

**Cognitive Diversity among Corporate Managers:  
Organizational Positions as Surrogates for Corporate-Level Strategy Beliefs**

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Casper van der Veen

Research Associate  
Strategy Academy

Contact address:  
Parklaan 1  
3016 BA Rotterdam, The Netherlands  
E-mail: [c.vanderveen@strategy-academy.org](mailto:c.vanderveen@strategy-academy.org)  
Tel: +31 10 4408522  
Fax: +31 10 4408529

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## **Cognitive Diversity among Corporate Managers: Organizational Positions as Surrogates for Corporate-Level Strategy Beliefs**

*Various strategic management research efforts have tested Hambrick and Mason's (1984) thesis that individual characteristics could be surrogates for managerial beliefs. However, beliefs on corporate-level strategy have not been researched comprehensively, whereas various individual characteristics remain underexposed as explanatory variables. This paper hypothesizes that when dealing with corporate strategy, especially positional characteristics (hierarchical, functional or governance positions) influence managerial beliefs, vis-à-vis demographic characteristics (age, nationality) and experience characteristics (work, functional or organizational experience). This PhD research is conducted among 350 executives in 5 multinational corporations. Results show highly significant relationships, suggesting that it is important to take differences in belief systems across positions of managers into account when formulating and implementing corporate-level strategy.*

## INTRODUCTION

Strategic decision-making is conducted by and has effect on individuals, who bring their own perspective into the decision-making process. Theorists (e.g. March and Simon, 1958; Hambrick and Mason, 1984; Schwenk, 1984; Huff, 1990; Stubbart, 1990; Walsh, 1995; Carpenter et al., 2004; Hambrick, 2007), have for long argued for the importance of managerial beliefs as a basis for decision-making. The key argument of Hambrick and Mason's upper-echelons (UE) theory is that executives act on the basis of their personalized interpretations of the strategic situations they face (Hambrick and Mason, 1984; Hambrick, 2007). These constructs affect strategic choice in decision-making, which in turn affects strategic organizational outcomes that influence firm performance (Carpenter et al., 2004). According to Stubbart (1990), managerial cognitions influence each strategy process activity, from formulation to implementation. Recent empirical work indeed suggests that differences in managerial cognitions may lead to different strategic decisions and outcomes (Adner and Helfat, 2003): managerial cognition 'matters'.

The second important argument of UE-theory is that "personalized constructs are functions of the executives' experiences, values and personalities" (Hambrick, 2007). A large variety of researchers has followed up on this argument, focusing on the demographic and background characteristics of managers as explanations for cognitive diversity and thus managerial outcomes. However, insights from agency theory (Fama and Jensen, 1983; Jensen and Zajac, 2004) and social influence theory (Blumer, 1969, Chattopadhyay et al, 1999) suggest that managers translate different needs and interests into their belief systems, which is enforced by social interaction with their peers. These perspectives suggest that also positional characteristics of managers should be taken into account when studying the antecedents of managerial beliefs. This would contribute to the wealth of explanatory value of upper echelons theory.

Corporate-level strategy deals with the way in which a corporation manages a set of businesses (Grant, 1995). Whether it is possible as a corporation to add value to its businesses is a critical question (Goold and Luchs, 2003) and therefore a key issue in strategic management literature. Surprisingly, however, managerial beliefs on the area of corporate-level strategy have not been subject of much research so far. It's especially in the intersection between corporate-level strategy processes and managerial cognition that the importance of positional antecedents of managers comes to the fore. Not only top-level executives, but also business unit and middle managers can have significant upward influence on corporate-level strategy formulation (Bower, 1970; Floyd and Woolridge, 1992; Watson & Woolridge, 2005). Forming and implementing corporate-level strategy not only means dealing with people across nationalities, ages or areas of experience, but it foremost means dealing with people's positions, duties and responsibilities – people can have their own personal biases, stakes and future bound to the corporate strategy of their firm. In other words, besides the other possible explanations that UE-theory provides, a large deal of cognitive diversity on corporate-level strategy might be due to the

positions that managers have. The study discussed in this paper focuses on the question: What is the relationship between managers' corporate-level strategy beliefs and their position within the corporation?

Data was collected from 372 managers in 5 corporations across industries and countries. Whereas most research into managerial cognition has been done using smaller samples, usually among more junior managers or MBA-students, the uniqueness of this dataset will contribute to answering this intriguing question. The sample includes board members, headquarter staff, division heads, business unit managers and functional managers with diverse functions, demographic characteristics and levels of experience. The research involved an online assessment, which was developed in close cooperation with practitioners using an issue-based framework of corporate-level strategy, in turn based on theoretical studies. Incorporating new individual variables into managerial cognition research and comprehensiveness of individual variables provides more understanding of managerial cognition. Furthermore, it provides insight into the challenges brought about by a diversity of corporate-level strategy beliefs among its important stakeholders: the managers that influence the corporate-level strategy formation process and who will ultimately be engaged in its execution.

