Board of directors’ relationship to environmental sustainability: Differences between insiders and outsiders

A study of inside and outside board members’ cognition and reasoning when engaging in environmental sustainability issues

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Abstract

The aim of this study is to investigate how inside and outside directors differ in their cognition and reasoning in regards to environmental sustainability issues. The theoretical background derives from a cognitive view and Stakeholder theory. The paper is further based on current research regarding insiders’ and outsiders’ relationship to environmental sustainability. In order to capture the cognition and reasoning of insiders and outsiders, a Think-aloud study was conducted, interviewing a total of 20 board members in the food industry. Results from this study showed that, when faced with environmental issues, outsiders are more likely to request, repeat, ponder as well as clarify the information given. Secondly, outsiders are more likely to consider a long-term perspective. Thirdly, outsiders are more likely to consider an environmental view. Lastly, both insiders and outsiders use analogical reasoning when contemplating around environmental issues. However, insiders are more likely to draw experience from their current position or company while outsiders are more likely to draw experience from outside their current position or company when solving environmental issues.

Keywords: Environmental sustainability, Board of directors, Insiders, Outsiders, Think-aloud
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1. Introduction

“When the wind blows there are those that build walls and then there are those that build windmills”.

The quote stated above (Huffington Post, 2014) was mentioned by Clare Woodcraft during the Responsible Business Summit in London in May 2013. It summarizes the current view on companies’ and their managements’ mixed thoughts and actions in regards to environmental efforts. In other words, there are those who are happy to sit and pretend everything is going to work out, and there are those that see a new world, the opportunities in it, and trying to create benefits out of it (Huffington Post, 2014).

Environmental issues, regardless of any occasional managers’ views, have become an increasingly prominent matter for companies. At the same time, boards of directors have also had an increasing impact on how the organizations tackle sustainability challenges. Indeed, the strategic decision-making literature recognizes board of directors as an important factor in corporate decision-making (Ibrahim & Angelidis, 1995; Post et al., 2011). Consequently, for organizations that consider environmental objectives as key issues for their strategy and operations, boards of directors play a key role in assessing, shaping company practices and policies on a wide range of environmental topics (Ayuso & Argandoña, 2007; Kakabadse, 2007).

There has for the last years been a strong incentive to diversify boards (Kramer et al., 2006; Sellers, 2007). This is based on the assertion that board members with different backgrounds improve the chances of obtaining different knowledge domains, ideas and perspectives, something that in turn is considered important in the decision-making process. However, as board members’ backgrounds differ, research on individual ethics suggests that environmental values vary across individual characteristics (Post et al., 2011). Although boards of directors and their board members’ attributes have shown to have great impact on different aspects of firm performance, prior studies have primarily focused on financial performance. The effect of specific board attributes on corporate social responsibility (CSR) (Ayuso & Argandoña, 2007; Zhang et al., 2012), and in particular environmental sustainability (from here on sustainability) is a relatively under-researched area (Post et al., 2011).
Environmental policies, unlike corporate governance policies, induce a different set of conflicts, where management and shareholder interests are likely to be aligned and fixed on maximizing profit, which may be against the community at large. As such, distinguishing board members who are likely to protect the community over management and shareholders is of importance (Kassinis & Vafeas, 2002). As mentioned above, board members appear to differ systematically in their attitudes toward environmental issues based on their individual characteristics (Post et al., 2011). However, studies on the subject have presented contradictory findings, especially regarding whether a board member is an insider (current or former manager/employee of the firm) or an outsider (directors who have business relationships to the firm and/or owner family) (Zhang et al., 2012).

Inside and outside directors have in general different values, interests and time horizons. Insiders are suggested to be more attentive to short-term economic performance goals (Post et al., 2011). In contrast, outside directors are argued to be more responsive to stakeholder claims, less attached to economic performance, and more concerned with complying environmental standards (Zhang et al., 2012). Research on the topic (McKendall et al., 1999; Zhang et al., 2012) has however, as mentioned above, presented inconsistent findings. In addition, Kang et al. (2007) argue that a generalizability of demographic aspects may not extend across national boundaries due to different regulatory and economic environments, the effectiveness of governance mechanisms and cultural differences. As most empirical research on this topic is restricted to US data, Kang et al. (2007) further argue that inside and outside directors should be separately examined in each country.

In this study, we focus on inside and outside directors and examine their relationship to sustainability. More specifically, the aim of this study is to investigate how inside and outside directors differ in their cognition and reasoning in regards to environmental sustainability issues. Prior studies have primarily taken a quantitative approach on board compositions’ relation to sustainability. Although their studies have made significant contributions towards further understanding of the subject, neither of them has been able to capture the cognition and reasoning of inside and outside directors when faced with sustainability issues. As such, it is our belief and anticipation that this qualitative study will contribute to previous literature within this topic as well as give useful insights for practitioners that plan to promote an active work towards sustainability.
2. Theoretical background

2.1 Boards of directors from a cognitive perspective

The corporate governance literature commonly describes board of directors as the formal connection between the firm’s shareholders and the firm’s management entrusted of the day-to-day operations. In other words, board of directors is seen as the apex of the firm’s decision control system. As other top management positions, boards of directors are faced with complex, multifaceted tasks that involve major strategic-issue processing (Forbes & Milliken, 1999). However, an important distinction between board members and other top management positions can be made as the purpose of board of directors is only to monitor and influence company strategy – not to implement strategic decisions or to handle day-to-day operational tasks (Fama & Jensen, 1983). Hence, the “output” that board of directors creates can be seen as cognitive in nature. Moreover, as directors are episodic and interdependent, they are particularly vulnerable to the interaction difficulties that hinder groups from attain their full potential. Taken together, these aspects suggest that boards of directors are likely to depend heavily on social-psychological processes. This is especially true for boards that pertain to the exchange of information and critical discussions, e.g. balancing competing demands from various stakeholders. (Forbes & Milliken, 1999)

2.2 Stakeholder theory and board diversity

According to stakeholder theory, companies should design their corporate strategies in order to satisfy the interest of their stakeholders, i.e. groups and individuals who can affect or are affected by the company’s objective (Freeman, 2004). In this sense, stakeholders of a firm can be defined as “individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and who are therefore its potential beneficiaries and/or risk bearers” (Ayuso & Argandoña, 2007, p. 2). The firm can address these groups for at least two reasons. First, addressing the interests of stakeholders who are alleged to have influence can improve firm profitability. Second, it can be argued that stakeholders’ demands have intrinsic value, so that the firm has the responsibility to meet their legitimate claims. Stakeholder theory is related to sustainability issues as it provides convincing theoretical framework for examining the relationship between firms and the society (Ayuso & Argandoña, 2007).

In regards to corporate governance, a firm has often multiple goals related to its diverse stakeholders. The stakeholder theory has as such led to an alternative approach to the
conventional singular goal of raising shareholder returns. The governance process and the task of board of directors are therefore to control managers and other organizational participants to ensure that they act in the owners’ interest. As firms strive to be viable over time, the organization, including the board of directors, must exhibit the ability to both achieve the various objectives of different parties and to distribute the value created in ways that maintain their engagement. (Ayuso & Argandoña, 2007)

As mentioned before, there has been a strong incentive to diversify corporate boards based on the premise that diversity among board members increases the likelihood that different values, experience areas, ideas, and perspectives are considered during board of directors’ decision-making process (Ayuso & Argandoña 2007; Ramírez, 2003; Post et al., 2011). Diversified boards are further argued to have several advantages such as a better understanding of the market place and increased innovation and creativity. Moreover, diversified boards might increase board independence since these diversified members can raise questions that would not have been raised from a homogenous board. Taken these aspects together, diversified boards are suggested to better consider various stakeholder demands. Diversified boards are also argued to provide a more effective global relationship due to diversified network opportunities. (Carter et al., 2003)

Board members can be divided into two subcategories when it comes to diversity. Firstly, gender, age, background, nationality and race/ethnic are categorized as observable diversity. Secondly, functional and occupational backgrounds, educational, industry experience and organizational experience are categorized as less visible diversity factors. (Kang et al., 2007) Thus, the aspect of being an inside or outside director falls into the second category.

