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## The consensus between Italian HR and sustainability managers on HR management for sustainability-driven change – towards a ‘strong’ HR management system

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By sustainability-driven change, we mean the transformation of a company into an active agent of broad sustainable development. This paper focuses on two key features of this transformation: (i) the key role played by the company’s human resource (HR) management system within that process; and (ii) the fact that the transformation involves a variety of agents and that, among others, HR and sustainability managers are pivotal to the success of the process. Gaining consensus between them on those aspects of the HR system that support sustainability-driven change is a key success factor, as it results in a ‘strong’ HR management system that sends coherent messages to the organization. In addition, consensus between the two managers can be critical in preparing a compelling business case for sustainability for the senior management of the organization. This paper explores the level of consensus between the HR and sustainability managers using a survey of 89 managers in Italian companies committed to sustainability. The results of our research indicate which elements of an HR management system are seen as important for sustainability-driven change by both the HR and the sustainability managers and what differences in perception exist between them. Based upon our findings, implications for HR practice and research are then advanced and discussed.

**Keywords:** human resource management; sustainability; sustainability-driven change

### Introduction

The global financial crisis, the train of economic scandals and the increase in environmental concerns have put companies under pressure not only on account of shareholder interests and the maximization of profit, but also from the broader issue of the company’s sustainability and its impact on society. For organizations, reducing the factors that impact negatively on the environment and how they, as businesses, respond to existing social issues are of imperative concern (Clarke and Clegg 2000; Bansal 2002; Egri and Hortal 2002). Nowadays, companies are expected to account for their capacity of contributing towards sustainable development by answering ‘the needs of the present without compromising the ability of future generations to meet their own needs’ (Brundtland Commission 1987, p. 8).

The path towards sustainable development involves a paradigm shift in different social aspects and requires the contribution of various actors. Stead and Stead (1994) have advanced a comprehensive model of the change demanded by sustainable development. They state that, in order to attain sustainability, a paradigm shift is needed on three levels: (i) the scientific level, where new models allow organizations to understand their part in the interconnected process; (ii) the economic level, where new patterns overturn the basic

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assumptions of traditional models, such as the possibility that the economy will grow forever, the infinite availability of natural resources and the idea that an individual's self-interest is the best way to allocate resources fairly; and (iii) the managerial level, where new strategies, systems and learning mechanisms relating to sustainability must be implemented within organizations.

This paper focuses on the managerial level, addressing the process whereby companies shift from profit maximization to the search for balance between economic, social and environmental performance: this is known as sustainability-driven change (George and Jones 1996). In their pursuit of change, companies must incorporate social and environmental concerns into their strategy and management systems, and so increase their contribution towards sustainable development. Together with other systems, the human resource (HR) management system has a central role in advancing sustainability-driven change (Ramus and Steger 2000; Daily and Huang 2001; Vickers 2005; Jabbour and Santos 2008; Preuss, Haunschild and Matten 2009).

Within an organization, two actors have an equal and major role in designing the HR management system to support the change, the HR manager and the sustainability manager. Consensus between the HR and sustainability managers is crucial in assuring that the HR management system is able to contribute to the sustainability-driven change. Indeed, consensus among message senders is considered a key feature of a strong HR management system (Bowen and Ostroff 2004). In particular, Bowen and Ostroff (2004) pointed out that one of the key requirements of a 'strong' HR management system is consensus among HR decision-makers who, because of that consensus, send coherent messages to employees.

The aim of this paper is to understand the existing consensus between HR managers and sustainability managers on the essential elements that HR management systems contribute to the sustainability-driven change. Identifying the level of consensus is essential in assessing which HR management elements are involved in sending coherent messages and which, instead, in sending ambiguous messages. In order to understand the existing consensus, we carried out a survey involving 89 HR and sustainability managers from 41 Italian companies. Starting from a model proposed by Ehnert (2009), the managers' consensus was measured according to a set of questions about the relevance or otherwise of a list of HR processes and practices in the matter of sustainability-driven change. On this point, there are several reasons why Italy is particularly interesting for studying the relationship between HR management and sustainability-driven change. First, in Italy, HR management is based upon what is known as the European model (Mayrhofer, Sparrow and Brewster 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, Tencati, Lozano and Perrini (2006) and Albareda, Lozano, Tencati, Midttun and Perrini (2008), in Italy, government plays a fundamental role in promoting an inclination towards sustainability on behalf of management by introducing special public policies. Through these policies, Italian companies are highly motivated towards social and environmental issues, based on a constructive and participatory dialogue with their stakeholders (Perrini, Pogutz and Tencati 2006; Perrini, Russo and Tencati 2007; Russo and Tencati 2009; Habisch, Patelli, Pedrini and Schwarz 2011). For instance, Italy has, globally, the highest diffusion of SA8000 certificates (the main certification relating directly to the respect of human rights), both in terms of certified facilities and in terms of employees.

In line with its objectives, this paper is structured as follows. The first section contains a theoretical framework. The second and third sections set out the specific features of this study, its objectives and methodology. The empirical results are presented and discussed

in the light of the general theoretical framework in the fourth and fifth sections, respectively. In the conclusion, which forms the sixth section of this paper, the specific implications of our findings are proposed, with suggestions for possible directions for further research.

### **Theoretical framework**

The theoretical framework of this paper is presented in three parts, which cover, respectively, (i) the key features of the model of change for sustainable development at the managerial level (i.e. sustainability-driven change) and the contribution of the HR management system, (ii) extant literature on sustainability-driven change through HR and (iii) the importance of consensus among HR message senders in terms of implementing sustainability-driven change.

#### *Sustainability-driven change and the contribution of HR management systems*

Although governments play a major role in enhancing development sustainability by introducing environmental standards and social regulatory frameworks, a growing number of companies start the process of change voluntarily, with the purpose of balancing their social, environmental and economic performance (Elkington 1997; Wilkinson, Hill and Gollan 2001; Hart and Milstein 2003; Steurer, Langer, Konrad and Martinuzzi 2005; Dixon and Clifford 2007; Epstein 2008). At the managerial level, the decision to care about their company's sustainability is based mainly on three encouraging rationales: an interest in responding to external pressures, a desire to benefit from making a business case for sustainability, and recognizing the company's moral obligations towards society.

Starting from the assumption that companies have, without any doubt, a large influence over the economy, society and the environment, they face daily requests from institutions (governments, NGOs, associations, etc.), customers and employees pushing their contribution towards sustainable development (Parnell 2008). These pressures increase the interest on behalf of managers for their company's sustainability, feeding the idea that its contribution to sustainable development is becoming inevitable if they wish to operate in the market and the perception that a change in the organization is both mandatory and unavoidable (Campbell 2007).

