THE ROLE OF INDIVIDUAL JUDGMENT IN A COMPREHENSIVE MODEL OF PROACTIVE CORPORATE ENVIRONMENTAL STRATEGY FORMULATION

Marko Horn
Valdosta State University
Langdale College of Business Administration
Department of Management and Healthcare Administration
1500 N. Patterson St.
Valdosta, GA 31698-0075

Abstract
Proactive corporate environmental strategies are gaining increasing application in industry and government. Nevertheless, given the importance of the preservation of planetary resources for future generations, one wonders why proactive corporate environmental strategies are not common business practice. This paper outlines the importance of the individual actors and decision making while proposing a comprehensive model and potential antecedents for the creation and formulation of these strategies. Specifically I outline the importance of stakeholder pressures, stakeholder management, managerial cognition, top management team characteristics, and the role of firms’ resource position. Important moderating factors are identified, and a supporting model and propositions are developed.

Keywords
Individual judgement, corporate environmental strategy, planetary resources

INTRODUCTION
Human ecology is defined as “the ecology of human communities and populations especially as concerned with preservation of environmental quality (as of air or water) through proper application of conservation and civil engineering practices” (Dictionary, Retrieved May 30, 2008). Proactive Environmental Strategies (PESs), addressing the prevention and/or reversal of ecological damage from products and services, are gaining momentum and support by practitioners within manufacturing and service industries (Analytica, 2006; Hamm, 2006; Hindo, 2006) and are becoming increasingly salient in the eyes of the general public (Adler, 2006). In light of the impact environmental disasters such as the Deepwater Horizon oil spill have on the industry, management scholars have an increasing interest in the topic. In addition, investors have started to align their personal values with their investments, which led to the

http://dx.doi.org/10.21607/jmsm.2016.0005
inception of mutual funds that exclusively hold stocks of ecologically responsible companies (e.g. Portfolio 21 PORTX, Domini Social Investments DSEPX, Axa Enterprises EGSAX, and Winslow Green Fund WGGFX). Corporate environmental management has been identified as a common component of corporate strategy with clear direct or indirect profit and performance implications (Joyner & Payne, 2002).

This paper investigates proactive environmental strategy (PES) formulation and the role of individuals in top management teams (TMTs) that develop and implement PES. TMTs are a likely explanatory factor in a firm’s engagement in proactive environmental strategies, because TMTs play an important role in the development of a firm’s strategy (Hambrick, 2007; Hambrick & Mason, 1984). Differences between internal and external firm environments as well as differences between the individuals within those teams are likely to explain why some firms are more proactive than others in their ecological cognition, orientation, and initiation. To date, no one has conceptually clarified the linkage between top management teams managerial cognition and a proactive environmental strategy effort in a comprehensive form. Nevertheless, such a conceptual clarification can move the field of corporate environmental performance forward, as outlined by Schwenk, “content research has been quite useful in providing rules and guidelines on the types of strategies which lead to the best performance for different types of organizations in different competitive conditions. In the current turbulent business environment, however some of the generalizations are becoming less useful.” (1995, p. 471), therefore researchers argue the need “to study the way executives conceptualize strategic problems, the way they develop their own rules and guidelines, the personal and organizational characteristics that influence this process, and the way these rules influence their own decision making” (1995, p. 472). Given the premise of strategic process research, it is therefore important to outline the process that leads to a specific outcome, in this case the pro-active environmental strategy.

**PROACTIVE ENVIRONMENTAL STRATEGY**

In recent years firms in the developed world are increasingly engaging in implicit and explicit corporate social responsibility (CSR), which “empirically consists of clearly articulated and communicated policies and practices of corporations that reflect business responsibility for some of the wider societal good. Yet the precise manifestation and direction of the responsibility lie at the discretion of the corporation.” (Matten & Moon, 2008). The direction a firm takes towards CSR depends on the strategy of the corporation, but most firms’ social responsibility extends to managing the firms impact on the natural environment, in reaction to an increase in their customers awareness of environmental issues. PES is an essential part designed to help the firm reduce the ecological footprint that a tangible or intangible product has on the natural environment (Bansal, 2005). Corporate environmental strategy can be viewed as on a continuum from reactive (conformance) activities, to proactive (voluntary) activities (Berry & Rondinelli, 1998; Hunt & Auster, 1990; Sharma, 2000). An environmental conformance strategy (reactive strategy) is based on the compliance with the law and the adaptation of standard industry practices. According to institutional theory, a firm would
implement ecological activities as the result of pressures from other firms in the industry, and regulatory expectations, until it reaches the industry standard (King & Lenox, 2000).

The other end of the spectrum, the proactive strategy, is defined as “a consistent pattern of company actions taken to reduce the environmental impact of operations, not to fulfill environmental regulations or to conform to standard practices” (Sharma, 2000, p. 683). The emphasis here is on the proactive approach taken from firms to reduce their ecological footprint without being forced into action by governmental regulation or industry standards. The purpose of focusing on differences in top managers across firms is to identify factors that uniquely influence the behavior of managers towards an incorporation of ecology into their company’s business practices.

As proposed by Hart (1995) the pillars of corporate environmental management are pollution prevention, product stewardship, and sustainable development. The first construct of pollution prevention is the minimization of emissions, effluents and waste. The implementation of product stewardship minimizes the effects products have on the environment from “concept and design, through manufacturing, distribution, usage, and disposal” (G. Dutton, 1998, p. 59). The global concept of sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987).

Corporate environmental strategy implementation is conducted through a wide array of activities within those pillars such as habitat preservation, voluntary restoration, and reduction of the use of unsustainable materials (Sharma, 2000). The activities are a product of a wide range of organizational and managerial choice, creative problem solving, as well as acquisition and installation of new technologies (Berry & Rondinelli, 1998; M.V. Russo & P.A. Fouts, 1997; Sharma, 2000).

PESs are utilized by firms for several reasons. The practices can lead to cost reduction, positive firm image (reputation), quality improvements, and financial performance (Joyner & Payne, 2002). Ultimately, the application of proactive environmental strategies has the potential to lead to the development of a sustainable competitive advantage by creating a valuable, rare, and inimitable resource for the firm (Barney, 1991), mainly through path dependent business processes like valuable organizational capabilities such as stakeholder integration, higher order learning, and continuous innovation (Sharma & Vredenburg, 1998), or overall dynamic capabilities (Aragon-Correa & Sharma, 2000). Use of PES can also increase the ability to premium price products in markets with environmentally and socially conscious buyers.

