A Cognitive Perspective on the Business Case for Corporate Sustainability

Kai Hockerts*
Copenhagen Business School, Centre for Corporate Social Responsibility (cbsCSR), Frederiksberg, Denmark

ABSTRACT
This paper proposes that a cognitive perspective on corporate sustainability and competitiveness might allow new insights into the question of the business case. The paper explores how respondents from 12 firms make sense of their firm’s investments in corporate sustainability activities by analyzing the mental models evoked. The interviews showed that a business case perspective emerged as the dominant logic. A subsequent analysis of the content of the knowledge schemas that were elicited surfaced four dimensions of corporate sustainability induced competitive advantages: risk reduction, efficiency gains, brand building and new market creation. An analysis of the structure of these knowledge schemas revealed that respondents from firms with lower perceived sustainability performance drew on less differentiated and less integrated cognitive frameworks (focusing on risk and efficiency). Respondents from firms with higher perceived performance drew on more complex mental models to represent the links between corporate sustainability and competitiveness. Copyright © 2014 John Wiley & Sons, Ltd and ERP Environment

Received 08 May 2013; accepted 15 May 2013

Keywords: business case; cognition theory; cognitive complexity

THIS PAPER PROPOSES A NEW RESEARCH AGENDA FOR CORPORATE SUSTAINABILITY AND COMPETITIVENESS. MOST STUDIES to date have discussed the topic from an all-or-nothing perspective. Thus corporate sustainability either does or does not create competitive advantages. The data presented here indicates that future research might more profitably study the mental models managers employ when thinking about this relationship. In particular, this paper aims to study how respondents in firms that are perceived as having a high social and environmental performance differ from respondents in firms that are perceived to have a less high performance.

The term ‘corporate sustainability’ used in the paper is in line with the definition by Dyllick and Hockerts (2002), who argue that corporate sustainability entails that firms maintain their economic, natural and social capital bases. Thus although there might be short-term exceptions firms should in the long run consume only the income from their capital and not the capital stock itself.

The idea that there might be a ‘business case’ for good corporate environmental and social behavior goes back more than three decades (see, e.g., Baumol, 1970; Davis, 1973; Dyllick et al., 1997; Hart, 1995; Wallach and McGowan, 1970; World Business Council for Sustainable Development (WBCSD), 2002). Many scholars,

*Correspondence to: Kai Hockerts, Copenhagen Business School, Centre for Corporate Social Responsibility (cbsCSR), Frederiksberg, Denmark. E-mail: kho.ikl@cbs.dk

Copyright © 2014 John Wiley & Sons, Ltd and ERP Environment
however, remain skeptical (Walley and Whitehead, 1994; Palmer et al., 1995), doubting the existence of ‘win–
win’ solutions, as they are also often called: ‘Unfortunately, this popular idea is also unrealistic. Responding
to environmental challenges has always been a costly and complicated problem for managers’ (Walley and
Whitehead, 1994, p. 46).

The debate about whether there is a business case at all for corporate sustainability has spawned a multitude of
empirical studies correlating corporate financial performance (CFP) with corporate social or sustainability
performance (CSP). Meta-analyses by Orlitzky et al. (2003) and Margolis and Walsh (2001, 2003) find that a
majority of studies indicate a slight positive relationship. However, such studies tend to treat corporate sustainability
induced competitive advantage usually as a single variable.

Compared with the hundreds of CSP/CFP studies, there are only a small number of empirical contributions that
unpack corporate sustainability competitiveness (e.g. Dyllick et al., 1997; Reinhardt, 1999, 2000; Székely and
Knirsch, 2005). It is the intention of this paper to provide more insights into the different types of competitive
advantage that respondents perceive as springing from their corporate sustainability activities. Second, the paper
aims to study the variance in these perceptions. How do respondents in firms that are seen to perform well in social
and environmental activities differ from respondents in firms that perform less well?

The main contribution of this paper’s findings is to propose that managers use different mental models. Rather
than seeing competitiveness as a single yes/no construct, managers tend to perceive it through numerous lenses.
The data from this study indicates that the complexity of these models (i.e. their differentiation and integration)
seems to change with the perceived sustainability performance. Being based on a small sample qualitative study,
this finding has to be taken with a grain of salt. However, the findings might nonetheless indicate a path for future
research into the CSP/CFP question.

The findings of this paper finally raise the question of how mental models about corporate sustainability
and competitiveness develop over time. The data being cross-sectional, there is no longitudinal element in
this paper. However, the cognitive perspective taken begs the question of how mental models develop. Is it
a generic development path or do mental models of managers in different settings develop differently?
Moreover, this perspective raises the question of whether firms can take an active role in developing these
mental models.

The Business Case for Corporate Sustainability in the Literature

Past literature on the business case differentiates four main dimensions through which corporate sustainability may
create competitive advantages. These are risk reduction, efficiency gains, social branding and new market creation
(Dyllick et al., 1997; Dyllick, 1999; Reinhardt, 1999; Stefan and Paul, 2008). In the following, prior research on each
of these four dimensions will be discussed briefly.

Reducing Business Risks

Previous research has identified reduced firm risk as one possible way in which a proactive stance on corporate
sustainability could create competitive advantages (Davis, 1973; Yaziji, 2004; Henisz, 2009). Several perspectives
are discussed in the literature: accident risk, litigation risk, regulatory risk, campaign risk and reputation risk as well
as the general risk of loss of a firm’s licence to operate.

Accident Risk

Environmental disasters such as the Deepwater Horizon oil spill in the Gulf of Mexico (Force et al., 2010), the Bhopal
tragedy in India or the Love Canal contamination have demonstrated that the costs following an accident (e.g.
cleanup cost, production loss) can pose significant financial risks (Barth and McNichols, 1994; Hamilton and
Viscusi, 1999).
Litigation Risk
In addition to direct losses, accidents such as the ones mentioned also pose considerable litigation risks. It has, therefore, been hypothesized that a proactive sustainability stance can help to mitigate litigation risk (Reinhardt, 2000; Olsen, 2002). Kassinis and Vafeas (2002), for example, find that companies can reduce the risks of being prosecuted for violating environmental laws and having to pay steep penalties by bringing in more outside stakeholders on their board of directors.