## **MANAGERIAL BELIEFS**

Prahalad and Bettis (1986) compare managers in multi-business firms to chess players as studied by Newell and Simon (1972), having to process vast amounts of information and facing an almost unlimited array of choices. The complexity of their task as managers in a corporation is compounded by the firm's operations in many, often quite distinctive markets, while the managers of diversified firms must endeavor to realize the synergies that justify their firm's diversification strategies (Stimpert and Duhaime, 1997). According to Hambrick and Mason (1984) and Prahalad and Bettis (1986), to handle these complexities the 'dominant coalition' adopts a shared mental model. This *dominant logic* plays a strong role in shaping the organization's growth, diversification and business portfolio strategy. Lampel and Shampsie (2000) add that a firm can produce a mindset or worldview that can be shared across its business units: "by seeking to inculcate in managers from each of the business units the same beliefs and assumptions, dominant logic endeavors to create a degree of consistency in the way that these units deal with environments".

However, managers do not think alike in terms of their vision, expertise, risk-profiles, motivations, or goals (Stubbart, 1989). The cognitive base for decisions consists of managers' knowledge or assumptions about future events, knowledge of alternatives, and knowledge of consequences of alternatives (March and Simon, 1958; Cyert and March, 1963). With these assumptions, managers construct belief structures that are simplified representations of the world (Walsh, 1989). As managers attempt to make sense of an increasingly intricate, ambiguous, and ever-changing world, they frequently simplify reality into polarized distinctions that conceal complex interrelationships (Lewis, 2000). This limited field of vision, selective perception, and interpretations then combine to produce managerial perceptions of a situation (Huff, 1990). As stated, as strategy is not simply a

top management task (Porac and Thomas, 2002; Watson and Woolbridge, 2005), a diversity of strategy beliefs will exist across managers in an organization.

The cognitive bias of managers is an ‘ever-present ingredient’ (Das and Teng, 1999) of the strategic decision-making process of organizations, from goal formulation to analysis, strategy formulation, implementation and evaluation. However, considerable tension can arise when executives have different points of view on the corporate direction that should be taken. Beliefs can be wrong or unacceptable to others, in the case of ‘bad maps’ (Kiesler and Sproull, 1982) or encompass a narrow vision (Lorsch, 1999). On a group level, in the case of top management teams, dissensus and cognitive heterogeneity is a more likely outcome than consensus and cognitive homogeneity (Porac and Thomas, 2002). On the other hand, managerial heuristics can simplify the strategic decision process considerably (Schwenk, 1984) and improve group problem-solving skills in cognitive heterogeneity (Jackson, 1992; Finkelstein and Hambrick, 1996).

In general management research, much work has been done on what managers believe, in what Walsh (1988) calls an “eclectic mix of content areas”. In research around strategic management beliefs, or as called by Porac and Thomas (2002) “cognitive strategy” research, content areas are just as abundant and diverse. Some examples are risk averseness (e.g. Hambrick et al. 1996; Wiersema and Bantel, 1992), alliance candidates (e.g. Tyler and Steensma, 1998), strength and weakness indicators (Ireland et al., 1987), business tactics and operative goals (Chattopadhyay et al., 1999), competitive structures (Daniels et al, 1995), strategic change (Markoczy, 1997), strategic orientation (Chaganti and Sambharaya, 1987) and strategic planning systems (Koufopoulos, 2002). However, the area of corporate-level strategy, especially comprehensively, remains unexploited in managerial cognition research. Exceptions are Lawrence and Lorsch (1967) on the differences in perspectives on differentiation and integration across a corporation, Ireland and Duhaime (1997) on the conceptualization of relatedness, Jensen and Zajac (2004) on perspectives on the scope of the firm. Notable are also Ambrosini and Bowman (2003) on perceptions of rationales behind corporate-level strategy, dealing with issues such as communication and lack of consensus.

Arguing that application of UE-theory requires observable characteristics of managers, Hambrick and Mason (1984) put forward that demographic characteristics such as age, functional background and formal education can be surrogates for manager’s beliefs: “Observable demographic factors [can] provide a reliable portrayal of a person’s makeup... [and] are potent predictors of strategies”. A variety of researchers have followed this premise, focusing on the relation between managerial beliefs and truly demographic variables such as age (e.g. Wiersema and Bantel, 1992; Ireland et al, 1997), gender (e.g. Westphal and Milton, 2000) and background variables, e.g. education, tenure and functional background (e.g. Walker, 1985; Wagner, 1987; Papadakis and Barwise, 2002).