If the development of a PES leads to a better application of a firm’s resources, reduces the ecological footprint of a firm, and influences firm performance (Hart & Ahuja, 1996), then it is desirable for the firm to pursue such a strategy. Given the potential advantages of a proactive environmental strategy, a conundrum exists as to why relatively few firms actively pursue such a strategy.

As outlined in the attraction – selection – attrition model, research has shown that “the people make the place” (Schneider, 1987), therefore there needs to be awareness and willingness of the top decision makers of a firm to deploy valuable resources towards PES. A coordinated organization wide effort, as well as leadership with environmentally sensitized

http://dx.doi.org/10.21607/jmsm.2016.0005
values is required to formulate, and implement PES activities (Sharma & Vredenburg, 1998). This level of decision making and the level of authority for the necessary resource allocation to develop PES is of strategic proportions that cannot be found in the resource allocation authority of first line supervisors or middle management, even though the implementation authority is in many cases transferred to the line managers (Sharma & Vredenburg, 1998). A Proactive Environmental Strategy is often developed, formulated, and implemented in several stages, from R&D to full firm implementation. Many managers might decide to engage only small parts of their operations in PES practices in trial and error fashion to “test the water”, since the concept of equifinality outlines that several different paths could lead to the same outcome (Gresov & Drazin, 1997). Nevertheless, the decision to engage in PES is driven from the decision makers of a firm that influence strategic outcomes, which is the upper echelon (Hambrick & Mason, 1984).

ANTECEDENTS TO FIRMS FORMULATING A PROACTIVE CORPORATE ENVIRONMENTAL STRATEGY

CEOs and other top managers are the primary decision makers for resource allocation into PES (Hambrick & Mason, 1984). Executives have varying abilities to influence firm decisions (Hambrick & Finkelstein, 1987), “but in general we can conclude that CEOs affect organizational outcomes and … we anticipate that TMTs matter even more” (Hambrick, 2007, p. 341). As such it is important to investigate and identify the factors that influence the strategic decision making process from cognition to PES formulation.

Without diving into the large and complex literature on knowledge structures, whose thorough analysis would be impossible given the space constraints of this paper, it is important to notice that most researchers agree that the strategy formulation process starts with managerial and organizational cognition. Since managers spend their time “absorbing, processing, and disseminating information about issues, opportunities, and problems” (Walsh, 1995, p. 280) the source for the cognitive trigger is information flow. An ecological priority will likely be expressed by certain stakeholders of the firm (e.g. customers, employees, suppliers, governments, social action groups), whose value set prioritizes the protection of the natural environment. Therefore an ecological stakeholder claim will be placed onto a firm and cognitively recognized by the management if the stakeholder group is salient (Agle, Mitchell, & Sonnenfeld, 1999).

The upper echelons perspective suggests that organizational outcomes (strategic choices and levels of performance) are partially predicted by managerial background characteristics (Hambrick & Mason, 1984). As such, a first step toward identifying useful linkages between TMTs and PES is to consider the characteristics of firm’s TMTs to posit certain commonalities between teams that formulate a PES. Based on Hambrick’s updated view of the upper echelon (Hambrick, 2007), I identify important characteristics and connect the various factors to the specific content of PES formulation. The upper echelons perspective states that the strategic choice a top management team makes is dependent upon the “personalized interpretations of the strategic situations they face, and these personalized construals are a function of the executives’ experience, values, and personalities. … If we want to understand why
organizations do the things they do, or why they perform the way they do, we must consider the biases and dispositions of their most powerful actors – their top executives.” (Hambrick, 2007, p. 334).

For this investigation into the engagement in PES, the focus is not on the influence of the strategic decision making process on firm performance, but on the strategic choice itself. Prior research has found empirical support that a planned approach to PES leads to financial and environmental performance (W. Q. Judge & Douglas, 1998), therefore the strategy formulation logically is the first step. As the initial step in the process, the formulation of a PES is an antecedent to the implementation and the content tie to performance. In other words my emphasis is on the snow ball that starts the avalanche, not the driving forces or the aftermath of the avalanche itself. I investigate the antecedents to managerial cognition towards the formulation of a PES and the impact of TMT characteristics on the decision making criteria towards PES formulation. A model outlining antecedents and moderating factors affecting a firm’s TMT choice of a proactive environmental strategy is developed here (see figure 1).

![Figure 1. Firms Proactive Environmental Strategy Formulation](http://dx.doi.org/10.21607/jmsm.2016.0005)
Organizational Cognition

No strategy will be formed without the social cognition of the involved top decision makers of the firm, the TMT, recognizing that this course of action is needed for the firm or as outlined by Gioia “strategy can be framed variously as many different stories in many different forms in many different settings, but the essence of all of them at a deep level is a tale of social cognition at the highest levels of the organization” (Lant & Shapira, 2001, p. 345). Given the external business and society environment, cognition has been linked to strategy suggesting that the action of the organization will depend the decision makers’ beliefs in how the firm can best succeed in the current competitive environment (Daft & Weick, 1984). Therefore a TMT will recognize the need for a PES if the firm’s most salient stakeholders lay a claim to such a strategy or its underlying premises. The management of the firm will be responsive to the claim in an effort of stakeholder management, ensuring that stakeholder voices get heard and the primary stakeholders will not withdraw from the relationship with the firm (Buysse & Verbeke, 2003).

Stakeholder View/Theory: The theoretical obligations firms have to entities other than shareholders, assisted in the development of stakeholder theory and its wide use in research (Freeman & Reed, 1983). Stakeholder theory essentially outlines corporate obligations to meet the needs and values of relevant stakeholders (e.g., employees, shareholders, suppliers, customers, etc.). As outlined by Clarkson, “from this perspective, the corporation itself can be defined as a system of primary stakeholder groups, a complex set of relationships between and among interest groups with different rights, objectives, expectations, and responsibilities” (1995, p. 107). Even though stakeholders may not have direct equity ownership in the corporation, they do logically hold power over the firm in the form of economic or political influence. Stakeholder theory proposes that powerful stakeholders with greater interest in a corporation will exert greater influence over that firm (Mitchell, Agle, & Wood, 1997). An empirical test and survey of CEO behavior provides support to stakeholder theory’s views that corporations prioritize stakeholders (Agle, et al., 1999). Therefore an organization’s existence and performance is largely premised on the support it receives from the most important stakeholders. Essentially, the most important and vocal stakeholders receive the greatest attention.

