability and additionally, describe favorable behavior which the company's desire by providing both opportunity and motivation for optional attempt (Macky & Boxall, 2007).

To deeply understand RBV, it is notable to consider that the organization's focus is only on rare value added resources that competitors cannot imitate the easily (Barney, 1991).

Appelbaum et al., (2000) also discussed that there should be sufficient amount of skilled, experienced and knowledgeable employees to accomplish all the necessary work for the benefit of the organization. Furthermore, some scholars (Paul & Anantharaman, 2003; Paauwe, 2004) suggested that in sequence to achieve better results and as a consequence success for their organization, employees must be motivated, committed and satisfied.

It is expected that under the guidance of AMO theory, which is the most used theory in all article published after 2000 according to Boselie et al. (2006), an organization have an increase and improvement by its human resources (Kabst & Matiaske, 2005).

For companies who want to become green, they can plan AMO components along with EMS e.g., establishing environmental trainings, putting incentives for employees who work toward becoming green, shaping teams and other chances as a foundation to attract employees working green.

What makes AMO theory unique is that it covers set of mediating changes in employees' abilities, motivation, and opportunities to practice. Among these three different elements, motivation is explicitly 'HR-related' mediator and the rest have 'direct' influences on performance (Boselie et al., 2006).

A recent study, Martínez del Río et al., (2012), focuses on the relationship between High-Involvement Work Practices (HIWP) and environmental capabilities. Besides, Aragón-Correa and Sharma (2003) explain Proactive Environmental Strategy (PES), which is people intensive strategy, relying on tacit skill development and employee involvement. PES refers to a set of systematic environmental approaches and voluntarily improvements and implementations (e.g. new design for processes, products, and activities in order to prevent negative environmental effects) that are not important only for competing with competitors and applying industry's standards, but also for anticipating new regulations and trends in the market in the future. Martínez del Río et al., (2012) find that: (1) HIWPs can increase PES, (2) PES has positive relationship with organizational performances, (3) HIWP can indirectly and positively effect organizational performances, and (4) HR strategies, where the aims are to increase involvement and performances of employees, can act as a mediator to increase PES and play an important role in implementation and development of environmental strategies that are necessary to obtain in order to meet sustainability.

Furthermore, Daily and Huang (2001) suggested that management support and leadership has great importance in starting to become green and that it is the basis for implementing AMO theory. Additionally, Marshal and Brown (2003) stated that managerial attitudes and behavior have significant effect on the result of becoming green. Therefore, for a company that follows green strategies, a green goal and also ability should be start from top level of managers. Then, the company should go step by step through becoming green from some changes in recruitment channels, employees green training strategies, require environmental knowledge level for employees. If a company accomplishes these changes correctly, as AMO theory supports, it can be assure to have done the first step correctly.

What May and Flannery (1995) defined as managements' responsibility is that "they should introduce front-line teams to simple data collection tools and orient them to analyze, on a constant basis, how processes are operated and maintained". Additionally, managers should aware employees that changes toward becoming green can also improve worker health and safety.

Management theorists have identified green issues in several ways (Gladwin, 1993), in particular institutional theory (Meyer & Rowan, 1997), strategic choice (Hrebiniak & Joyce, 1984), population ecology (Baum, 1996) and transformational leadership (Senge, 1991).

Hannigan (1995) argued that society is willing to identify and solve environmental problems in which how those problems are represented by interest groups rather than the problem extremity. Thus, Starkey and Crane (2003) concluded that who is constructing environmental knowledge, how they do so, and in what contexts is highly affecting the paradigm shift in environmental relations.

Scholars have introduced two leadership styles: participatory and consultative. While participatory style motivates and supports employees especially for active research as well as transferring and diffusing generation of new knowledge. Conversely, directive or consultative style leads information and new knowledge flow to be constant and change process with only one exception of medium-sized construction companies (Siebenhuner & Arnold, 2007).

Fryxell and Lo, (2003) suggested that environmental knowledge and values been are two major predictive of more personal managerial behaviors that lead to action and force companies to work within a system tends to minimize environmental effects. In another part of their research, they presented that managements' green actions in the least externally visible form would be to gather information and to employ existing organizational procedures and resources to enhance their environmental performance. Moreover, in more visible form, management may run new programs within their responsibility scale. But, these new projects may have more risks compare to less visible action level.

Managers' understanding of the natural environment tends to be completely limited in ecological terms (Shrivastava, 1994). The lengthening of time scale that accompanies an engagement with the flows of organizational ecology, makes a dilemma for managements which is between demands of the present and investment in the future (Starkey and Crane, 2003).

Senge and Carstedt (2001) represented that "people stay with a firm… because they see an alignment between their personal values and those they perceive the firm to be committed to". The start of this commitment should be from firm strategy, hence from

top management to other layers. This is the reason why so many business schools have added environmental knowledge and courses in management degrees (Fryxell & Lo, 2003).

Taking steps toward sustainable pro-environmental firm should be started from leaders and managers, owing to the research done by Branzei et al. (2004) that shows worsening environmental conditions in China was because executives who prefer to 'champion' new plans and strategies regard to their own value and principles.

The last point to be mentioned is the ability and approach of management in dealing with conflicts since many scholars (Rothman & Friedman, 2001) argued sustainable development is a widespread course of actions that can be interpreted widely by different employees.

Ability. In this section it need to be clear how to attract and develop green employees starting from the importance of applying employees' ability to work. Riordian et al. (2005) suggested that exploiting and controlling employees' skills and knowledge can bring economic value to the firm. This is exactly what Deming (1988) mentioned as " extracting the gold from the employee mine". Additionally, Barney (1991) linked employees' skills and knowledge as authorities for achieving unique sustainable competitive advantage.

Forming and retaining a pro-environmental organization need employees who are agreeable to get involve in green activities. In a Brazilian survey, companies with ISO14001 certification tend to select employees between candidates who have environmental knowledge and motivation (Jabbour et al., 2010). In competitive market

for attracting high skill employees decide on becoming green lever to gain this aim since young generation are more aware of environmental issues than before (Ehnert, 2009).

For years, many scholars only focused on the different aspects of traditional sources of recruitment information (i.e. newspapers advertisements) to point out criteria that could effect perspective of potential employees about the recruitment materials, their reactions to the organization and to encourage them to participate in hiring process of company. Since emerging the Internet recruitment process is changed but still there are some missed points about the manner in which company websites influence prospective employees. Websites in comparison with other channels for job advertisement have more space for giving information to prospective employees and provide a great chance for companies to express themselves (Behrend et al., 2009).

Social performances send signals about the company's responsibilities to multiple stakeholders including employees also (Turban & Greening, 1997). Social performances are not only about community relations, employee relations, treatment to minorities, but also about treatment to the environment (Greening & Turban, 2000) that bring more reputation for companies (Turban & Greening, 1997) and increase applicant attraction. Moreover, Aiman-Smith et al. (2001) presented that ecological rating is the strongest predictor for organizational attractiveness and has a crucial impact on increasing the applicant attraction. Furthermore, in their research it is included since pay is the strongest factor, after companies stressed on their environmental awareness, they should allocate more effort on job characteristics (i.e. pay) during interviews.

Two great researches done by Chapman et al. (2005) and Kristof (2006) focused on the interpretation of prospective applicants about the values and needs of a company and

their needs. If they are fitted and aligned together, it is so called person-organization (P-O) fit perspective. There is correlation between P-O fit and organization attraction (Kristof et al., 2005).

Additionally, a research done by Bauer and Aiman-Smith (1996) supports following hypothesis: Job seekers are more likely to accept job offers from pro- environmental organizations. In the procedure of recruitment, providing complete information during the job search and selection processes has great impact on the company's ability to attract applicants (Richman-Hirsch et al., 2000).

Turban and Greening (1997) address signaling process in which if a company cares about environment, it would care about its employees also. Therefore, social policies may attract job seekers by sending positive signals to applicants about the working conditions. Furthermore, the first step of choosing a job, as Gatewood et al. (1993) represented, is related to the information available about the employing company that forms the image and reputation in applicants' mind.

Working in an environmentally friendly company or not may instead be effected by other multiple factors such as pay and benefits of working in a non-environmentally responsible company and job seekers find themselves in a tradeoff (Behrend et al., 2009). Likewise, Dolan and Munk (1997) completed a research over the 2100 United States' MBA student. The result was that half of the students prefer to select a job in an environmentally responsible company with lower salary than a non-environmentally responsible company high higher salary.

Different individuals will look at different factors for finding a job and scan company image respect to their own needs and values (Aiman-Smith et al., 2001). Albinger and

Freeman (2000) proved that applicants with higher level of education tend to work for an environmentally responsible company in which its relationship with the global stakeholders and corporate social performance indexes are high. These authors also presented that reputation for company as a green organization, acts as a competitive advantage for attracting skilled employees. Signaling information does not influence different job seekers similarly. For instance, work options and values are not well understood and significant for less educated, fewer skills and unemployed job seekers who have urgent needs for a job.

A paper by Philott and Davies (2007) on 757 members of Charted Institute of Personnel and Development (CIPD) in UK released 39% of members have an idea that EM policies and green reputation of a company are great factors not only for recruiting younger candidates but also for maintaining employees.

Regarding to green training and environmental knowledge transfer, since governments have supported environmental protection policies, many firms in different countries have focused on being a leader in environmental technology section (Wilkinson et al., 2001). Taking preventing actions may cause some changes in company's organization from business culture and HRM to organizational capacities for managing environmental actions (Russo & Fouts, 1997) and, as Cardano and Frieze (2000) presented, differentiated and preventive approaches should be integrated with business strategy. These changes, that need related trainings, might include a broad range of social, environmental and economics risk and opportunities (Mandip, 2012).

Dahab et al. (1994) found that improving maintenance procedures, narrow inventory control, maintaining proper material handling and transferring and generally good

housekeeping practices, improve quality and reduce waste. For doing so, May and Flannery (1995) discussed that with training in area of waste management, employees are unique and excellent sources for identifying, solving, implementing and controlling good housekeeping solutions. The key for finding more environmentally materials and products is that usual way of doing and thinking about the procedures should be broken. Changes start from simple step of housekeeping, then going through product/material substitution and ends with complex step of process modification, they all need people to break the way in which they do their routines.

Fernandez et al. (2003) discussed that for a company where reaching a sustainable pro-environmental approach is an aim, improving employee awareness, knowledge and abilities about processes and materials that the company is engaged with are quite required. In other words, if a company wants to go through evolution path toward preventive environmental approaches, it should heavily rely on its resources of organizational involvement and learning.

Furthermore, Fineman (1997) stressed about the importance of employees' involvement in EM success. However Dyer and Reeves (1995) linked productivity directly to the knowledge, Fernandez et al. (2003) stated that accompany of employees is necessary to make a good use of knowledge and without involvement, training and knowledge transferring are not sufficient.

Hart (1995) represented resource-based view in relation to natural environment pointed that EM strategies are mostly labor-intensive strategies that focus on development of skills by employees' involvement. In this research, it Hart argued that managers' and

employees environmental knowledge and awareness, with the combination of motivation surely have great influence in increasing environmental performances.

Preventive and control approaches have different view for developing environmental strategies. While in control approaches organizations use external consultants and do not participate employees and managers, preventive approaches consider organization culture, employees and managers involvements as important factors (Florida, 1996).

The number of companies that dedicate a department or management post especially for environment issues are increasing. But, it seems that this way is only a trick to protect the company from regulations and roles in this department is not well defined. The major task done by this department is to keep employees (especially technicians and engineers) updated from environmental knowledge and information about process improvement and innovative ideas (King, 1995).

During 1980s, companies linked environmental management to health and safety under the name of environment, health and safety (EH&S) department. What this department's staffs have to do is to define overall strategic planning and guidance in relation to environmental functions for other departments and facilities (Epstein & Roy, 2001).

Strong internal channels for easing communication between employees for commenting and sharing strategic vision is one of the key factors toward increasing EI. Also, companies can gain an advantage from employees skills, experiences and motivations and on the other hand, employees feel this sense that the company see them and they are important asset for the company (Argenti, 1999). For this reason, companies should always update employees on achievements and new requirements that provide them sharing common goals, comments, and suggestions (Kitazawa & Sarkis, 2000).

Communication and information sharing are not internal factors for becoming green. A study done by Florida and Davison (2001) shows that in factories with EMS information sharing with government agencies, neighbors, environmental groups, and business customers are more likely to be done and information sharing is a significant factor.

Mandip (2012) proposed to organizations to ask for employees who are known as socially or ecologically oriented and eco-entrepreneurs. These employees have talent to manage and organize existing financial, human and natural resources in a way in which it can bring value added to company's products/services which did not exist before.

As Wright et al. (1999) mentioned, since employees who are not in management level are more involve in procedures and processes, they can recognize problems better and can have great influence in performance improvement. But, Banerjee et al. (2003) suggested that training must be for all employees in the firm and it is not for some departments that are directly involving in production section and as time passes, benefits from trainings become more bold since there will be more efficient and more safe production (Koch & McGrath, 1996).

Continuous environmental training was an issue that Cook and Seith (1992) stated in their research that can leads to an increase in employees' motivation and collaboration at all levels with company's strategies and policies. In addition, they identified features to be included in planning of any environmental training programs as following:

- Reasons that show why the company has decided to run the specified program should be clear.
- Objectives must be clear.

- Subjects of study must fit company's objectives and right information need to be collected

In a study by Vidal-Salazar et al. (2012), first, they distinguish "innovativeness" from the "ability to innovate". While the first concept is defined as a clear direction for new ideas, processes, and products, the second concept refers to organization's ability to implement what is generated by "innovativeness". Moreover, they differentiated Environmental Training (ET) from Organizational Learning (OL). ET is concerned with efforts in order to adapt company's procedures to environmental requirements, which means that it includes trainings on required knowledge and skills through specific program or a routine plan. The latter concept, OL, contains collective and dynamic processes that share and integrate individuals' knowledge with others, enable company to generate knowledge and go beyond the knowledge level of organization. They find following points: (1) innovativeness promotes ET, because a requirement of being an innovative company is being able to go toward internal changes that needs trained and skilled employees, (2) innovativeness promotes OL, because transferring the knowledge and developing organizational rules increase company's capacity, (3) ET promotes PESs since employees are more aware of environment related issues, procedures, and organizational goals, (4) OL promotes PESs, because it transfers the environmental to all groups of company, and (5) for developing PESs, OL is more effective than ET. Because as mentioned before, PES asks for voluntarily work to go beyond organizational knowledge. Besides, implementing OL, which more durable in long run, requires more effort and capabilities than ET, which is easy to implement and measures its costs and time. For implementing OL, HR managers might opt a set of high-performance practices to be implemented

suggested by many scholars (Garvin, 1993; O'Dell & Grayson, 1998), such as staff remuneration system, internal promotion policy, performance evaluation, etc.