Regulatory Risk
A third type, regulatory risk, concerns the emergence of stricter regulation over time (Simons et al., 2003). Firms that are hit by new, unanticipated laws are exposed to potentially huge competitive disadvantages. Thus proactive initiatives can be motivated by a desire to retain freedom of decision making (Davis, 1973).

Campaign Risk
Environmental or social campaigns against firms may be based on specific behavior. However, companies may also find themselves singled out as representatives of a sector. Such ‘proxy wars’ (Yaziji, 2004) are more likely to be aimed at market leaders, even if these do not have the worst sustainability performances. Yet, the media attention that NGOs can garner from campaigning against an industry champion means that such firms face a higher risk of being singled out for attack.

Reputation Risk
When hit by either accidents or campaigns firms also run the risk of serious damage to their corporate brand. Proactive sustainability management has therefore also been proposed as a means of brand protection (Jones and Rubin, 1999; Barnett and Hoffman, 2008; Bebbington et al., 2008).

License to Operate
An extension of reputation risk is the danger of losing a firm’s license to operate (DeSimone and Popoff, 1997). Davis describes this as the ‘iron law of responsibility, which is that in the long run, those who do not use power in a manner which society considers responsible tend to lose it’ (Davis, 1973, p. 314). Extant literature contains many examples of the consequences firms have had to face because of mismanaged stakeholder relations (Kolk and Pinkse, 2006), and typically proposes extensive stakeholder dialogue as a means to mitigate it (Van Huijstee and Glasbergen, 2008).

Increased Operational Efficiency
Apart from reducing managerial risks, corporate sustainability has also been hypothesized to increase operational efficiency (Schaltegger and Sturm, 1998; Dyllick, 1999). However, building on the economic law of diminishing returns, past research has emphasized that any double dividends that firms may gain from environmental management are likely to diminish fast. The idea is that there are only a limited number of ‘low hanging fruit’ (Reinhardt, 2000; Bréchet et al., 2004), i.e. investments that pay off quickly and do not require much investment. Once these have been harvested, firms can no longer expect cost advantages from proactive corporate sustainability measures (Walley and Whitehead, 1994; Palmer et al., 1995). Two perspectives in particular stand out in the literature when it comes to sustainability-related efficiency gains.

Eco-efficiency
When Porter and Van der Linde (1995a, 1995b) were writing about double dividends, they were primarily thinking of cost reductions that had been prompted by proactive environmental initiatives. This is the idea that is at the heart of ‘eco-efficiency’, a concept first developed by Schaltegger and Sturm (1990, 1998) and popularized by the Swiss businessmen Stefan Schmidheiny (1992) and the World Business Council for Sustainable Development (Ayers et al., 1995; DeSimone and Popoff, 1997; Verfaille and Bidwell, 2000). Typically, eco-efficiency is seen to comprise efficiency gains from reduced waste management cost and resource consumption (energy, water, metal) (Stefan and Paul, 2008).
Employee Productivity

A second important element of increased operational efficiency concerns employee productivity (Branco and Rodrigues, 2006; Morsing, 2006). A good corporate reputation may help to attract, motivate and retain employees who care about environmental and social issues. Henriques and Sadorsky (2007) and Grolleau et al. (2007), for example, find that the implementation of environmental management is also driven by the desire of firms to motivate their staff.

Cost of Capital

Third, proactive firms have been suggested as benefiting from lower costs of capital. Sharfman and Fernando (2008), for example, have found that improved environmental management is associated with a lower cost of capital. However, as Stefan and Paul (2008) show in their overview article, robust empirical proof of this effect is still missing.

Branding

There is a large literature pertaining to social branding, which describes opportunities from differentiating products along social or environmental lines (e.g. Menon and Menon, 1997; Reinhardt, 1998; Charter and Polonsky, 1999; Hansen and Schrader, 2004; Belz, 2006; Pedersen and Neergaard, 2006). Four particular branding advantages are discussed in the literature: premium pricing, customer acquisition, customer retention and share of wallet.

Premium Pricing

The biggest debate among academics pertaining to whether corporate sustainability drives product branding hinges on the question of the willingness of clients to pay a premium for socially or environmentally superior products (Wüstenhagen, 1998; Charter and Polonsky, 1999). Empirical research suggests that some customers are indeed willing to pay premiums for environmentally or more socially responsible products; however, there remains a gap between what consumers say they are willing to do and their actual buying decisions (Moon et al., 2002; De Pelsmacker et al., 2005; Ward et al., 2011).

Customer Acquisition

Research also suggests that a proactive sustainability stance can help to attract customers. In B2B markets, for example, green sourcing guidelines of public organizations mean that sustainable performance may well be a means to attract new clients (Christensen, 2008).

Customer Retention

A green product image has also been found to lead to higher customer loyalty, for example, in liberalized energy markets where green branding can help to retain customers in the face of growing competition (Cai et al., 1998; Hartmann and Apaolaza, 2007). Similar findings have been reported from the food sector (Wettstein et al., 2011; Gottschalk and Leistner, 2012).

Share of Wallet

Finally, the question can be raised of whether offering green products is likely to increase a retailer’s share of wallet by inducing customers to shop for other products at the same time.

Creating New Market Space

A fourth type of competitive advantage concerns the notion of corporate sustainability also being a driver for the creation of new market space. Hockerts and Wüstenhagen (2010), for example, describe how sustainability innovations often start in the NGO or voluntary sector, where they are usually ignored by business. Only as these innovations grow do they develop their full competitive potential. Three types of new market space are discussed in the literature: the commercialization of sustainability competencies, cleantech venturing and the base of the pyramid.
Commercialization of Sustainability Competencies
Firms excelling at corporate sustainability might as a first step aim to sell their capabilities to outside customers. Thus they might be able to turn their internal knowledge about climate change, sustainability reporting or environmental management system implementation into a new market.