In an attempt to further outline the prioritization of stakeholders, Post, Preston, and Sachs define the stakeholder as “individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and that are therefore its potential beneficiaries and/or risk bearers,” and outline that “the capacity of a business enterprise to generate sustainable wealth, and hence long term value, is determined by its relationship with critical stakeholders” (2002, pp. 19, 51). Since the salient stakeholders (e.g. customers, employees, local communities) directly provide necessary resources to the firm (e.g. revenue, labor, license to operate), managerial reaction to their claims are necessary in the firm’s attempt at wealth creation (Post, et al., 2002). It is also important to note that internal stakeholders (e.g. employees) have the ability to become “champions” of natural environment issues and convince the top decision makers of their importance through issues framing and influence tactics (Andersson & Bateman, 2000), “selling” ecological issues to the TMT (J. E. Dutton & Ashford, 1993) which will lead to greater the organizational cognition towards the formulation of a PES.

http://dx.doi.org/10.21607/jmsm.2016.0005
Stakeholder Management: TMTs that are accepting the fact that a firm does not exist in a vacuum, and not only for the wealth creation of the owners (shareholders) as proposed by Milton Friedman (1962), engage in the managerial implementation of stakeholder strategy which is “stakeholder management”. Stakeholder management “refers to management practices that reflect awareness of and response to the legitimate concerns of the multiple constituencies of the corporation” and not to “the manipulation of stakeholders for narrow organizational purposes – that is, the management of stakeholders” (Post, et al., 2002). Stakeholders that feel their claims are not heard will withdraw from the relationship with the firm, and/or increase their salience through other means (e.g. governmental protection, local rules and regulations, non-governmental organizations). In the context of PES, this clearly means that it is in the corporations’ best interest to pro-actively ensure that the firm responds to the stakeholder claims. This strategy lessens the financial impact and the impact on firm reputation if problems occur. This orientation will not only have a positive impact on the natural environment, but will extend the benefit into the financial performance of the firm. Studies investigating firms unresponsive to stakeholder claims, “have consistently found market reactions to be strongly negative” (Berman, Wicks, Kotha, & Jones, 1999, p. 490). Managing the salient stakeholder groups effectively and efficiently will mediate the impact salient stakeholder’s ecological claims will have on the organizational cognition of such claims (Buysse & Verbeke, 2003). If the TMT is open and reactive to stakeholder claims the stakeholder groups need to exert less pressure and needs to apply less power to get their claim heard.

Organizational Culture and Schemas: Based on ethnoscientific, culture is seen as “a unique system for perceiving and organizing material phenomena, things, events, behavior and emotions” (Goodenough, 1971, p. 27). Culture in organizations has evolved into a cognitive perspective where “corporate culture is viewed as an organization specific system of widely shared assumptions and values that give rise to typical behavior patterns” (Gordon, 1991, p. 397).

New members of the organization will adjust their values and beliefs displayed by the organization. If the belief system of the individual is not comparable, he/she will either not join the organization (Diener, Larsen, & Emmons, 1984; T. A. Judge & Cable, 1997), or leave the organization shortly after joining it (Schneider, 1987).

Organizational culture is ultimately manifested and maintained in individuals’ sensemaking efforts and firms will develop a certain culture in which most individuals have similar sensemaking schemas. The knowledge of the culture, and therefore the TMT’s knowledge, is retained and organized in schemas that help the TMT make sense out of the incoming information flow. Schemas direct information acquisition and processing, as well as guide which information is going to be retained, because “schemas refer to the dynamic, cognitive knowledge structures regarding specific concepts, entities, and events used by individuals to encode and represent incoming information efficiently” (Harris, 1994, p. 310).

After the event has been categorized, the schemas will help the individual “determine what the stimulus means so that a response can be formulated” (Harris, 1994, p. 315). Schemas guide the TMTs interpretations of the past, present, and future; therefore they will determine if the TMT interprets the ecological stakeholder claim as opportunity or as threat. If the TMT views the ecological claim as a threat the TMT will more than likely choose a reactive environmental strategy. If the TMT views the ecological claim as an opportunity for the firm,
the team will recognize a need for a PES (Sharma, 2000). Assuming that the stage of the TMTs
cognitive moral development (Klebe Trevino, 1986) will allow them to act upon their values,
the organizational culture will directly impact the organizational cognition of the TMT.

Top Management Team Characteristics

As outlined by Hambrick (1984), strategic choice happens under conditions of bounded
rationality (Cyert & March, 1963; March & Simon, 1958). Every manager involved in the
strategic process will view the world through their own lens, a lens that is limited by selective
perception, shaped by the cognitive base, and the value set of the individual (Hambrick & Snow,
1977). An example of bounded rationality for TMTs in the context of ecology was, as fore
mentioned, outlined by Sharma (2000), who found that if managers view the relationship
between performance of the firm and the protection of the natural environment as opposing
forces and therefore view ecology as a threat, the TMT will likely engage in an environmental
conformance strategy. If the TMT views corporate environmental management activities as an
opportunity, the firm will engage in a proactive strategy.

In an attempt to build a comprehensive model that outlines the tendency for TMTs to
formulate and implement PES, I would first like to review the traditional works in the field.
Commonly articulated TMT characteristics that shape the cognitive lens are average age,
average tenure, functional track experience, intra team power distribution, behavioral
integration, level of self-interest, and TMT heterogeneity (Hambrick, 2007). Since strategic
decision making and learning can only occur if a group shares the way issues are framed (Fiol,
1994), I assume, for the purposes of this study, that the TMT is a functioning team that already
developed its team mental models for the strategic decision making process and is not plagued
by dysfunctional conflict (Klimoski & Mohammed, 1994).

Current empirical studies also show support that the scope of the firm gets shaped by
demographic preferences and structural differences of the corporate elite (M. Jensen & Zajak,
2004), and the validity of the upper echelons model has been greatly enhanced by recent studies
and 10 years of research (Mason A. Carpenter, Geletkanycz, & Sanders, 2004). The TMT
characteristics are applied to PES context for the development of the following propositions.