Motivation: Performance Measurement and Incentives System. Performance Management System (PMS) in EM is defined as a challenge of how to measure environmental performance standards between different departments of a firm and gathering beneficial data about the environmental performance for managers (Wehrmeyer, 1996).

Florida and Davison (2001) interpreted environmental performance measures as mechanisms in which a company can simultaneously improve their business and environmental performances.

Employees' involvement in environmental issues is crucial factor for achieving creative solutions and better applying of employees' knowledge in this field. Such an EI viewpoint put stress on that the best problem solvers are those who are closer to procedure (Forman & Jorgensen, 2001). Therefore, employees' involvement can directly and positively impact the productivity of environmental set of actions and protection of the natural environment (Hanna et al., 2000).

Additionally, two scholars, Shrivastava (1994) and Getzner (1999), cited that the employees' motivation for taking green actions is the main component for a company to introduce advanced environmental approaches. Meanwhile, MacDuffie (1995) stated that performance is maximized when the company initiates practices that can result in reinforcing workers' patterns of behavior through increasing motivation.

Generally, there are two sources for motivation: intrinsic and extrinsic factors. An employee may have intrinsic motivation, some personal values for taking environmentally friendly actions, and some other must perceive organizational support for doing a research on creativity and innovations for solving environmental problems (Ramus, 2001).

There are different ways to motivate employees and companies can show in different ways that they want their employees get engaged with searching for innovative ideas to solve environmental problems (Ramus, 2001). For instance, they may set environmental policies describe tasks and duties for environmental performance improvements, and also supportive behavior from managers for supporting environmental innovations ideas (i.e. allocating time and resources to describe, examine and develop ideas, rewarding for ideas result in environmental improvements and etc.).

Measuring environmental performances need a set of standards that according to Handfield and Nichols (2002), it strongly encourages for taking environmentally actions which are not an easy task and may interpreted differently by different business units and departments. It is suggested the standards should be start from managers. By doing so, employees can realize the relationship between facility's performances and environmental efforts.

A recent study done by Mandip (2012) suggests that if in a company environmental criteria are written as responsibilities into all staffs' action plan, then the company should run a encouraging plan for a learning culture in EM that managers can ask employees to declare and share their green ideas related to their individual jobs in their performance evaluation meetings. Afterward, green ideas are gathered together and by brainstorming

can become approaching goals. These goals are would be criteria for measuring the performance.

Measuring performances is not the only way achieving motivation. Companies should also take into consideration the incentive systems that lead managers to quantitative measures (and not qualitative measures since they create external barriers for managers) to show if they have reached environmentally improvements goals (Wolfe & Howes, 1993). Merriman and Sen (2012) confirm that incentives increase the managements' attentions to environmental initiatives and suggest that first, indirect benefits compare to direct incentives are an insufficient means to direct managerial attention to sustainability outcomes. Second, sustainability projects compare to other traditional projects need at least equal direct incentives.

The impact of compensation on environmental performances showed in an empirical research by Gerhart and Milkovich (1992). They addressed the direct link between higher performances and contingent remuneration for senior managers while fixed salaries for managers show lower performances.

Beard and Rees (2000) explored organizations tend to become green must develop both incentives and disincentives systems to create appealing behaviors in EM. Incentives may start from verbal or written feedbacks from supervisors that may motivate employees in the direction of environmental improvements to monetary-based environmental rewards. Disincentives possibly can be suspensions, criticisms and warnings to force employees to create environmental improvements (Govindarajulu & Daily, 2004).

Performance-Related Pay (PRP) is a kind of monetary based reward, where for example, a significant portion of managements' bonuses are directly linked to performance

outcomes in EM. Besides PRP, recognition-based rewards in EM present non-monetary rewards for different levels of employees, where for example, paying employees for performing community service and giving them opportunities to participate in green events (Ramus, 2001).

Opportunity. This part is about how to provide space and opportunity to employees and how to get them involved to take actions toward becoming green.

Remmen and Lorentzen (2000) noted that successful EM is achieved not only by managers' involvement but also by involvement of other employees also. Besides, Berry and Rondinelli (1998) revealed that in addition to main drivers boost EM in a company (market, business and regulations), there are cases which employees were a source of pressure on company for defining and addressing environmental problems.

Employees would participate in suggestion systems and environmental projects if they realize managers and supervisors' behaviors are supportive, communication is encouraged, innovative environmental activities are recognized and are included in reward systems (Ramus & Steger, 2000).

Denton (1999) proposed that the key to pollution management need is to win employees 'hearts and minds' to the environmental cause. A case study done by Kitazawa and Sarkis (2000) confirmed Denton's idea: motivating employees to participate and make suggestions for environmental issues result in increasing employees feelings of psychological empowerment that are critical for EM.

Renwick et al. (2013) described three core processes for achieving EI in EM beginning from tapping the employees' tacit knowledge that is achieved because they are close to operations (Boiral, 2002); then, motivating and encouraging employees to participate in improving environmental issues (Govindarajulu & Daily, 2004); and in the end, developing a supportive EM improvement culture.

Moreover, Boiral (2002) made a result out of his case study that using employees' tacit knowledge has great influence in identifying pollution sources, managing emergency circumstances and expanding preventive solutions. A year after, another research by Rothenberg (2003) completed this idea that employees tacit knowledge and EI can cover managers' lack of skills and knowledge which in sum increase environmental performances and identified suggestion program and problem solving circles as two ways to participate workers in environmental issues. Rothenberg made a conclusion that a contribution of contextual, processual and interorganizational knowledge of workers with external knowledge of specialists, managers and technical staffs can lead to improve and solve environmental issues.

Apart from using tacit knowledge and encouraging employees as practices to provide opportunity for employees, referring to Kitazawa and Sarkis (2000), there must be a supportive culture for EM that encourages employees to make suggestions, be willing to changes in production processes, products or law material; to sum up, in companies there should be a supporting culture which is open to any changes even related to deeply rooted values for the aim of improving long-term sustainability. Implementing supportive culture is started from informing employees about environmental problems (Madsen & Ulhoi, 2001).

In providing opportunities for employees to participate in environmental sustainability objectives of the company, the role of unions should not be neglected. Recently, taking action for solving environmental issues is a responsibility that has been added to traditional unions' role to increase their power influencing in the workplace, expand employees' consciousness and encouraging them to create new green jobs (Renwick et al., 2013).

Apart from good results of union roles in some cases, Le Blansch and Lorentzen (1996) stated that the strategic nature of EM weakened the essential role of workers and trade unions.

In the Table 1 a summary of different practices under AMO Theory categorization is presented to have a better understanding of what is known by scholars about the role of HR managers in environmental sustainability plans of the company.

Table 1. AMO Theory: What We Know

Ability		
Management goes Green	Recruitment for EM	Green training and environmental knowledge transferring
1. Managers collaboration with employee in actual decision making	1. Select employee between candidates who have environmental knowledge and motivation	1. Green-related (special) trainings + Training in the field of waste management + Continuous trainings
2. Aware employees about improvement in workers' health and safety	2. Using ecological ratings to increase applicants' attraction	2. Shape green teams for each department
3. Gather information and employ existing organizational procedures and resources to enhance environmental performances	3. Using internet (not traditional sources) to influence prospective employees about recruitment materials, encourage them to participate in hiring process, etc.	3. Improving awareness and knowledge about processes and materials which the company is engaged with
4. Make visible the commitment to firm strategy	4. Using websites as a channel for job advertisement	4. Building strong internal communication channel
5. Prioritize firm's values and norms rather than their own preferences	5. Mentioning about pay for environmental performances in job characteristics during interview	5. Considering employees' and managers' involvements and organizational culture
6. Motivate and support employee for active research and knowledge sharing	6. Increase prospective employees understandings about organizations' values and norms	6. Communicate and share knowledge with external parties
7. Able to deal with conflicts between employees	7. Delivering complete information during the job search/selection process to form image/reputation in applicants' minds	7. Update employees on environmental knowledge/ information, process improvements/ innovations, achievements, and new requirements
		8. OL has more effect than ET in implementing PESs
Motivation		
Using environmental performances measures by employing a set of standards	Paying attention to both employees' personal values (intrinsic factors) and organizational support (extrinsic factors)	Using incentive systems (monetary and non-monetary rewards) to support and motivate employees
Setting environmental policies describing tasks and duties for environmental performances	Supporting innovative environmental ideas	Use disincentive system to force employees to create environmental improvements
Indirect incentives are less efficient than direct incentives in attracting management attention to sustainability projects	Direct incentives of sustainability projects must be at least equal to the direct incentives of traditional projects	
Opportunities		
Tapping employees' tacit knowledge	Encouraging employees to participate in improving environmental issues	Showing the management's commitment to environmental issues, employees' eco-centric values, and their participation in EM activities
Developing supportive EM culture starts from informing employees about environmental problems	EM trainings for union members to increase their power influencing the workplace	

3. Future Researches of Environmental Sustainability

Involving employees in EM initiatives has assigned the most focused empirical literature to it self, the first task done by organizations to start new initiatives (Renwick et al., 2013), and also has been experimented by managers the most (Marchington & Wilkinson, 2005). Based on AMO framework, there are other areas that have not been expanded like EI as following.

3.1. Attracting and Developing Staff

Potential employees are paying more attention to environmental management practices and performance while searching for job more than before (Wehrmeyer & Vickerstaff, 1996; Stringer, 2009). In addition, the amount of organizations that are recognized because of their eco-friendly actions and green employer are increasing (Stringer, 2009).

It is important to address the stage that information about environmental performances and practices effect on the candidates' evaluation process (Jackson et al., 2011).

Renwick et al. (2013) stated that the linkage mechanism of green EI-outcomes relationship has not enough theoretical basis research especially for testing mediators. Also, opposite to the impact of GHRM in attracting applicants who is studied in many researches, there is little work on the field of EM impact on selection process and criteria.

Based on the theory of issue ownership (Pratt & Dutton, 2000), Russell and Griffiths (2008) claimed that individuals' emotional responses to EM have significant effect on their ownership of pro-environment initiatives. This can be an interesting line of empirical research.

The most important HRM practice reaching environmental goals are environmental trainings and creating support culture which employees feels their importance to the system (Ramus, 2001). There are two kinds of trainings: (1) Technical skill trainings required to reach standards and environmental goal, and (2) Employee awareness of these goals to create supporting culture. Although changes address environmental issues started with education and training, the challenge is that if they are effective enough to create sufficient learning that transfers to the job setting (Strassner & Wood, 2009; Holton & Baldwin, 2003). There is also an absence of researches about how effective training programs are about changing attitudes (Kulik & Roberson, 2008).

Case studies illustrating how training can affect both environmental behaviors and environmental outcomes are crucial. It is also not clear that when training is effective: when it is a part of training program or when a specific environmental training is considered and also when the training is in regular plan or when there is an intense training (Jackson et al., 2011)?

There are some obstacles implementing successfully the environmental trainings (i.e. insufficient need analysis, poor trainee readiness, lack of actual/perceived commitment about training goals by senior leaders, etc., Wehrmeyer & Vickerstaff, 1996). There is lack of case study document how to assess and increase readiness for environmental trainings. Case studies discuss about these barriers are preferable. Researches have to address not only training issues but also developing skills enable management to learn throughout the process (Jackson et al., 2011).

Vidal-Salazar et al. (2012) suggested a study to evaluate the direct relationship between the innovativeness and PESs. They also express that the influence of ET on OL opens a new room for research.

Finally, Renwick et al. (2013) suggested to future works to assess the effectiveness of paying employees for green trainings.

3.2. Employee Motivation

There are some points in performance measurement and reward system that have to be targeted for future researches.

Corporate-wide metrics for assessing environmental performances are for determining acquired resources, tracking resource flows by applying information system, evaluating amount of wastes and usages, supporting employees to identify problems and new ideas as well as sending feedbacks about organization's organizational performances (Milliman & Clair, 1996).

The questions are as following: what are the best processes managing employees? What is the best usage and how to balance metrics in total performance appraisal not only for measuring and understanding the effectiveness of employees' responsibility but also for supporting and sending feedbacks to them about firm's environmental outcomes focusing on environmental behaviors? How firms should distribute environmental responsibilities to different level of employees (Jackson et al., 2011)?

In the field of compensation and reward systems, the importance and effectiveness of linking managers' salaries and bonuses to environmental performance goal is illustrated

in a longitudinal study done by Berrone and Gomez-Mejia (2009). The study shows that environmental performance has positive correlation with CEO's payment.

Fernandez et al. (2003) focused on finding the right balance between the punishment and reward. Punishment should not be excessively harsh, forcing managers to give up environment-related actions in the case of poor performances. In addition, rewards must be interested enough to motivate management.

The design of incentive system must be well-structured to avoid management using accounting or other tricks to show that they are achieving good performances which are in short-term (Benz & Frey, 2007). For doing so, strong research mapping effective approaches and structures for implementing reward system to reach environmental performances is suggested (Jackson et al., 2011).

Since employers usually select nonmonetary rewards more than monetary rewards, researches provide better understanding of the reason behind this preference is valuable. Also, explanatory research finding the reason why organizations are not willing to pay incentives for EM performances to all levels of employees and only have paid them to senior managements is missed (Renwick et al., 2013).

Merriman and Sen (2012) suggest that a new research can try to find the interdependent effects of complementary and direct incentives via experiments that evaluate incentives with and without the existence of complementary benefits.

3.3. Green Opportunities

There are meta-analytic studies about EI in general but there is lack of meta-analytic studies more specific for green EI providing key design variables discriminate between effective and ineffective EI initiatives. Additionally, potential mediators of employee tacit knowledge, employee empowerment, and supportive work culture have not defined yet (Renwick et al., 2013).

3.4. Problem Focused Agenda

What Jackson (2012) suggested is that researches on environmental sustainability must shift problem-focused agenda that aim to find approaches and clear recommendations toward specific problem/outcomes. In recent years, researches have heavily focused on content and design issues. A shift from content-focused to process-focused researches help successfully applying HRM activities and practical knowledge while implementing environmental sustainability.

Based on Hart and Milestein (2003), Taylor and colleagues (2012) suggest studies that explain whether choosing different strategies lead to different impacts on HRM system or not. The degree of changes in composition of workforces in companies where they opt more future- oriented strategies is also unknown. Future studies are suggested to address probable differences in HRM systems of companies with different strategies in order to obtain sustainable goals. Furthermore, the type of the firm's industry in selecting

environmental, social, or economical performances needs more attention in future researches.