2.4 Insiders’ and outsiders’ relationship to environmental sustainability

Insiders are according to Ayuso and Argadoña (2007) defined as current or former managers or employees of the firm while outsiders are board members who solely have business relationships to the firm and/or owner family, outsiders have accordingly no operational tasks at the company. Studies have found that inside and outside directors in general terms have different perspectives, values and time horizons (Post et al, 2011). Boards that are dominated by outsiders are first and foremost claimed to hold a greater variety of knowledge and experience from other companies or industries. In contrast, inside directors tend to derive their information, success factors and processes from the same type of company or industry (McKendall et al., 1999). Thus, one can expect a distinction between outside and inside
directors in terms of analogical and holistic reasoning. Analogical reasoning occurs when previously solved problems are matched against, and used to suggest solutions to upcoming problems. This suggests that outside directors are more likely to make decisions based on knowledge and experience from other companies or industries. Holistic reasoning is a way of thinking that identifies attitudes and actions, which indicates an extensive, more selfless way of thinking. Individuals that use holistic reasoning are more likely to relate concepts and principles to one another in many various ways rather than separate them into parts (Dew et al., 2009).

Moreover, inside directors also appear relatively more attached to economic performance (Ibrahim & Angelidis, 1995; Post et al., 2011) and in turn less apprehensive to environmental standards and firm reputation than their outside counterparts (Ibrahim & Angelidis 1995; Webb, 2004). Outside directors are argued to be more likely to comply with sustainability standards, even if they conflict with short-term economic goals, because they may feel that such actions could be in the best long-term interest of the stakeholders. Outside directors’ focus on stakeholders’ long-term interest is consequently suggested to help broaden organizations’ hearing from stakeholders’ claims and thus increase their salience (Zhang et al., 2012). For instance, Ibrahim and Angelidis (1995) found that outside directors tend to favor philanthropic activities and Wang and Dewhirst (1992) argue that outsiders have stronger employee orientations. Boards consisting of a higher proportion of outside directors are also suggested to provide superior governance because they can monitor the behavior and actions of managers and intervene when they act in an opportunistic way (Core et al., 1999; Post et al., 2011).

The aforementioned studies are in general suggesting that a larger proportion of outsides are positively associated with sustainability performance. However, McKendall et al. (1999) argue that expecting greater number of outside directors to make a difference is naive. According to them, board members, are chosen because of their personal or professional ties to management and tendency to challenge management is not a selection criterion. McKendall et al. (1999) further argue that there is no reason to automatically presume that outside directors will act more courageously or independent than their inside counterparts. Coffey and Wang (1998) also question the recommendation of increasing the number of outsiders on the board. Their study on social performance, in this case philanthropic behavior, showed that increasing the number of outside directors on the board might have little effect.
Previous studies on the topic have according to Johanson and Østergren (2010) concluded that corporate governance practice is complexly embedded in political, cultural and legal settings. The different categories are often drawn out from ownership concentration, i.e. to what degree a company is owned by a few owners with relatively large shares of the company or several owners holding smaller shares of the company. As such, the scale is ranging from a more concentrated ownership on one side to a more dispersed ownership on the other. Countries with an “Anglo-Saxon model”, i.e. USA and Great Britain, are associated to a more disperse ownership while Scandinavian countries such as Sweden are closer tied to a more concentrated ownership. The degree of concentrated ownership also reflects some differences in regards to board composition. US boards typically consist of the company management and external members while Swedish boards usually consist of owners, industry experts and working directors. In addition, the CEO of the company is also commonly represented in boards of Swedish companies (Jansson et al., 2013, p. 16-21). Thus, Swedish inside and outside directors have in general slightly different roles as well as connections to the owners and the company itself in comparison to their American counterparts. There is however a tendency among Swedish companies to converge towards an “Anglo-Saxon model”, but recent studies indicate that there still exists a differentiated board structure between countries and cultures (Johanson & Østergren, 2010). Taken together, corporate governance varies among different national contexts where Swedish companies are relatively more tied to concentrated ownership in regards to their American counterparts. Differences between Swedish and American corporate governance are also found in regards to board composition.

2.5 Trade-offs regarding environmental sustainability

Companies and their board of directors continually encounter demands from various stakeholders to engage in environmental responsibility. These pressures to devote resources to sustainability initiatives can emerge from various stakeholders such as customers, suppliers, employees, governments, community groups and stockholders. With so many conflicting goals and perspectives, the definition of CSR is not always clear. According to McWilliams and Siegel (2001) CSR is defined as “actions that appear to further some social good, beyond interests of the firm and that which is required by law”. Since sustainability is one keystone in the concept of CSR (Post et al., 2011), the same definition applies in this study but with a focus on environmental initiatives and actions.

As mentioned above, increasing environmental demands from various stakeholders put pressure on organizations to engage in sustainability initiatives. As boards of directors are
utmost responsible of the decision-making process in public corporations, strategic or major operational decision that concerns a firm’s policy, including those connected to environmental issues, must go through the board (Kassinis & Vafeas, 2002). Many board members have responded positively to heightened stakeholder interest in sustainability by dedicating additional resources to promote such initiatives. However, other board members avoid fulfilling the demand for sustainability, as they believe that such efforts are inconsistent with profit maximization (McWilliams & Siegel, 2001). The economic cost related to sustainability initiatives is however not the only issue boards of directors have to take into consideration when engaging in strategic environmental decisions. Three common issues specified by Lii and Lee (2011) and Wu and Pagell (2011) are: profitability, uncertainty and company reputation. Each of these issues will be explained further below.

2.5.1 Balancing economic and environmental priorities

Existing studies on the relationship between organizations’ environmental and financial outcomes have generated mixed results. Many studies have found a positive relationship when examining the financial and environmental performance of organizations in different industries (Ayuso & Argandoña, 2007). For instance, the same processes that cut costs, reduce wastes and improve competitiveness can also be linked to improving sustainability outcomes as well, indicating that multiple stakeholder demands can be simultaneously satisfied (Wu & Pagell, 2007).

However, research has also suggested that not all stakeholders can be satisfied all the time. Strategic decisions regarding sustainability ambitions and goals can come with real economic costs. Some researchers argue that once organizations move beyond easy obtained actions such as reducing energy use and start focusing on more fundamental issues such as business models or supply chain designs, further sustainability actions will require significant changes in operational practices along with considerable investments. As such, proactive sustainability actions can place an economic burden on organizations that competitors do not have. (Wu & Pagell, 2011)

Consequently, boards of directors might have to consider a trade-off between environmental and financial outcomes. As companies begin to confront tighter environmental regulations and compete for resources, focus has switched from whether it pays to be green or not to how to address sustainability challenges while still being competitive. Indeed, the real challenge for organizations is when sustainability actions impose costs in the short-term while potential
benefits accrue only in the long term (Wu & Pagell, 2011). Thus, boards of directors have to decide on how to balance priorities by weighing economic short-term and long-term consequences.