Average age: Outlined in Hambrick’s (1984) work, as well as in the work of others
(Wiersema & Bantel, 1992), the literature about the age of TMT members points to a stance of
higher risk taking for younger executives, and a more conservative stance for older executives.
In the context of PES, the developments in environmental protection and product stewardship
are likely accompanied by advances in new technology that may be harder to understand for,
or be perceived as harder by older managers. Many new technologies and processes also do not
have a long and proven record in producing savings or cost advantages. Much of the new
technology may have to be applied in a trial and error fashion, where engagement in PES is
associated with higher risk than a continuance of current practice. This outlined reasoning
should, therefore, favor a younger management team as a team that is more likely to engage in
PES.
Average tenure: Researchers have determined that long-tenured CEOs may grow “stale in the saddle”, ceasing to make adaptive changes (Hambrick & Fukutomi, 1991; Henderson, Miller, & Hambrick, 2006; Miller, 1991). The planning and implementation of proactive environmental strategies would require a TMT to make a number of adaptive changes to create the pattern of a new strategic direction over time (Mintzberg, 1978); and, therefore, a TMT with shorter average tenure should be more adaptive and open to change. TMTs with shorter average tenure are not so reliant on programmed decisions that have been engrained in the decision making process.

Functional track: The functional track experiences and the education about environmentally friendly technologies of the managers are of utmost importance to their understanding of new technologies that underlie the development of PES. The upper echelons perspective of the functional tracks separates them into output functions (marketing, sales, and product R&D), throughput functions (production, process engineering, and accounting), and peripheral functions (law and finance). The strategy of a firm will depend on the dominance of TMT members from a certain functional track where output functions stand for growth, throughput functions stand for efficiency, and peripheral functions stand for unrelated diversification (Hambrick & Mason, 1984). The correspondence between the functional track experiences, people’s preferences and dispositions, as well as their strategic choices, may occur because people self-select into the different functional areas. After joining a track, people get socialized in it, which will lead to a dominant mode of thinking and acting (Finkelstein & Hambrick, 1996).

When looking for growth and efficiency in today’s business environment, TMT members with a background in marketing and sales will look to the value set and salient views of the primary stakeholder customer when formulating the firm’s strategy. As mentioned earlier the customer base is getting increasingly sensitive to human ecology which will lead the TMT members to engage in proactive behavior. Operationally, the greening of the supply chain through an adoption of environmentally friendly technology will make the transformation processes more productive and efficient because less waste will have to be removed at the end of the pipeline. TMT members with throughput function background will see the benefit and engage in a pro-active strategy:

The peripheral function experience, looking for unrelated diversification will have a focus on short term financial performance, the management of the acquisition process, and the creation of synergies between business units. In most cases environmental pro-activity creates a financial disadvantage for the firm in the short term.

Ecological education: Post secondary formal education about ecological issues will allow the managers to understand the complex scenarios and linkages that lead to global environmental problems, as well as introduce the TMT to new environmentally friendly technologies that could be implemented at the home firm. The environment will be conducive to best practice sharing within industries, as well as best practice fertilization across industries. During the course of the education the managers will most likely be removed from the day-to-day activities at the home firm which might free cognitive capacity to consider or re-consider the corporate environmental strategy of the home firm. Many firms also elevate the position of a corporate
environmental officer into the TMT, therefore ensuring a steady inflow of information related to environmental protection and sustainability into the boardroom.

Intra TMT power distribution: Most top management teams have an unequal power distribution. Some positions might be viewed as more important and/or prestigious (e.g. the CFO because of his/her role in the allocation of resources). In some cases team members might be more powerful because of their personality traits (e.g. extroversion vs. introversion), or their personal characteristics (e.g. charm, political skill, networking abilities). Generally, the CEO has a source of legitimate power because of his/her position within the firm, his/her relationship with the board of directors, and his/her ability to evaluate and reward the other team members. Especially if a CEO possesses cognitive complexity, he/she is better equipped to integrate the different views of the other TMT members (Calori, Johnson, & Sarnin, 1994). Research on top management teams has demonstrated that TMT characteristics yield stronger predictions of strategic behavior when differing amounts of power are accounted for (Finkelstein, 1992), especially if powerful team members create the consensus, needed for good strategic decisions, through TMT agreement (Kellermanns, Walter, Lechner, & Floyd, 2005). Therefore we can assume that a powerful champion of environmental protection within the TMT will have substantial influence on the PES creation.

TMT Cohesiveness: It is also important to account for the team cohesiveness, or the level of teamwork conducted by the TMT. This concept was also introduced as TMT behavioral integration (Hambrick, 1994, 1995). In many organizations, due to geographical and physical separation, the TMT constitutes of a group of executives that do not engage into mutual decision making processes. Every team member is the expert in his/her functional area and very few decisions are conducted in team work. If the team does not function as a cohesive unit, using the TMT level as unit of analysis will be ill advised and the use of sub-groups within the TMT is suggested (Jackson, 1992). In the context of PES, I suggest the initial decision to engage in a PES has such a monumental impact on the firm that the decision will be made from the whole TMT. Therefore TMT cohesiveness is needed for the strategy formulation process. The choice of implementation activities, following the PES formulation process, will be in operational control of the individual executives if the team is geographically disbursed. The execution of the PES is suggested to become standard operating practice, therefore the importance of team cohesiveness will decline longitudinally, but it is essential for the PES formulation. A short term versus long term firm performance orientation of the individual team members will impact to what extend long term strategic decisions will be made. If the team is not cohesive and has a mutual commitment to long term goal achievements, team members with a short term economic perspective will likely derail the PES formulation and implementation, underlining the importance of a cohesive TMT.

Heterogeneity: The diversity of the team will play an important role in the decision making process. Several researchers have focused on the diversity of top management teams (Amason, 1996; Hambrick & Mason, 1984), and the influences team heterogeneity and team homogeneity have on performance (Mason A. Carpenter, 2002), willingness to change (Wiersema & Bantel, 1992), and the quality of the decision making process (Simons, Hope Pelled, & Smith, 1999). The common theme throughout the literature is that team diversity has both positive and negative effects. The positive effect of diversity is that different perspectives are brought to the

http://dx.doi.org/10.21607/jmsm.2016.0005
table and diversity fosters functional conflict between team members, leading to better quality decisions. It is also important to note that a diverse team has access to an even more diverse social network that can influence the availability of task relevant information for the decision making process. Therefore, a diverse and functioning team will make a better quality decision.