Achieving Alignment. The questions are how firms can align GHRM with strategies and what are obstacles in implementing it? How firms can assess the extent of alignment (Jackson & Seo, 2010)? Where in the organization (specifying the function and level) management can align HRM and environmental goals (Jackson, 2012)?

Engaging Multiple Stakeholders. Backward (with supplier) and forward (with customer) engagement rise an opportunity to implement and improve HR practices (Brown et al., 2003; Macey & Schneider, 2008). Successfully reaching environmental sustainability needs to take into account the attitudes and behaviors of employees and customers and community and investors and media (Jackson, 2012).

Linking management pay for environmental performances clarifies to different stakeholders that the company considers also the environment. Future researches should identify if there are some HRM practices that effect on stakeholders more than others, how stakeholders evaluate the relationship between HRM practices and environmental goals, and how a firm can assess its partners' HRM systems to realize if they are aligned with their own HRM system or not (Jackson & Seo, 2010).

Environmental Sustainability in the Global Market. HR systems are becoming same as each other in world (Brewster et al., 2004). On the hand, Multi National Companies (MNCs) are increasingly facing issues related to environmental sustainability from governments, environmental activists, employee unions, and customers around the world. An interesting line of research is to assess which one is stronger associated with convergence in HRM systems: regulations or societal attitudes? Do international

differences can affect employees' perception about GHRM activities (Jackson & Seo, 2010)? Applying green literature on Asian economic development countries has been neglected by most of the scholars (Renwick et al., 2013).

The Table 2, which is based on AMO Theory categorizations, aims to summarize a list of future research and knowledge gaps.

Table 2. AMO Theory: What We Do Not Know

Attracting and Developing Staff	Employee Motivation	Green Opportunities
1. In which stage the information about environmental performances effects on candidates' evaluation process?	1. What is the best usage and how to balance metrics in total performance appraisal for measuring the employees' effectiveness and sending feedbacks about firm's environmental outcomes?	1. What are the key design variables discriminate between effective and ineffective EI initiatives?
2. How many employees and who (identifying the level of job) need to participate in training?		2. What are the potential mediators of employee tacit knowledge, employee empowerment, and supportive work culture?
3. How to motivate employees to participate in training programs?	2. What are the best processes managing employees?	
4. What is the effect of individuals' emotional responses to EM with their ownership of pro-environment initiatives?	3. How firms should distribute environmental responsibilities to different level of employees?	3. Lack of meta-analytical studies specifically for green EI
5. To what extent trainings are enough to create sufficient learning and are effective in changing attitudes?	4. Why employees usually select non-monetary rewards more than monetary rewards?	
6. When training is more effective: when it is part of training program or when a specific environmental training is considered?	5. Why organizations are not willing to pay incentives for EM performances to all level of employees and only have paid them to senior management?	
7. Lack of case studies illustrating how training can have impact on environmental behaviors and outcomes		
8. Lack of research on the field of EM impact on selection process	6. Lack of researches addressing the effective approaches and structures for implementing reward system to reach environmental performances	
9. Lack of theoretical basis research in the linkage mechanism of green EI-outcomes relationship	7. What is the interdependent effect of complementary benefits and direct incentives?	
10. Lack of case studies addressing how to assess and increase readiness for environmental trainings		
11. Lack of researches developing skills enable management to learn throughout the process		
12. Lack of assessment on the effectiveness of paying employees for green outcomes		
13. What is the direct relationship between innovativeness and PESs?		
14. What is the effect of ET on OL?		

Chapter 2: Paradox Theory as a Lens for Theorizing in Human Resource Management

In the second section, the aim is to map and managing tensions in HRM by paradox lens. First we start with the concept of theory, its objectives, and approaches. Then, notions and clear definitions of paradox, duality, and dilemma from different perspectives are provided. The differences between these three concepts are described in the next step that helps us to classify different applications of paradox, duality, and dilemma theories. A particular description of paradox theory in HRM, results in a necessary need to get familiar with paradox theory's elements which are paradoxical tensions, ambiguities, ambivalence, reinforcing cycles, and different coping strategies. Finally, after explaining related components, organizational concept, which is identified by many researchers (Luhmann, 1995; Remer, 1997; Brandl et al., 2012), and categorization of organizational paradoxes (Smith & Lewis, 2011) get connected to each other that illustrate clear map of HRM's evolutionary path, characteristics, objectives, structures, relationships, constraints, etc. within different organization concept.

2.1. The Notion and Nature of Theory and Theorizing

The aim of this part is to understand what theory is, its objectives, and approaches. Wolf (2005) interpret theory an "if-then statement" in order to understand and explain phenomena and theoretical approaches as group of theories with similar lines of thinking. Furthermore, Van de Ven (2007) defines theory as " a mental image or conceptual framework that is bought to bear on the research problem" and called selecting, building,

and developing a theory as a critical research activity. Dörner (1994) states " by developing theory, something new is created, and it is not known in advance how the result will look like. For this reason, theory cannot be developed by following a fixed pattern" and viewed the art of theory development rarely described that can lead to the impression of "anything goes".

Ladyman (2002) discourse "If there is one thing that has been learned from the twentieth century debates about scientific method it is that the generation of scientific theories is not, in general, a mechanical procedure, but a creative activity". Moreover, Weick (2002) propose that theory development is a "disciplined imagination". This definition, which is a paradox, emphasizes on this fact that a researcher need to be both creative and controlled at a same time.

There are different objectives and approaches to develop a theory. Theory development aims to reach four objectives: (1) describing (focusing on aspects of problem), (2) explaining (searching for causes of phenomena), (3) predicting real world phenomena and generate true knowledge, and (4) improved design of practices and strategies, which is the application-oriented function of theory development and in the field of management and HRM have great importance (Klimoski, 1992; Weber & Kabst, 2006; Wolf, 2005).

Approaches can be as followings: (1) observations relying on previous literature and common sense (Dörner, 1994), (2) building theories out of case studies using empirical data collection and iterative process (Eisenhardt, 1989), (3) Taking advantage of a greater variety of field of research methods (Snow & Thomas, 2007), (4) extending grounded theory (Glaser & Strauss, 1967), (5) employ heuristics such as analogies or metaphors

(Dörner, 1994), and (6) pursuing the objectives of research process (description, explanation, prediction, design) (Dubin, 1976).

2.2. The Nation and Notion of Paradox

What is called as paradox? We try to answer this question in this part. Different viewpoints on this definition are provided.

Different disciplines such as philosophy, sociology, psychology, and anthropology have effected the definition of paradox during the time (Lewis, 2000). Five types of paradox are as following:

Ordinary Language Paradox: "Paradox is a statement or tenet contrary to received opinion or expectation; often with the implication that it is marvelous or incredible" (Erickson & Fossa, 1998).

Logical Paradox: "A logical paradox consists of two contrary or even contradictory propositions to which we are led by apparently sound arguments. Taking singly, each proposition is incompatible, but taken together they seem to be inconsistent or incompatible" (Poole & Van de Ven, 1989).

Rhetorical Paradox: "In rhetorical studies paradox designates a trope which presents an opposition between two accepted theses" (Poole & Van de Ven, 1989).

Social Paradox: "paradox is a simultaneous existence of two inconsistent states, such as innovation and efficiency or collaboration and competition" (Eisenhardt, 2000).

Philosophy of Science Paradox: “A paradox is an agreement among local interpreting observers that a certain duality of actual behaviors is inconsistent” (Johnston & Selsky, 2006).

Studying paradoxes in organizations lead to a better understanding about organizational phenomena (Lado et al., 2006). The two main usages of paradox in management and organization literatures are mentioned bellow:

First, from the ordinary language perspective, studying paradoxes result in describing tensions and oppositions detected by HRM theory. Second, as an analytical tool, paradox can analyze tensions in the linkage between sustainability and HRM in order to determine sustainable HRM’s dualities (Johnston & Selsky, 2006).

2.3. The Nation and Notion of Duality

Oxford English Dictionary defines duality as “an opposition or contrast between two concepts or aspects” (e.g. centralization and decentralization). Based on Sydow and Windeler (2003) and Möllering (2005), the characteristics of two poles of duality are: (1) each pole needs the existence of the other one, (2) refer to each other (reflexive relationship exist between two poles), (3) create each other, and (4) remain irreducible to each other which means that one pole should not be a subcategory of the other.

2.4. The Nation and Notion of Dilemma

Dilemma is an either-or situation in where a choice has to be made between two equally desirable or undesirable alternatives (Neuberger, 2000). Dilemma has four types: logical, rhetorical, moral, and social.

Logical Dilemma includes constructive and deconstructive dilemmas where respectively has the same result whatever the choice is and lead to impossibility (Rehfus, 2003). For example, in logical dilemma, the decision maker will face dilemma if he/she considers both efficiencies and sustainability while both choices have different economics logics (Müller-Christ, 2007).

Rhetorical Dilemma which the definition is "like quandaries and predicaments, requires us to choose between equally repugnant courses of action" (Erickson and Fossa, 1998).

Moral Dilemma where there is a moral conflict situation between actors. For example, an employee will face a moral dilemma if he/she must make a choice between stop working and spend time with family/friends or continue working to achieve organization's goals.

Social Dilemma includes a paradoxical situation in which individual rationality leads to collective irrationality (Kollock, 1998).

2.5. Comparing Paradox, Duality, Dilemma

Definitions of paradox, duality, and dilemma may not express significant differences between them. Furthermore, they might be confusing. But, comparing these concepts two by two can clarify the definitions and their differences.

In contrast to dilemma, "in paradox no choice need to be made between two or more contradictions. Both contradictions in a paradox are accepted and present. Both operate simultaneously" (Cameron, 1986).

Comparing paradox with duality, paradox includes a broader notion that allows more than one contradictory couple. Consequently, this couple creates tension (Cameron & Quinn, 1988). A brief separation of the characteristics are shown in table bellow based on a research by Ehnert (2009):

Table 3. Comparing Paradox, Duality and Dilemma

Paradox	**Duality**	**Dilemma**
Two or more contradictions operate simultaneously	Only two contradictions	An action (a choice) must be taken
A contradictory relationship exist between poles	A complementary relationship exist between poles	
There is no need to make a decision	There is no need to make a decision	

In addition, what perceived as paradox and duality today, can turn into dilemma in a situation in which taking an action is needed. Furthermore, paradox is an analytical tool includes mutually elite parts that work at a same time, create tensions, and accept their co-existence. Paradox, and not duality, exists in HRM systems there are multiple opposing forces operating at the same time (Cameron, 1986).

2.6. Application of Paradox Theory

In HRM, paradox can be used as a lens for theorizing and as an analytical tool in order to develop a conceptual framework (Ehnert, 2009; Poole & Van de Ven, 1989) and to understand various organizational phenomena (Johnston & Selsky, 2006). There are three main categories to apply paradox as followings:

Organizational change, success, and failure. Using paradox as an analytical tool released that in long-term companies where could settle tensions and bring them back together were the most successful. These companies were capable to completely manage mutually exclusive but at a same time, opposite elements (Cameron 1986; Probst & Raisch, 2005; Peters & Waterman, 1982).

"Paradox of success" describes how extremely focus on what is perceived as success can lead companies to failure (Handy, 1994). Fast growth, uncontrolled change, autocratic leadership, and an excessive success culture where strong competition exists between employees were identified as reasons to fail by Probst and Raisch (2005). They suggested companies to employ sustainable growth, stable changes and shared power where both competition and trust interact with each other.

Paradigmatic changes in organization and management research. The second application is about using paradox to challenge linear cause-and-effect thinking and assumptions on equilibrium based on dominant paradigm of logical positivism (Quinn & Cameron, 1988).

Development of conceptual framework. Since visualizing a concept in a meaningful way is not easy, it is a massive problem to develop a conceptual framework (Ofori-

Dankwa & Julian, 2004). Cameron and Quinn (1988) introduce "competing values framework" which was able to visualize more than one paradoxical tension. Furthermore, the framework is able to illustrate a part of decision makers' difficulties and complexity. Based on this framework, if a pole is getting maximized, the trade offs should be searched in the other one. Panayotopoulou et al. (2003) add new assumptions to this framework to link HRM with the firm performances.

2.7. Application of Duality Theory

Duality theory expresses that dualities occur in complex organizations. The two main application of duality theory in HRM are as followings:

Wavelike or pendulum like patterns of changing management. The first application includes two approaches: (1) swing of pendulum in strategic management theory which deals with shifting position between internally and externally orientations of management modes (Hoskisson et al., 1999). Their research started with description of development with regard to IO and external focus, continuing with going back to resource-based view and internal focus. Swing pendulum is necessary to generate new knowledge. (2) research paradigm which deals with analyzing normative and rational paradigms (Barley & Kunda, 1992). These researchers identified sequences of shifts from nineteenth century. They found that the first shift was from the period of industrial betterment (normative rhetoric) to scientific management (rational rhetoric) while the second and third shifts were to human relations movement (normative) and system rationalism (rational) respectively. Finally, a shift to discourse on organizational culture (normative) was identified.

Sustainable HRM which considers the origin of human resources, includes both normative and rational positions to be accepted and reconciled their tensions (Paauwe, 2004). Bansal (2004) states that the interpretation of sustainability is changed over the time. Therefore, the pendulum must swing back to a higher level. Ehnert (2009) mentions that if sustainability is viewed through social responsibility in HRM, then it is defined as an opposing pole for economic rationality. In other words, it is viewed through the lens of paradox and duality.

Development of duality theory for HRM. Evans (1999) claims that organizations are facing rapid changes and opposing forces since 1990s as a result of development in global business arena. The reason that paradoxes exist in organizations is these dualities. She declares that management modes have been shifted in a wavelike manner from one pole of duality to the other over the past century. Evans and Doz (1991) identify three periods for post was management paradigms: (1) 1950s/1960s: including rational and mechanistic management paradigm based on this assumption that the most effective structure for an organization must be found. Therefore, the management metaphor is "structuring", (2) 1970s/1980s: the structure should be fitted, matched and consistent with strategy. The main HR activity was to match people with positions. The management metaphor is this period is "fitting", and (3) 1990s/…: in the previous period, the opposing forces in HRM research were neglected. Evans (1999) expresses that management approaches are inconsistent and contradictory. Since companies have to apart themselves from external environment to survive they have to follow different logics. In the last period, while the boundaries of HRM domain became vague, it is impossible to separate strategy from HRM. Otherwise, it may result in opposite desired

effect. The management metaphors of this period are dynamic balance between dualities, focusing on diversity, and reconciling dualities.

Evans (1999) discusses about a duality that HRM has faced which is local responsiveness and decentralization vs. global efficiency and centralization. Apart from advantages of decentralization in delivering HR services, it results in duplication of resources and slowing down the responses. He proposes that companies should not lose local entrepreneurship and should build coordination links across units (Evans et al., 2002).