Cleantech Venturing
The field of cleantech venturing typically involves the development and commercialization of environmental technology into new products that reduce either environmental pollution or the consumption of fossil resources. A large part of cleantech venturing is concerned with clean energy technologies (Boehnke and Wüstenhagen, 2007; Caprotti, 2008; Bürer and Wüstenhagen, 2009); however, other technologies such as water and waste management have also been covered by past research (Forester and Skinner, 1992).

Base of the Pyramid
The assumption of Prahalad and Hart (1999) is that by focusing on the unmet needs of low-income populations firms can create profitable markets at what they call the base of the pyramid (BOP), while also helping the poor address some of their most urgent needs (Christensen et al., 2001; Prahalad and Hammond, 2002; Prahalad and Hart, 2002). Prahalad’s most notable assumption is that BOP markets have to pay a ‘poverty premium’ (Prahalad and Hammond, 2002). This means that many poor have to pay more for products and services such as food, water, medication, credit or telecommunication than their middle or upper class counterparts. By using BOP thinking, firms are believed to be able to better target their design, as well as improving distribution, thus bringing down the poverty premium.

Cognition Theory
When discussing why firms engage in corporate sustainability activities, many authors take organizational or industry level approaches, often drawing on institutional theory (e.g. Campbell, 2006; Doh and Guay, 2006; Husted and Allen, 2006; Yang and Rivers, 2009; Jackson and Apostolakou, 2010; Brammer et al., 2012; Julian and Ofori’ Dankwa, 2013). However, little is known about the cognitive reasoning of the individuals in firms. Do their mental models about the business case for corporate sustainability differ? If so, what could explain this variation?

In simple terms, cognitive theory would lead us to expect that increased exposure to corporate sustainability will impact people’s mental reference frames, which they draw on when rationalizing corporate sustainability. Increased exposure to corporate sustainability might lead to more appreciation of the business case if it exists. On the other hand, if the business case fails to materialize, respondents might exhibit doubts.

In order to inform the debate about the business case this paper explores respondents’ cognitive representation of the business case for corporate sustainability in firms with varying sustainability performance. The focus is thus on the knowledge structures that people use to make assessments, judgments or decisions involving the evaluation of whether corporate sustainability creates competitive advantages and if so how.

Cognition theory has emerged from social psychology (Fiske and Taylor, 1991; Reed, 2007; Fiske, 2013) as a means to explain how individuals process information. The underlying assumption is that prior experiences guide information processing, since the complexity of our information environment does not allow for a case-by-case decision process in which all data is considered. Instead knowledge structures are employed as mental templates, making decision making more efficient. This theory has been widely applied in management and organizational theory (Stubbart, 1989; Spicer and Sewell, 2010; Kaplan, 2011) due to it is inherent ability to explain many managerial phenomena.

Managerial cognition theory sees decision makers as limited information processors. Decisions are thus usually based on ‘mental models’ (Walsh, 1995, p. 282), which managers use to give available information form and meaning. Mental models are organized knowledge structures, which originate from implicit theories derived from past experience (Nisbett and Ross, 1980; Abelson and Black, 1986) and guide identification, structuring and analysis
of new data (Sims and Gioia, 1986; Fiske and Taylor, 1991; Hitt and Tyler, 1991) that enable interpretation and action in an information environment (Walsh, 1995).

The intriguing problem for management researchers has been that while these knowledge structures may transform complex information environments into tractable ones, they may also blind strategy makers, for example, to important changes in the business environment. [...] The paradox, then, is that schematic information processing can be at once enabling and crippling’ (Walsh, 1995, p. 281).

In his overview of managerial cognition research, Walsh (1995) identifies three research streams relating to knowledge structures in organizational contexts.

- **The content and structure of knowledge representation.** What knowledge categories constitute the content representing managerial information environments and how are these categories structured into a mental model (i.e. the mental models used in IT purchasing decisions or in market research)?
- **The use individuals make of knowledge structures.** How does the use of mental models improve or hinder effective decision making (i.e. knowledge structures can increase the speed and effectiveness of decisions making on the one hand, while they also carry the risk of selective perception)?
- **The development of knowledge structures.** How do mental models develop and can this process be purposefully guided (i.e. the impact job rotation can have on alleviating the risks of strategic myopia)?

It is believed that more complex mental models facilitate better decision making (Okeefe and Brady, 1980; Bartunek et al., 1983; Streufert and Swezey, 1986; Hambrick and Finkelstein, 1987). Research on mental models differentiates between two structural attributes which together represent the cognitive complexity of a mental model (Bartunek et al., 1983; Streufert and Nogami, 1989).

1. **Cognitive differentiation** describes the number of dimensions an individual invokes when reflecting about an information environment. In other words, it is an individual’s ability to dissect information into smaller units (Green, 2004).
2. **Cognitive integration** describes the degree of interconnectedness among the knowledge structure’s dimensions. They are an individual’s ability to form conceptual frameworks that organize complex situations (Stabell, 1978).

Research suggests that people with less complex cognitive structures tend to grow impatient with complex trade-offs and thus tend to prefer monistic rather than pluralistic ideologies (Tetlock, 1984). In the context of corporate sustainability this might imply that managers with less complex mental models are likely to be less attuned towards the conflicting demands of multiple stakeholders.

In the past, cognition theory has been used to analyze entrepreneurial opportunity identification (Mitchell et al., 2000; Krueger, 2007) as well as organizational learning (Barr et al., 1992; Spender, 2008). The first study to mention cognitive models in the context of this paper goes back three decades. In their study on the cognitive structures of corporate social responsibility, Boal and Peery (1985) illustrate three content dimensions underlying ethical reasoning about corporate social responsibility: an acceptable decision had to be perceived as economically worthwhile, as justly affecting all stakeholders and as protecting or promoting the rights of those affected.

Since then quite a number of studies have been carried out looking into the content and impact of sustainability related knowledge structures. For example, Schlange (2009) uses cognition theory to explain how sustainability-driven entrepreneurs identify and perceive stakeholders differently than normal entrepreneurs. Swift (2012) illustrates the potential of mental models as decision support frameworks in the context of the Future Forest Ecosystem Scientific Council (FFESC) project.