To the contrary, diversity can also lead to misunderstandings between the team members. Different functional, cultural, and social backgrounds will introduce dysfunctional conflict when stereotypes and attitudes are present, slowing down the decision making process and leading to a lack of trust between team members (Van Knippenberg, De Dreu, & Homan, 2004). In the context of TMTs the members have a high level of professionalism and formal education, as well as a large amount of experience with team work, which enables the members to avoid dysfunctional conflict (Olson, Parayitam, & Bao, 2007).

Heterogeneous management teams have the ability to make quality decisions and have the availability of information through their extended social networks. Team heterogeneity is a desirable state, and traditionally it was thought that certain TMT demographical indicators (e.g. gender, age, and ethnicity) could serve as a proxy measure for executives’ cognitive frames. Lawrence (1997) has alerted us of the so called “black box problem” that outlines that the demographical indicators are not a good use for the prediction of real psychological and social processes that drive executives behavior. A better measure for the TMT heterogeneity was introduced from Olson et.al. (2007), in their work about cognitive diversity. The authors argue that even though TMT members could have fairly similar demographics, their cognitive lens could still be very different. Commenting on the studies that use observable demographic indicators, the authors comment that “these studies, however, often ignore the complex processes that occur within strategic decision making – specifically cognitive diversity, task conflict, and competence based trust – to determine their impact on decision outcomes” (Olson, et al., 2007, p. 197). This is consistent with previous research showing that cognitive conflict in a TMT improves strategic consensus as well as decision quality (Amason, 1996).

Level of self-interest: Management scholars have long identified executives’ self-interest as an important factor in his/her strategic decision making. Outlined in contrasting theories executives are either agents or stewards that are either governed by an overwhelming interest for themselves, or a dominating interest for the well being of the firm and others (Davis, Schoorman, & Donaldson, 1997; Eisenhardt, 1989; M. Jensen & Meckling, 1976). Based on their compensation package, the agent looks for the immediate short term return, while the steward is interested in the long term performance and contributions of the firm.

In the context of PES, it is yet unclear if the strategy could have an immediate short-term effect. To the contrary, the PES might be a drain on short term resources and only pay off in the long term. Much of the literature points towards a long term orientation since the proactive strategy is accompanied by the creation of several path dependent capabilities like stakeholder integration, higher order learning, and continuous innovation (Sharma & Vredenburg, 1998). It has also been established that complimentary assets have to be present if a firm wants to create financial performance with the implementation of best practices in environmental management (Christmann, 2000). If a firm does not possess the necessary assets, the resources have to be acquired over time. In summary, the proactive implementation of a corporate environmental
strategy is a long term strategic plan that creates benefits over an extended period of time (e.g. reputational wealth, dynamic capabilities). In most cases the PES will not lead to immediate short term benefits.

The agent vs. steward orientation of the TMT will also determine how the TMT engages in stakeholder management. A TMT with a high level of self interest will manage the stakeholders reactively to keep the “noise” from the stakeholder claims to a minimum, while simultaneously favoring their own compensation tied to short term financial measures. A TMT with a low level of self interest that is interested in the long term survival and reputation of the firm will pro-actively manage all the stakeholders of the firm and involve stakeholder organizations in the strategy formulation process, which in turn will lead to a pro-active orientation in the corporate environmental management.

Managerial discretion: Even though managerial cognition and TMT characteristics are important elements that help shape PES, it will be the discretion of the decision makers that amplifies or constraints the extent to which these relationships are actually observed or will manifest itself. When researching the importance of the TMT in organizations, the opposing views that top executives influence the strategic direction of an organization greatly (Hambrick & Mason, 1984) and the institutional view that executives have little effect because they are swept along by external forces (DiMaggio & Powell, 1983) were reconciled when Hambrick and Finkelstein (1987) introduced the concept of managerial discretion. According to social cognitive theory, managers can only be effective if they believe they can control the organization and are capable of doing so (Wood & Bandura, 1989).

Managerial discretion exists when there is a great deal of means-ends ambiguity – that is, when there are multiple plausible alternatives. Discretion emanates from control, state, and environmental variables (Winter, 1987), whereas state variables cannot be changed over a short period of time, but can be influenced over a long time span (e.g. firm structure), control variables that can be changed over a short time span, and environmental variables are not subject to managerial choice over a plan-able time span (e.g. governmental policies). The TMT’s managerial discretion will therefore be impacted from environmental conditions like industry growth and munificence (Aragon-Correa & Sharma, 2000; Sharma, 2000), from organizational factors like firms resource position and the strength of the board (Hambrick & Mason, 1984; Hart, 1995), from the amount of uncertainty in the industry (M. A. Carpenter & Frederickson, 2001), and from the executive himself or herself (e.g. tolerance for ambiguity)” (Hambrick, 2007, p. 335). The adoption of a PES, for most organizations, represents a substantial departure from prevalent general business practices and needs a TMT that is not very constrained in their decision making process. Managerial discretion will enable a TMT to shift resources into the areas needed for an engagement into a PES.

Board of Directors: The board of directors (BOD) is the primary representative of the owners (shareholders) of the firm and charged with safeguarding the owners’ investments through the governance structure. The board’s secondary function is to safeguard the contractual relationship between the firm and the TMT (Baysinger & Hoskisson, 1990). The board will hire and fire the top managers of the firm, as well as impact the corporate strategy. Several factors in the board TMT relationship will impact the managerial discretion the TMT has towards the
formulation of a PES. The composition of the board of directors (Deutsch, 2005), the BOD demographics (M. Jensen & Zajac, 2004), the environmental strategy of the board members home firms, and the CEO duality will directly impact the managerial discretion of the TMT. The BOD size and composition “are not random or independent factors, but are, rather, rational organizational responses to the conditions of the external environment” (Pfeffer, 1972). If the board has more outside directors than inside directors, the board will favor a financial performance measures as a criteria to evaluate the TMT. Insider dominated boards will focus on an refinement of the firms main competitive advantage and an increased R&D activity (Baysinger & Hoskisson, 1990). Nevertheless the outside directors, when hiring new CEOs, will likely favor candidates that have the same strategic posture as the directors home firms. (James D Westphal & Fredrickson, 2001)

If the CEO is also the chairman of the BOD, his/her power on the board should be even greater; therefore his/her managerial discretion towards a PES formulation will be greater (J.D. Westphal & Zajac, 1995). Researchers have also suggested that the BOD will not play a role in strategy formulation unless the situation is dire and the BOD is forced to act (Kerr & Bettis, 1987), or the board would not prevent the top management from following a bad strategy stemming from occurrences of pluralistic ignorance (James D. Westphal & Bednar, 2005).