2.8. Application of Dilemma Theory

Remer (2001) suggests ideal configuration for management systems based on their organizational environments. Considering this ideal configuration, dilemma management is defined as a situation where finding the appropriate configuration of a management system, which also takes the relationship between different elements of this system into account, is the problem. Strategic fit between systems and their environment is the main concern of dilemma management (Hülsmann & Berry, 2004).

Remer (2001) defines the dilemmas between opening (external or environment orientation) and closing (internal or system orientation) of organizational boundaries. “Opening” is necessary for organization in order to survive so they can receive input/resources from their environment. On the other hand, organizations need to “close” their internal orientations to maintain their identity (Luhmann, 1964).

From dilemma management perspective, human resources (people) do not only realize a company’s strategies, but they are also able to generate strategies (Remer, 1997).

2.9. Elements of Paradox Theory

Ehnert (2009) asserts that different scholars have identified several elements for paradox as followings: (1) paradoxical tensions, ambiguities, and ambivalence, (2) reinforcing cycles, and (3) strategies to cope with paradoxes.

Paradoxical Tensions, Ambiguities, and Ambivalence. Lewis (2000) states "Paradoxical tensions signify two sides of the same coin". Mutually exclusive elements and contradictory nature of paradox are the reason behind the creation of tension (Cameron, 1986; Eisenhardt, 2000). In other words, tension is created between poles of paradox, duality or dilemma (Ehnert, 2009). Tensions are unavoidable and an active coping is needed (Eisenhardt, 2000). Instead of categorizing tensions into negative and positive groups, Cameron (1986) introduces "creative tensions". In contrast, Lewis (2000) believes that tensions are negative dynamics. A study on everyday tensions between company's periphery (people who are positioned at organizational boundaries i.e. salesman) and its centre (people who work at the centre of organization i.e. marketing department) reveals that there is a difference between creating strategy in mentioned areas. While at the centre, rational and deductive planning approaches are prioritized, people in periphery prefer inductive and trial and error methods (Regnér, 2003). Nelson (2001) asserts that centre-periphery pattern can create creative tensions and foster diversity and based on Regnér (2003), has great importance in making new knowledge and strategies about company's organizational environment.

This pattern can be applied to sustainable HRM. In a situation in which central planned strategies face limitations, it is important to check if there are any linking pins or boundary roles persons in HRM's peripheries who can present inductive approaches to strategies. Recruitment team can attract potentially new employees who have completely different understanding about HR strategies and expectations from future employers (Aldrich & Herker, 1977; Organ, 1971).

Örtqvist and Wincent (2006) found a positive relationship between role stress (role ambiguity, role conflict, role overload) and job tensions. But, the tension that is focused in this study is the one is created by paradoxes, dualities, and dilemmas. It is worth to notice that paradoxical tensions can have impact on job tension and role ambiguity (Ehnert, 2009). Furthermore, Evans (1999) represents that instead of focusing on performances, the focus should be on tensions.

Boselie (2009) presents that for companies aim to achieve long-term survival it is necessary to address both financial and societal performances. "Strategic balance perspective" is a suggested framework that includes three dimensions to be addressed in HRM boundaries which have potential conflicts and companies need to balance them: the external market (i.e. market or technology development), the external institutional dimension (i.e. external social and cultural dimensions), and the internal configuration of the organization (i.e. cultural/administrative heritage of the organization in terms of culture, structure and systems).

In order to deal with he tension arises from following both financial and societal performances, Boon and colleagues (2009) introduce the concept of "institutional fit" which intends to "find an optimal level of conforming to institutional pressure and

differentiation from competitors. This construct can contribute to our understanding of strategic HRM by providing insight in this more nuanced and balanced goal setting of organizations". Different levels of institutional fit are: deviate, conform or innovate. A multi-dimensional fit or performance criterion is needed to manage HRM and organizational complexity in order to achieve strategic balance.

The other elements of paradox are ambiguity and ambivalence. Ambiguity is defined as individuals' reactions to paradoxical tensions (Evans, 1999). HR managers found themselves victims of ambiguities between capitalism and patriarchy. From sustainable HRM perspective, it is important to address the problem between normative ambitions of how HR managers should act and how they have to deal with daily pressure of efficiency (Legge, 2005).

Tolerance for ambiguity that helps openness in an organization is another concept that has great importance for individuals who has to deal with paradoxical tensions (Gebert & Boerner, 1999). This concept is included in the cultural dimension of high versus low uncertainty avoidance. Ambiguity depends on particular contexts, individual actors' perceptions, and sense making process (Hofstede, 2001).

Based on Wright (2007), ambiguity makes difficulties for sense making process. Since complex decision or sense making are not only the top managers' tasks but they are more related to highly-skilled and self-managing employees, the importance of skills in decision-making under ambiguity have been increased (Mintzberg, 1973) and companies should reduce ambiguities for their employees (Buller & McEvoy, 2000).

Ambiguity and lack of power together shape vicious circle and tension for those who are responsible. Defining the elements of success or failure, people who are responsible for

them, and the special contribution of HR managers are complicated. The ambiguity of HR managers' roles is that they have a position in management and a responsibility for employees simultaneously. Besides, a lack of power exist with their role which Legge (1978) called it "three vicious circles".

First vicious circle emerges because HR managers are not directly involved in decision-making issues related to people management that result in insufficient trained staff and getting involved to the crisis management instead of strategic management. This reactive position leads line managers to perceive that the effectiveness of HR managers is poor. Not clear success criteria for HR managers make the second vicious circle. Lack of strategic focus and uncertainty about priorities emphasize their reactive role.

The third vicious circle comes from this fact that compare to other managers, HR managers have not a good reputation and high status and highly motivated managers prefer to work on other department rather than HR. They think that there is no opportunity to work for other departments if they work for the HR.

Eisenhardt (2000) states that changes cause both negative and positive outcomes for employees and organizations, which is so called ambivalence. Piderit (2000) studies the organizational need to foster ambivalent attitudes and their approaches to reconcile them with individuals' desires to maximize the effects of ambivalence. This study leaded to identify the self reinforcing cycles as another core element of paradox (Eisenhardt, 2000; Lewis, 2000).

Reinforcing Cycles. Co-existence of opposing poles promotes reinforcing cycles (Lewis, 2000). In order to define the dynamics caused by opposite poles, different metaphors

have been use (i.e. wave, pendulum, etc.). The term reinforcing cycle considers also the developments over the time (Luhmann, 1993).

Reinforcing cycles are defined as loop-like phenomena that happen repeatedly over the time because of this fact that paradoxes, dualities, and dilemmas should be resolved over the time (Lewis, 2000). While Lewis (2000) explains that the reinforcing cycles are the negative dynamics of paradoxes, Eisenhardt (2000) calls reinforcing cycles as "positive feedback loops emerge to drive people, group, and organizations into spiral of increasing or decreasing pluralism and change. These loops can have consequences that occur at different points in time, and so intersect in unpredictable ways".

The term cycle has been used in literature of organizational learning where managers have to deal with paradoxical tensions to create learning cycles and not be attached to a dysfunctional cycle (Argyris & Schön, 1978).

Coping Framework for Paradoxical Phenomena. Lewis (2000) asserts that tensions and reinforcing cycles related to paradox can be coped with and cannot be managed in a way that they are under control. The term "cope" conveys a set of efforts to reconcile, master, accept, and use paradoxical phenomena in order to overcome, reduce, tolerate, avoid, and minimize paradoxical tensions. In this part, two coping strategies are addressed; logical (Poole & Van de Ven, 1989) and psychological (Ehnert, 2009) coping strategies.

The first coping strategy, which is based on Poole and Van de Ven's (1989) research, states "a logically exhaustive set of relationships opposing terms can take in the social world". The second coping strategy, which is extended by Ehnert (2009), has a particular focus on emotions.

Regarding to the first coping strategy, Poole and Van de Ven (1989) introduce different "modes of coping" with paradoxical phenomena and their consequences in a cognitive way. Four modes of paradox resolutions are as followings:

1. Opposition: accept the paradox and poles and use them constructively and simultaneously.
2. Spatial Separation: separating the poles of oppositions to different locations and clarify the levels of analysis.
3. Temporal Separation: taking the temporal dimension into account by separating the poles temporarily in the same location.
4. Synthesis: new perspective which eliminates the opposition between the poles.

Opposition is for dealing constructively with paradoxes at the cognitive level, including two steps: (1) Identify, define, accept (Hampden-Turner, 1990), and understand the phenomena (Poole & Van de Ven, 1989), (2) opposition or accepting inconsistencies (Poole & Van de Ven, 1989).

Hampden-Turner (1990) suggests "framing" as a technique for the first step which means "make each side [of the dilemma] in turn the frame or the context for the other". In this step, tensions remain and opposing poles are performing at a same time.

The second step support this idea that actors who are confronted to the tensions have to accept, tolerate or bear them and then, re-evaluate the situation or use humour (Hampden-Turner, 1990; Erickson & Fossa, 1998). Furthermore, Remer (2001) suggests balancing by compensating opposing forces around an equilibrium as a technique for this step. Later on, Ofori-Dankwa and Julian (2004) add counterintuitive action to it. Another technique, which has substantial importance for HRM, is layering by "building dualistic

properties into the firm", e.g. having differentiation and building on local cultures (Evans & Doz, 1991). In this step, tensions are faced and accepted.

Spatial separation means separating and shifting poles of paradox to different level of analysis (Poole & Van de Ven, 1989). This separation can be a physical separation of poles and then shift them to different locations of organization (Raisch, 2005). Examples of different levels of analysis in spatial separations are micro and macro, individual and society, global and local, centralization and decentralization. The challenges of spatial separation are choosing the right levels of analysis or spatial locations and determining the relationship between different levels of analysis (Poole & Van de Ven, 1989).

The separated poles that are operating in different levels/structures, can efficiently reach objectives at a same time, in a consistent way, in another part of organization, but the paradox or duality still exists (Raisch, 2005).

Temporal separation is a method of separating poles of paradox for a short time. The separated poles operate in different time periods but can have impact on each other and may promote a shift to the other one (Poole & Van de Ven, 1989). Three possible relationships between the poles have been addressed as followings (Poole & Van de Ven, 1989): (1) one pole can influence the other pole, (2) one pole can create the other pole, and (3) both poles have an impact on the other in a mutual way.

Several temporal separation approaches are mentioned in prior sections as waving, cycling, pendulum swings, balancing, and oscillating. Temporal separation has made challenges for both theorists and practitioners. While in theory development, when a phenomena shifts from one pole to another, understanding the transition points is the crucial question, in practice neglecting one pole at the time of temporal separation is the

main challenge. In sum, when there is a paradox, duality or dilemma, essential attentions must be on determining the point of time when the managements' focuses must turn to the other pole (Poole & Van de Ven, 1989).

Evans (1999) declares that one of the most dualities in HRM is the "temporal trade off between short- and long-term orientation". The permanent tension between short-term profit making and long-term organizational viability is the duality faced by HR practitioners (Wright & Snell, 2005).

In this step, tensions are avoided at one point in the time and coping is deployed in future that leads to reduction in emotional tensions (Poole & Van de Ven, 1989; Ehnert, 2009).

Synthesis that aims to resolve paradox in higher level, includes two main approaches: (1) abstracting (Hampden-Turner, 1990) and (2) synergizing, integrating (Evans, 1999; Remer, 2001; Poole & Van de Ven, 1989).

Abstracting tries to reduce the tension only verbally and delay taking an action step to the future. It can be useful to overcome emotions at least temporarily (Ehnert, 2009). Abstracting is suitable for those companies where another form of coping cannot be realized immediately (Müller-Christ, 2007).

Synergizing/integrating approach is an actively reducing the tension. "Building the future into the present" (Evans, 1999) and abstracting at a higher (meta) level (Remer, 2001) by introducing new term (Poole & Van de Ven, 1989).

An important issue is that while tensions are reduced verbally and actions are delayed to the future, the real paradoxes cannot be resolved one and for all. New tensions may appear and they need to be expected (Ehnert, 2009).

Regarding to the second coping strategy, Ehnert (2009) asserts that people who confront contradictory phenomena have to cope with them emotionally. Otherwise, individuals may make an inertia decisions lead to dysfunctional effects for HRM or the organization.

Emotion-focused coping strategy aims to reduce the uncomfortable feelings from confronting paradoxical situations, tensions, and ambiguities (Ehnert, 2009). An example for emotion-focused coping strategy is the research done by Harter and Krone (2001) that examined the tensions arising when companies try to cope with changes in organizational environments. They found that when employees talk to each other about their anxiety and uncertainty, the tensions are reduced and they are more comfortable to deal with change or innovation process. Although emotion-focused coping strategy is not able to resolve a tension, it is capable of reducing the feeling of distress tensions and ambiguities and helping individuals to stay active (Ehnert, 2009).

2.10. Sustainable HRM

In contrast to Strategic HRM that aimed to achieve economic goals and maximize profitability, sustainable HRM takes the development of social and human capital capitals into account (Kramar, 2013) and can be deal with concerns about the HRM impact on environmental and social aspects. Ehnert (2009) considered the tensions and paradoxical elements in the sustainable HRM as she defined it as " Sustainable HRM is the pattern of planned or emerging human resource strategies and practices intended to enable a organizational goal achievement while simultaneously reproducing the HR base over a long-lasting calendar time and controlling for self induced side and feedback effects on

the HR systems on the HR base and thus on the company itself". Furthermore, Ehnert (2006) specifies followings as main objectives of sustainable HRM: (1) balance efficiency's and sustainability's ambiguities and dualities against a long-lasting calendar, (2) develop, reproduce, and sustain human and social resource bases in organization, and (3) evaluate the negative effects of HR activities on the HR base and on the HR sources.

Ehnert (2009) found the objectives that lead companies to consider sustainability in their businesses as followings: (1) Creating value and long term success, (2) Obtaining legitimacy, (3) Improving company's reputation, (4) Creating accountability and transparency, (5) Improving employees' life quality, and (6) Increasing the company's trustworthy. Besides, this researcher identifies the reason that companies connect sustainability with HRM: (1) Attracting and selecting expertise, (2) Maintaining healthy and productive workplace for employees, (3) Training and investing in employees, and (4) Creating trust between employees and company.

Characteristics of Sustainable HRM. Ehnert (2011) identifies characteristics of sustainable HRM as: (1) long term oriented, (2) Impact control oriented, (3) Substance and self-sustaining oriented, (4) Partnership oriented, (5) Multiple bottom lines oriented, and (6) Paradox oriented.

Sustainable HRM is long-term oriented that means that it integrated future into the present. Sustainable HRM includes that investment is needed and that maximum exploitation of human resources should be banned.