2.5.2 Uncertainty connected to sustainability initiatives

Due to the complex nature of environmental strategic decisions, sustainability initiatives could fall into the context of complex social problems known as “wicked problems” (Rittel & Webber, 1973). Basically, a problem is “wicked” when (1) there is a broad variety of definitions of what the problem really is; (2) there are a number of competing solutions to the problem, each creating new problems in return; and (3) the process of solving the problem is complex and generally imprecise due to constraints such as constantly changing resources. Environmental issues can be considered to be such a “wicked problem” since (1) not everyone agrees on the content, (2) environmental issues pose different problems for each organization, (3) the problem solving process regarding environmental issues is often complex which often leads to indefinite results, and (4) consequently, no generic solution exists for such issues (Lepoutre et al., 2007). The complex nature of environmental issues has as such elements of uncertainty which board of directors has to take into consideration when deliberating over environmental strategic issues.

Moreover, as organizations set out to evaluate the impact of their environmental actions they often do not have complete information on consequences or decision parameters. Organizations might have limited information about the environmental issues they face, how environmental issues interact and affect other dimensions of sustainability and what effect certain environmental actions will have. When organizations are constrained by scarce information and information processing ability, they experience bounded rationality, i.e. the rationality of individuals is limited by the information they have, while considering environmental-economic trade-offs. Boards of directors can per se hardly be certain of environmental consequences when the information itself is ambiguous and uncertain. Consequently, they are not fully aware of all of the factors in the first place (Wu & Pagell, 2011). Taken together, environmental initiatives can be viewed as risky and uncertain for boards of directors (Oh et. al, 2011).
2.5.3 Sustainability initiatives’ effect on corporate reputation

As mentioned before, sustainability initiatives are acts that satisfy goals beyond the legal obligations of a firm. Thus, such initiatives can also be seen as a key component in an organization’s marketing toolbox since it improves corporate reputation and performance as well as responds to consumer expectations. The underlying theme of influence is that sustainability initiatives allow the consumers to identify with a specific organization (Lii & Lee, 2011). However, a critical consideration for companies is reputational risk heightened by a greater transparency and criticism of corporate practices. As markets have become more competitive and brand reputation has become more vulnerable, safeguarding the organization’s brand image has never been more important. In other words, organizations may be penalized by consumers for actions that are not considered environmentally responsible. Boycotts of companies’ products are one manifestation of such penalization. Surveys of consumer reports have also showed that consumers are to a large degree influenced by a company’s reputation. (Smith, 2003) On the other hand, Vogel (2006, p. 46) argues that there is a lack of evidence supporting that “bad” sustainability behavior results in decreased profitability or harms other measures in corporate financial performances. Taken together, this suggests that sustainability initiatives play a crucial role in regards to corporate reputation which subsequently an additional aspect boards of directors have to take in consideration when faced with environmental issues.

2.6 Theory summary

The “output” that boards of directors create can be seen as cognitive in nature as the purpose of board of directors is only to monitor and influence company strategy – not to implement strategic decisions or to handle day-to-day operational tasks. Further, Stakeholder theory is related to environmental sustainability as it provides convincing theoretical framework for examining the relationship between firms and the society. In order to meet these multiple demands from stakeholders, there has been a strong incentive to diversify boards. This is based on the premise that diversity among board members increases the likelihood that different values, experience areas, ideas, and perspectives are considered during board of directors’ decision-making process. Diversity factors can be divided into visible and less visible factors where the aspect of inside or outside directors falls into the latter one.

Inside and outside directors have in turn shown to have different perspectives, values and time horizons, which are likely to affect organizations’ environmental sustainability initiatives. Furthermore, board of directors are likely to face three types of issues when engaging in
sustainability initiatives. First, board of directors have to balance priorities by weighing economic short-term and long-term consequences along with desired environmental results. Second, uncertainty is considered an issue since boards of directors hardly can be certain of environmental outcomes when the information itself is ambiguous and unclear and since they are not fully aware of all of the factors in the first place. Third, sustainability can both be seen as a reputational risk as well as an important marketing tool in regards to company reputation. These three issues will form the foundation in the following method passage.
3. Method

3.1 Think-Aloud Protocol

To investigate how inside and outside directors’ differ in their cognition and reasoning in regards to sustainability, we have chosen to conduct a series of Think-Aloud (TA) interviews with individual board members. Prior studies on the subject (e.g. Ayuso & Argandoña, 2007; Post et al., 2011; Zhang et al., 2012) have primarily conducted quantitative research on board composition and its effect on sustainability performance. Although their studies have made important contributions towards further understanding of the subject, neither of them has been able to capture individual inside and outside directors’ cognition and reasoning when faced with sustainability issues. Our belief is that by applying a TA study examining how inside and outside directors deliberate around environmental strategic dilemmas, this study has the potential to capture the cognition and reasoning behind strategic decisions regarding sustainability, and as such contribute to the existing research.

In practice, the TA method calls for concurrent verbalization – i.e. participants are required to continuously think out loud when solving a problem. Transcriptions are typically tape-recorded and the verbalization forms the basic data to be analyzed in so called Think-Aloud protocols (Dew et al., 2009). The TA method can be used in a variety of problem-solving studies such as how experts and novices within a specific domain of knowledge reason or what aspects students consider when solving a math problem. TA studies of individuals of different backgrounds and perspectives within a certain area are useful for unfolding how individuals reason when presented with a problem or a statement (Fonteyn et al. 1993). Svenson (1989) argues that studying unfamiliar tasks in a TA setting have the benefit that they may generate information about the creation of a solution process as well as the cognitive structuring of a process. Since it could be argued that sustainability issues are not everyday tasks for board members, applying a TA study has the potential of capturing the cognition and reasoning by the board members over such issues. Ericsson & Simon (1993) further argue that verbal protocols usually are accurate and representative measures for cognition, especially when participants are reporting memory traces that are already in verbal form when they begin the process of verbalizing about them. This condition was presumably met in this study, as the participants were asked to verbalize while reading and analyzing environmental dilemmas. Lastly, Ericsson & Simon (1993) argue that think-aloud reports, where the cognitive process are verbalized directly, can be considered to be a close reflection of an
individual’s cognitive process. This is illustrated in Figure 1 and 2 where S stands for subject and verbal encoding represent the occurrence when individuals generate verbal descriptions to communicate information to another person (Ericsson & Simon, 1993).

![Figure 1](image1.png)

**Figure 1.** The Think-aloud process that calls for concurrent verbalization (Ericsson & Simon, 1993).

![Figure 2](image2.png)

**Figure 2.** Verbalization procedures that involve mediating processes before verbalization such as request for explanation (Ericsson & Simon, 1993).

The essential logic behind TA protocols can be summarized as followed: While regular interviews and questionnaires allows participants to make up polished stories and explanations about how they believe they solve problems (illustrated in Figure 2), concurrent verbalization allows the researcher to look directly inside the black box of the participants cognitive process. This is illustrated in Figure 1 where the cognitive process regarding subjects S1 – S3 is verbalized directly (Dew et al., 2009; Ericsson & Simon, 1993). The validity of verbally thought successions is derived from the very short interval between the occurrence of thoughts and verbalization. Consequently, the TA technique suffers little from introspection and retrospection biases, which thereby can be considered to generate the most valid data possible in this line of research (Dew et al., 2009).