Adopting this perspective, especially since the short-term financial implications of a PES formulation are not clear and the BOD-TMT relationship has several different variables, I will assume that the BOD will give the TMT discretion for PES formulation as long as the TMT can make the case that the PES is a viable and affordable option for the firm.

Executive job demands: The CEO and the executive management team of an organization are perceived to operate under large amounts of pressure and experience big workloads. In reality, the job difficulty of CEOs and executives vary greatly between jobs. Executives who are under heavy job demands will be forced to take mental shortcuts and fall back onto decision that proved itself successful, whereas executives with minimal job demands have time for comprehensive decision making processes (Hambrick, Finkelstein, & Mooney, 2005). Since a strategic shift into a PES is a comprehensive process that demands long range planning and consumes many cognitive resources of the executive team, the TMT that engages into a PES needs to have spare cognitive resources and relatively low urgent job demands. As with managerial discretion, the amount of time available to the top executives will amplify or constrain the ability of the TMT to engage in a strategic decision to formulate a PES.

Firms Resource Position in the Industry: It has long been recognized that organizations do not exist in a vacuum and they are to a large part a product of their environment. The amount of exchange between the firm and different parties in the environment determines the organizations dependency on the environments variability, complexity, and illiberality.

The firm’s position in the environment will determine and be determined by technology, size and structure (Child, 1972). Valuable, rare, and inimitable resources secure firms’ competitive advantages over rivals in the industry (Barney, 1991). Firms that possess slack resources, not immediately needed for the business processes, have the ability to invest in new technologies, research and development, employee training, as well as other activities to support a PES and potentially develop dynamic capabilities that can serve as resources in their
own right (Aragon-Correa & Sharma, 2000). The availability of slack resources is dependent; to a large extent, on the industry munificence. If the general business environment can support a sustained rate of growth, and potentially even includes tax incentives as well as subsidies, firms are more likely to develop complex structures and decentralized operational decision making (Yasai-Ardekani, 1989), conditions favoring the formulation of a PES. This has been empirically investigated by Russo & Fouts who found that it pays to be green (financial and capabilities benefit), and the pay-off is higher in high growth industries (1997).

A hostile business environment that does not provide a sustained rate of organizational and/or industry growth will put a lot of pressure on the resource position of the firm. The firms in the industry will try to cut costs, be more efficient, and try to avoid an engagement in strategies with an ambiguous outcome. Therefore the “conditions of scarcity in the general business environment make it more difficult to establish the organizational and managerial processes, resources, and capabilities necessary for developing the dynamic capability of a PES” (Aragon-Correa & Sharma, 2000, p. 81).

The managerial interpretations of environmental issues and the choice of corporate environmental strategy is heavily dependent on the available discretionly slack managers can utilize for creative problem solving in the decision making process (Sharma, 2000). Therefore the firm’s resource position in the industry will lead to the following proposition:

**Proposition 1:** Slack resources and managerial discretion towards a PES formulation are positively related.

This proposition can be tested by evaluating the firm’s slack resources in comparison to the industry average utilizing appropriate measures developed in the field (Bourgeois, 1981). If this proposition is correct then the firms with the largest amount of slack resources should be the ones most likely to engage in a PES. Causality of the construct will be difficult to determine because either the firms that are doing well engage in a PES as a “luxury item”, or firms that engage in a PES are doing well and have slack resources, but a longitudinal analysis of the slack resources combined with a qualitative analysis of the firm’s annual reports should allow an insight what came first, the resources or the strategic initiative.

**Strategic Decision Making**

Since “corporate elites do in fact influence corporate strategies above and beyond economic factors such as prior performance, resource scarcity, and firm size” (M. Jensen & Zajak, 2004, p. 521), and empirical evidence shows that “focusing on only one aspect at the expense of the other may lead to an unfortunately narrow choice of units of analysis that can oversimplify or even mask the true relationship between corporate elites and the scope of the firm” (M. Jensen & Zajak, 2004, p. 520), it is important to develop a comprehensive model of the strategic decision making process towards a PES.

This process will be dominated by the teams’ causal map and the causal ambiguity about the quality of the decision (Mosakowski, 1997), as well as the TMT consensus (Amason, 1996; Kellermanns, et al., 2005). Every TMT will be evaluated by their contribution towards firm performance. Depending on the priorities of the firms’ stakeholders, several different
performance measures could be considered. Firm financial performance, firm environmental performance, firm social performance or a combination of the measures could be of importance for the evaluation of the TMT.

Nevertheless, the TMT’s decisions are supposed to lead towards a certain outcome or performance in the future. Depending on the level of difficulty in predicting the future outcome, and the level of resource allocation towards the outcome, every decision has a level of risk or uncertainty. Decision makers have to overcome causal ambiguity about the future performance in the strategic decision making process. Ambiguity is defined as “an intermediate state between ignorance (no distributions are ruled out) and risk (all but one are ruled out). Thus, ambiguity results from the uncertainty associated with specifying which of a set of distributions is appropriate in a given situation.” (Einhorn & Hogarth, 1986, p. 229). The ambiguity will be increased or decreased depending on the known causal structures and the TMT’s ability to acquire information relevant to the formulation of a PES.

Assuming that the TMT engages in the strategic decision making process with a hypothesis testing approach, the ambiguity will be reduced by a construction of tentative rules about the relationship between actions towards a PES and potential outcomes of the decision. Information gathering will be used to create the feedback needed to alter the rules of the relationship. Over time the TMT will develop a causal map that will allow the TMT to make decisions towards a PES that will lead to the desired performance outcome. This process will be impacted by the discretion the managers have over their decision making, the resource position of the firm in the competitive industry environment, and the executive job demands on the TMT.

The industry knowledge position about the needed resource allocation as well as potential benefits of a PES will impact the causal ambiguity the TMT has to overcome in the strategic decision making process towards a PES formulation, as much as firm structure and firm size impact causal ambiguity. Larger firms have more slack resources than smaller firms, but more complexity in their processes, operations, and industry environment (Mosakowski, 1997). Therefore I propose:

**Proposition 2**: The level of ambiguity that the formulation of a PES will lead to a desirable outcome is negatively related to a PES formulation.