On the other hand, managers begin looking at their company's contribution to sustainable development because they see it as a means to benefit from the positive relationship between social and environmental efforts and the economic purposes of the corporation (see e.g. Hamilton 1995; Burke and Logsdon 1996; Pava and Krausz 1996; Griffin and Mahon 1997; Russo and Fouts 1997; Edwards 1998; Heinze, Sibary and Sikula 1999; Margolis and Walsh 2003; Wagner and Schaltegger 2004). In this sense, a large number of studies have indicated that sustainability is a situation where economic success is increased if it takes place alongside performance on environmental and social issues (among others, Carroll 1991; Dyllick and Hockerts 2002; Holliday, Schmidheiny and Watts 2002; Epstein and Roy 2003; Perceval 2003; Garriga and Melé 2004; Steger 2004; Schaltegger and Wagner 2006), and that most companies have the potential for making a business case for sustainability (Steger 2004; Schaltegger and Wagner 2006; Rumsey and White 2009). For example, sustainability has been used by a company to promote its reputation (Fry, Keim and Meiners 1982; Haley Usha 1991; File and Prince 1998; Saiia, Carroll and Buchholtz 2003; Carter 2006; Bronn and Vidaver-Cohen 2009) or for encouraging positive behaviour in consumers (Ellen, Mohr and Webb 2000).

External pressures and institutional rationales are not the only reason to encourage the contribution a company can make towards sustainable development. Many managers are interested because they see it as a company's moral obligation towards society (Etzioni 1988). Interest in the role of the company on the subject of sustainable development is, therefore, helped by the parallel consideration of shareholder and other stakeholder interests (Kilcullen and Ohles Kooistra 1999), so that managers will consider the company to be responsible for preventing injuries or harm to staff caused by work-related tasks or operations (Lantos 2001).

When managers take the decision to increase their companies' contribution to the overall sustainable development, this enables sustainability-driven change to take place (George and Jones 1996). This change drives the implementation of an ordered set of actions, in order to move the company from its current state in which its maximization of profit is the sole aim of the organization, to a new state where an equal attention for social and environmental concerns is incorporated into the company's strategy, systems and learning mechanisms (Maon, Lindgreen and Swaen 2009). Ultimately, sustainability-driven change has the purpose of transforming a company into an active agent for sustainable development (Wilkinson et al. 2001; Smith 2003; Reynolds, Schultz and Hekman 2006; Lindgreen, Swaen and Maon 2008; Kemp, Keenan and Gronow 2010). According to Stead and Stead (1994) and Maon et al. (2009), sustainability-driven change is the third level of a broad process of model change, involving science, economy and the managerial level. At the managerial level, sustainability-driven change requires companies to include economical, social and environmental criteria within each of their managerial systems (Bakker, Groenewegen and Hond 2005).

Among the various managerial systems involved in sustainability-driven change, extant literature recognized the central role played by the HR management system in facilitating and supporting such change. Indeed, previous authors have discussed the centrality of HR management systems for sustainability-driven change, for three reasons: (i) the very nature of the HR management system, which can have a major impact on the design and implementation of practices that enhance the organization's sustainability (Ramus and Steger 2000; Daily and Huang 2001; Vickers 2005; Jabbour and Santos 2008; Preuss et al. 2009); (ii) the ongoing evolution of HR management systems, which must meet the needs of a growing number of stakeholders (Ulrich and Brockbank 2005; Colakoglu, Lepak and Hong 2006; Caldwell, Truong Do, Linh and Tuan 2011); and (iii) the inherent tension within HR management systems between the short and the long term, which is a key concept of corporate sustainability (Wilkinson et al. 2001; Boudreau and Ramstad 2005).

Accordingly, recent literature has widely recognized the central role of HR management systems for sustainability-driven change, regardless of the assumptions about the nature of the sustainability-driven change. For instance, assuming that sustainability-driven change is a radical, top-down change process, Mohrman and Shani (2011, p. 30) wrote:

people are the carriers of purposes and values, and they determine how sustainably an organization operates through their day-to-day actions and decisions [...] Organizations transitioning to become sustainably effective are faced with the challenge of establishing and developing new employee understanding of purpose and mission; in these, the people practices of the organization are an indicator to employees of the credibility of this undertaking.

Conversely, the authors who see sustainability-driven change as an incremental and bottom-up change process have advanced the theory that a company's HR management

system plays a central role in progressively involving the employees in this emergent process (e.g. Nord and Riggs-Fuller 2009; Bolton, Chung-hee-Kim and O’Gorman 2011).

### ***Extant literature on sustainability-driven change through HR management***

Although sustainable development has acquired importance in many aspects of management research, HR managers, apparently, do not yet see it as part of their job description (Zappalà 2004; Shen 2011; Harris and Tregidga 2012) and HR researchers have given it comparatively little attention (Ehnert and Harris 2012). Recently, Taylor, Osland and Egri (2012) have written a theoretical perspective regarding the connection between HR management and sustainability. They argued that the HR management system plays a dual role within sustainability, since it operates as a *means* to develop a mindset directed towards sustainability-driven change in the company’s employees, and as an *end* to promote, through employee-centred HR practices, the physical, social and economic well-being of the employees, improving, in this way, the company’s social performance. Empirically, two basic research streams on the relationship between HR and sustainability have emerged over recent years (Ehnert 2009).

Relating to the view that HR management systems are an end for achieving sustainability, the studies included in the research stream are known as *sustainable work systems*. These studies have pointed out that intensive work has a negative impact on workers’ health (e.g. Docherty, Kira and Shani 2008). Harmful side effects of intensive work result in work-related stress symptoms, work-dependent psychosomatic reactions, burnout, self-exploitation tendencies, increased pressure of time and pace of work, and the erosion of trust in employment relations (Kira 2002). To cope with these occurrences, companies have developed specific practices to increase their HR management system’s sustainability, for instance when designing functions, companies should put in place collaborative work systems allowing both tasks and employees to evolve and develop (Kira, Eijnatten and Balkin 2010). Theory relating to the sustainable work system states that practices to increase the sustainability of the HR management system *per se* enable sustainability-driven change by encouraging skills, trust and motivation, balancing the quality of working life with the organization’s performance and controlling the side effects of work intensity (Docherty et al. 2008). Accordingly, in sustainable work system studies, progressive and employee-oriented HR practices are considered to be core to a company’s sustainability, as they have a direct impact on its social performance. For this reason, some companies label employee-oriented management practices as sustainability-related (Gond, Igalens, Swaen and El Akremi 2011). This is also the reason why Pfeffer (2010) argued that HR management should be considered as a key part of a sustainable organization, as it directly impacts on human sustainability. Recently, this stream of study has extended its scope to include international HR management, looking at the issues faced by multinational companies in managing their HRs in the context of extremely differentiated work-related standards and legislation. For example, Shen (2011), among others, argued that – in multinational companies – the implementation of sustainable work systems that are consistent with the labour-related legal regulations and employment traditions of both home and host countries requires (i) a global legal compliance on behalf of the company, which means providing equal opportunities to employees regardless of their nationality, and monitoring their global business partners’ industrial relation practices; (ii) sustainable initiatives to be put in place by the company worldwide, with people employed to analyse, plan and implement these initiatives; and (iii) an increased employee satisfaction, by acknowledging and involving trade unions and employees in the decision-making process for work-related issues.