This specific TA study has in turn been inspired by practical guides of conducting TA studies (e.g. Chi, 1997; Ericsson & Simon, 1993; Fonteyn et al., 1993; van Someren et al., 1994) as well as previous TA studies (e.g. Dew et al., 2009, Isenberg, 1986; Lundgrén & Salenterä, 2010) examining individuals’ cognition in other knowledge domains.
3.2 Study industry and participants

In order to better be able to isolate the effect of board members’ inside or outside backgrounds and subsequently answer the aim of this research, this study consists of participants restricted to the same industry, namely the food industry. The food industry faces many significant risks from public criticism of sustainability issues since it is not only a part of people’s everyday life but also plays a large role in the national economy (Maloni & Brown, 2006). The food industry faces several challenges connected to sustainability, for example, to reduce the industry’s effect on the environment, utilize sustainable resources and reduce waste in production (Livsmedelsföretagen, 2014). This was seen as important as the board members needed to be able to relate to sustainability issues. In order to further concentrate the sample and isolate the effect of board members inside or outside backgrounds, participants were chosen solely from the food processing industry and the food wholesale trade industry. The companies, where the participants held board positions, had an annual turnover ranging from 60 million SEK to 380 million SEK.

This study used a purposeful sample, i.e. a non-random method of sampling where the participants are selected because of their information richness (Coyne, 1997), which is in line with Lundgrén & Salenterä’s (2010) TA study. The participants were found through the company information website, Allabolag.se, and were contacted per phone or email. In order to get as dispersed perspectives and opinions as possible, each of the participants represented a unique company. The identity of the participants and the companies is not revealed due to confidentially agreements. The participants will instead be referred to as insiders or outsiders. Based on the purposeful sample, one could possibly argue that only board members representing “good” firms in terms of environmental sustainability engagement would attend, and consequently leaving board members with “bad” environmental behavior out. It is however our belief that the participants’ promised anonymity protection would limit this aspect. Then again, the purpose of this study is not to measure their sustainability engagement in absolute numbers but instead compare any potential differences between insiders and outsiders.

The TA method seeks, as other methods that produce qualitative data, in depth data from a small sample. It is often stressed that a methodology of discovery appropriated to the undisputed complexity of human knowledge requires rich data about individuals rather than easily analyzed data about population. Some scholars have suggested that small samples, consisting of only five respondents, are enough in order to generate satisfactory results.
(Lundgrén & Salanterä, 2010). However, since sustainability issues might be relatively complex area we decided to recruit more participants than recommended (Yang, 2003). Consequently, this study consists of interviews with 10 inside directors and 10 outside directors in order to give a more comprehensively sample.

### 3.2.1 Description summary of the participants

**Table 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>Minimum</th>
<th>Maximum</th>
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<tbody>
<tr>
<td><strong>Insiders</strong></td>
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<td></td>
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<tr>
<td>Age</td>
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<td>8.8</td>
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<td>66</td>
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<tr>
<td>Years of graduate studies (university)</td>
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<td>1.5</td>
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<td>4</td>
</tr>
<tr>
<td>Years of board experience</td>
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<td>4.2</td>
<td>6</td>
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<td>Board of directors’ assignments</td>
<td>3.1</td>
<td>2.2</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td><strong>Outsiders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
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<td>6.7</td>
<td>47</td>
<td>66</td>
</tr>
<tr>
<td>Years of graduate studies (university)</td>
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<td>1.4</td>
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<tr>
<td>Years of board experience</td>
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<td>3.5</td>
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<td>5.9</td>
<td>2</td>
<td>21</td>
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</tbody>
</table>

Table 1 describes the structural data of the participants gathered during the TA interviews. Years of graduate studies display how many years on average inside and outside directors have been studying at university. Years of board experience display how many years the participants on average have held a board position, this also includes board assignments other than their current board position(s). Board of directors’ assignments show how many board positions on average that the participants are currently holding. Further, two out of ten outsiders were a woman while only one out of ten insiders was a woman. CEO was the most common title among the insiders, eight out of ten insiders were both CEO and a representative of the board. Further, our study is focused on how inside and outside board members differ in their cognition and reasoning in regards to sustainability issues. Other demographic aspects than being an insider or an outsider, such as the factors mentioned above, could arguably affect the results of the study. However, such variances among the participants are neither surprising nor easy to avoid (Dew et al., 2009). In addition, based on the same premise, outsiders and insiders have not been distinguished from a shareholder perspective, e.g. owning shares in the same company where they hold their board position.
3.3 Procedures

Before the TA interviews began, the participants were given instructions on how to think out loud (see Appendix 1). Further, since professionals rarely use a think-aloud technique on a regular basis, Ericsson and Simon (1993) advice it would be helpful carry out practice and warm-up tasks in order for the participants to get used to think out loud. In this study, the participants were requested to solve a simple math problem as well as to choose their three holiday places of choice as warm-up tasks before proceeding to the actual TA interview (see Appendix 1).

After the warm-up session, the participants were instructed that they were going to face three strategic environmental dilemmas while thinking out loud (see Appendix 1). Each dilemma were constructed to touch upon the three previously highlighted issues regarding environmental strategic decisions, namely balancing economic and environmental priorities, uncertainty and company reputation (Lii & Lee, 2011; Wu & Pagell, 2007). Each dilemma specifically highlights one of the concerned issues but does not exclude the other as these issues often are intertwined in real life business situations (Wu & Pagell, 2007). The dilemmas were in turn inspired by real strategic environmental dilemmas found in KPMG’s UN Global Compact Dilemma Game (KPMG, 2014), which was developed to assist and guide companies in implementing responsible business practices. The original dilemmas were further modified in order to better suit real life dilemmas for board of directors operating in the food industry. In addition, the dilemmas used in this study were relatively generic and not too technical or otherwise it might have bias some participants against others. Each of the participants’ company names were also included in the dilemmas in order for the participants to better relate to their own organization. To limit any misunderstandings regarding the social dilemmas presented during the TA interviews, four students at Uppsala University were asked to deliberate around the same environmental dilemmas before the actual TA interviews took place. Some minor corrections, mainly clarifications regarding the context of the dilemmas were changed after these test runs. Several of the board members in this study later commented after the interviews that the dilemmas, although slightly universal and quite restricted in regards to information, reminded them of actual decisions they had to make in their real life experience as a board member. This is according to Dew et al. (2009) considered to be an important factor since the participants need to have representative tasks that capture the essence of performance in a certain knowledge domain.
Fonteyn et al. (1993) further stresses the importance of a quiet study setting to facilitate thinking aloud. Ericsson & Simon (1993) also advise that researchers give reminders to the participant to keep on talking but without engaging in any other communication. The interaction between the experimenter and the participant should be kept to a minimum. In this study, the only interactions were when the participants were reminded in a neutral voice to keep on talking (“please, keep on talking”) if they were silent for longer than 10 seconds. The observers were also positioned so that they did not have eye contact with the participant as it does not give the participant the feeling of being watched (Ericsson & Simon, 1993).

The interviews were conducted in the same manner, i.e. the researchers started with a small introduction to think-aloud before the warm-up case and the different environmental dilemmas were presented. The length of the think-aloud interviews ranged from 25 to 40 minutes. As the researchers did not engage in any communication during the environmental dilemmas, the time of the interview sessions depended solely on how talkative the participants were when talking out loud during the TA interview. In order to attain more details and promote a richer vocabulary the TA interviews and dilemmas were held in Swedish, the participants’ native language. The material from the TA interviews was later recorded and transcribed in order to code the results.

3.4 Measures and coding

Each transcribed protocol was first segmented to separate the verbal utterances to identify the unit of the analysis. As Svenson (1989) advises, this study used two independent coders to segment the protocols into units before the coding starts to ensure that the same units are coded. The reliability of the segmented units can be determined by correlating the two independent coders. Any differences between the two coders’ segmenting of the protocols were later discussed and analyzed until a final segmentation of the protocols were agreed upon.