Sustainable HRM is impact control oriented that means HRM controls its strategies and practices impacts on organization, on itself, and on the employees' health, qualification and engagement. In other words, sustainable HRM controls its impacts on resources

within the company and resources coming from other organizational environment to the company.

Sustainable HRM is substance and self-sustaining oriented that means HRM system can both allow its human and social resources to develop and sustain itself 'from within' in its social, ecological and economical environments.

Sustainable HRM is partnership oriented that means HRM system is able to develop and sustain trustworthy and mutual exchange with its different stakeholders.

Sustainable HRM is multiple-objective oriented that means HRM system can integrate multiple-objectives such as social, environmental, economical, etc., into its performance management systems and control such variables and use these indicators for both internal assessment purposes and external sustainability reporting.

Sustainable HRM is paradox oriented that means HRM systems and employees need to cope with different tensions cognitively and emotionally.

2.11. Mapping and Managing Tensions in HRM by Paradox Lens

For describing tensions in HRM, two studies have to be connected. The first one is the organization concept (Luhmann, 1995; Remer, 1997; Brandl et al., 2012) and the second one is categorization of organizational paradoxes (Smith & Lewis, 2011). After describing these two studies, the paradoxes in sustainable HRM are presented in this section.

Organizational Concept. Researchers identified three logically deduced organization concepts that are classical, neo-classical, and modern in order to reduce complexity, to

identify organizational problem, and to solve problem by linking these concepts to potential organization structure (Ehnert, 2014). The concepts are as followings:

The classical organization concept assumes that the institutional, legal, socio-political and economical organizational contexts have in low complexity with few and little changes. In classical organization concept finding the best solution is the only way to achieve its goal that is making and maximizing the profit.

The neo-classical concept deals with more complex situation in which external environment is dynamic and employees are more qualified and scare. It includes stable planning, needs a linear organizational structure, and aims to incorporate with constraints in achieving profit.

Above all, new requirements for an environment that is extremely complex, dynamic, and uncontrollable and embraces a lot of interdependencies relations, are categorized in modern concept in which an organization strives for multiple goals and measures not only financial performances but also social and environmental ones. The primary issue with this concept is that within this limited universe with limited resources, achieving the unlimited economic growth is not feasible (Gladwin et al., 1995). This issue leads organizations to develop and maintain sustainable economic systems. Classical and neo-classical approaches that are based on efficiency and effectiveness are deficient to address sustainability perspectives (Ehnert, 2009).

Unlike classical and neo-classical concepts, modern concept conceives human resources creative and social beings who have their own goals and lives beyond the organizational boundaries. Similarly, scholars such as Boxall and Purcell (2003) outline HR goals as (1) productivity, (2) flexibility, and (3) social legitimacy.

It is notable that modern does not mean a more recent or better alternative. Depending on the organizations' contexts and their position in development stages, all of organizational concepts can be possible (Luhmann, 1995; Remer, 1997; Brandl et al., 2012).

Table 4, Organization Concept

Organization concept / Characteristics	Classical	Neo-classical	Modern
Organization's characteristics	• Low complexity • Little dynamics and changes	• Medium complexity • Not completely controllable	• Highly complex and dynamic • Mutual dependencies and relationships • Uncontrollable
Research tradition	• Scientific management • Bureaucracy • Administrative science	• Human relations • Motivation theories • Group theories • Decision theory • Behavioral theory • Socio-technical systems approach	• Systems-development theory • Non-linear approaches • Complexity theory • Ecological theories, • Culture theory …
How to response to organization's tensions (Smith &Lewis, 2011)?	• Either/ or choice • A or B? Finding one best solution	• Either/ or choice • Aligning internal and external environment • Under what condition A or B?	• Both/and choices • How to engage A and B simultaneously
Viewpoint about HRM	• Employees as production factors • Employee interest and tensions can be ignored	• Employees as resources/assets of company • Similarity of employer and employee interest	• Employees as human beings • HRM faces plurality, tensions, and contradictions

Categorization of Organizational Paradoxes. Smith and Lewis (2011) categorized four types of paradoxes that represent core elements and activities of organizations: learning (knowledge), belonging (identity/interpersonal relationships), organizing (processes), and performing (goals). This study provides more details for each above-mentioned paradoxes in the end of this section.

Regarding to the paradoxes of "performing" in HRM in different organizational concept, Porter and Kramer (2011) believe that the aim of an organization from performing paradox perspective in classical context is profit maximization and that this aim can even make problems for company's legitimacy and viability. It is supposed that ends (e.g. purposes) are not in a conflict with means (e.g. resources). The neo-classical organization context tends to align internal and external environments. This aim can be accomplished by a "purposeful" organization design (Smith & Lewis, 2011) through "the best fit" solutions, and not by implying "the best way" solutions (Lawrence & Lorsch, 1967). Finally, the aim of modern context that changes continuously, is to include multiple purposes (De Woot, 2005).

Table 5, Paradoxes of "performing" in HRM

Organization Concept / Characteristics	Classical	Neo-classical	Modern
Purpose of the organization	• Make profit (only ends) • One-best way solution	• Making profit by considering constraints (condition of means) • Best fit solutions	• Multiple purposes possible • Oriented toward ends and means • Durable problem solving
Management problem	• Purposeful work • Authority structure	• Purposeful behavior	• Durable problem solving (means-ends tensions)
HRM implications	• Put one best way (A or B) into practice • Contribute to profit via cost-minimization	• Identify best condition via internal and external fit • Value maximization	• Focus on tensions and sustainability (Evans, 1999)

Paradoxes of "organizing" in HRM mainly include centralization versus decentralization, flexibility versus standardization. In classical organizations, companies' structure is highly centralized, processes are highly standardized, and organizations' rules are highly

continued which put economic success in danger because organizing a big and fast growing company is too costly it can be even uncontrollable (Baron et al., 1988).

Flexibility inherits in neo-classical concept, since it considers internal and external requirements. This concept aims to benefit from employees' skills and abilities through considering HR wants and needs.

In contrast to classical concept, modern one incorporates in a decentralized, informalized, fluid, and non-linear structure where employees are encouraged to participate in make decisions about work design.

"Work design- Human factor paradox" is a situation in which HRM tends to use holistic job design (integrates task and autonomy). On the other hand, costs must be controlled and the situation of organizations is becoming more complex which force managers to specialized tasks to ensure efficiency and productivity (note that if the design is holistic and productivity decreases, employees may lost their motivation). If they specialized tasks, cross communication may decrease and communication might be lost which act as barriers in order to achieve goals. A "fit solution" can manage this paradox (Jaffee, 2001).

Table 6, Paradoxes of "Organizing" in HRM

Organization Concept / Characteristics	Classical	Neo-classical	Modern
Organization structure	• Centralized, standardized, continuous, and linear structure • Stable planning	• Considering HR wants and needs • Exploiting professional potential of employees • Variable and imperfect planning • Socio-human increasingly contradictory	• Strategy follows structure • Decentralized, flexible, and informalized structure • Contradictions inherent

Organizational models	• Functional division • Assembly-line organization • Line and staff organization	• Project organizations • Team structure • Production islands • Management by objectives	• Matrix structure • Network organization • Associate organization • Sustainable work system
Organization of HR work, job design	• No HR staff or HR advisory role only	• HR function/department is shared between top managers, HR department or line managers	• HR becomes a responsibility of HR • All managers and employees self-responsibility
HRM implications	• HR strategy follows organization strategy	• HR is still a follower • HR is aligned to organization strategy	• HR strategy can become organization strategy

Paradoxes of belonging refer to changes in view of employees on the work and collective, resulting in undesirable outcomes. While classical concept considers employees as a part of organization, neo-classical and modern concepts consider employees as resources (assets) and partners respectively.

Table 7, Paradoxes of "Belonging" in HRM

Organization Concept / Characteristics	Classical	Neo-classical	Modern
Organization-environment-relationships	• Clear distinction between systems and its environment	• Organization's boundaries are open to adjust to organizational environment • Relationships to environments are characterized by competitive tendencies	• Organization's boundaries are vague • Relationships to environments are characterized by mutual partnership (competing and collaborating simultaneously)
Belonging of HR and interpersonal relationships	• Employees are part of organization • Lifelong employment is normal	• Employees are resources (assets) • Lifelong employment is less normal/frequent • Changes in psychological contract	• Employees are partners (mutual exchange relationships) • New psychological contract

Paradoxes of learning are concern with changes in the method of managing

employees. These changes, which can be either radical or within the existing system, are elements that based on Smith and Lewis (2011), can "foster tensions between building upon and destroying the past to create the future" (pp. 383). Fit perspective on learning tensions should determine the level of investment in the existing HRM system as well as the level of openness to changes to different HRM systems under a specified situation (Boxall & Purcell, 2011).

Table 8, Paradoxes of "Learning" in HRM

Organization Concept / Characteristics	Classical	Neo-classical	Modern
Organizational Knowledge	• Low skilled employees • Firm's director or managers have the knowledge	• Employees are more educated that before • Knowledge specialists and expertizes are growing	• Firm includes both low skilled and highly educated employees • Self-organized employees • Need for life-long learning
HRM implications	• Administrative HR role	• HR as a business partner	• HR is a facilitator, supporting managers and employees' sense making • HR supports ability to work in tension situation • More individualized HR solutions exist

Paradoxes in Sustainable HRM. Ehnert (2009) points out to three paradoxes in sustainable HRM as following: (1) Efficiency- Substance paradox, which Ehnert (2014) defines it as 'the tension between deploying human resources efficiently and sustaining the human resource base and the origin (i.e. the organizational environments where resources comes from) of human resources, (2) Efficiency-Responsibility paradox, which is the tension between economical rationality and relational rationality such as social

legitimacy, and (3) Present-Future paradox, which clearly refers to the tension between short term and long term effects.

The first paradox originate from the traditional view of HRM that focuses on financial performances and on current workplace without considering what is needed to be done today to have determined resources in future. This tension between efficiently and sustainability creates dual economic rationality (Mülller-Christ, 2011).

The second paradox includes tensions when companies aim to deploy resources efficiently and simultaneously make and maintain social responsibilities. Finally, the third paradox, present-future paradox, is applied to a situation in which sustainable HRM, which is long term oriented, has to balance short term and long term requirements; situations in which companies has to balance short term profit making against long term viability.

Chapter 3: Knowledge Gaps, Research Question and Methodology

3.1. Knowledge Gaps and Research Question

The author identified three key knowledge gaps, as followings: (1) HRM can contribute to implement environmental performances, but empirical studies on the relation between the whole HRM system and environmental sustainability are still lacking; (2) some scholars in the field have recognized that HRM implies ineliminable paradoxes, although traditional HRM research has assumed the opportunity to solve, compose and remove them; (3) green objectives in the organization may be paradoxical and generate tensions, but this topic, addressed by several other management disciplines, seems to be neglected by HRM research.

The present paper explores what are the paradoxes perceived by the organization when designing the HRM system aimed at supporting the development of the company towards environmental sustainability.

This research question focuses not only on specific green HRM practices, but on the whole green HRM system. It is rooted in paradox theory, assuming paradoxes to be an inherent element of HRM, and concentrates on emerging HR-related paradoxes associated with environmental sustainability. In terms of managerial implications, the addressed issues are relevant for supporting managers in coping with paradoxes, because (i) the first step of the process of elaboration of a coping strategy is recognizing paradoxes (Poole &Van de Ven, 1989; Lewis, 2000) and (ii) “staying with the paradox”

(Vince & Broussine, 1996, p. 4) and coping with it, instead of managing, planning and controlling, is a key ability of the "modern manager" (Poole &Van de Ven, 1989).

3.2. Methods

Research Design. Previous empirical research identified and theorized paradoxes through rich case studies (e.g. Leonard-Barton, 1992; Westenholtz, 1993). Since the aim of this research is investigating the paradoxes related to the design of the green HRM system, we adopted a qualitative and interpretative research approach (Schwandt, 1994). In particular, our research is based on a multiple case study design, in order to achieve a wide understanding of the topic and a robust base for the analysis and a possible extension of research findings (Eisenhardt, 1989; Yin, 2003).

The case selection criterion was guided by the theoretical sampling principle of Grounded Theory, which bases the choice of cases on the relevance for the theory being developed. The process results in a constant comparison between data collected and the need for more data that has to be gathered in the subsequent empiric work (Corbin & Strauss, 1990).

For cases selection, we decided to focus on Italian context, for two basic reasons. First, in Italy, HRM is based upon what is known as the European model (Mayrhofer et al., 2012), which, compared to the US model, has a stronger stakeholder orientation and is more deeply nested into society and social awareness. In addition, according to Albareda and colleagues (2006 and 2008), in Italy, government plays a fundamental role in promoting an inclination towards environmental sustainability, leading companies

toward social and environmental issues (Perrini et al., 2006 and 2007; Russo & Tencati, 2009; Habisch et al., 2011).

Within this national context, the initial requirement for companies to be included was that they were multinational companies with an Italian ownership, since we wanted to collect opinions directly from those who developed and planned sustainability and HRM policies at the company level. In a second moment we decided to consider also foreign-owned multi-national companies, including in the sample some organizations that were able to develop environmental policies at the country level.

We centered our sampling procedures on the members of a private foundation that connects companies involved in social and environmental sustainability actions.

The foundation is settled in the North of Italy and collects multinational companies who have establishments all over the country. The members of this Foundation are thus companies who are renowned for their environmental efforts and performances, being considered leaders in their industries regarding environmental sustainability policies. These characteristics assured the relevance of the selected cases for the aim of the research, as well as the interest and collaboration of participants.

We had a total number of 6 participating companies. The entire fieldwork lasted approximately ten months, from March 2013 to December of the same year. All the interviews where collected directly in the offices or establishments of the companies. Table 1 summarizes the main characteristics of our sample.

Table 9. Characteristics of the companies and the role of the interviewees

Disguised company name	Headquarter	Ownership structure	Listed/ Not listed	Countries where it operates	Number of employees worldwide	Industry	Key product/ services	Market/ consumers	Interviewees
Company A	Italy	Family Business	Not listed	4 countries in Europe and North America	5000	Paper Production	Kitchen paper, toilet paper, facial tissues	From households to companies	-Environmental Manager -General HR Manager also responsible for the CSR
Company B	France	Non Family Business	Listed	20 countries in Europe, Asia, the Americas	20000	Business Services	Consulting services and project development	From telecoms and media to defense, railway, automotive	-Communication Manager and responsible for the CSR -Environmental Manager -General HR Manager
Company C	Italy	Family Business	Not listed	20 countries in worldwide	3300	Healthcare/ Chemical industry	Diagnostic imaging, drugs, health services	All people who need imaging, health services or drugs	-Environmental Manager -Manager in the CSR & Communication Dept. -General HR Manager
Company D	Italy	Family Business	Not listed	5 countries in Europe	1400	Iron and Steel Industry	Billets, hot/ cold rolled reinforcing steel, wire rod, electro-welded mash	Private/industrial building companies	-Environmental Manager -CSR Manager -General HR Manager
Company E	Belgium	Family Business	Listed	55 countries worldwide	29100	Chemistry Industry	Consumer goods, energy, paper, automotive, IT construction, agriculture	Consumer market and industrial customers	-CSR Manager -Country Manager -General HR Manager
Company F	France	Family Business	Not Listed	13 countries in Europe, Asia and North America	61000	Mass Retailing Industry	Gardening retailer, outdoor furniture, cleaning accessories	Households and construction companies	-Coordinator for Sustainable Development (matching CSR and Environmental Manager roles) -HRM Director

Data Collection. The case studies involved extensive interviewing of key organizational actors, coupled with the use of documentary evidence in the form of company reports, documents, corporate website, and other materials provided by interviewees (see interview guides at appendix 1 and 2).