Bundy et al. (2012) address the usage of knowledge structures and how they can impact the choice of a firm’s stakeholder responsiveness. They find that firms will respond more substantially to those issues perceived as salient to multiple cognitive logics and more symbolically to those issues salient to only one logic.

Taking the discussion from Walsh’s first two levels (content and use of knowledge structures) to the third level (development of knowledge structures), Branzei et al. (2004) focus on the evolution of corporate sustainability related knowledge structures over time. They develop a dynamic model of corporate greening showing how satisfactory or unsatisfactory results strengthen or weaken managers’ cognitive models.
This paper studies not the knowledge representation of corporate sustainability itself, but rather the respondents’ representation of how corporate sustainability interacts with competitive advantage. In other words the focus is on peoples’ perceptions of the business case for corporate sustainability. This is important since most research into the business case for corporate sustainability fails to take it apart and analyze its different elements.

Specifically, this paper aims to address the following two research questions.

- How cognitively differentiated and integrated are the mental models managers use when representing their perceptions of the link between corporate sustainability and competitiveness?
- How does the cognitive complexity of these models differ between managers in firms that are perceived as having a higher or lower corporate sustainability performance?

**Methods**

**Research Design**

The research design of this paper follows a multiple-case ‘replication’ logic, which treats the cases as a series of independent experiments that substantiate or refute emerging insights (Eisenhardt, 1989). All 12 companies were multinationals included in the Euro Stoxx list of the 600 largest European firms. Cases were chosen following theoretical sampling (Eisenhardt, 1989; Yin, 1989). Three types of company were identified in the following categories:

- top performance (firms with outstanding perceived sustainability performance),
- runners-up (firms with above average perceived sustainability performance) and
- followers (firms with average to low perceived sustainability performance).

Two public sustainability rating indices were used as proxies for perceived corporate sustainability performance: the Dow Jones Sustainability Index (DJSI) STOXX, and the Ethibel Sustainability Index (ESI) Europe Pioneer. Beloe et al. (2004) have identified Sustainable Asset Management (SAM), the provider of the Dow Jones Sustainability Index (DJSI), as a clear leader, with a ‘best practice’ mention in four of six categories. Launched in 1999, the DJSI is the first global index tracking the financial performance of the leading sustainability-driven companies worldwide. Its index of European firms, the DJSI STOXX, is made up of the top 25% firms of the Dow Jones STOXX 600 Index (150 firms) considered to be leading in terms of social and environmental performance in Europe. Eight out of the 12 firms considered in this study were included in the DJSI STOXX (see Table 1).

<table>
<thead>
<tr>
<th>Name</th>
<th>Industry Focus</th>
<th>Dow Jones Sustainability Index</th>
<th>Ethibel Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Followers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dandelion</td>
<td>Consumer</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Rose</td>
<td>Technology</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Hyacinth</td>
<td>Raw Material</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Tulip</td>
<td>Services</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Runner-ups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnolia</td>
<td>Consumer</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Rhododendron</td>
<td>Technology</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Azalea</td>
<td>Raw Material</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Lavender</td>
<td>Services</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Top Performers</td>
<td></td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Maple</td>
<td>Consumer</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Oak</td>
<td>Technology</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Sequoia</td>
<td>Raw Material</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Hemlock</td>
<td>Services</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

Table 1. Description of case data
The second sustainability rating index used in this study, the Ethibel Sustainability Index (ESI), has been named as best practice in one of the six categories assessed by Beloe et al. (2004). The ESI contains two public indices, the ESI Europe Excellence index, which is similar in ambition to the DJSI STOXX (aiming to identify firms with good corporate sustainability practice), and the ESI Europe Pioneer index, a much more selective measure. For this study the more demanding ESI Europe Pioneer index has been chosen, containing only 86 European firms that are seen by Ethibel not just as above average but as belonging to a more proactive group of ‘pioneers’ in terms of social and environmental performance. Of the 86 firms cited as pioneers on the ESI, 37 firms are not included in the DJSI. This leaves an overlap of 49 firms that are covered by both indices (about 8% of the Euro STOXX 600 or roughly a third of the DJSI STOXX).

Based on the data from DJSI and ESI four firms were selected for inclusion in this study in each of three categories, resulting in a total of 12 studied firms (see Table 1). The paper considers firms as ‘top performers’ if they were included in the DJSI STOXX and the ESI Pioneer Europe. ‘Runner-up’ firms had to be included in the DJSI STOXX, but had to be absent from the more exclusive ESI Pioneer Europe. ‘Follower’ firms had to be absent from both indices but still be part of the Euro Stoxx universe.

It is important to note that the term ‘corporate sustainability performance’ is not unproblematic. There exists a body of literature that highlights how difficult it is for external rating companies to approximate a firm’s objective corporate sustainability performance (Sharfman, 1996; Chatterji et al., 2009). It is for this reason that this paper talks about perceived corporate sustainability performance. In that sense it might be fairer to conclude that what we term ‘top performers’ here are those companies that have the best ability to present themselves as sustainable to external rating firms such as DJSI or ESI.

In order for the study to cover a wide range of corporate sustainability issues, firms were selected in four sectors: consumer, technology, raw material extraction and services. Each of these four sectors faces unique corporate sustainability issues, thus providing a broad and yet balanced sample of firms. In order to protect the confidentiality of informants, firm names are masked with code names in this publication.

Data Collection

Data was collected through 12 semi-structured individual interviews of about an hour. Interviews were recorded and transcribed. Interviews first probed respondents’ awareness of corporate sustainability issues. The interview then focused on the firm’s motivation to engage in corporate sustainability, and the perceived link with competitiveness.

Research into similar questions has often used dedicated corporate sustainability managers as informants (see for example an overview of 24 studies by Steger, 2000). These respondents have the advantage of hands-on experience with the topic in question. However, they will also be tempted to present their own achievements in a particularly favourable light, since this might mean more resources and better career options in their own firm. To avoid this kind of bias, this research project has approached investor relations (IR) directors as the main source of information. Due to their position, IR directors are usually familiar with activities across the whole firm. Thus they are well placed to assess whether a firm’s action advances its competitiveness or not.