A coding scheme was developed in order to extract relevant variables and counts that are reproduced in the coding scheme (see Appendix 2). The coding categories (Category 2, 5–9) were designed to reflect the current research and theory regarding cognitive functioning within environmental challenges (Basu & Palazzo, 2008; Lii & Lee, 2011; Wu & Pagell, 2011; Zollo et al., 2009). These categories were further complemented with other relevant aspects (category 1, 3-4) used in different TA studies (Dew et al., 2009; Isenberg, 1986) in order to provide a broader picture of the participants’ cognition (see Appendix 2).
Each protocol was coded, taking one phrase at the time, individually by both of the authors. As with the segmenting of the protocol, if a difference occurred between the two authors coding, the specific phrases were further discussed and analyzed until a final coding was agreed upon. It could be argued that a research assistant, blind to the purpose of the study, would parse and code the transcribed protocols and as such limit potential bias of having the authors coding the protocols. This option was however neglected due to time constraints. Further, in line with Isenberg’s (1986) TA study, as differences of the results between the two groups can be expected to vary directly as a result of number of words used, this aspect was also measured and taken into consideration. In order to give a better understanding of how the coding was done, an illustration of a TA protocol is presented below (Table 2). Examples of coding for each category can also be found in Appendix 2.

Table 2
Illustration of TA protocol coding. See appendix 2 for coding scheme.

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>One would have to confirm how great this risk is, since we don’t know this at the moment.</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>10 percent of the annual turnover is a great investment… especially when we don’t know if this is going to generate any effect.</td>
<td>7, 8</td>
</tr>
<tr>
<td>3</td>
<td>My concern here is that (COMPANY NAME) wouldn’t generate any benefits by doing this, for instance improving our goodwill.</td>
<td>5a, 9</td>
</tr>
<tr>
<td>4</td>
<td>However, one could of course argue that this would benefit the environment in the long run… which also is a great cause.</td>
<td>5c, 2a</td>
</tr>
<tr>
<td>5</td>
<td>But still, the risk of not knowing if this is going to generate any effect or not still bothers me</td>
<td>8</td>
</tr>
</tbody>
</table>

3.5 Significance and interpretation of findings
In order to quantitatively explore the findings and a Student’s t-test (Saunders et al., 2009, s. 456) was, in line with Isenberg’s (1986) TA study, used to significantly test eventual differences between inside and outside directors’ cognition and reasoning. A two sample t-test examines whether two samples are different and is commonly used when a study uses a relatively small sample size, as in this study (Saunders et al., 2009, s. 456-457). Aspects consisted of dichotomous variables were analyzed using chi-squared tests (Bryman & Bell, 2007, p. 369). In line with Isenberg’s TA study (1986) and the exploratory spirit of this study, a significance level of $p = < 0.1$ was used. Then again, this study is based on qualitative data from TA interviews. Significant differences should be seen as an indication that either insiders or outsiders are considering a certain aspect proportionately more than their counterparts (Chi, 1997).
## 4. Results of the TA study

As presented in Table 3, the transcribed protocols varied from 451 words to 1423 words with a factor of about 3 with the average being 773 words for insiders and 853 words for outsiders. Outsiders consequently used more words during the TA interviews but this difference proved not to be significant \((p=0.540)\). Further, neither of the participants doubted or questioned the dilemmas presented during the TA interviews. Moreover, outsiders were also more likely to request, repeat, and ponder \((p=0.063)\) as well as clarifying the information given \((p=0.073)\). However, no significant difference between insiders and outsiders was found in regards to evaluating the information given in the dilemmas \((p=0.631)\).

<table>
<thead>
<tr>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable descriptions and analyses: differences between insiders and outsiders</td>
</tr>
<tr>
<td><strong>Category</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Information focus</td>
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<tr>
<td>Information focus</td>
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<td>Information focus</td>
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<tr>
<td>Information focus</td>
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<tr>
<td>Information focus</td>
</tr>
<tr>
<td>Time perspective</td>
</tr>
<tr>
<td>Time perspective</td>
</tr>
</tbody>
</table>

\(^*\) Significant when \(p < .10\)
In regards to time perspective (Table 3), the results showed that outsiders are more likely to consider a long term perspective than their inside counterparts, as this difference proved to be significant ($p=0.089$). However, no significant difference could be found between inside and outside directors when it comes to taking a short-term perspective into consideration ($p=0.795$). In fact, explicitly mentioning a short-term perspective was quite rare for both insiders and outsiders with a mean of 0.5 for insiders and mean of 0.4 for outsiders.

### Table 4

<table>
<thead>
<tr>
<th>Category</th>
<th>Variable description</th>
<th>Descriptive statistics insiders</th>
<th>Descriptive statistics outsiders</th>
<th>Significance of insiders/outsiders</th>
<th>Summary of findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analogical reasoning</td>
<td>Number of counts participant conducts analogical reasoning from their current position</td>
<td>Max: 11 Min: 2 Mean: 6.5 S.D.: 3.2</td>
<td>Max: 12 Min: 1 Mean: 3.6 S.D.: 3.4</td>
<td>$p=0.066^*$</td>
<td>Insiders are more likely to draw on personal experience from their current position</td>
</tr>
<tr>
<td>Analogical reasoning</td>
<td>Number of counts participant conducts analogical reasoning from outside their current position</td>
<td>Max: 2 Min: 0 Mean: 0.5 S.D.: 0.7</td>
<td>Max: 12 Min: 0 Mean: 3.5 S.D.: 4.6</td>
<td>$p=0.059^*$</td>
<td>Outsiders are more likely to draw on personal experience from outside their current position</td>
</tr>
<tr>
<td>Holistic reasoning</td>
<td>Number of counts participant conducts holistic reasoning</td>
<td>Max: 12 Min: 1 Mean: 4.3 S.D.: 3.6</td>
<td>Max: 11 Min: 4 Mean: 6.3 S.D.: 2.6</td>
<td>$p=0.172$</td>
<td>Insiders and outsiders do not differ in using holistic reasoning</td>
</tr>
<tr>
<td>Scope of view</td>
<td>Number of counts participants considers a firm view</td>
<td>Max: 24 Min: 5 Mean: 12.8 S.D.: 6.3</td>
<td>Max: 18 Min: 4 Mean: 12 S.D.: 4.3</td>
<td>$p=0.744$</td>
<td>Insiders and outsiders do not differ in considering a firm view</td>
</tr>
<tr>
<td>Scope of view</td>
<td>Number of counts participant considers a stakeholder view</td>
<td>Max: 30 Min: 4 Mean: 13.2 S.D.: 7.6</td>
<td>Max: 29 Min: 7 Mean: 14.6 S.D.: 7.4</td>
<td>$p=0.686$</td>
<td>Insiders and outsiders do not differ in considering a stakeholder view</td>
</tr>
<tr>
<td>Scope of view</td>
<td>Number of counts participant considers an environmental view</td>
<td>Max: 8 Min: 3 Mean: 5.2 S.D.: 1.9</td>
<td>Max: 16 Min: 3 Mean: 8.2 S.D.: 4.3</td>
<td>$p=0.058^*$</td>
<td>Outsiders are more likely to take an environmental view into consideration</td>
</tr>
</tbody>
</table>

* Significant when $p < .10$

Both insiders and outsiders proved to use analogical reasoning (Table 4), i.e. drawing from previous experience in order to solve a problem, to a certain degree. On one hand, the findings indicate that insiders are more likely to draw on personal experience from their current company and position than outsiders ($p=0.066$). On the other hand, a significant difference was also found regarding personal experience from outside their current position or company.
Outside directors proved to use personal experience from outside their current position or company to a greater extent \((p=0.059)\).