Before approaching every company, we generated background information and circulated it in the research team. We initially asked to conduct interviews with the HRM Director (HRMg), the Environmental Manager (EnvMg), and the Corporate Social Responsibility (CSRMg) Manager. However, in some cases there was not the specific role or two roles where overlapped on the same person. The last column of Table 1 summarizes the number and order of interviewees for each company and their roles in the organization.

We set the interviews in a way to have the HRM Director as last interviewee. The first interviews with CSR and Environmental Managers covered aspects such as the implementation of sustainability policies in the company, the current strategies and practices, the responsibility for environmental matters and "green" performances, the expected contribution from the HRM Department and possible sources of paradoxical tensions. In the last interview we entered the details of the HRM process, distinguishing the different components of the green HR system and asking an evaluation of every function in relation to sustainability goals.

The main data gathering technique was the semi-structured interview (Drever, 1997), which we applied following the guidelines for the ethnographic interview elaborated by Spradley (1979). In this sense, the interview protocol was intended as a flexible tool of inquiry instead of a rigid scheme: we prioritized the natural development of the interviewee discourse, adapting the interview track while performing it.

All the interviews were conducted in presence of three researchers and lasted between one and two hours. The content of the interviews has been transcribed and translated to English, while this was the common language of the international research team. The final empiric documentation of our research resulted in 16 interview reports, which were supported by written documentation both self-collected and provided by the interviewees.

Data Analysis. The analysis procedure made general reference to the method of applied thematic analysis as elaborated by Guest et al. (2012). This content-driven and inductive approach can be complementary to Grounded Theory on many levels, having the aim to generate themes from textual data. By contrast, it focuses on individual perceptions and tries to delineate the problems of a particular setting, rather than trying to build a general theoretical model.

Accordingly, we organized the analysis in two steps. Initially, we operated a structural coding process (Guest et al. 2012), which means that, based on the research questions and the literature review, researchers shaped different categories and fulfilled them for each company. Quotes and information were summarized in a contrasting matrix and re-examined using a case-oriented approach (Miles &Huberman, 1994).

Then we passed to a cross-case analysis, looking for common problems and areas of conflict emerging in the interviews. The analysis work was based on the identification of themes: following Ryan and Bernard (2003) suggestions, researchers looked in the transcripts for recurring arguments, comparisons and metaphors, making large use of indigenous categories to code the text. In this phase, two coders worked separately in order to avoid thinking inertia. The triangulation of analysis (Denzin, 1978) also helped

to enhance the credibility and reliability of results, since only one of the coders was also present during the interviews.

Every researcher elaborated a list of paradoxes that were then discussed together in the research team. Problems and inconsistencies were solved basing the interpretation on the identification of "exemplar quotations". Illustrative quotations are included in the description of every paradox and help to anchor our findings (Guest et al. 2012).

The whole process was supported by the software for qualitative data analysis Atlas.ti 7. We used it both to isolate key quotations, generate codes and organize them hierarchically, and for exchanging intermediate results and graphic visualizations of every researcher's work.

In the next section the research findings are presented: we first introduce the context and the key features of the green HRM systems and then, according to our research question, we present the paradoxes characterizing those systems.

Chapter 4: Findings, Discussion and Conclusion

4.1. The Organizational Context of the Green Human Resource Management System(s)

This section focuses on the context in which the green HRM systems are embedded, providing information regarding when the analyzed companies started working on environmental sustainability, the strategic reasons (why) in both beginning of the process and today, and what are the key environmental objectives pursed today by those companies (see Table 10).

Five out of six companies explained that taking environmental sustainability into consideration characterized the company even from the early days of its foundation but, as it is evident in their sustainability reports, formal and organized actions such as measuring environmental performances have started from 2000.

We identified the following initial motives that encouraged companies to adopt environmental sustainability: (1) the "ethical orientations" of the top management to the environment (companies A and E), (2) requirement of the customer/ business choice (company B and F), (3) requirement of production process or the nature of the workplace/product (company C), and (4) obligation of law (company D).

However, we found that the motives of the companies to adopt environmental sustainability have changed during the years. In other words, what motivates the companies at the beginning may not be necessarily the same as what motivates them now. Other reasons such as facing the increased sensitivity of the customers and stakeholders toward environment (companies A, B, C, E, and F), utilizing the supplementary environmental trainings (e.g. environmental engineering, company B),

differentiating the company (company D), maintaining the loyal customers (company D), improving the image of the industry (company E), and sustaining the future development (companies E and F) have become new purposes of the environmental effort of the companies.

The analyzed companies deployed their orientation towards environmental sustainability in a wide range of specific objectives, such as reducing waste/water consumption/CO2 emission/scrap (companies A, B, C, D, and E), optimizing the use of raw materials (company E), improving energy efficiency (companies A, D, and E), obtaining environment-related certificates (e.g. ISO 14001, companies A and D), producing recyclable products (company A), optimizing the most energy-inefficient processes (e.g. supply chain, companies B and F).

Table 10. Key features of environmental sustainability in the analyzed companies.

	When	Why (starting)	Why (persist)	What (current key objectives)
Company A	From the 90s	Commitment of top management	• Increasing demand for sustainability	Obtaining environment related certificates, producing recyclable products, improving energy efficiency, reducing CO_2
Company B	From 90s (first environmental report in 2008)	Forced by a customers	• Expanded training • Increased demand for sustainability	Optimizing the transportation, reducing CO_2 emission
Company C	From the early days of the company	Forced by production process	• Increased demand for sustainability	Reducing waste of water, Improving the environment of the territory
Company D	Early 2000s	Obligation of law	• Differentiating • Customers' loyalty attraction	Structuring environment management and sustainability reports, increasing energy efficiency, reducing scrap/emission
Company E	Recent years (first environmental-related report in 2012)	Commitment of top management	• Industry image improvement • Increased demand for sustainability • Future development securement	Improving energy efficiency, optimization of raw materials, and reduction of waste and water consumption
Company F	From 2008	Business/strategic choice	• Increased demand for sustainability • Future development securement	Optimizing the supply chain (reducing the emissions of transportation)

4.2. Key Features of the Green Human Resource Management System(s)

One considerable part of our research was devoted to understand what kind of HR-related actions companies put in place in order to develop the environmental performance of the organization. At this purpose, part of the interviews explored to what extent the different components of the HRM system are finalized by the companies to green purposes (see Table 11).

Knowledge, Skills and Abilities

*Recruiting***.** All interviewed HR managers recognized the positive impact of communicating sustainability plans on potential applicants' quality and quantity, especially on young and educated ones since young generations are considered more sensitive and care about the environment to a greater extent. Among all interviewed HR managers, only HR manager of company F does not rely on the opportunity of communicating green to labor market as the strategy of the company is more focused on implementing green plans rather than showing them.

*Selection***.** HR managers have two approaches in designing selection process with the aim to improve environmental performances: (1) including environmental sustainability related issues in interviews and reflecting them on the selection process to check candidates' sensitivity and alignment with the company view on environmental sustainability issues (companies A, D, and E); (2) including environmental sustainability-related issues in interviews but focusing only on technical skills and not on environmental sensitivity when it comes to select candidates (company B). Actually, HR managers do not consider "green credential" a discerning element for hiring: this happens

only in the case of technical roles that require environmental related skill and knowledge as essential part of the task skill baggage.

*Training***.** While some HR managers set environmental training only for specific positions, which are related to environmental issues (company C), others arrange trainings for all levels of employees (companies A, D and F). Besides, since selection and training practices are considered together when developing necessary skills, a company can invest more in selection process and less in training or vice versa. For instance, the company E's HR manager decided to focus on environment-related skill in selection process to avoid investing in environmental training.

Motivation and Effort

*Performance Management***.** The majority of HR managers are interested in measuring only those environmental performances that lead to cost reduction (companies B and C). Nevertheless, it is possible to find individual or unit performance targets aimed at improving organizational environmental performances (companies A, D, E and F).

*Incentive and compensation***.** HR managers have assigned both monetary and non-monetary incentives to motivate employees toward environmental sustainability plans (companies A, C, D, E and F). Sometimes, they exert creative forms of symbolic rewarding such as the plantation of a tree for every employee, "employee of the month" prizes, or even the possibility for an employee to participate to a week-long World Wildlife Found (WWF) camping (company F).

Opportunity to Contribute

*Employee involvement***.** Companies try to increase the participation of their employees in environmental sustainability plans using suggestion boxes, conferences, meetings, sustainability reports and social networks (e.g. company intranet). For example, whereas companies A and D use suggestion boxes to involve employees in sustainability processes, rewarding suggestions according to the level of their applicability, company E uses the intranet of the company as a tool through which employees can discuss their viewpoint on environmental sustainability.

*Job Design***.** Environmental tasks are never included in the job description with the exception of special technical positions or responsibility roles (e.g. site managers for companies in chemical and steel industries, companies A, C and E).

In sum, among the different components of the HRM system, we found that all HR managers in the companies we studied have adopted performance measurement practices to promote environmental performances. In addition, interviewees of five out of six companies assert that they apply recruitment, selection, and incentives policies to foster the environmental sustainability goals of their companies. Finally, we found job design to be the least used function for improving environmental performances as only three companies have job specifics and these specifics are only for positions that are directly related to environmental responsibilities. Specifics of each company's practices are presented in the Table 11.

Table 11. Different practices of green HRM system (*ES is abbreviation for Environmental Sustainability)

Contents	Knowledge, Skills and Abilities			Motivation and Effort		Opportunities to contribute	
	Recruitment	Selection	Training	Performance Management	Compensation/ Incentive	Involvement	Job Design
Company A	ES* practices and performances are used for attracting applicants	ES sensitivity is a criterion in the selection process	Environmental training for all departments and employees	Measuring different green behaviors	Monetary and non-monetary bonuses	Using suggestion box, periodic meetings on ES issues, international programs related to environment	For specific elements on ES
Company B	ES practices and performances are used for attracting applicants	Technical skills are only considered	Environmental training only as a part of other technical trainings	Measuring only cost reducing green activities	-	-	-
Company C	ES practices and performances are used for attracting applicants	-	Environmental training only for certain roles	Measuring different green behaviors/ activities but mainly the cost reducing ones	Monetary bonuses	Using informal channels to gather suggestions from workers	For managers and engineers especially those in production and research area
Company D	ES practices and performances are used for attracting applicants	ES sensitivity is a criterion in the selection process	Environmental training for all departments and employees	Measuring different green behaviors/activities	Monetary and non-monetary bonuses	Using suggestion box	-
Company E	ES practices and performances are used for attracting applicants	ES sensitivity is a criterion in the selection process	-	Measuring different green behaviors/activities	Monetary bonuses	Using social networks, involving staff in the process of self assessment/continuous improvement, assigning dedicated days to ES	For specific elements on ES
Company F	Not using ES for employer branding and recruiting	-	Environmental training for all departments and employees	Main focus of ES criteria is for specific positions	Monetary bonuses	Assigning projects/ideas to employee who work on that for 8 hours	-

4.3. Ten Paradoxes Emerging in Organizations When Human Resource Management Meets Environmental Sustainability

In this section, we report the emerged paradoxes related to the design of the green HRM system. Overall, the companies interviewed acknowledged the explanatory capability of the paradox theory, since it helped them to diagnose the tensions characterizing the role of the green HRM system. We report below the ten identified paradoxes and present the sound but contradictory arguments that characterize each pole of the paradoxes.

Paradox 1: Green Performances vs. Other Business, Economic and Social Performances of the HRM System

Setting environmental goals along with other goals such as economic, social, and human goals usually poses companies in a complex situation and may bring a paradox to light. Managers face this paradox when they want to set the direction and objectives of the green HRM systems.

The first pole concerns employing HRM to improve environmental plans. However, developing implementing environmental plans increases the possibility of financial shortages for companies and may hurt other plans. Thus, the second pole of this paradox entails using the potential of HRM to enhance financial and social performances.

Company B is an example of company where there has been recently an open conflict between ES performances and other social and financial performances, since they were restructuring their organization. The general HR Manager seems to have a strong position on this point:

My policy is "people come first" of everything, even of sustainability; If we have to do cutbacks, we cut before all the rest and only at the end, if necessary, we cut people. But you have also to include the other themes in this process because, for example, regarding sustainability, working environment is fundamental for employees satisfaction […]

The interviewee is aware that sustainability has other implications in the company life, for example related to employees' satisfaction and work performance. Therefore, HR Managers cannot totally avoid this dimension. It resulted that Mangers have two main strategies to contribute to the greenings of their organization:

(1) Focusing on green performances when they do not imply costs for the company;

Our company is more concerned with cost reduction; it allows us to do our initiatives but without giving any resource… and the imperative is always not to increase costs…

[HRMg, B]

(2) Implementing green performances when the company has no other priority;

In this moment, we are experiencing a tension at the company level: talking about sustainability whereas we are reorganizing the production is not easy. There is a heavy climate in the company leading some projects to be seen as accessory.

[CSRMg, C]

The companies we studied are strongly committed to environmental sustainability; therefore, they all expressed the desire to improve their environmental performance. Nevertheless, when there are other issues at stake, the same companies prefer to pursue sustainability goals as "ancillary" or "accessory" goals, prioritizing other objectives, financial and social performances in particular.

Paradox 2: Opened/outside vs. Closed/inside Green Human Resource Management system

Environmental sustainability raises the following question to managers: which is the context of our actions? HR policies and practices, the whole organization or should they also involve external actors? While structuring the boundaries of green HRM systems, companies should pay attention to the possibility of the emergence of the following paradox.

On one hand, companies could undertake actions toward external parties like the employers' association, external non-profit associations, public administrations, suppliers, or even customers through marketing channels.