A recently emerged, second stream of empirical studies covering the relationship between HR and sustainability is known as *sustainable HR management*. It is a long-term approach, aimed at the socially responsible and economically appropriate selection, recruitment, development, deployment and release of employees. Starting from recognizing that a long-term focus in direction and a balance between the stakeholders' interests are pivotal in nurturing the company's sustainability, this stream of research sees HR management as central to systems dealing with the main stakeholder categories and their major role in sustainability-driven change (Davenport 2000). Since sustainable HR management looks at the contribution of the HR management system to the success of the organization, it is part of strategic HR management, which is 'the pattern of planned HR deployments and activities intended to enable the firm to achieve its goals' (Wright and McMahan 1992, p. 298). In particular, sustainable HR management extends the scope of strategic HR management, conceiving that the HR management system contributes to the success of the organization in a broader sense. Indeed, in the view of sustainable HR management, the final objective of the HR management system is to contribute to the balance between economic, social and environmental performance in order to meet the stakeholders' expectations, resulting in better individual and organizational performance, as has been set out in theory (e.g. Gond, El Akremi, Igalens and Swaen 2010) and empirically proven (e.g. Shen and Zhu 2011). For example, the HR management system can make a key contribution to this balance, through the development of new personal and organizational competencies (e.g. Wilcox 2006; Bierema and D'Abundo 2007; Fenwick and Bierema 2008) or by motivating new employees in their behaviour through various incentives and compensation processes (e.g. Merriman and Sen 2012). Empirical research in the field of sustainable HR management has highlighted the contribution of sustainable HR management to different elements of a company's sustainability-driven change, such as responsible leadership or environmental performance and the employees' eco-friendly behaviour. On the subject of the relationship between sustainable HR management and responsible leadership, for example, Gond et al. (2011) demonstrated that HR management can develop what is known as responsible leadership in different ways by (i) encouraging interaction between existing managers and the sustainability department, (ii) implementing specific HR practices aimed at promoting equity and fairness, (iii) encouraging relational interaction with employees on sustainability-related topics, which can result in potentially greater influence of employees on corporate responsible leadership. In reference to the contribution given by the HR management system to the organization's environmental performance, Renwick, Douglas, Redman and Maguire (2013) have, for example, systematically reviewed the available studies that demonstrated how the different elements of the company's HR management system have a direct and significant impact on its environmental performance. Regarding employees' eco-friendly behaviour, Muster and Schrader (2011) have advanced the theory that environment-oriented HR practices can improve both the workplace and the actions taken voluntarily by employees to reduce the environmental fallout resulting from their job.

One of the most comprehensive studies on the role of HR management systems in sustainability-driven change comes from Ehnert (2009). The author analysed the content of information published on the websites of 50 European multinational companies where there was an explicit link between sustainability and HR management. Starting from this analysis, Ehnert developed a model illustrating the 'theory-in-use' for HR practices that support sustainability-driven change (see Appendix). As his model was developed from an analysis of what the companies were actually doing, it is an achievable operational framework for companies interested in supporting sustainability-driven change through

HR management. Among the proposed activities are practices consistent with the concept that the HR management system is an end in itself, and these can be classed as progressive or employee-centred HR practices – such as those relating to work–life balance, diversity, health, safety and ergonomics – as well as practices consistent with the concept that the HR management is a means, with practices enabling sustainability-driven change, such as training, job design and motivating management initiatives that support personal and team commitment to the change.

### ***The relevance of consensus among HR message senders: ‘strong’ HR management systems to support sustainability-driven change***

HR management research has shown that the implementation of a combination of initiatives (a ‘bundle’) is more likely to have an impact on organizational performance than the implementation of a single initiative (Delery and Doty 1996). Therefore, HR management research sees the HR management system as ‘a multilevel construct, consisting of multiple hierarchically arranged components’ (Arthur and Boyles 2007, p. 78).

Among the academics studying the relationship between the HR management system and organizational performance, Bowen and Ostroff (2004) proposed a model in which this relationship was mediated by the extent to which people’s views of situations converge. They distinguish between content (single practices or policies to achieve a defined objective) and processes (features of the system that create shared meanings about the content). The degree to which these meanings converge is defined as the ‘strength’ of the HR management system, and is based on three main requirements: (i) distinctiveness, so that the system captures interest and attention; (ii) consistency, which can be set by establishing an effect over time regardless of the form taken by the interactions; and (iii) consensus, which is based on the people affected by the system agreeing in terms of their view of the causal relationships. Recent studies have focused on the impact between a strong HR management system and organizational performance. Research has demonstrated that a strong HR management system has a positive impact on employee absenteeism (Kehoe and Wright, 2013), on employee satisfaction, vigour and intention of resigning (Li, Frenkel and Sanders 2011), on affective commitment (Sanders, Dorenbosch and de Reuver 2008) and on individual commitment, individual satisfaction, organizational citizenship behaviour and customer satisfaction (Nishii, Lepak and Schneider 2008).

Research on the ‘strength’ of the HR management system has recognized the importance of consensus in achieving strength in such systems. Studies have investigated HR effectiveness by collecting information from a variety of sources, such as line managers and staff (Khilji and Wang 2006), senior HR and line managers (Wright, McMahan, Snell and Gerhart 2001), senior line managers and HR managers (Guest and Conway 2011), HR managers and line managers (Chen, Hsu and Wai-Kwong 2011) and senior executives (Stanton, Young, Bartram and Leggat 2010). This stream of literature – avoiding overly simplistic notions of consensus, as pointed out for example by Legge (1978), who emphasizes the ambiguities in judging HR effectiveness and the scope for differing interpretations of effectiveness – demonstrated the correlation between consensus and organizational performance.

From a managerial perspective, HR management research has provided a few suggestions regarding consensus-building within the HR management system (e.g. Delmotte, De Winne and Sels 2012). One of the most important recommendations is that consensus can be created by an agreement between the principal HR management decision-makers. This agreement also has a strong impact on distinctiveness, because

large numbers of organizational actors who send coherent messages increase the visibility of the messages, and on consistency, because a potential disagreement would result in poor consistency in delivering HR practices.

In the field of sustainability, the need for consensus between decision-makers becomes even more relevant because the managers involved in sustainability-driven change must agree on the role played by the HR management system in this process, so that employees can receive coherent and univocal messages. Even if sustainability-driven change involves a large variety of message senders within and outside the company (Cheng, Millar and Choi 2006), it can be argued that two message senders in particular have a major place in effecting change within an organization: (i) the sustainability manager and (ii) the HR manager. The sustainability manager is responsible for the coherency and efficiency of the overall change to sustainability. He/she is in charge of a new area, different from that of the HR manager, and is responsible for coordinating the initiatives relating to the company's social and environmental commitment in all its functions. This also includes continuous coordination with the HR manager, to address the implications of sustainability-driven change within the HR management system in an effective way (Molteni and Pedrini 2009). Regarding the HR manager, his/her importance in the process of sustainability-driven change has been discussed above. It is, however, important here to point out that, according to HR literature, from when this field first emerged, HR management systems (and, consequently, HR managers) have had a key role within organizational change processes (Ogilvie and Stork 2003). In particular, literature has advanced the concept of HR professionals as agents of change (Guest 1990; Storey 2001; Keegan and Francis 2010), as 'champions' of change (Ulrich 1997), as 'transformative' change agents (Caldwell 2001), as the key actors in reinterpreting symbols and changing their meanings for employees and line managers (Conway and Monks 2008; Sunghoon and Ryu 2011).