Moreover, as one of the main conduits between socially responsible investors and a firm’s corporate sustainability department (Hockerts and Moir, 2004), they can be expected to be aware of corporate sustainability issues in their respective firms. While reducing the bias towards corporate sustainability, this choice does, however, introduce a bias towards shareholder value creation. When interpreting responses from the IR managers it must be kept in mind that they tend to look for ways to present their firms as having competitive advantages.

Prior to the principal data collection, desk research was carried out for each firm. In this process, each company’s website was reviewed for material pertaining to corporate sustainability. Of the 12 firms studied all (even the followers) had a link to their corporate sustainability website (or an equivalent title) on their corporate front page. Furthermore, web searches for media articles were carried out pertaining to corporate sustainability issues. This data was used as preparation for the interviews and also for triangulation in the analysis section.

The interview data was supplemented with material from the desk research to verify the reliability of the information received from the respondents. This analysis revealed some small inconsistencies with regard to dates of events and names. However, no considerable discrepancies were found between the publicly reported corporate sustainability strategies and the IR directors’ account thereof.

Copyright © 2014 John Wiley & Sons, Ltd and ERP Environment
Data Analysis

Data analysis used approaches common to qualitative research studies (Miles and Huberman, 1984; Eisenhardt, 1989; Yin, 1989; Lee, 1998). For each interview a transcript was prepared and studied regarding the key research issue. Codes and sub-codes were developed as the analysis progressed. These codes were developed after a close reading of prior literature as laid out earlier in this paper.

Codes were then represented in mental maps (Eden, 1992; Eden et al., 1992). The value of mental maps as a data analysis tool has been demonstrated by a number of authors over the past years (Eden et al., 1992; Ojastu et al., 2011; González et al., 2012), and is also increasingly used in sustainability related studies (Figge et al., 2002; Mendoza and Prabhu, 2006; Parisi and Hockerts, 2011).

For this study separate mental maps were created for each of the 12 respondents. These maps were then integrated into three collective maps (Langfield-Smith, 1992; Klimoski and Mohammed, 1994; Mohammed et al., 2010; Fairweather and Hunt, 2011), which represent the key schemata used by respondents from the follower, the runner-up and the leader groups. The results of these three maps will be discussed in the next section.

Findings

The insights that emerged from the data linked perceived corporate sustainability performance with a set of competitive advantages. The respondents usually identified certain positive aspects (e.g. philanthropy, good governance) and negative aspects (e.g. pollution, discrimination, child labor) of sustainability performance as relevant to their firm. As part of the semi-structured interview guide, respondents were then prompted to comment on why they thought their companies should or should not take action on these corporate sustainability issues. A second question probed further into whether they felt that such activities created competitive advantages.

The data presented in the following contains quotes that were selected to best represent a respondent’s cognitive representation of the business case for corporate sustainability. Each quote corresponds to longer statements that may run over two or three paragraphs. In some cases several quotes are attributed to one respondent; this signifies that the informant has come back to the theme at a later point in the interview.

A first insight from the data concerns the general question of why some firms invest more in corporate sustainability than others. Previous research suggests different explanations. Bansal and Roth (2000) identify both extrinsic factors (such as competitiveness and legitimization) and intrinsic factors (such as individual responsibility and ethical motives). This would suggest that the knowledge structures of respondents in firms with a lower sustainability performance should exhibit both less intrinsic and extrinsic motivation. Cognitive structures of respondents in firms with a higher sustainability performance on the other hand should be expected to contain both more competitiveness arguments and more ethical motives.

Walley and Whitehead (1994), on the other hand, postulate that competitive advantage is only a temporary effect. Thus one might also expect that respondents in firms from the ‘runner-up’ group would be more likely to perceive competitive advantages than managers in firms from the ‘leaders’ group (since the leaders have presumably already exhausted all ‘low-hanging fruits’ (Walley and Whitehead, 1994) and win–win solutions, and consequently are now facing more trade-offs. According to this logic one would expect that respondents from firms in the ‘leader’ group would cite ethical arguments and corporate values more often as drivers of corporate sustainability than competitive advantage.

At a first glance the evidence from this study does not fully support either Bansal and Roth (2000) or Walley and Whitehead (1994). In fact, the results are eerily undifferentiated. Respondents in all three categories claimed that corporate sustainability increases competitiveness. Ethical motives and individual responsibility on the other hand were hardly ever mentioned. This finding does not exclude the possibility that firms and managers act upon certain sustainability issues out of a conviction that this is the ethical right thing to do, even if it comes at a price. However, the data suggests that the business case for corporate sustainability has so far permeated the consciousness of respondents that the respondents would not admit to any other motivation for addressing corporate sustainability.
In other words, professing ‘good ethics is good business’ has become an organizational ‘dogma’ (Hoffman, 1999) in itself.

Proponents of corporate sustainability may be heartened by the fact that managers seem to have knowledge structures that positively link corporate sustainability with the business case. However, it is also interesting to note that respondents were reticent when asked whether there might not be at least some sustainability activities that lead to competitive disadvantages. It seems that considering sustainability in a business case perspective has become the dominant logic (Prahalad and Bettis, 1986).

However, such dominant mental models may be deleterious if they become dogmatic and simplistic. An unreflective perception that all sustainability activities will eventually pay off may lead to an impoverished view of the complex challenges corporate sustainability poses. Weick (1979) and Gioia (1986) point to the fact that simplified knowledge structures may actually turn out to be liabilities if they incorrectly simplify highly complex issues. In his later work Prahalad similarly warned against the dangers of dominant logics becoming ‘blinders’ (Prahalad, 2004, p. 171).