The ambitious recruitment plan of company D represents a case of opened HRM system:

Five years ago, when many old people went into early retirement the company was empty of skills: fresh forces had to fill these losses. [D]'s managers decided to develop a recruitment program in collaboration with local technical high schools. They started to select excellent students who were willing to undertake a dual training program […] *what is interesting is that selection was supported by a work psychologist, who helped the company to assess candidates' attitudes toward environmental and safety issues. At the end of the project, all the trainees were hired* […]

[HRMg, D]

"It was a success" concluded the interviewee that allowed the company to create a trust relation with the new employees as well as with the local community and its educational institutions.

Although this kind of actions positively affects the relations with the external context of the organization, they may present some limitations and difficulties. For example, the Environmental Manager of a pharmaceutical company (C) explains that customers are used to glass bottles as drug-containers but glass is not environmental friendly, since it entails high costs and, in fact, is not recyclable. A possible solution identified by the interviewee could be providing training and information to customers while extending the boundaries of the green HRM system. "But it is hard to change mentality" she concluded.

Another difficulty occurs when partners pay little attention to environmental aspects. While a partnership, with a supplier for example, can be useful, often companies have the problem that other organizations lack in technical knowledge or commitment; in other words, companies may face few internal tensions whereas external resistance can be huge.

The second pole of the paradox thus consists of strategies that look principally at the internal side of organizations. HR Managers affirm that they rely especially on training instruments and intervention on work practices. This way, managers focus their action on the internal workforce, renouncing at the same time to create positive synergies and collaboration with a wider range of actors outside the organization.

Paradox 3: Time Horizon of the Green Human Resource Management System: Short Term vs. Long Term

In the companies we studied, an evident source contributing to paradox is related to whether the organization and, in particular, the HRM System are oriented in a short- or

long-time perspective. This paradox is thus associated with the time and planning horizon of green HRM systems.

It emerges in particular in hard times, when situations such as economic crisis and market recession ask to companies to take actions in order to assure the immediate survival of the organization. In fact, a short-term oriented HRM System enables Managers to have a high control of the overall system, intervening with rapid corrective actions when necessary. On the other hand, with a long-run time horizon it is possible to influence through managerial tools a wider range of organizational outcomes, including social and environmental sustainability.

During the research, we found for example that companies B, C and D where experiencing a company re-organization; this raised an evident conflict between immediate results and the long-term perspective that sustainability policies necessary imply. Actually, people and environmental management may generate problems if considered exclusively in a short time perspective:

[…] downsizing is an activity you do in the short period, because you need to react to the market, whereas greening and sustainability are activities with a medium-long perspective. In any case, in the short term you need to balance: you cannot spend lot of money in sustainability initiatives and give them great visibility while managing a downsizing… you have to balance because you can generate problems in this way […]

[HRMg, B]

According to the interviewee, personnel and environmental management are a source of problems when the company has to face contrasting demands and possible trade-offs between short and long-term objectives. Setting the time orientation of their Green HRM

System companies always "need to balance", assuring immediate results as well as good performances in the long run.

A possible solution to this paradox is, how expressed by the HR Manager of company C, "to make everyone visible the advantages of sustainability" in order that they understand the current efforts and commitment related to environmental initiatives. Even because, she further explained, the efforts companies make today in environmental areas might be not immediately appreciated but in the long run they disclose their usefulness and foresight for the company.

Paradox 4: Focusing the Green Human Resource Management System on Everyday Work vs. Symbolic Appointments

HRM has been often depicted in the interviews as a "soft function", meaning that it especially deals with cultural aspects such as the fit between company values and employees' values, their sensitiveness and attitudes towards certain topics. Nevertheless, organizations also have a "hard" substrate made of rules, procedures and work habits.

It resulted that sustainability can alternatively assume one of these two faces. This paradox has to do with the degree of formalization and integration of the Green HRM system in the organization. HR managers have to address this paradox at the time of formalizing green HR policies and practices: should they act at the level of the symbolic representation of the company or be more focused on the concrete work activity?

Here below is how the HR Manager of C describes the terms of this paradox:

I think there is a little gap between corporate culture and the concrete organization with its procedures… although the cultural level somehow compensate for this procedural

inadequacy. Sometimes it is difficult to move from initiatives to policy because our company style is liquid, fluid and is difficult for us to structure our initiatives […]

On one pole, there is a conception of sustainability as a principally cultural dimension manifested in speeches, slogans, symbols, yearly meetings or resounding initiatives. On the other pole, environmental sustainability is spread in the organization, since managers integrate it in employees' everyday work through regulations and procedures. When the cultural aspect of sustainability prevails, it creates enthusiasm and involvement, reinforcing companies' values and public image. At the same time, it is a signal that sustainability need a periodic recall in the mind of everybody, otherwise it would be overlooked.

This is the motive why the HR manager of company F auspicates a gradual evolution towards a major integration of sustainability in "daily business":

Communication and involvement are really important, not only in relation to sustainability, and have to balance symbolic situations and daily business. The company could consider itself mature when there will be no more need for celebratory occasions with high emotional value, such as the Annual Sustainability Day.

On the other hand, this is how the CSR Manager of E illustrates the shortcomings of a highly formalized Green HRM System:

We do many things but sometimes you loose the general sense of what you are doing: at the end you do not really know if your actions has a positive impact at the global level, or an impact at all…

Although simplifying and overemphasizing certain aspects, communication and symbolic appointments provide to the company and all employees a "general sense" for their

environmental efforts. In conclusion, when defining the formalization of Green HRM Systems, companies always need to balance "symbolic situations and daily business".

Paradox 5: Collective vs. Individualized Green Human Resource Practices

Every company is a mixture of different employees carrying different characteristics, interests, perspectives: these often represent a problematic aspect of organizations. In other words, inner diversity leads to a paradoxical situation. Companies where explicit messages and strategic statements connect visions and missions to environmental goals are aware that these messages have different audiences. This paradox emerges at the time of setting the level of standardization of the Green HRM system.

On one pole, there are undifferentiated messages, steps and practices that clear up ambiguities regarding strategic environmental plans. This universal approach results simple to manage and effective in the case of strong homogeneous company cultures and when there is a shared commitment regarding sustainability goals at all company levels. Conversely, it fails to address different values and interests of employees when there is high internal heterogeneity.

For example in company C, environmental efforts are directed to all employees, without considering their position and organizational level.

Not all of the middle managers are fully committed to ES and we take the risk to send ambiguous messages to all workers: it might be the case of an employee who is strongly commitment to environmental sustainability whereas his/her direct supervisor is not committed at all […]

[HRMg, C]

Neglecting different orientations and positions may affect the way supervisors manage their subordinators causing misunderstandings and failures.

The alternative strategy is to focus on the interests of the employees and assign suitable practices to different categories. Of course, this pole needs more time and preparation, but it is successful to take advantage of potential capabilities, even of those employees who are not green-oriented.

For example, the HR manager of company D explained that while young generations are more sensitive to environmental plans, older generations "for reasons such as age and monoculture" think about environmental plans as unnecessary. The company decided to face this inconsistency differentiating its HRM practices in relation to the different age groups.

We have already illustrated (paradox 2) its ambitious recruitment plan that injected young sensitive employees in the organization. Regarding senior employees and workers, they decided instead to act at the level of work practices, modifying the layout of the workplaces and introducing new rules and procedures in the ambits of safety and waste disposal. Since they could not manage to impact inner beliefs and values of this part of the workforce, they decided to act on concrete work behaviors in order to reduce the inconsistency within the company.

Paradox 6: Designing the Visibility of the Green Human Resource Management System: Front Stage vs. Back Stage

Communication of green initiatives and corporate image result hot spots to manage: it is necessary to send the right message and with the right timing to obtain the desired effect;

otherwise the risk is to cause dysfunctional behaviors, complaints, lower the commitment and decrease the company credibility in front of the employees and other stakeholders.

The 6th paradox has to do with the degree of visibility of the Green HRM system. On one pole we have companies that generally benefit from showing their environmental actions thanks also to the support of their marketing Department.

The reactions of our clients sometimes are positive… I think especially to the youngest customers who are prepared and sensitive about environmental initiatives and they support and appreciate our activities… we have some market researches about this […].

[CSRMg, C]

Interestingly, in the interview with the Environmental Manager emerged how the same company C had recently to intervene on the visibility of its green initiatives when facing the protest of a group of dismissed employees.

There are also companies that do not advertise at all their environmental efforts since they feel it is not advantageous. This is the case of company D, which operates in the iron and steel industry: even though sustainability contributes positively to the internal climate (evidences from the employees' survey), the external environment including customers, suppliers and competitors do not show the same sensitiveness.

I think that sustainability has a positive impact in the company life, even though, the commercial and marketing areas have a very different position: according to them, sustainability actions are a total failure since they cannot sell even a ton more of steel thanks to sustainability policies.

[CSRMg, D]

While illustrating other paradoxes (1-4) we have already seen how it is not possible for the companies to put environmental initiatives and investment always in the front stage, since different stakeholders within and outside the company usually have different priorities. Working on the visibility of the Green HRM System gets necessary when dealing with different expectations. Sometimes companies opt for giving less visibility to their environmental efforts, putting on the front stage other initiatives or investments which are much more appreciated by the stakeholders of the organization in that moment.

Paradox 7: Value-free vs. Value-based Employee Involvement in Environmental Issues

In the management of HRM some choices has to be done with regard to how much a company wants its employees engaged in sustainability efforts and what kind of involvement they should have in realization of environmental plans.

Employees' involvement could be purely on an instrumental base, defined in the employment contract and supported by the benefit system. On the contrary, it could be rooted in personal attitudes mobilizing employees' values and sensitiveness. This paradox operates at the level of motivations and opportunities for employees to participate.

An example of value-free, transactional involvement comes from company F in mass retailing who implemented a system of sanctions for store-level collaborators, to push them to collect wasted packaging in the proper way. Value-free involvement mechanisms can reach all the employees in the organization, not only those already committed to environmental sustainability. Such a system of control and sanctions could be effective in

reducing deviant behaviors and free riders, although does not assure a truly committed workforce to environmental actions.

In fact, it is important to have employees who are aligned with the general vision and mission of the organization. That is why some companies (A, C, E) declared they try to verify candidates' "green orientation" during job interviews. However, when managing their personnel, a further process of involvement implies the risk of creating new expectations and demands for companies:

There's fear and uncertainty in every changing process. Many people do not do their best because they do not know where the change is leading. There's also a fear in activating people: they would become more critical and ask always more, if the company share some problems or doubts […]

[HRMg, F]

The same risk was clearly identified by the CSR Manager of E, stating that when she asks an opinion to someone, then "they will come back and ask you a feedback". This is because people do not content themselves easily and "always want to know the result of their contribution".

The paradox is essentially related to whether a company prefers "activated" employees, accepting the implication of raising their motivations and expectations; or whether a company prefers a value-free employees' involvement. Using benefit/sanction systems implies the risk to reinforce an exclusively instrumental attitude towards sustainability goals, with no ethical implications for the employees. At the same time, this approach results less problematic from the managerial point of view and more effective in reaching the whole personnel.

Paradox 8: Top-down vs. Bottom-up Change Processes

In our study, we found that the nature of environmental sustainability implementation can be traced back alternatively to top-down or bottom-up change processes. Indeed, strategic and structured actions are in the context of a top-down practice, meaning that they start from top management and the organization change follows the process structured by top managers. In contrast, companies can obtain involvement, commitment and participation through bottom-up processes, which emerge from employees and then diffuse to the upper levels of the organization.

There are many reasons that push companies to choose top-down practices, for example the influence of top management decision, the possibility of cost reduction and clear evaluation of interventions through measurement of sustainable-related criteria or the possibility to implement prompt corrective actions. For example, company E, decided to opt for a general top-down approach to sustainability; the CEO of this organization said that this was necessary, otherwise there would not have been any significant progress in the environmental ambit for the company.

One problem of this approach is that it stresses very much on results, even though when companies undertake an action, results are not certain and information is never complete.

When the colleagues put up a project, a doubt remains: can we manage to balance people, planet earth and profits? The goal is ambitious, the project goes in the right direction, with data on the reduction of carbon dioxide and waste… but one could wonder how much the model actually affects global balances. It is a virtuous path, but how much can you affect this balance? […]

[CSRMg, E]

Moreover, when companies follow this pathway, it seems that they have difficulty in creating commitment:

The main challenge is creating commitment. This is the most difficult thing needed to start the project, because it requires a substantial initial investment and it is hard to manage involvement.

[CSRMg, E]

On the contrary, company E chose to stimulate suggestions and change initiatives directly from the employees. Bottom-up processes are characterized by "less pressure" and "more spontaneity", affirmed the interviewee, nevertheless they have their own weaknesses:

We organized forums where people can discuss about environmental sustainability. We were trying to reduce impacts at the individual level, including the private life, but some have seen it as an intrusion, because they see a disproportion between individual and business impacts. These topics are delicate and may cause employees' complaint […]

[CSRMg, E]

When bottom-up processes are on-going, it is difficult to obtain a shared agreement, undertake different environmental actions, explain and use them in environmental reports or branding activities. In this sense, the lack of a clear direction can lead to ambiguous outcomes, disagreement or even rejection for some employees.

Paradox 9: Centralization vs. Decentralization of the Green HRM system

Managers know that environment-related plans require not only resources and funds, but also consistency in implementing and involvement of all the departments. Based on these

requirements, a key question is whether the company should have a separate environmental department (centralized structure) or environmental professionals working in all departments (decentralized structure). This interrogative concerns the structuring of green HRM systems and directly affects the criteria defining employees' required abilities, motivations and opportunities.

Actually, a centralized environmental department enables companies to have explicit and distinct environmental actions and specialized employees whose abilities, roles and responsibilities are clearly defined for the other departments.

Describing the relation with the HRM department of her company, the head of environment department of company C affirms:

The contribution of the HR results in a strongly supportive action. For example, when communicating to employees the results of environmental performances such as waste collection, recycling, energy savings […]

Nevertheless, centralized structures may pass on problems from one department to another, complicating company structure and decision-making. Another problem of centralization is that environmental competences of HRM department may be not enough to guide employees towards sustainability goals.

In terms of supportive training, the HR plays a passive role, since the department of environment proposed the environmental trainings and the HR only agreed with them. Moreover, HR offers little support at the operational level […]

[ENVMg, C]

To become decentralized, companies need culture, time and trainings. However, this strategy results attractive for organizations because it decreases the misconnection

between departments. A concrete example of decentralized structure is the role of the sustainability development coordinator in company F. The definition of this role, which is a combination of CSR and Environmental Manager tasks, aims to emphasize the fact that responsibility in the company is a common charge.