The level of ambiguity is reduced if several components of the PES have been successfully implemented inside or outside of the industry. If the strategic initiative is based on new and/or untested technology or processes, the level of risk is higher. An analysis of the newness of certain technologies and initiatives should shed light on the ambiguity level. For this proposition to hold, firms will be slower to adopt younger technologies and processes, yet are more likely to incorporate proven strategic initiatives into their plan.

Nevertheless it is not the amount of ambiguity alone that will affect the strategic decision making process. It has been recognized that “when incorporating strategic choice in a theory of organization, one is recognizing the operation of an essentially political process in which constraints and opportunities are functions of the power exercised by decision-makers in the light of ideological values” (Child, 1972, p. 16). Essentially we are left to wonder how TMTs
make decisions towards specific strategy formulations in light of the fact that there are so many different elements that influence the decision.

The TMT has a certain value set, educational background, and work experience, and now it is bombarded by external and internal constrains as well as pressures from external and internal stakeholder groups to act in a certain way. How do executives sort it all out? It has been empirically validated that both, individual and situational factors play a role in the ethical environmental decision making process (Flannery & May, 2000), and a lot of research has been conducted on the decision making process, outlining many different mechanisms like magnitude, motivation, logic, intuition, analysis, and judgement.

It has been outlined that “executive judgement (i.e., executives’ understandings of key causal relationships) is such an important variable in strategic management that it deserves direct examination.” (Priem, Lyon, & Dess, 1999, p. 947). A great deal of controversy exists if individual decision making theories can be applied to organizational decision making models, or if organizational decision making is a separate topic (Bazerman, 1999). Bazerman outlined in his review of Shapira’s organizational decision making book, “Organization theorists criticize individual decision-making research for simply observing deviations form the “arbitrary” standard of rationality rather than capturing the real process of decision making. Organizational decision-making researchers tend to provide new research approaches, including work that is metaphorical, aesthetic, and even artistic, while avoiding judgments about the rationality of the decision process. My view is that this absence limits the usefulness of organizational decision-making research” (1999, p. 178).

He also mentioned that “Individual decision making has been strengthened by comparison against a normative benchmark; this aspect of the field is responsible for the phenomenal level of influence that individual decision-making research has had in psychology, medicine, marketing, and the organizational sciences. For example, behavioral decision research has been given prominence in an influential and mainstream OB journal, Organizational Behavior and Human Decision Processes” (p. 179).

It is not the purpose of this paper to make an attempt to consolidate the different view points, but I would like to outline that some of the discrepancy might lay in the type of decision made by the organization. Much of the criticism applied by organizational decision-making researchers (i.e. sequentially of decision making, organizational incentives and survival, organizational rules, conflict and power, and agenda setting) might have dominance for content research, but can be addressed or circumvented for process research. In other words, of course it is important to understand that a decision to implement a certain strategy is dependent on the decision what strategy was formulated, but I believe the formulation process, the main focus of this study, is heavily influenced by a small group of individuals (individual champions) and their decision-making. In the context of this study, individual decision making theories are of utmost importance.

As outlined before, the decision making process of the TMT is of course influenced by environmental variables like the industry environment and the firm’s resource position, but there are individual decision making theories available that address just this issue. In particular the cognitive continuum theory, developed on the foundation of the social judgment theory, is
the appropriate theoretical grounding for the TMT’s decision to formulate a PES. It has long been recognized by scholars of ethics in organizations, how important the judgment of the individual actors is for the process, especially if the outcome of the decision may not lead to financial performance.

Social Judgment (SJT) and Cognitive Continuum Theory (CCT) was developed based on Brunswick’s lens model, in which a person makes judgments about uncertain events based on cues (Brunswick, 1955a). The judgment is influenced by the person’s characteristics (i.e. education, experience, social norms, and values), and the amount and weight of cues. On the other side of the lens is the actual outcome of the decision and a feedback loop will close in the future and provide feedback on the accuracy of the judgment (See Figure 2).

![Figure 2. Brunswik’s Lens Model](http://dx.doi.org/10.21607/jmsm.2016.0005)

Hogarth outlined in the book Judgment and Choice about Brunswik’s Lens Model: “The importance of Brunswik’s lens model is to stress:

1. Judgment results from a series of operations on information that is related to other items of information or events;
2. Such interrelations in the human mind have an analogue in nature;
3. Judgement will be accurate to the extent that the individual’s picture of reality and judgmental rules match those of reality;
4. Brunswik also stresses that judgement takes place in a probabilistic environment. That is the relations between cues in the environment and the target outcome cannot
be represented by strict functional rules. Rather the rules are probabilistic – which roughly means that they are not exact in 100% of cases; and

5. Judgmental accuracy is a function of both individual characteristics and the structure of the task environment.” (1988, pp. 9-10)

Social judgment theory scholars, true to Brunwikan origins, have developed the cognitive continuum theory to research tasks that people face in their intercourse with the environment. This theory is applicable to the laboratory setting as well as in negotiations, and real work situations. It relates those task characteristics explicitly to aspects of the behavior of people performing them (Doherty & Kurz, 1996). Four general premises of the CCT outline its applicability to the strategy formulation process, and the cognitive processes of the TMT:

1. Cognition happens in different modes on a continuum anchored at one side by intuition, and at the other by analysis.

2. The most common sort of cognition includes both elements (intuition and analysis), and is called quasi-rationality.

3. There is constant movement on the continuum for the cognitive activities, where failure and success determine the amount of movement (failure fosters movement, success discourages movement).

4. The continuum can be utilized as a typology for the tasks at hand; they can be sorted upon the level of intuition or analysis needed. (Hammond, 1996)

Given the underlying premises of the theory, its extension into group decision making, and its long standing theoretical and empirical research tradition, the CCT framework is applicable in the context of this paper. Much like a medical doctor, asked to diagnose a patients sickness based on a certain set of symptoms (cues), it is the task of the TMT to analyze the internal and external cues (e.g. stakeholder pressures, resource position) and give a diagnosis of the patient (situational analysis of the firm) and determine a treatment plan (firm strategy) for the patient (firm). Sometimes the cues are subtle and in the judgment of the TMT the firm needs to maintain business as usual with minor adjustments, sometimes the cues are dramatic (such as an environmental spill) and have a lot of weight which calls for a change in firm strategy.