Holistic reasoning (Table 4), i.e. a way of thinking that identifies attitudes and actions which indicates an extensive, more selfless way of thinking proved not to significantly differ between inside and outside directors \((p=0.172)\). However, outside directors had a slightly higher mean (6.3) than their inside counterparts (4.3).

The board members also proved to have slightly different scope of view when deliberating over the different environmental dilemmas (Table 4). Both inside and outside directors tended to keep the firm in consideration to a relatively high degree but no significant difference \((p=0.744)\) could be found between the two groups. Moreover, no significant difference was found regarding outside and inside directors tendency to keep stakeholders in consideration \((p=0.686)\). This aspect was also relatively common thought of by both insiders (13.2) and outsiders (14.6). As for a broader view, taking the environment into consideration, outside directors proved more likely to take this view in regards as this difference showed to be significant \((p=0.058)\). An overview of inside and outside directors’ scope of view can be found in Diagram 1, showing the number of times the board of directors on average consider a specific view.
Table 5

<table>
<thead>
<tr>
<th>Category</th>
<th>Variable description</th>
<th>Descriptive statistics insiders</th>
<th>Descriptive statistics outsiders</th>
<th>Significance of insiders/outiders</th>
<th>Summary of findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legitimacy</td>
<td>Number of counts participant tries to align its reasoning with social expectations</td>
<td>Max: 4</td>
<td>Max: 3</td>
<td>( p = 0.569 )</td>
<td>Insiders and outsiders do not differ in trying to align its reasoning with social expectations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min: 0</td>
<td>Min: 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean: 1.3</td>
<td>Mean: 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S.D.: 1.3</td>
<td>S.D.: 0.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td>Number of times participant takes profitability in consideration</td>
<td>Max: 22</td>
<td>Max: 22</td>
<td>( p = 0.774 )</td>
<td>Insiders and outsiders do not differ in taking profitability into consideration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min: 2</td>
<td>Min: 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean: 11.1</td>
<td>Mean: 10.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S.D.: 5.6</td>
<td>S.D.: 5.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertainty</td>
<td>Number of times participant takes uncertainty in consideration</td>
<td>Max: 10</td>
<td>Max: 13</td>
<td>( p = 0.934 )</td>
<td>Insiders and outsiders do not differ in taking uncertainty into consideration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min: 4</td>
<td>Min: 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean: 6</td>
<td>Mean: 5.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S.D.: 1.9</td>
<td>S.D.: 3.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company Reputation</td>
<td>Number of times participant takes company reputation in consideration</td>
<td>Max: 7</td>
<td>Max: 10</td>
<td>( p = 0.757 )</td>
<td>Insiders and outsiders do not differ in taking company reputation into consideration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min: 1</td>
<td>Min: 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean: 3.6</td>
<td>Mean: 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S.D.: 2</td>
<td>S.D.: 3.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant when \( p < .10 \)

Moreover, as presented in Table 5, inside and outside directors showed no significant difference in trying to align its reasoning with social expectations \( (p = 0.569) \). In fact, this aspect was quite rarely thought of by both insiders (1.3) and outsiders (0.9). Lastly, the three commonly present issues when engaging in sustainability initiatives, profitability, uncertainty and corporate reputation did not indicate any substantial differences between the two groups. Both inside and outside directors took the company’s profitability in consideration to the approximately same extent, with a mean of 11.1 for insiders and 10.4 for outsiders, while no significant difference was encountered \( (p = 0.774) \). The aspect of uncertainty also proved to differ a little between the two groups with a mean of 6 for insiders and 5.9 for outsiders. Consequently, this aspect showed no significant difference \( (p = 0.934) \) between insiders and outsiders. Finally, outsiders had a slightly higher mean than their inside counterparts in regards to corporate reputation. However, this difference did not prove to be significant \( (p = 0.757) \).
5. Discussion

5.1 Insiders’ and outsiders’ cognition and reasoning

5.1.1 Information focus
This study found that outsiders had a slightly higher average (853) compared to insiders (773) in regards to total number of words used during the TA interviews. However, this difference did not proved to be significant ($p=0.540$). Further, neither of the participants questioned the dilemmas presented which according to Dew et al. (2009) is vital since participants need to have representative and credible tasks that capture the essence of performance in a certain knowledge domain.

Moreover, outsiders proved to be more likely to clarify the given information ($p=0.073$) as well as request, repeat or ponder specific information ($p=0.063$). Consequently, this suggests that outsiders are more likely to concretizing and instantiating the information given when faced with an environmental issue. Insiders were in turn less likely to ask for additional information and reasoned from the information given rather than contemplate it further. Lastly, no significant difference ($p=0.631$) was found between insiders and outsiders regarding evaluating the information given. In summary, these findings could indicate that outsiders are more likely to critically study information before taking a decision connected to environmental sustainability issues.

5.1.2 Time perspective
As the results showed, no significant difference ($p=0.795$) was found regarding how often inside and outside directors take a short-term perspective into consideration. However, outsiders showed to be more likely ($p=0.089$) to explicitly deliberate around environmental issues from a long-term perspective. This is line with Zhang et al. (2012) who argue that outsiders tend to comply with environmental standards, even if they conflict with short-term economic goals. Moreover, Wu and Pagell (2011) argue that potential environmental benefits, derived from short-term costs, only accrue in the long term. Hence, outsiders could be argued to better pay attention to long-term environmental results as the findings of this study demonstrate that outside directors have a tendency to consider a long-term perspective relatively more than their inside counterparts. Consequently, outsiders could arguably prosper an organization’s long-term view on sustainability challenges.
It should however be noticed that the number of counts the participants received for considering a specific time perspective were solely counted when the participants explicitly mentioned a specific time perspective. It is possible that the participants occasionally held a specific time perspective in mind when deliberating over the different dilemmas without mentioning it. However, as the TA method is claimed to reflect one’s cognitive process (Ericsson & Simon, 1993), only the time perspectives mentioned explicitly were counted.

5.1.3 Analogical reasoning

Analogical reasoning, i.e. drawing from previous experience in order to solve a problem, was used by both inside and outside directors in this study. What is noteworthy though is that the two groups used different types of experience when deliberating around the environmental dilemmas. On one hand, insiders were more likely to draw experience from their current position and company as the difference between the two groups proved to be significant \((p=0.066)\). On the other hand, outsiders were more likely \((p=0.059)\) to draw from previous experience that was not related to their current position or company.

This result is consequently in line with McKendall et al., (1999) who argue that boards dominated by outsiders are claimed to hold a greater variety of knowledge and experience from other companies or industries. In contrast, inside directors tend to derive their information, success factors and processes from the same type of company or industry. Given that outside directors hold a greater variety of experience, outsiders would also be more likely to contribute with different ideas and perspectives than their inside counterparts. According to Carter (2003), Ramírez (2003) and Post et al. (2011) this would conduce to a more heterogeneous and diversified board that to an extent would lead to several advantages such as increased innovation and creativity.

Taken together, the results showed that board members do use analogical reasoning when facing sustainability issues. However, inside and outside directors draw on personal experience differently depending on where they have gained this experience. As outsiders in general have more experience from different board positions (see Table 1) they consequently have a broader knowledge and different perspectives to rely on when solving sustainability issues.