DeNisi et al. (1984), for example, have found in their study of performance appraisal that supervisors who have a positive perception of a subordinate may feel it unnecessary to collect more information. They may also interpret a person taking a break more positively (i.e. as planning time rather than loafing). In the context of corporate sustainability this might mean that an unreflective appreciation of corporate sustainability as always in the long-term interest of the firm may lead to a simplistic view of corporate sustainability. Managers may run the risk of ignoring any issues that fall outside this stereotype. Thus any discussion of ‘corporate sustainability beyond the business case’ (Dyllick and Hockerts, 2002) is seen as heresy and becomes impossible.

Turning our attention to the content and structure of the mental models employed by respondents, a more differentiated picture emerges. Whereas followers mainly employed knowledge structures related to risk, runners-up and leaders used more differentiated and integrated mental models. In the following, data for each of the three groups will be presented briefly.

Mental Model Employed by Followers

An analysis of the data shows that the mental models employed by respondents from followers were not very differentiated, focusing primarily on risk reduction with only minor considerations towards efficiency gains. Figure 1 represents the data from followers in a collective cognitive map, which shows that branding and market opportunities were not part of the cognitive repertoire of these firms.

Risk Reduction

Awareness of risk was particularly strong among the followers. The dominant cognitive model employed by followers is best represented by the respondent from Dandelion, who described sustainability performance as a kind of insurance: ‘[Corporate sustainability] can protect you from losing added value’. All four respondents in this category mentioned emerging regulation as a major motivation for their corporate sustainability programs. ‘If you [are not proactive], later on you could lose money. You may face new regulations and complying with these could be very expensive and difficult’, stated, for example, Dandelion. Rose concurs with this when stating that if ‘you don’t have a strong policy […] you can become the subject of lawsuits (such as for example in the case of asbestos). This could actually eat up shareholder value’.

Both Rose and Hyacinth reported that product and production standards have been constantly tightening. Being aware of this trend, both firms stated that their aim was to stay several years ahead of legislation in order to safeguard managerial options. The respondent from Rose, for example, concludes ‘We know we won’t be able to sell [products] if we don’t meet these standards […] on things like noise pollution and emissions’.

The respondent from Tulip confessed to a fear of being ‘named and shamed by the environmental minister’. Rose cited its social HR policies as the main reason the company hadn’t had a serious strike for 12 years, while its largest competitor was regularly subject to strikes. The risk of losing its license to operate was a clear motivator for Hyacinth. Owning plants with a long depreciation time, they felt vulnerable to hostility in the local community, as they could not easily delocalize.
Efﬁciency Gains

At ﬁrst glance the interviews seem to bear out the assumption that efﬁciency gains are limited to the low-hanging fruits hypothesized by Walley and Whitehead (1994). None of the followers brought up increased operational efﬁciency as the ﬁrst motivation for engaging in corporate sustainability. Only when probed as to whether they can imagine any further motivations for engaging in corporate sustainability did two of them (Dandelion and Tulip) mention more as an afterthought: ‘And then there are, of course, cost reductions’. This fact would indicate that increased operational efﬁciency is not the primary motivation for these ﬁrms to engage in corporate sustainability.

An exception is Dandelion, which stressed that for ten years they have worked on ‘reducing energy bills and the impact on the environment, [since then we] have become highly successful – both from an economic aspect and an environmental point of view’. Tulip also refers to water and efﬂuent controls as a way of saving costs. Moreover, Tulip points towards its long tradition in people development and management development: ‘[This has] been integral to the success of the company. […] Can we quantify [the savings from this]? No. But it’s been a real factor’.

Mental Model Employed by Runners-Up

The mental models elicited from runner-up companies were both more differentiated and more integrated than those of the followers. Figure 2 represents the data from runners-up in a collective cognitive map, which shows that runners-up also consider branding and new market opportunities part of their cognitive repertoire. These knowledge structures are, however, less integrated than those for risk reduction and efﬁciency (meaning that there were fewer interconnections among knowledge structures).
Risk Reduction
All four runners-up identified risk reduction as a major motivator for corporate sustainability. The best illustration for managing regulatory risk could be found at Azalea. As the first player in its industry the company had voluntarily committed to much tougher emission targets than were required by law. When the national environmental agency began contemplating tougher laws it turned to Azalea for help in how to design the law most efficiently, and when the law was extended to a European level Azalea once again was part of the negotiations as the only firm with several years of data to draw on.

Azalea also cited the risk of campaigns as a relevant motivator: 'Another example is Greenpeace’s [consumer boycott] campaign. [If such a campaign endures] loss of volume starts to have a financial effect and analysts will start saying: “Do something to sort it out”’. The respondent from Azalea also saw a direct link between being perceived well by local communities and the firm’s ability to deliver projects on time and budget, ‘because we won’t find ourselves opposed by communities and governments’.

This line of thought was echoed by Magnolia: ‘We’re [clear] about the risks involved from a PR point of view. [We] ensure that we’re not damaging the value of [our brand]’. The respondent from Lavender felt that his company was doing quite well in this dimension: ‘We have not been getting a lot of flak over [social responsibility in the supply chain] because we have a good program in place’. However, being a market leader Lavender also realized that it was exposed to much more scrutiny from stakeholders than some of its competitors. According to Rhododendron this attention also includes certain types of investor who will not invest in a company if it seen as having an unsustainable product portfolio.

Efficiency Gains
All four respondents also referred to efficiency gains as a reason for investing in corporate sustainability. Lavender, for example, stated that ‘the benefits from being environmentally friendly are extra cost savings’. This was shared by
Magnolia, which reported quite a lot of gains, the best being from energy efficiency, as well as by the respondent from Azalea, who felt that ‘for things like carbon trading, there is an economic benefit’. Azalea also saw the potential for productivity gains from a lower staff turnover if a firm is seen as responsible. A similar argument was made by Rhododendron with a view towards hiring staff.

Brand Building
Three of the four runners-up have reported brand building as a consequence of proactive corporate sustainability. Magnolia, for example, linked its status as a most trusted brand to its CSR program: 'So people look at us and expect us to be doing the “right thing”'.