In conclusion, consensus between the HR and sustainability managers on the contribution given by HR management to sustainability-driven change is necessary to assure a strong HR management system, one that sends coherent messages to employees and senior management. Indeed, consensus between the HR manager and the sustainability manager on the contribution of the HR management system to sustainability-driven change is crucial in developing a strong HR management system which – sending clear messages to employees – can effectively contribute to the change, as otherwise these messages remain general statements and do not affect the actual business processes. In addition, if managers agree in principle, this can also be the basis for sending coherent and clear messages to the people leading the organization, for example, by presenting a compelling business case for sustainability. Indeed, previous studies have demonstrated that the CEO plays a key role in sustainability-driven change (Swanson 2008; Godos-Diez, Fernández-Gago and Martínez-Campillo 2011) because, for example, it has been shown that his/her leadership styles and personal integrity are effective predictors of the development of the corporate sustainability (Waldman, Siegel and Javidan 2006). Within this context, if the organization's HR and sustainability managers share the same view on how to implement sustainability-driven change, they can arguably provide the stimulus for senior leaders to support sustainability-driven change strategically.

In conclusion, as Figure 1 shows, consensus between the HR and sustainability managers is essential in terms of sending coherent messages to employees and senior management on the specific objectives and contribution of HR management to the sustainability-driven change within the company. On the contrary, when there is dissensus between the HR and sustainability managers, they will send inconsistent messages to senior management and employees.

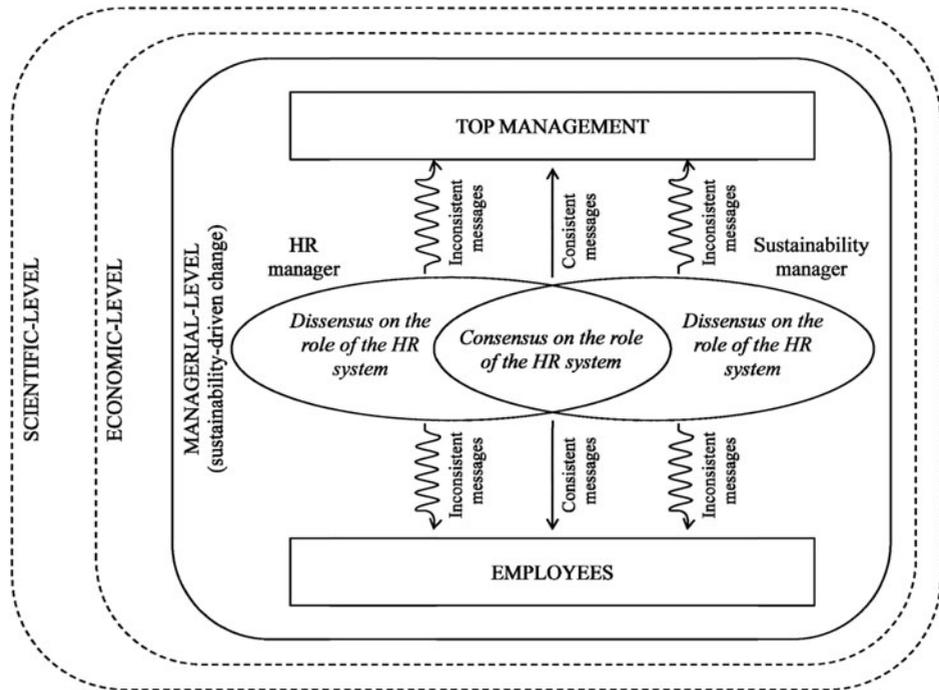


Figure 1. Sustainable development, sustainability-driven change and strong HRM systems.

### Knowledge gaps and specific objectives of the study

This study focuses on the relatively new area surrounding the change to sustainable development at a managerial level (Stead and Stead 1994), contributing to the somewhat limited literature on sustainable HR management research (Ehnert and Harris 2012). The aim of this paper is to assess the consensus between HR and sustainability managers on the contribution given by the HR management system to sustainability-driven change. The comparison between ‘what really matters’ for HR and sustainability managers in HR management is important because their agreement is crucial in designing a ‘strong’ system, as they must both contribute significantly to the sustainability-driven change of the organization.

Little research has been carried out on the role of the HR management system in promoting sustainability-driven change. Although there is call for studies on this subject, ‘sustainability rarely appears in strategic HR plans, and its implications for strategic HR management have received little attention. As organizations increasingly embrace sustainability, however, so must HR’ (Boudreau and Ramstad 2005, p. 130). In addition, the topic is addressed in the light of ‘strong’ HR management systems, a concept that also seems to have been studied little. ‘More attention should be devoted to understanding how strong HR and organizational systems can be created so as to encourage all stakeholders to share similar value systems’ (Marchington and Zagelmeyer 2005, p. 7).

We combined findings from Ehnert’s (2009) seminal study with HR management processes, irrespective of the specific HR management practices included in those processes; for example, instead of asking whether cognitive ability tests were used to select employees, we asked to what extent the recruiting, selection and induction process promoted sustainability-driven change. This approach acknowledges the finality of the

different sets of HR management practices and allows for organizational idiosyncrasies in HR management (Colbert 2004). Among the items included were common HR processes, such as health and safety, training, development and career planning, internal communication, HR strategy and planning, performance appraisal and management, compensation management, industrial relations and collective bargaining, selection, recruiting and induction, and job design and analysis.

## Methodology

This section provides the methodological details of the present study, presenting its sample, procedures, measures and analysis.

### *Sample and procedures*

The study is based on a survey sent to HR and sustainability managers working in 41 Italian companies belonging to CSR Manager Network Italia, the professional association of managers in charge of social, environmental and corporate sustainability issues. We forwarded the survey to the members of this association because, as an organization, it is the most representative of sustainability managers in Italy. For each of the 41 companies, we sent a questionnaire to both the HR and the sustainability managers.

Over a two-month period at the end of 2010, 102 managers were contacted, resulting in 89 completed surveys, with a final redemption rate of 87.3%. The final sample consists of 48 managers in charge of social and environmental issues and 41 HR managers working in the same companies. We used *t*-tests and  $\chi^2$  to test for non-response bias by comparing the personal information of the respondents with that of the non-respondents (Armstrong and Overton 1977). The tests displayed no significant differences between the two groups. Table 1 shows the demographic information about age, gender, level of education, average years of service in total, and average years of service within current company, industry and size of the companies for the managers included in the final sample.

### *Measures and analysis*

In designing the research, special attention was paid to the potential bias from response artefacts, which is among the main concerns in cognitive and behavioural research (Podsakoff and Organ 1986; Podsakoff, MacKenzie, Lee and Podsakoff 2003). To collect data, we decided to use a questionnaire rather than interviews for two reasons: (i) in literature, the interviewer's personal characteristics, expectations and verbal idiosyncrasies are well recognized as being a potential source of co-variation bias among variables in cognitive research (Collins 1970; Shapiro 1970; Bouchard 1976); and (ii) face-to-face interviews tend to induce more socially desirable responses and lower accuracy than questionnaires (Martin and Nagao 1989; Richman, Kiesler, Weisband and Drasgow 1999).

The questionnaire was designed to cover two main areas: the managers' demographic information and the managers' cognitive mindset of sustainable HR management, including information on how the managers judge the relationship between HR processes and practices with the change required to implement corporate sustainability. The managers' cognitive mindset was measured through a set of questions on the importance of sustainability-driven change for the items in a list of processes and analysed practices. The starting point of the dimensions to be included in the analysis was a previous work by Ehnert (2009), in which the author proposed a list of HR practices relating to sustainability. In our

Table 1. Demographic information of managers in the final sample.