5.1.4 Holistic reasoning

Inside and outside directors showed no significant difference regarding holistic reasoning, i.e. a way of thinking that identifies attitudes and actions, which indicates an extensive, more
selfless way of thinking. Although outside directors had a relatively higher mean (6.3) than their inside counterpart (4.3) this difference did not prove to be significant ($p=0.172$).

This result might be seen as contradictive to previous research which claim that outside directors tend to have a stronger environmental (Ibrahim & Angelidis, 1995; Webb, 2004) and employee orientation (Wang & Dewhirst, 1992). On the other hand, although the result did not show to be significant, it could be considered substantial enough to give a hint of a potential difference between the two counterparts. However, since this study did not distinguish on how board members relate to concepts and principles to one another (Dew et al., 2009), it is possible that they indicate an extensive, more selfless way of thinking but direct their focuses are on different aspects such as stakeholders and the environment. This assumption is based on the results and analysis presented in the following section, namely the board members’ scope of view.

5.1.5 Scope of view

When deliberating around the environmental dilemmas, insiders and outsiders tended to have slightly different focus regarding their scope of view. To begin with, no significant difference ($p=0.744$) was found regarding the participants tendency to take a firm view into consideration. This finding could be argued to be contradictive to previous research (Post et al., 2011; Ibrahim & Angelidis, 1995) that suggest that inside directors appear relatively more attached to economic performance and as such the focus of their own firm. Further, what might be seen as even more contradictive to previous research is the non-significant difference ($p=0.686$) regarding to what degree inside and outside directors tend to take stakeholders in consideration. Outsiders are suggested to have a relatively stronger employee orientation (Wang & Dewhirst, 1992) and broaden organizations’ hearing from stakeholder claims (Zhang et al., 2012). The stakeholder theory (Freeman, 2004) suggests that companies should design their corporate strategies in order to satisfy the interest of their stakeholders. However, our findings indicate that the aspect of being an inside or outside director has no or little impact in regards to satisfy stakeholder interests. To an extent, this would support McKendall et al. (1999) and Coffey and Wang (1998) who claim that outsiders’ effect on environmental initiatives is exaggerated.

As showed in Table 3 and illustrated in Diagram 1, a significant difference ($p=0.058$) was however found regarding to what extent inside and outside directors tend to take an environmental view in consideration. Outsiders proved to be more likely to consider an
environmental view when deliberating around the environmental dilemmas. These findings are as such in line with previous research (Ibrahim & Angelidis 1995; Webb, 2004) that claim that outside directors are more apprehensive to environmental standards than their inside counterpart. These findings also reaffirm previous research (Zhang et al., 2012), which suggests that outside directors comply with environmental criterions, even if they conflict with short-term economic goals.

Taken together, these findings indicate that outsiders are more likely to take an environmental view in consideration than insiders. This focus is however not on the expense of either the firm or the stakeholders. As illustrated in Diagram 1, in addition to considering the firm and stakeholders to approximately same extent as their inside counterpart, outside directors are more likely to consider an environmental view. For organizations that plan to promote a more environmental sustainable approach to their processes, adding outsiders could arguably contribute to such initiatives.

5.1.6 Legitimacy
The stakeholder theory suggests that companies should design their corporate strategies in order to satisfy the interest of their stakeholders (Freeman, 2004). To do so, boards of directors have to be able to achieve various stakeholder objectives and align their actions with expectations from stakeholders and the society at large (Ayuso & Argandoña, 2007). This study found however no significant difference ($p=0.569$) between inside and outside directors in regards to trying to align their reasoning with social expectations. This aspect was in fact quite rare in either group, with a mean of 1.3 for insiders and a mean of 1 for outsiders. Further, this result could possibly be related to insiders’ and outsiders’ tendency to take stakeholders in consideration as no significant difference was found in regards to that aspect.

5.1.7 Profitability
For companies that seek to address environmental challenges while still being competitive, balancing environmental and economic priorities have proved to be a real challenge for boards of directors. This is especially true for environmental actions since they often impose costs in the short term while potential environmental benefits accrue only in the long term (Wu & Pagell, 2011). In regards to this aspect, the results showed no significant difference ($p=0.774$) between insiders’ and outsiders’ tendency to consider this aspect. This result might be seen as contradictive as previous research (Ibrahim & Angelidis 1995; Post et al., 2011) suggest that insiders appear relatively more attached to financial performance. Then again,
this study solely focus on to what degree insiders and outsiders take these aspects into account – not whether they would go for a more environmental friendly decision or not.

Profitability was however a recurring aspect that both insiders and outsiders tended to consider to a relatively large extent. One reason for this high consideration of profitability could be that environmental initiatives might be an economic burden for organizations that their competitors might not have (Wu and Pagell, 2011). Further, as the main purposes of boards of directors are to look after the shareholders’ interests and maximizing profit (Kassinis & Vafeas, 2002; Forbes & Milliken, 1999), considering profitability could be seen as an unavoidable necessity when taking company strategic decisions.

5.1.8 Uncertainty

Uncertainty connected to sustainability initiatives is regarded as a crucial aspect that boards of directors have to consider (Oh et al., 2011; Lepoutre et al., 2007; Wu & Pagell, 2011). These so called “wicked problems” (Lepoutre et al., 2007; Rittel & Webber, 1973) do not come with complete information on consequences or decision parameters. This was certainly reflected in this study as the dilemmas given were quite vague with restricted background information and data on expected outcomes. No significant difference ($p=0.934$) could however be found regarding how insiders and outsiders take risky and uncertain environmental issues into consideration. As the board members were constrained with scarce information one could possibly expect that outsiders, with greater variety of knowledge and experience (McKendall et al., 1999), would have considered the uncertainty in different ways and consequently deliberated around the issue to a greater extent. This showed however not to be the case. In summary, these findings indicate that neither insiders nor outsiders consider uncertainty to a greater extent relatively to each other.

5.1.9 Company reputation

The third issue that is commonly present when boards of directors face environmental issues is the aspect of company reputation (Lii & Lee, 2011). Our results indicate no significant difference ($p=0.757$) between outsiders and insiders in regards to this aspect. This result could possibly be related to previous findings regarding both legitimacy and stakeholder view. These aspects also include company reputation to some degree and likewise did not prove any significant difference between insiders and outsiders.

Moreover, these findings could be seen as contradictive as Ibrahim and Angelidis (1995) and Webb (2004) argue that outsiders appear to be more apprehensive to firm reputation than their
inside counterparts. While many of this study’s results support previous research, these findings consequently suggest that outsiders, in comparison to insiders, might not be as aligned to company reputation as previously argued. To an extent, this would also strengthen the case of Coffe and Wang (1998) and McKendall et al. (1999) who argue that the claim that a greater number of outsiders will generate a positive effect on sustainability actions is exaggerated.

5.2 Result summary and interpretation of findings

Based on the findings presented above, it is possible to outline some differences between outsiders and insiders and their reasoning in regards to environmental issues. When faced with such issues, outsiders are more likely to critically study information before taking a decision; to consider a long-term perspective; to consider an environmental view as well as draw on personal experience from outside their current position or other industry experiences. Insiders are, on the other hand, more likely to draw from experience from their current position or company. However, not all findings were in line with previous research within this field of research. For instance, while outsiders are argued to be more apprehensive to stakeholders in comparison to insiders (Wang & Dewhirst 1992; Zhang et al., 2012), this study found no such difference. As pointed out by previous research (Jansson et al., 2013; Johansson & Östergren, 2010; Kang et al., 2007), corporate governance practice is embedded in political, culture and legal settings which are portrayed by different ownership concentration and board compositions. This study gives an insight in how Swedish inside and outside board members relate to sustainability issues and also point out some differences to previous research on the topic which is primarily restricted to US data. Hence, national contexts could arguably be an explanatory factor to why some aspects did not coincide with previous research.