As for more tangible outcomes, Azalea admitted that at the beginning sustainability might create a short-term disadvantage: 'If you take sulfur out of gasoline products before anyone else, you’ll initially see a financial disbenefit. [However,] the idea is that customers will appreciate what you’re doing and you’ll benefit later'.

Lavender agreed that increasingly customers were factoring sustainability criteria into their purchasing decisions: 'The customer has shown a lot of interest in organic products, service levels, diversity in personnel in stores'.

New Market Opportunities
Only one of the runners-up talked about the possibility of using sustainability to enter new markets. 'We realize greenhouse gases are an issue', said the respondent from Azalea: 'We [have moved into] gas and renewables. We have research going on carbon sequestration. We do research [...] on the use of hydrogen. We spend money on all of these things. [They are] a development business. They give us options for the future'.

Mental Model Employed by Leaders
Compared with the followers and runners-up, the mental models used by leaders were more complex. In particular, they were more cognitively integrated across the four dimensions of risk reduction, efficiency gains, brand building and new markets (see Figure 3).

Risk Reduction
The respondent who evoked risk reduction the most was from Sequoia. He saw corporate sustainability as a means to manage both regulatory and litigation risk as well as to maintain Sequoia’s license to operate and thus safeguard its survival in the long run. Hemlock referred to risk only in passing when talking about its carbon risk unit.

Today the regulatory controls mean that the track record you have with [social and environmental management] is vital for the way you get permits. If you have a good track record, then you get permits to exploit new areas more easily (Sequoia).

Interestingly, two of the leaders (Oak and Maple) did not bring up risk reduction at all as a category to consider when talking about the business case, indicating that their mental models seem more focused on finding opportunities than avoiding threats. In other words, they were less cognitively differentiated.

Efficiency Gains
All four leaders referred to efficiency gains as a motivator for their sustainability activities. Sequoia, for example, saw much potential in alternative energy: 'The use of alternative fuels [...] is vital not only from an environmental point of view but also to contain the increase in fuel costs'. Hemlock made a similar statement: 'The energy we buy is considered to be very ecological and it is also at a lower price. So it doesn’t always mean you have to spend more to achieve ecological criteria'. Maple’s main focus on energy efficiency was linked to the use of teleconferencing. 'We saved £5–6 million in fuel costs. [...] Over the last 10 years our [environmental program] has saved about £600 million.' Only Oak was somewhat doubtful about the real potential of efficiency gains in the short run: 'These are all long term. You have to invest more now to save in the long term'.

In addition to energy efficiency Hemlock also stressed the impact its CSR activities have on employee productivity. 'Hemlock is very committed to CSR and we are known as an employer of choice. We have a reputation as a good employer.'
Brand Building

The support of the corporate brand through sustainability was mentioned repeatedly by Maple and Oak. Oak admitted that its dedicated eco-products were not a big sales success. However, the Oak respondent felt that its sustainability activities were driving its overall corporate brand and its ability to charge a premium price for all Oak products. Oak also felt that it was attracting and retaining customers by making products that allowed its customers to receive tax exemptions due to their lower emissions.

Maple was very pleased with the way its CSR activities had helped improve the firm’s image, which at one point was that of ‘a most hated company’. An in-house study found that CSR had an important impact on improving Maple’s image with its customer base: ‘[We found that] half of the factors impacting image are due to CSR’. Public recognition for Maple’s employee diversity program has also been important in bids with government and other public clients, who include such activities in their sourcing decisions.

New Market Opportunities

Three out of the four leaders interviewed reported seeing new market opportunities arising from their corporate sustainability activities. Hemlock, for example, has started a carbon certificate trading unit, which it hopes to evolve into a new business. The business idea arose directly from the fact that Hemlock’s core business was very exposed to carbon risk.

Maple also reported having leveraged its internal environmental management system into a new product line: ‘[We sell it] primarily to government departments. [...] It is significant revenue for us. This application uses our core competencies’. Maple also sees cleantech services (such as teleworking to avoid the environmental impacts of traveling) as a possible growth market.

In this context Oak stressed the importance of the cutting edge of green R&D activities and forward looking eco-design: ‘[Oak products] are [used] 10 years or more. [So] we are always thinking ahead. Today we have [the most efficient product in the market], but we also have a [more efficient one in the conceptual stage].’
Discussion and Theory Development

As described above, the respondents in this study represent information about the business case for corporate sustainability by drawing on four distinct knowledge structures. They describe process oriented opportunities such as risk reduction and operational efficiency, as well as market oriented opportunities such as sustainability branding and new market creation. These categories mirror broadly findings suggested by prior literature (e.g. Schneidewind, 1995; Dyllick et al., 1997; Dyllick, 1999; Reinhardt, 1999, 2000). However, the findings from this study extend our understanding of the business case by indicating that managers in firms with higher perceived corporate sustainability performance tend to display more cognitive complexity when discussing the business case.

Cognitive Differentiation

As a study of the maps shows, respondents from firms with a lower perceived corporate sustainability performance referred to fewer dimensions (only risk and efficiency) than the runners-up and leaders (risk, efficiency, brand building and new markets). In cognition theory this is referred to as cognitive differentiation, which Feldman and Hilterman (1974) describe as the number of independent dimensions that a person employs when talking about different constructs (Bartunek et al., 1983; Streufert and Nogami, 1989; Green, 2004).

Bartunek et al. (1983) argue that a narrow cognitive framework often results in ineffective managerial behavior. They thus advise managers to aim for a more complex understanding of their information environments. In the context of this study this would mean that managers in firms such as the followers might want to look for more elaborate mental models.

One obvious concern with such an idea could be that followers evoke fewer business case dimensions because their firms simply have fewer opportunities to explore, either due to the legal or market environment they act in, or due to their competency base. This lack of opportunities might explain why both sustainability ratings such as the DJSI or ESI rate these firms lower and why respondents from these firms did not evoke brand building or new market opportunities.

However, it might also be possible that the causal relationship is in the opposite direction. This means that because individuals in follower firms have less differentiated mental maps about the business case they do not see the opportunities and accordingly miss out on opportunities to create competitive advantage from corporate sustainability activities.