<i>Variable</i>	<i>Total</i>	<i>Sust. mgrs</i>	<i>HR mgrs</i>
Participants ( <i>n</i> )	89	48	41
Age (%)			
26–35	5.6	6.2	4.9
36–45	52.8	54.2	51.2
46–55	31.5	29.2	34.1
56–65	10.1	10.4	9.8
Gender (%)			
Male	43.8	54.2	31.7
Female	56.2	45.8	68.3
Educational level (%)			
High school	4.5	6.3	2.4
Graduate	67.4	70.8	63.4
Master	27.0	20.8	34.2
PhD	1.1	2.1	0.0
Industries (%)			
Chemical and pharmaceutical	12.4	12.5	12.2
Consulting and business services	11.2	10.4	12.2
Energy	10.1	10.4	9.8
Food and beverage	7.9	8.3	7.3
ICT	10.1	10.4	9.8
Insurance and banking	29.2	29.2	29.3
Logistics and transport	11.2	10.4	12.2
Retail	7.9	8.3	7.3
Average years' service in work ( <i>n</i> )	20.8	20.5	21.1
Average years' service in company ( <i>n</i> )	12.2	12.3	12.0
Number of employees (%)			
<1000	31.5	31.3	31.7
1000–5000	31.5	33.3	29.3
5000–10,000	19.0	18.8	19.5
>10.000	18.0	16.6	19.5

questionnaire, following a definition of sustainability-driven change, each process or practice was rated by the respondent in terms of its relevance to the change using a seven-point Likert scale. In the scale used, 1 stood for 'not important for supporting sustainability-driven change' and 7 for 'strongly important for supporting sustainability-driven change'. Examples of items included in the questionnaire are: 'Promoting the company's reputation as a socially responsible and trustworthy employer', 'Promoting the company's reputation as a family-friendly or working mothers-friendly employer', 'Life-long learning', 'Vocational training programmes or apprenticeships', 'Ergonomic workplace conditions', 'Reducing and preventing stress', 'Keeping the workforce fit'.

When collecting data, attention was also paid to response bias. To avoid the problems of scale anchors (Tourangeau, Rips and Rasinski 2000) and response acquiescence (Winkler, Kanouse and Ware 1982), during data collection, the order of questions was randomized. To reduce over-justification effects (Greenley, Hooley, Broderick and Rudd 2004) and social desirability bias (Nederhof 1985), respondents were not told about the nature of the relationships being examined. To avoid leniency biases (Guilford 1954), we assured respondents that there were no right or wrong answers and that they should answer questions as honestly as possible.

Similarities and differences in the cognition gap between HR and sustainability managers were tested through the significance of mean difference for processes and

practices. An analysis of the Kolmogorov–Smirnov (K–S Lilliefors) and the Shapiro–Wilk normality tests suggests that processes, practices and factors are not normally distributed. Because the data broke the normal distribution assumption, a set of paired sample *t*-tests and Wilcoxon-signed rank tests were carried out to identify significant differences in cognition between HR managers and sustainability managers. We also tested for mean differences between demographic characteristics (gender, age, educational level, industry, number of employees), but none of the tests showed significant differences ( $p$ -value > 0.05).

In order to reduce the data, we carried out a varimax orthogonal rotation on an initial factor solution based on the principal component method of extraction. Although the sample size of 89 is below the generally accepted minimum sample for factor analysis (100 observations) (Tabachnick and Fidell 2007), we felt that, on the basis of methodological studies indicating that the subject-to-variable (STV) ratio is a second reliable criteria for assessing the right sample size, we could conduct a factor analysis (Arrindell and van der Ende 1985; Velicer and Fava 1998; MacCallum, Widaman, Zhang and Hong 1999). In our research, the STV ratio is 89:25 (3.56), which is above the suggested lower limit of a STV ratio of 3 for achieving factor stability (Arrindell and van der Ende 1985). Having said this, the above-mentioned consideration on sample size raises concerns on possible effect sizes that are likely to be present and could limit the potential generalization of the results.

Following Hair, Anderson, Tatham and Black (1998), the factor analysis showed a four-factors solution with an explained 55.81% of total item variance, and a determinant greater than 0.0000001. Before acceptance, the emerging factors were checked against the value of each eigenvalue greater than 1.0 (Zaltman and Burger 1975). Based on Churchill's (1979) suggestions, we deleted the items with low factor loadings (less than 0.40) or items with split loadings (loading of 0.40 or more on more than one factor). The sampling adequacy was measured using the Kaiser–Meyer–Olkin coefficient, which demonstrates that the variables belong together, with a coefficient of 0.778. These levels of reliability are acceptable since, as Nunnally (1978) suggested, Cronbach's  $\alpha$  are all higher than the limit of 0.6.

The four factors that emerged from the examination of the practices were the employees' well-being, safety and social inclusiveness, individual support, talent support and career development. The factor loadings and the items of each factor are included in Table 2.

We labelled the first factor as 'Sustainability-driven change through caring' ( $\alpha = 0.764$ ). The relative items describe the importance of sustaining employees by caring for them, which implies the implementation of specific policies regarding work–life balance, health, benefits and employees' well-being. The factor loadings range from 0.50 to 0.90.

The second factor was labelled 'Sustainability-driven change through social inclusion' ( $\alpha = 0.728$ ). It consists of seven items with factor loadings ranging from 0.41 to 0.72. Items in this factor seemed to measure both the way in which employee safety is helped (including ergonomic workplace conditions and reduction of stress) and the diversity of employees in terms of culture, gender and age. The factor also includes outplacement services for redundant employees.

'Sustainability-driven change through the development of competencies' is the third factor ( $\alpha = 0.793$ ), which consists of four items with factor loadings ranging from 0.40 to 0.83. Items belonging to this factor seem to measure the intensity of practices directed at the employees' personal and professional development by means of career counselling, training, education and mentoring.

Table 2. Factorial analysis on HR management practices.

<i>Factors</i>	<i>Loading values</i>
Factor 1 – Sustainability-driven change through caring ( $\alpha = 0.764$ )	
To be a family-friendly and a working mothers-friendly employer	0.88
To be an employer who takes employees' work–life seriously	0.90
Remuneration and employee benefit	0.54
Health issues	0.50
Employees' well-being in partnership with local communities	0.58
Factor 2 – Sustainability-driven change through social inclusion ( $\alpha = 0.728$ )	
Promoting culture and gender diversity	0.63
Promoting the company's reputation as a socially trustworthy employer	0.45
Safety issues	0.41
Ergonomic workplace conditions	0.62
Support ageing workforce	0.62
Offering careers and outplacement services	0.50
Reducing and preventing stress	0.72
Factor 3 – Sustainability-driven change through the development of competencies ( $\alpha = 0.793$ )	
Education	0.40
Vocational training programmes or apprenticeships/work placements	0.70
Supporting international careers through services for employees and their families	0.83
Mentoring	0.75
Factor 4 – Sustainability-driven change through careers growth ( $\alpha = 0.765$ )	
Investing in employees' talent and knowledge	0.71
Offering career opportunities	0.79
To be an employer who cares for employees' job satisfaction and motivation	0.56
Life-long learning	0.54
Business training supporting people's individual careers	0.76
Talent management and internal succession management	0.53

The last factor consists of six items with factor loadings ranging from 0.53 to 0.79. We labelled this factor 'Sustainability-driven change through career growth' ( $\alpha = 0.765$ ) because it is based on developing the professional skills and talent of the workforce. Indeed, the items with the highest loading factors are offering career opportunities, business training in support of each person's individual career, and investing in employees' talent and knowledge. The factor also includes caring about employees' satisfaction and motivation, offering life-long learning opportunities, managing talent, and internal succession.