Researchers have empirically evaluated intuition used in strategic decision making, and found that intuitive decision making is positively related to firm performance in unstable firm environments, and negatively related to firm performance in stable environments (Kharti & Alvin, 2000). This finding is consistent with the prediction of the CCT because the availability of many relatively constant cues in the stable environment should allow for an analytical analysis, while a small amount of vague cues, as in turbulent environments, should invoke intuitive decision making.

In conclusion the social judgment framework, and here especially the CCT, provides us with a tool that ties together all the elements of the model. The essential piece in the decision making process towards a PES formulation will still be the judgment of the people running the organization. If the characteristics and values of the TMT, the internal and external cues, as well as the realistic assessment of the firm environment align, the TMT will decide to formulate a PES. Therefore I propose:

http://dx.doi.org/10.21607/jmsm.2016.0005
Proposition 3: The more homogeneous the sets of cues the individual TMT members utilize to evaluate the firm environmental performance are, the higher the likelihood that the firm formulates a PES.

It is understandably difficult to get a good response rate out of TMT survey research because the TMT members have difficult time demanding jobs that likely won’t allow them to partake in a survey, but this research could be produced in a simulated setting. Utilizing graduate students in a laboratory setting should allow for good measurable results. In an application of business simulations such as CapsIM’s Capstone or GlobalDNA students run their own companies and make decisions based on company performance. The introduction of several scenarios in the form of case studies centered on the firm’s environmental performance will move the students into a decision making pattern that will allow the researcher to apply survey research with the students and determine which cues lead to their analysis result. It is acknowledged that the students are likely not seasoned executives and there might be a variance in how a actual TMT member of a large organization thinks, but laboratory research with appropriate sample sizes should lead to usable results, by the very least about the quantity, diversity, and quality of the cues utilized in the decision making process.

LIMITATIONS AND DISCUSSION

Corporate Environmental Strategies are of great importance for firms engaging in business operations during the 21st century. Global trade surpasses national governments in importance, since the largest MNCs have more resources available to them than the majority of the countries recognized by the United Nations (UN). Only a small minority of people doubts the effect global warming has on climate change and the remnants of consumption are piling up in many landfills in industrialized nations as well as in our oceans. Therefore it becomes increasingly clear that environmental management is a global problem that cannot be managed and regulated from national or local governments. Pollution does not stop at national borders and also happens in areas without government control, such as the emissions of the global maritime shipping fleet.

One of the limitations of this research study is the ethnocentric focus. I developed this comprehensive research framework for the North American firms for several reasons, first, historically and on average, the US plays a very big role as a polluter but a much smaller role in PES formulation and implementation than other countries in the developed Northern hemisphere (e.g. evident by the non-ratification of the Kyoto Treaty, as well as the per capita amount of Greenhouse gas emissions for the country as a whole). Conceptually there might be differences in the definitions and applications of some of those constructs between the US and e.g. Europe (Matten & Moon, 2008), which in turn means that if a comprehensive research agenda for proactive environmental protection can be developed for the US, researchers at North American academic institutions can help shape the future of PES formulation in the US. Researching PES formulation for US firms would therefore be equivalent to a focus on “the low hanging fruit”, because a small percentage decrease in emissions and waste, will lead to a big change in real emissions (e.g. tons of CO2).

http://dx.doi.org/10.21607/jmsm.2016.0005 113
Second, most of the research underlying this paper was published in US academic journals, with mostly North American data sets. When the effects of globalization are included into the model, many premises might have to change. Globalization and international assignment experience will have profound impacts on the way executives will approach PES. If a manager was working as an expatriate in Europe, the laws, regulations, and values he/she was exposed to during that time will alter the cognitive lens (M. A. Carpenter & Frederickson, 2001). Managerial talent is following a global educational trend as well; people can truly become global citizen (i.e. Carlos Ghosn, current CEO of Renault, a French citizen born in Brazil to Lebanese parents, educated in several countries of the planet, yet made his name by turning around Nissan in Japan). If possible this research should also be conducted in Southeast Asia since the lack of PES with many manufacturing companies has led to substantial pollution problems, but the robustness and applicability of this framework with managers of different nationalities needs to be established first.

The same might be true for the organizational culture, managerial cognition, as well as stakeholder management in multi-national-corporations (MNCs) versus companies that conduct their business in smaller geographical regions. The exposure Ford, GM, and Chrysler had to the European product take-back laws (by law the car company is required to take the car back at the end of its useful life at no cost to the consumer), shape the design of their manufacturing facilities and the use of materials on a global scale. Therefore a strategy that could be viewed pro-active in one country could be just a re-active strategy on a global scale. For MNCs it will also be difficult to research stakeholder pressures, since many of the stakeholder groups are still national groups (i.e. unions, consumer groups, government agencies), and a MNC will therefore be exposed to many small national stakeholder groups with partially opposing views.

For true advances in the protection of the natural environment and advances in human ecology, proactive steps from business are necessary to go beyond the attempts of governmental regulation. I introduced a comprehensive model of antecedents, external and internal influences, as well as theoretical foundation of the strategic decision making process towards firms’ proactive corporate environmental strategy formulation. Many individual pieces of the model have been empirically tested and the next step is an empirical test of a global model towards PES formulation. For many individual elements of the model new measures might have to be developed or old measures refined and retested. Especially in the CCT framework, applied to the TMT’s cognitive decision making process, extensive access to corporate decision makes is needed.

This comprehensive model as a research framework will advance our understanding of proactive corporate environmental strategy and help shareholders, firm directors, and other stakeholders of the firms to evaluate and potentially change the structure of firms and the composition of TMTs. A starting point for this relatively unknown but very important and timely phenomenon has been created. Evaluating a comprehensive model to firms’ engagements into proactive corporate environmental strategy is consequently a contribution to the field of management.
REFERENCES


http://dx.doi.org/10.21607/jmsm.2016.0005


http://dx.doi.org/10.21607/jmsm.2016.0005

116


Kharti, N., & Alvin, H. (2000). The role on intuition in strategic decision making. *Human Relations, 53*(1), 57-86. [Article (CrossRef Link)]


http://dx.doi.org/10.21607/jmsm.2016.0005 118