The work of Guicherd et al. (2011) might shed some light on this question. They have demonstrated that higher cognitive differentiation impacts the kind of negotiation strategy people will employ. Negotiators with more differentiated mental models will tend to be less confrontational and focus less single-mindedly on profit maximization alone. In other words, they are less likely to perceive interaction with stakeholders as a zero sum game. Instead, they might perceive win–win scenarios that allow them to achieve environmental and social goals while at the same time creating competitive advantages.

Whichever of these explanations is correct, one can deduce from the data that a positive relationship seems to exist between cognitive differentiation and corporate sustainability performance.

Proposition 1. Managers in firms with higher perceived corporate sustainability performance will tend to have more differentiated mental models about the business case for corporate sustainability.

Cognitive Integration

A second trend emerging from the data concerns the cognitive integration of the mental models employed. As explained by Stabell (1978), cognitive integration describes the degree of interconnectedness among a knowledge structure’s dimensions. They are an individual’s ability to form conceptual frameworks that organize complex situations (Stabell, 1978).
An analysis of the collective maps reveals that the map of the followers contains 10 interconnections, that of the runners-up 15 and the map of the leaders 19. In other words, the map generated from runner-up data is more cognitively integrated than that of the followers. It contains more interconnections between corporate sustainability and each of the four business case dimensions. The same is true for the leader map, which again contains more interconnections than that of either the followers or the runners-up.

**Proposition 2.** Managers in firms with higher perceived corporate sustainability performance will tend to have more integrated cognitive mental models about the business case for corporate sustainability.

**Knowledge Structure Content**

Another trend emerging from the data concerns the content categories of the cognitive maps. Here awareness runs from risk reduction (eighteen mentions) via operational efficiency (thirteen) to brand building (eight) and new market creation (five). These findings indicate that, generally speaking, process oriented opportunities (risk and efficiency) outweigh market advantages (branding and new markets). This would indicate that the large academic attention paid to sustainability marketing and sustainability innovations does not match with the actual preoccupations of firms. In general, companies seem to see more potential in operational benefits such as risk and efficiency than in market opportunities.

**Proposition 3.** Cognitive models of the business case for corporate sustainability tend to contain more interconnections regarding risk and efficiency oriented categories than brand building or new market development.

**Cognitive Development**

The only content category for which the relationship outlined in Proposition 2 does not hold true concerns risk reduction. Here the follower map contains more interconnections (seven) than those of the runners-up (six) or the leaders (four). Actually, two leaders did not refer even once to risk reduction as a motivation for their corporate sustainability programs. A possible explanation for this could be that, as firms improve their sustainability performance, their mental models develop from a risk reducing logic towards an opportunity logic.

**Proposition 4.** With increased perceived corporate sustainability performance, cognitive mental models of managers regarding risk reduction become less integrated.

**Conclusions**

This paper investigates how mental models about the business case for corporate sustainability differ between firms with different perceived corporate sustainability performance. It finds that respondents from all firms have mental models in which corporate sustainability programs are primarily motivated by competitive advantages. In fact, the belief in the business case seems to be the dominant logic among the respondents of this study. A possible limitation may be found in the selection of respondents. The mental models of IR managers are obviously attuned towards looking for possible competitive advantages. The assertion that the business case has become a dogma is not implausible. However, it will need to be verified through studies with other types of respondent.

A second finding of this study is a clear bias among respondents from firms with perceived lower sustainability performance towards measures resulting in risk and cost reductions. Respondents from perceived high performers on the other hand have more differentiated and integrated cognitive structures. While this allows some preliminary
speculations, this paper is limited in the sense that it does not actually contain much data about the development of business model knowledge structures. Future research might, in particular, study this area.

The conclusions to be drawn from the data in this study are limited in several other ways. This study only points to a link between more complex mental maps of the business case and sustainability performance. It does not prove causation. Is it that firms whose managers have more differentiated models of the corporate sustainability business case eventually invest more in their sustainability performance? Or is it that managers in such firms are exposed more to corporate sustainability thinking and therefore have more complex cognitive models? Intuition would suggest a mix of the two effects, but no data is available as yet to analyze the question.

It is also important to remember that this study does not explore the business case directly. It only elicits the official discourse of managers about the business case for corporate sustainability. A competing explanation for the findings of this study could be that with increasing corporate sustainability expenditure managers feel pressured to justify these investments. This might explain why managers in firms with higher corporate sustainability performance gave more examples of the business case. Future research will have to control for the possibility of such an effect.

Furthermore, it would be very interesting to test research by prior scholars related to the development of knowledge structures. Bartunek et al. (1983), for example, find that the articulation of a leader’s new vision for an organization may cause the development of cognitive models in employees. It would, for example, be interesting to see whether grand sustainability visions such as Jeff Immelt’s Ecomagination strategy for GE or Philips’ Green Flagship program actually change mental models significantly.

Another promising research venue would be to follow up on the work of Westenholz (1993), who suggests that by experiencing a paradoxical situation individuals can develop their reference frames. This raises the interesting question of how far firms should promote a discourse about the paradoxical challenges of sustainability instead of promoting the dogma that there is always a business case in the long run.

It would also be interesting to explore what role NGOs and other stakeholders can play in helping firms reframe their mental models. Sequoia, for example, has gone to extraordinary lengths to bring its most critical stakeholders into the firm to start a discussion about the complex issues the firm faces. Similarly, Oak has been drawing inspiration for its conceptual work from the challenges NGOs such as Greenpeace have leveled against its industry. In this context it would be interesting to see whether, and if so how, sustainability rating firms impact the development of mental models.

Another extension of the research begun here would be a study of the creation of group level cognition about the business case. How does the representation of this issue differ between managers at HQ level and those in business units? Similarly, the construction of industry wide cognitive maps and their evolution over time offer development options.

If the propositions emerging from this paper survive empirical testing, they will extend our theories of corporate sustainability beyond the all-or-nothing type of argument underlying most of the CSP–CFP debate. This in turn will hopefully lead to a more relevant description of the corporate sustainability challenges faced by most managers.

References