## Results

Table 3 illustrates how HR and sustainability managers perceive the contribution of the HR processes, practices and factors to sustainability-driven change. To analyse the consensus between these managers, the table shows the descriptive statistics and the statistical significance of the tests we conducted on mean differences. We also included Glass's estimator of the effect size between the two groups of managers to measure the relevance of the differences observed (Hedges 1981). In line with previous guidelines (Cohen 1988), we considered an effect size of 0.2 as a small effect, an effect size of 0.5 as a medium effect and an effect size of 0.8 as a large effect.

The results confirmed the major role played by the HR management system in sustainability-driven change. Table 3 shows that the two manager groups judged the general HR management processes ( $M = 5.77$ ) and the HR practices ( $M = 5.15$ ) to be

Table 3. HR management practices and processes for sustainability-driven change.

Variables	Total		HR Managers		Sust. Managers		Glass's $\Delta$	t-test $t(2, 87)$	Wilcoxon test Z
	M	SD	M	SD	M	SD			
<b>Processes</b>									
Health and Safety	6.5	0.7	6.5	0.6	6.4	0.7	0.2	0.82	-1.00
Training, development and career planning	6.0	0.9	6.0	0.8	6.0	1.0	0.0	-0.11	-0.45
Internal communication	6.0	1.1	5.9	1.3	6.1	0.9	0.2	-0.65	-1.55
HR Strategy and HR Planning	5.7	1.2	6.0	0.9	5.5	1.5	0.6	1.66*	-0.54*
Performance appraisal and management	5.8	1.0	5.8	1.0	5.8	1.1	0.0	-0.04	-0.28
Compensation management	5.7	1.0	5.6	1.0	5.9	1.0	0.3	-1.36	-1.42
Industrial relation and collective bargaining	5.6	1.1	5.5	1.0	5.6	1.2	0.1	-0.40	-0.71
Recruiting, selection and induction	5.5	1.1	5.7	1.1	5.3	1.2	0.4	1.66*	-0.56*
Job design and analysis	5.1	1.2	5.2	1.3	5.1	1.2	0.1	0.17	-0.23
<b>Practices</b>									
Safety issues	6.5	0.9	6.6	0.8	6.4	0.9	0.2	0.78	-0.88
To be an employer who cares for employees' job satisfaction and motivation	6.1	0.8	6.1	0.9	6.1	0.7	0.0	-0.28	-0.07
Investing in employees' talent and knowledge	6.0	1.1	6.1	1.1	6.0	1.2	0.1	0.93	-0.91
Promoting the company's reputation as a socially trustworthy employer	5.8	1.0	5.8	1.1	5.9	1.0	0.1	-0.22	-0.20
Health issues	5.8	1.2	5.9	1.1	5.8	1.4	0.1	0.33	-0.16
Promoting culture and gender diversity	5.6	1.2	5.7	1.1	5.5	1.3	0.2	0.99	-0.73
Life-long learning	5.6	1.1	5.8	0.9	5.3	1.2	0.6	1.99**	-1.74*
Business training supporting people's individual careers	5.6	1.0	5.8	1.0	5.3	1.0	0.5	1.68**	-2.21**
To be an employer who takes employees' work-life seriously	5.5	1.0	5.3	1.2	5.6	0.9	0.3	-1.27	-0.95
To be a family-friendly and a working mothers-friendly employer	5.5	1.0	5.3	1.1	5.6	0.9	0.3	-1.47	-1.21
Talent management and internal succession management	5.4	1.3	5.6	1.2	5.3	1.3	0.3	1.02	-0.88
Offering career opportunities	5.1	1.2	5.0	1.2	5.1	1.1	0.1	-0.38	-0.25

Sustaining employees' commitment to sustainability performance	4.9	1.2	5.0	1.3	4.9	1.2	0.1	-0.28	-0.07
Reducing and preventing stress	4.9	1.2	5.0	1.0	4.8	1.3	0.2	0.85	-0.62
Training for improving the company's sustainability performance	4.7	1.2	4.6	1.2	4.8	1.2	0.2	0.78	-0.88
Ergonomic workplace conditions	4.7	1.3	5.0	1.2	4.3	1.3	0.6	2.57**	-2.69**
Education	4.6	1.6	4.6	1.7	4.6	1.5	0.3	0.03	-0.10
Designing jobs for sustaining individual commitment to the company's sustainability performance	4.6	1.3	4.4	1.3	4.8	1.3	0.3	0.06	-0.58
Remuneration and employee benefit	4.6	1.3	4.4	1.2	4.8	1.4	0.3	-1.74*	-1.66*
Support ageing workforce	4.5	1.3	4.8	1.4	4.3	1.2	0.4	1.70*	-1.91*
Offering career and outplacement services	4.4	1.5	4.4	1.4	4.4	1.6	0.0	0.06	-0.58
Mentoring	4.4	1.4	4.3	1.5	4.4	1.4	0.1	-0.18	-0.09
Vocational training programmes or apprenticeships/work placements	4.4	1.4	4.4	1.6	4.3	1.3	0.1	0.18	-0.15
Employees' well-being in partnership with local communities	4.3	1.3	4.4	1.1	4.2	1.4	0.2	0.76	-0.79
Supporting international careers through services for employees and their families	4.1	1.6	4.2	1.6	4.0	1.6	0.1	0.52	-0.58
Practice-related factors									
Sustainability-driven change through caring	0.0	1.0	-0.21	1.09	0.18	0.89		1.84**	-1.39**
Sustainability-driven change through social inclusion	0.0	1.0	0.08	0.97	-0.21	1.03		-0.70	-0.99
Sustainability-driven change through the development of competencies	0.0	1.0	0.27	0.91	-0.23	1.03		-2.45**	-2.14**
Sustainability-driven change through career growth	0.0	1.0	0.05	1.06	-0.04	0.95		-0.43	-0.60

\*  $p < 0.10$ ; \*\*  $p < 0.05$ .

crucial for sustainability-driven change. In particular, Table 3 shows that some processes and practices were considered to be more relevant than others for implementing sustainability-driven change. According to the managers we surveyed, the most important HR processes for sustainability-driven change are health and safety ( $M = 6.5$ ), training, development and career planning ( $M = 6.0$ ), and internal communication ( $M = 6.0$ ). The practices with the highest significance for sustainability-driven change are protection of security ( $M = 6.5$ ), attention to satisfaction and motivation ( $M = 6.0$ ) and development of individual skills ( $M = 6.0$ ). In the following paragraphs, we will present the similarities and differences between HR and sustainability managers, focusing on HR processes, HR practices and the factors relating to HR practices.