Our slogan is: everyone is responsible for every responsibility! [emphasis]. *Responsibility thus refers to good suppliers, transport, people management, customer contact, products marketing, support in the use of products more and more green, impact in the area where the store is located, waste disposal […] every business unit works to enforce the sustainability process.*

[SDC, F]

Company F, which operates in mass retailing, has a highly decentralized structure with local nodes operating as separate business units. Since the beginning of their sustainability strategy, in every store "green teams" has been created, which elaborate and pursue own environmental initiatives. An emerging problem is that the realization of these initiatives was highly dependent on the disposition of local actors such as the Store Managers. In fact, it could be that stakeholders within and outside the organization consider environmental goals secondary goals, since there is not a central authoritative interlocutor.

Paradox 10: Role of Human Resource Managers in the Green Human Resource Management System: Personal Credibility vs. Professional Credibility

Exactly as the previous one, the last paradox has to do with the degree and form of involvement of employees in the greening of their companies, but it focuses on those

actors in the organization who works directly on the HRM System: HR Managers and their staff.

The 10th paradox concerns the personal positioning of people working in HRM departments with regard to environmental sustainability. The issue at stake is: is it preferable a "technical" and professional support, based mainly on company's request and operating through the classical HRM tools; or a "personal" involvement of HR Managers, which overcomes the boundaries of their professional and working life?

On one hand, the HR Manager is a "professional supporter" of sustainability in the company, helping to design a technically optimal Green HRM System, which involves recruitment, training, job design, benefit system etc. This way HR Managers support the greening of their organization doing what they know best: HRM.

However, the action of HR Managers would be limited to their professional role, leaving apart personal beliefs and lifestyle. The other option is actually to bring personal values in their work, in order to strength the effect of some interventions in the Green HRM System with the personal example and beliefs of HR Managers.

The two poles are well exemplified by the opposed positions of two of the interviewed HR Managers. According to the HR Manager of B, "beyond ethics and ideal tension for improving the world, which are part of every individual, the role of the HR Manager should be separated…", since it is not part of this role to promote environmental sustainability at the company level, he further explained.

Another interviewee preferred instead a more "exposed position", from the point of view of his private life and everyday choices:

The most difficult thing was changing personal behaviors, in order to reach a congruence between said and done in lifestyles, especially in the domestic and private ambits. Because in order to spread a green message I must be believable [emphasis] *So, me and my family, we decided to make purchase choices such as get rid of a car, pay attention to water and energy consumption etcetera. This allowed me to see myself as a reliable interlocutor, and to carry on environmental efforts for my company in a vigorous way.*

[HRMg, F]

A "professional approach" focused on specific HRM policies and practices, according to the first interviewee, strengths the position of HR Managers and give them more power in supporting sustainability policies along with other organizational objectives. On the contrary, the second interviewee thinks that the personal example of HR Managers in the promotion of sustainability at the company level, although less systematic, is more effective "to carry on environmental efforts" in front of himself and the employees.

4.4. Discussion

In this section we discuss the key knowledge advancements and the managerial implications of our findings. One key finding of this study is that paradoxes were found to be a common and recurrent element in the analyzed companies. In addition, we found paradoxes to be pervasive in all the key components of the green HRM system. Indeed, paradoxes were found in relation to the objectives of the green HRM system (paradox 1), its boundaries (paradox 2), its time horizon (paradox 3), its formalization (paradox 4), its standardization (paradox 5), and its visibility (paradox 6). More specific paradoxes were also found in relation to specific practices within the green HRM system, such as

promoting employee green abilities (paradox 9), motivation (paradox 9), and opportunities (paradoxes 7, 8, and 9). Finally, it emerged that even the role of HR manager becomes paradoxical in environmental sustainability oriented companies (paradox 10).

That extends previous literature in two directions. First, it confirms that sustainability in general, and environmental sustainability in particular, are intrinsically paradoxical, and that they convey paradoxes to different functional deployments. The basic knowledge extension in this direction consists of the identification of ten HR-related paradoxes perceived by sustainability-oriented companies, as it has been done in other management disciplines. Second, it confirms that the adoption of paradox as theoretical lens for studying sustainable HRM is a fertile and insightful perspective, as theorized in the recent contributions by Ehnert (2009 and 2014). The basic knowledge extension in this direction consists of a declination of that perspective in an empirical study.

More in general, this study contributes to the development of a more realistic and problematic view of the concept of fit, by integrating -and contextualizing to the HRM field- the management contributions regarding paradox theory. Indeed, Cameron and Quinn (1988) state that considering paradoxes enables researchers to understand the complexity, ambiguity and diversity of organizations. Moreover, Eisenhardt and Westcott (1988) claim that "the contribution of paradox to management thinking is the recognition of its power to generate creative insight and change" (p. 170). Agreeing with studies that consider a "fit" solution and polarized notions an oversimplified interpretation, our study supports that "fit" (i) is a complex task, since both poles of the ten paradoxes identified are attractive; (ii) is multi-level, since we have many paradoxes at different levels of

green HRM system (e.g. paradoxes in boundaries, objectives, time horizon, etc.); (iii) is dynamic, since it changes over time (for example, our findings show that the reasons that companies adopt environmental sustainability at the beginning years ago differ from the reasons that they have now to pursue environmental plans). As a result, we draw attention to the two following questions: (1) can we really expect companies to have a perfect fit; in other words, is it doable? and (2) as many scholars such as Watzlawick et al. (1974), Rothenberg (1979), Quinn et al. (1994) and Denison et al. (1995), refer paradoxes to learning opportunity, can we really suggest companies to constantly look for the perfect fit?

These questions lead to the main implications of the present paper. From previous general management contributions on paradoxes, we know that there are two possible reactions to paradoxes. The first reaction is controlling/suppressing paradoxes, which means assuming a defensive position tempting to avoid and resolve paradoxes; this reaction leads actors not to realize what the causes of the paradox are, worsening the related tensions until possibly threaten organization's survival (Argyris, 1993; Harris, 1996; Lewis, 2000; Jarzabkowski & Van de Ven 2013). An alternative reaction is coping with/exploring paradoxes, which allows managers to consider paradoxes as an opportunity, trying to recognize and become comfortable with paradoxes, and possibly enabling them to make profit from tensions (Eisenhardt & Westcott, 1988; Lewis, 2000; Ehnert, 2009).

The identified list of paradoxes can be considered an insightful analytical tool usable by HR education and HR practice for developing the latter possible reaction to paradoxes. First, HR education might use the list to help students to recognize paradoxes as a mean

to understand the complexity of their organizations, and then to make that complexity plainer. Second, HR practice might use the presented list to recognize paradoxes, as this recognition is considered by literature the first step to elaborate a coping strategy (Poole & Van de Ven, 1989; Lewis, 2000). In this perspective, the list of paradoxes can be used by HR managers and professionals operating in environmental sustainability oriented companies to understand paradoxes in their HR practices and to develop context-specific coping strategies.

4.5. Conclusions

We intend to clarify the limits, future researches, and the main finding of our study in the followings. The main limitations are four. First, our research focuses only on environmental sustainability: we could not address whether the source of the identified paradoxes is the combination of HRM and sustainability or is intrinsic in the HRM itself. Second, we identified the paradoxes without describing coping strategies to deal with them. The third limitation of our study is that we targeted only large companies. Finally, this research involves only designers of environmental sustainability plans and HR practices and not other actors such as implementers (such as line managers) or users (such as employees/workers).

Consequently, possible avenues for future research might be, first of all, whether the environmental sustainability is the source of the identified paradoxes in the role of HR managers or the HR managers face these paradoxes even if the companies do not set environmental sustainability goals. Second, what other probable paradoxes in the HRM role are that this study do not explicate. Third, what the convenient coping strategies are

to deal with emerging paradoxes. Forth, what the paradoxes in the role of HR managers can be if a related study changes the characteristics of the interviewed companies. And lastly, what the tensions perceived by managers and employees who are not performing in the top level of the company are when it comes to environmental sustainability?

In conclusion, the present paper identifies a list of HR-related paradoxes in environmental sustainability oriented companies, through a multiple case study research design. The main contribution of our research is to support the idea that environmental sustainability brings a set of unavoidable paradoxes to HRM and that HR managers need to learn how to deal with them.

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Appendix 1: Interview Guide for Environment and CSR Managers

1. Strategic Issues about Environmental Sustainability

HISTORY AND STRATEGY

1. When and why did you start to care about environmental sustainability in your company? Where did the initiative come from? Did the top management support the initiative?
2. Do you think about sustainability in terms of a strategic goal? How do you pursue it?

   (Alternative: How did you plan to make money out of environmental sustainability? How is sustainability related to your business?)
3. Could you name key actions for environmental sustainability practices that you adopt?
4. Why the company decided to include environmental sustainability in their strategy? (societal factors or regulations?) Do you have price premium because you are green?

IMPLEMENTATION PROCESS

5. Describe the early phases of the integration of sustainability goals within company objectives/mission/operations. What was the degree of changes? At which level in the organization did you start to implement them?
6. Where (at which level) do you think sustainability has the greatest impact in your company (production and manufacturing, HRM, logistics and marketing)?
7. What was your role as CSR manager/ environmental manager in the process?
8. How did you manage to uniform the process in different country?
9. What was your stakeholders' role in shaping the overall environmental strategy of the company and the implementation process?
10. What were the strengths and weaknesses in the implementation of the environmental strategies?

11. Who are the principal planners of sustainability policies in your company? How do they work? How do they coordinate their work with the rest of the organization?
    (Alternative: If you had to think to the most influential actor in your company regarding environmental issues, who would you say? Why?)
12. Which is the role of external stakeholders? How are they involved in your sustainability programs?
13. Do you think sustainable policies and practices impact your business performance? Do they have a positive or negative effect? How (which are the mediating factors)? What are the outcomes (performances) of environmental sustainability policies in your firm?
14. Who is in charge of measuring the achievements of the company in terms of sustainability? How are they measured? Who is involved? Is there internal communication about it?
15. How do your stakeholders assess your environmental performances?
16. What is your personal overall evaluation of the company environmental performance? What are the key areas of improvement?

2. Paradoxes and Tensions in Implementing Environmental Sustainability

1. According to you, which are the principal tensions of caring about environmental sustainability? How you overcome them? Which are the strategies you used?
   (Alternative: Which were the main obstacles in the development of a sustainable strategy in your company? Who and how solved them? Examples of decision making process)
2. Have you ever had the impression of a conflict between economic and environmental goals? In which occasion? How the situation was solved?
3. Which are the challenges/decisions/tensions you face in your everyday work in the implementation of sustainable policies?
4. How do you overcome/deal/solve tensions?

5. How was your learning dealing with those challenges/decisions/tensions? Did you discover some good practices while doing it?
6. According to you, which are the problems of sustainability policies and practices in a for-profit organization? And the opportunities?

3. HRM Issues and tensions about Environmental Sustainability

1. Is the HR department an actor that makes decisions or contributes to organizational decision-making on environmental-sustainability topics? What kind of decision?
2. How is the work of the Human Resource department related to sustainability? What are the peculiar tasks/functions/objective of the HRM in this area?
3. What is perceived as an area of potential conflict in the HR department activity, in the development o environmental sustainability advance to HR department? Did any tension emerge?
4. What are your expectations from HR department? How do you collaborate with them in the achievement of sustainability goals?
5. What is your personal overall evaluation of the contribution that the company HR system provides to the development of environmental performance?

Appendix 2: Interview Guide for HR Manager

1. Basic Functions for Environmental Sustainability

1. What is the role of HRM department in shaping the overall strategy of the company? What is your role in shaping the environmental sustainability strategy of the company?

2. **Ability**
   - 2.1. Do you have any training program about sustainability? How do you plan for trainings? (specific program or routine plan? How many of employees have to participate Are employees forced to participate training?)
   - 2.2. How you evaluate the effectiveness of these trainings?
   - 2.3. In your experience, is there any evidence to show that trainings can also effect employees' attitudes toward environment? Are trainings affecting environmental behaviors besides the company's environmental outcomes?
   - 2.4. How many employees participate the training programs? Where in the organization do they work? Mandatory or not?
   - 2.5. Have you ever considered the relationship between employee's emotional responses to Environmental Management and your initiatives? Which is the impact in your experience?
   - 2.6. What are your strength and weaknesses in training?
   - 2.7. Let's now focus on the employees recruiting process: do you think your sustainability policies impact candidates' evaluation process in the choice whether to apply for a job in your firm? Why? (Employer Branding)
   - 2.8. Do you reveal the commitment for environmental performances to candidates during job interviews? When?
   - 2.9. Do you have any environmental criteria in the selection of future employees?
   - 2.10. What are your strength and weaknesses in recruitment and selection?

3. Motivation

3.1. Do you measure any sustainability related issues in your performance management systems?

3.2. What is the effective incentive system for your employees in environmental matters? (Monetary or non monetary? Direct or complementary?)

3.3. Are you willing to pay monetary incentives for the realization of objectives linked to sustainability? Which other kind of benefit?

3.4. What are your strength and weaknesses in performance management/incentive/compensation?

4. Opportunity

4.1. How HR managers distribute environmental responsibilities to different employees in different levels?

4.2. How do you use employee's experience and expertise in environmental matters (Do you have any regular meetings? How do you collect their suggestions?) Any green team?

4.3. Do you share with unions the information/decisions on environment sustainability issues? Any examples?

4.4. Regarding employees, how do you measure the impact of sustainable policies on their work? Do you ever receive any feedback? How are employees involved in the greening of your organization? At which level (is it a passive or active role)?

4.5. Do you explicitly include environment sustainability in your job descriptions? Examples?

4.6. What are your strength and weaknesses in employee involvement in environment sustainability process?

5. How do stakeholders evaluate the relationship between HRM practices and environmental goals of the company? And how do the company assess its

partners' HRM systems to realize if they are aligned with their own environmental goals?

6. What is your personal overall evaluation of the contribution of the company HR system to the development of environmental performance? What are the key areas of improvement?

2. Performing Under Paradoxical/Uncertainty Situation:

1. What are the tensions/paradoxes that you as HR manager perceived when the company was becoming more and more green oriented? Did you get any conflicting demand?
2. Are new stakeholders to be considered in planning, implementing and managing HR-related issues?
3. Have you ever experienced dilemmas/trade-offs between environmental goals and other kind of goals? Can you give some examples? How did you face them? Which were the company's strategies? Were new competencies required?
4. Have you ever had the impression of a conflict between economic and environmental goals? In which occasion? How the situation was solved?
5. How was your learning dealing with those challenges/decisions/tensions? Did you discover some good practices while doing it?
6. According to you, which are the problems of sustainability policies and practices in a for-profit organization? And the opportunities?
7. Do you consider emotional aspects in dealing with environmental issues? Did you ever experience emotional tension in your work? How did you overcome it? Did you ever talk about it with your colleagues/collaborators?