Moreover, some remarks have to be taken in consideration when interpreting these results. First, this study has solely focused on inside and outside directors’ reasoning and to what extent they consider specific issues – not on whether they actually would go for a certain decision. For instance, outside directors might contemplate broader environmental matters to a great extent but still go for a less environmental friendly decision in the end. Second, this study has only studied board members as individuals, not how they eventually reason in a group, e.g. in a board meeting. As such, aspects such as group pressure and interaction difficulties (Forbes & Milliken, 1999) might affect board members’ reasoning as well as decisions making. Even if there is as correlation between an individual’s greater consideration
of the environment and an actual higher environmental performance, the acts of other board members might discourage such behaviour. Lastly, the food industry was chosen as study industry due to the many significant risks from public criticism of environmental sustainability issues companies in the food industry faces (Maloni & Brown, 2006). Still, the question remains to whether these results are applicable to inside and outside directors in other industries. For instance, aspects such as company reputation might be considered differently in various industries. For boards of directors operating in industries that do not retain public visibility to the same degree as the food industry, a well-considered environmental company reputation might not be deemed as important. Thus, this study’s results might be more applicable to some industries than others.

Nevertheless, the results display that outsiders and insiders to some degree differ in cognition and reasoning when faced with sustainability issues. The results also indicate that outsiders could arguably have a positive effect on organizations’ sustainability initiatives. As such, for companies that actively seek to prosper their sustainability engagements, adding outside directors could arguably contribute to such initiatives.
6. Conclusions

The aim of this study was to study the cognition and reasoning of Swedish inside and outside directors when engaging in environmental sustainability issues. Results from this study showed first and foremost that, when faced with environmental issues, outsiders are more likely to request, repeat, ponder as well as clarify the information given. Secondly, outsiders are more likely to consider a long-term perspective. Thirdly, outsiders are more likely to consider an environmental view. Lastly, both insiders and outsiders use analogical reasoning when contemplating around environmental issues. However, insiders are more likely to draw experience from their current position or company while outsiders are more likely to draw experience from outside their current position or company when solving environmental issues.
7. Proposals for future research

Since environmental sustainability is a critical issue in today’s market, both for companies and the society, future and more extensive research within the topic could be of importance. In this study, a Think-aloud method was used in order to study insiders’ and outsiders’ cognition and reasoning when faced with sustainability issues. This qualitative study has contributed to previous research that primarily has conducted quantitative studies on the topic. While this study has been focusing on the insider/outsider perspective related to sustainability, other demographic aspects could preferably be studied using the Think-aloud method. Factors such as gender, age, education, and professional identities could be explanatory aspects to why board members differ in their cognition and reasoning regarding sustainability engagement. Hence, our study has mapped out the difference between inside and outside directors and it would be interesting to see how other demographic aspects differ in their cognitive reasoning considered sustainability initiatives.

Furthermore, our study has mapped out the Swedish board members’ relation to sustainability from the inside and outside perspective. As discussed in this paper, the Swedish governance system is distinguished from the Anglo-Saxon counterpart. In order to fill the gap of studies between the two governance systems considering environmental sustainability initiatives, we encourage future research to investigate this topic from a cognitive view, potentially using a Think-aloud method.
List of references


Appendix 1 - Think-aloud procedures and dilemmas

Instructions given to the participants before the case

“As soon as you begin working on the problem, please start thinking aloud. The best way to do this is to be as spontaneous as possible. Tell me everything you are thinking as you are thinking it, even details or side-tracks that seem insignificant or embarrassing. If you think aloud spontaneously, you will soon forget that you are speaking at all. There is no need to explain to me why you are thinking what you are. You don’t have to interpret or justify your approach to the problem. Just tell me what you are thinking at the moment. If you are quiet for more than a few seconds, I will remind you by saying: Please tell me what you are thinking.” (Svenson, 1989).

Warm-up questions

What are your top three travel destinations of choice? Why? Which aspects are you taking in consideration?

A bottle of wine costs 60 SEK. The wine without the bottle costs 50 SEK. What is the cost of the bottle?

The environmental dilemmas

Profit

COMPANY NAME has just discovered a new shipping process that will significantly reduce the amount of carbon dioxide connected to the shipping of your products. You know this will give you a competitive advantage in the market in terms of goodwill and reduced shipping costs. However, to implement this you will need to share the information with one of your supplier who is also a supplier to your biggest competitor. The competitor is also likely to reduce their costs even more than you. What are your thoughts on this?

Uncertainty

During a board meeting for COMPANY NAME, a new business model is presented that is argued to reduce the company’s effect on the environment. The cost for the new business model is estimated to 10 % of the annual profit for the next five following years. The desired result of the implemented business model is however uncertain, the implementation could significantly reduce the company’s effect on the environment, or the effect could be zero. What are your thoughts on this?
Company Reputation

A new more environmental friendly shipping process is starting to get commonly used among COMPANY NAME’s competitors. The new shipping process is slightly more expensive and the only competitive advantage is an arguable better goodwill. A few of the most environmental dedicated customers have contacted COMPANY NAME in order for the company to implement the new shipping process. What are your thoughts on this?

Appendix 2 - Coding Scheme

1. Information focus
   1a. Total number of WORDS of text.
   1b. Did the participants question the credibility of the dilemmas? Enter Yes or No.
   1c. Information focus. How many times did the participant request, repeat or ponder specific information? For example, “What is goodwill?”
   1d. How many times did the participant clarify the meaning of a particular fact? For example, “So they want me to put in money in order to improve our shipping processes?
   1e. How many times did the participant evaluate the dilemmas? For example “That’s crazy!”

2. Time perspective
   2a. How many times did the participant explicitly consider a long-term perspective? For example, “If you consider a long-term approach, it is still possible to save energy costs”.
   2b. How many times did the participant explicitly consider a short -term perspective? For example, “There is a conflict between profit and sustainability in the short-term”.

3. Analogical reasoning
   3a. How many times did the participant conduct analogical reasoning from their current position or company? For example, “Alright, I am trying to relate to something from my current board position”.
   3b. How many times did the participant conduct analogical reasoning from outside their current position or company? For example, “I am actually facing a similar problem with a project at another company”.

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4. **Holistic reasoning**

   4. How many times did the participant conduct holistic reasoning? For example, “Well, if I reason like this, my company would have no way of influencing my competitors and to an extent also contribute to a better environment”.

5. **Scope of view**

   5a. How many times did the participant consider a “firm view”? For example, “Right now I am at a pretty detailed level of my product and processes”.

   5b. How many times did the participant consider a “stakeholder view”? For example, “My concern here is what my frequent customer would think”.

   5c. How many times did the participant consider an “environmental view”? For example, “We could use this process to affect the environment even less than before”.

6. **Legitimacy**

   6. How many times did the participant try to align its reasoning with social expectations? For example, “I would probably try to reason with the customers and try to adjust my shipping processes to their expectations”.

7. **Profitability**

   7. How many times did the participant take profitability in consideration? For example, “Okay, so this shipping process is supposed to be better but also more expensive?”

8. **Uncertainty**

   8. How many times did the participant take uncertainty in consideration? For example, “I would definitely not do that, you can’t make a decision on such restricted information”.

9. **Company reputation**

   9. How many times did the participant take uncertainty in consideration? For example, “My concern here is what effect this will have on my goodwill and reputation”.