Regarding the processes, no significant difference emerged for seven out of the nine items tested. Focusing on the differences in the contribution given by HR processes to sustainability-driven change, two processes are seen as more significant for HR managers than for sustainability managers: HR strategy and planning ( $t = 1.664, p < 0.10, \Delta = 0.6$ ) and, with a minor cognitive gap, recruiting, selection and induction ( $t = 1.658, p < 0.10, \Delta = 0.4$ ).

Looking at the practices, there is consensus between HR managers and sustainability managers, as there were significant differences only for 5 out of 25 HR practices. In particular, for the HR managers, four practices are considered to be of greater importance than for the sustainability managers: ergonomic workplace conditions ( $t = 2.575, p < 0.10, \text{Glass's } \Delta = 0.6$ ), life-long learning ( $t = 1.988, p < 0.05, \text{Glass's } \Delta = 0.6$ ), business training supporting people's individual careers ( $t = 1.679, p < 0.10, \text{Glass's } \Delta = 0.5$ ) and the support of an ageing workforce ( $t = 1.969, p < 0.10, \text{Glass's } \Delta = 0.4$ ). The first three practices have a medium effect size and the fourth a small effect size. On the contrary, sustainability managers consider the practices linked to remuneration and employee benefits ( $t = -1.743, p < 0.10$ ) to be more significant, compared to the HR managers, with a small effect size ( $\text{Glass's } \Delta = 0.3$ ).

Considering the factors relating to HR practices, it emerged that for two of them, there is no significant difference in the perception of HR managers and sustainability managers, while there is a difference for another two, namely sustainability-driven change through caring ( $t = 1.841, p < 0.05$ ) and sustainability-driven change through the development of competencies ( $t = -2.448, p < 0.05$ ). Sustainability-driven change through caring was perceived by HR managers ( $M = -0.24$ ) as being less relevant to sustainability-driven change than by sustainability managers ( $M = 0.18$ ). For sustainability-driven change through the development of competencies, HR managers consider it to be more relevant to direct HR management ( $M = 0.27$ ) towards sustainability-driven change than sustainability managers ( $M = -0.23$ ).

## Discussion

In the light of the relevance of consensus for 'strong' HR management systems, we found a significant level of consensus between HR and sustainability managers and only a few specific cognitive differences. Discussion of the results presented above is divided into two parts, which regard (i) the consensus and (ii) the differences between HR and sustainability managers on the contribution of HR processes and practices to sustainability-driven change.

### *The consensus between HR managers and sustainability managers*

The results showed that these two groups consider HR processes ( $M = 5.77$ ) and practices ( $M = 5.15$ ) to be crucial for implementing sustainability-driven change. The key role attributed to the HR management system for sustainability-driven change is consistent

with the previous research, where, starting from either a resource-based (Barney 1991; Grant 1991; Barney, Wright and Ketchen 2001) or a human capital perspective (Becker 1964), studies looked at the main role covered by the HR management system in corporate performance (Brewster 2002; Paauwe 2004). In addition, our results are consistent with Preuss et al. (2009), who highlighted that companies intending to implement sustainability-driven change should carry out a timely and well-thought-out *deployment* of HR management system goals.

It is not surprising that there is a significant degree of consensus between HR managers and sustainability managers. In previous literature (e.g. Gond et al. 2011), it was pointed out that there is an overlap between the HR and sustainability areas, caused by two main organizational requirements. On one hand, the need to design and manage sustainability programmes and policies requires a strong HR support, driving the area of sustainability towards HR management (according to the above dichotomy, the corporate HR management system is a *means* of developing corporate sustainability). Consequently, many pure sustainability practices – such as corporate community involvement and charitable projects – can be supported by the corporate HR management system by increasing employee sensitivity for such issues. On the other hand, the need to transform HR processes so that sustainability-related principles become part of the processes, and push the HR area towards sustainability (according to the above dichotomy, the corporate HR management system is an *end* for developing corporate sustainability). Using these principles in the recruiting process uplifts the companies' corporate image as an employer. Incorporating gender equity and diversity practices within processes such as compensation or career management, or implementing HR planning systems that seek to avoid making staff redundant through the use of internal mobility, are examples of sustainability principles being incorporated into pure HR processes. Increasingly, companies are recognizing these two organizational trends and, from an organizational point of view, they have brought responsibility for sustainability programmes and policies into the HR department and integrated the managers and professionals in charge of these practices within the HR staff. Cohen has argued that this is an effective choice, defining the job description of a corporate social responsibility (CSR)/HR manager as a manager responsible for developing and assimilating tools and processes that enhance business and individuals' capabilities, in a way that develops a positive and healthy organizational culture, upholds business principles and values, and maintains accountability for the effect of business and individual actions on all stakeholders, including society at large and the environment. (Cohen 2009, p. 286). As a result, it might be argued that the trends and organizational solutions above are generating a convergence process between HR and sustainability managers, on the grounds of what sustainability-driven change is and the possible contribution of the HR management system to that change. The high degree of consensus that emerged in the present research confirms, at least for Italian sustainability-oriented companies, that such the convergence process is taking place.

### ***The cognitive differences between HR managers and sustainability managers on the contribution of specific HR processes and practices to sustainability-driven change***

Moving to the cognitive differences that resulted, in the following paragraphs, we will discuss the cognitive gaps in HR processes and practices.

Focusing on the HR process, two main differences emerged (out of nine processes). First, compared to sustainability managers, HR managers consider the process of strategy and planning as being more important in supporting sustainability-driven change. The main objective of this process is to group multiple HR practices, coherently, although the

two types of managers do not seem to share the same meaning for that integration. On this point, Delery (1998) highlighted that grouping HR practices can be (i) additive, in the sense that all the practices have independent non-overlapping effects on the outcomes; and (ii) interactive, in the sense that practices have synergy effects. It seems logical that HR managers assume the latter, and attribute importance to the HR strategies and planning processes that specifically aim at considering and planning *in advance* to gain these synergy effects. Sustainability managers seem to take the additive view, focusing on specific practices considered crucial for sustainability-driven change, rather than on their overall integration.

The second difference in HR processes covers recruiting, selection and induction. In particular, it emerged that the HR managers consider this process to be more important for sustainability-driven change than the sustainability managers. HR managers seem to realize that this process is important when hiring employees who have their own culture of sustainability and who have the competencies required in a sustainable organization (Thom and Zaugg 2004). With this in mind, HR managers are more likely to consider sustainability as a driver to attract talented applicants wishing to work for organizations that share some of their main principles (Greening and Turban 2000).

In terms of HR practices, the data showed five differences in 25 possible practices. In particular, it emerged that for HR managers, four practices are more important for sustainability-driven change than for sustainability managers. These practices are life-long learning, business training supporting people's individual careers, ergonomic workplace conditions and the support for an ageing workforce. At the same time, the sustainability managers perceive remuneration and employee benefits as being more important in sustainability-driven change than the HR managers. These results are consistent with the different perceptions of HR and sustainability managers on the contribution of HR practices in encouraging sustainability-driven change. In particular, the HR managers consider the factor of sustainability-driven change through the development of competencies to be more relevant in attaining sustainability-driven change than the sustainability managers. The latter focus instead on giving more consideration to the practice-related factor of sustainability-driven change through caring than the HR managers.

In a context of consensus regarding the contribution of the HR management system to sustainability-driven change, it emerged that HR managers and sustainability managers do not fully share the same vision, as they consider the contribution of specific components of the system differently. Drawing on these differences, it can be argued that HR managers share a vision of sustainability as an adaptive capability (Holling 2001), recognizing the importance of learning mechanisms that allow an organization to adapt to the constantly changing economic, social and environmental environment (Mohrman and Shani 2011). In this context, the role of the HR management system is to provide the competencies needed for sustainability on a long-term time scale (Ingo Pies, Beckmann and Hielscher 2010). This is consistent with the stream of research identified above as sustainable HR management, in which the HR management system contributes to the company's strategic objectives on the side of sustainability (economic, environmental and social) in the long-term. On the contrary, sustainability managers seem to think that the HR management system is intended to (i) align the contribution of employees to the overall sustainability strategic goals of the company by providing economic incentives; and (ii) satisfy the employees' needs both in terms of economic resources and benefit, and in terms of balance between personal life and professional activity. This orientation seems to be more consistent with the stream of research above known as the *sustainable work system*, which

focuses on employee well-being by, among other things, moderating work intensity and promoting a work–life balance.

### Implications for HR practice, education and research

The present study confirmed that there is consensus between HR managers and sustainability managers regarding the importance of the HR management system in implementing sustainability-driven change. At the same time, our work has highlighted some differences between the perceptions of these two professional groups. These differences are important because a ‘strong’ HR management system supporting sustainability-driven change should be built upon the consensus between HR managers and sustainability managers, who are the key message senders in the case of sustainability-driven change.

In detail, our findings include specific HR-related topics where, on the basis of a consensus regarding their role in sustainability-driven change, it is arguable that the risk of sending ambiguous messages to employees and senior management is low. We also found specific HR-related topics where HR and sustainability managers consider their impact on sustainability-driven change differently; when treating these topics, the risk of sending ambiguous messages to employees and senior management is high (see [Table 4](#)). By discussing the differences in perception between HR and sustainability managers, we have advanced the possibility that HR and sustainability managers have their own different views on what sustainability-driven change is. From a managerial perspective, the differences that emerged have significant implications. Indeed, consensus-building processes must be planned *in advance*, allowing managers to share the same vision on sustainability and encourage sustainability-driven change. Because a ‘strong’ HR management system requires consensus between message senders, these processes are relevant when planning what contribution the HR management system can make to sustainability-driven change (Draper 2006). Therefore, those consensus-building processes might include all the key players of the organization who are requested to drive and implement sustainability-driven change (Maon et al. 2009).

Our findings also present potential implications for HR education. Dissensus between HR and sustainability managers can be explained by their different professional competencies, which are the result of the no-integrated education programmes offered by many universities. Considering that HR and sustainability managers play a key role in the sustainability-driven change within companies, and that their consensus is a key success factor for the process of change, we argue here that the competence-building processes of these two groups of managers should intersect, with shared learning experiences. Indeed – even if the scope of the present study does not include a specific exploration of this topic – it is arguable that providing managers working on sustainability-related issues with basic HR competencies, and providing HR managers with basic CSR/sustainability skills may be a good basis for consensus and effective cooperation between the two professional families. In fact, by providing managers with research-led knowledge on both HR management and CSR/sustainability, it would be possible to avoid conflicts between them based on irrational or non-proven beliefs on the topic. In addition, this overlap in skills seems to be consistent with the ongoing processes in many companies, where – as presented above – the two areas are becoming more and more integrated within the same organizational units.

In terms of research, our results pointed out that there is no single, clear view of the role of HR in initiating and implementing sustainability, so there is an interesting stream for future research on this topic (Ehnert and Harry 2012).

Table 4. HR management and strength of sent messages.

	<i>Consensus Low risk of inconsistent messages</i>	<i>Dissensus High risk of inconsistent messages</i>
HR processes	2 HR processes (out of 9) – HR strategy and HR planning – Recruiting, selection and induction	7 HR processes (out of 9) – Health and safety – Training, development and career planning – Internal communication – Performance appraisal and management – Compensation management – Industrial relation and collective bargaining – Job design and analysis
HR practices	5 HR practices (out of 25) – Life-long learning – Business training supporting people's individual careers  – Ergonomic workplace conditions – Remuneration and employee benefit – Support ageing workforce	20 HR practices (out of 25) – Safety issues – To be an employer who cares for employees' job satisfaction and motivation – Investing in employees' talent and knowledge – Promoting the company's reputation as a socially trustworthy employer – Health issues – Promoting culture and gender diversity – To be an employer who takes employees' work-life seriously – To be a family-friendly and a working mothers-friendly employer – Talent management and internal succession management – Offering career opportunities – Sustaining employee' commitment to sustainability performance – Reducing and preventing stress – Training for improving the company's sustainability performance – Education – Designing jobs for sustaining individual commitment to the company's sustainability performance – Offering career and outplacement services – Mentoring – Vocational training programmes or apprenticeships/work placement – Employees' well-being in partnership with local communities – Supporting international careers through services for employees and their families
HR factors	2 HR factors (out of 4) – Sustainability-driven change through social inclusion – Sustainability-driven change through career growth	2 HR factors (out of 4) – Sustainability-driven change through caring – Sustainability-driven change through the development of competencies

Based on the limitations of our study and our specific findings, it is possible to discuss at least four possible avenues for future HR research. The first path is related to the nature, dimension and size of our sample, it would be interesting to validate the consensus and the differences between HR managers and sustainability managers that emerged in this study with work in other countries, specific industries, or specific company clusters, such as small and medium business, where, typically, there is no sustainability manager. A second area of future research relates to the exploration of the perceptions on the contribution of the HR management system to sustainability-driven change on the part of other relevant organizational actors. Since the present study considered only the perceptions of HR and sustainability managers, future research might focus on that of other managers in the company (like CEOs or other functional managers, who are also important HR message senders), of employees, or other stakeholders, such as trade unions, NGOs and local communities. A third area for future research could look at the consensus and differences in perception of key organizational actors on the role played in sustainability-driven change by other managerial systems apart from HR; indeed, as presented above, other managerial systems and processes are crucial to sustainability-driven change, and can include supply management, corporate governance and investor relations, or stakeholder management practices. The last area for future research regards the results of the consensus: since we assumed that consensus among HR message senders has a positive impact on different organizational performances, future research might test the impact of that consensus on the strength of the HR management system and so on the effectiveness of sustainability-driven change.

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**Appendix: HR practices that support sustainability (adapted from Ehnert 2009)**


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HR practices

Safety issues

To be an employer who cares for employees' job satisfaction and motivation

Investing in employees' talent and knowledge

Promoting the company's reputation as a socially trustworthy employer

Health issues

Life-long learning

Promoting culture and gender diversity

Business training supporting people's individual careers

To be an employer who takes employees' work-life seriously

To be a family-friendly and a working mothers-friendly employer

Talent management and internal succession management

Offering career opportunities

Sustaining employees' commitment to sustainability performance

Reducing and preventing stress

Training for improving the company's sustainability performance

Ergonomic workplace conditions

Education

Designing jobs for sustaining individual commitment to the company's sustainability performance

Remuneration and employee benefit

Support ageing workforce

Offering careers and outplacement services

Mentoring

Vocational training programmes or apprenticeships/work placement

Employees' well-being in partnership with local communities

Supporting international careers through services for employees and their families

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