Some researchers have put the assumptions in upper-echelons theory to the test, suggesting that not only the demographic characteristics mentioned by Hambrick and Mason (1984) are surrogates for managerial beliefs but

also other variables should be taken into account. For instance, Markoczy (1997) takes UE-theory based demographic characteristics as starting point, adding nationality and managerial level, yet finding conflicting results on the relation with managerial beliefs in her sample (91 managers in Hungary). Chattopadhyay et al. (1999) acknowledge “a surprising paucity regarding the antecedents of upper-echelon executive beliefs” and use *social influence theory* to supplement the UE-based functional background characteristic with current functional area and peers’ beliefs, finding stronger support for the latter than for the functional antecedents of 371 executives in 26 industries. Jensen and Zajac (2004) supplement the demographic premise of UE-theory with the *agency theory* perspective, which emphasizes the role of position-based preferences and dispositions (Fama and Jensen, 1983) and analyze the effect that functional background and governance positions in boards have on executive preferences on diversification and acquisition activity.

Carpenter et al (2004) argue that “as the upper echelon-perspective focuses on executive backgrounds as the primary indicator of their mindsets and thus potential behaviors, it ignores determinants rooted in organizational structure”. As corporate-level strategy deals with the alignment of businesses, emphasizing the role of the corporate headquarters and the corporate processes needed in the organization, structural determinants such as the functional area, a business vs. a HQ position and the hierarchical level of a manager can be important antecedents of the beliefs he has on this issue. Bowman and Helfat (2001), building on a large amount of data from previous research (e.g. Rumelt, 1991; McGahan and Porter, 1997), show that the corporate effect can explain up a large amount of the variance of profitability across multi-business organizations. In other words, decision-making on corporate-level strategy is important for the success of modern day organizations: “corporate strategy matters” (Bowman and Helfat, 2001; Adner and Helfat, 2003). In that sense, given the influence of managerial beliefs on the strategic decision-making process, the lack of research into what managers’ beliefs are on corporate-level strategy issues is remarkable.

Upper echelons theory has clearly shown it merits in the past decades in providing insight into executives’ actions and corporate biases. However, this insight can be even more enhanced by utilizing its conjectures with other theoretical premises, in particular the agency and social influence perspectives. As stated by Carpenter et al (2004): “it is through the integration of theories concerned with executive behaviors and choice that the UE perspective may provide its richest predictions”. Instead of selecting a number of individual demographic characteristics, this study analyzes a broader set of attributes, integrating positional, demographic and experience variables and thus building on different theoretical premises from UE-theory, agency theory and social influence.

## **CORPORATE-LEVEL STRATEGY**

The large diversified corporation, a firm that is active in multiple businesses, has risen as the dominant actor in post-war US and European economies (Rumelt, 1974; Markides, 1996; Whittington and Mayer, 1999). Since the multidivisional structure first appeared in theory in the early sixties with the writing of Chandler (1962) and

others, research into how a corporation can create value has become a key area within strategic management. The multidivisional (M-) form of organization (Chandler, 1962), in which firms are organized in relatively related divisions and business units that are collectively administered by a corporate headquarter unit (Hoskisson and Hitt, 1994), has steadily grown in use from the 1960's. According to Whittington et al (1999), divisionalization is "the final resting place of corporate development, unlikely to be reversed". Around 1993, in Germany, France and the UK, 70% to 90% of large industrial firms were organized according to the M-Form (Whittington et al, 1999).

A divergence of corporate-level strategy beliefs is apparent in the academic discourse. Generally, the field of corporate-level strategy can be constructed around two issues to translate this discussion into practice. The first issue is *corporate alignment*, or how a group of businesses should create value, including complex corporate-level strategy issues such as synergy, business unit autonomy, business relatedness and corporate scope. Summarizing the discussion around this area: some researchers note the virtue of harvesting synergies throughout the firm in order to create corporate value (Porter, 1987; Prahalad and Hamel, 1990), while others express the need for independence of local businesses to retain value for the businesses (Hedley, 1977; Taggart and Hood, 1999), with researchers from the globalization literature noting that the business units should be able to be responsive to their diverse markets (Douglas and Wind, 1987; Dosi and Kogut, 1993). On the matter of relatedness, some researchers emphasize the importance of relatedness when expanding business scope (Rumelt 1974; Collis and Montgomery, 1998), yet others disagree on its importance, or at least on its measurement (Duhaime, 1997; Whittington and Mayer, 1999).

The second issue in corporate-level strategy is *corporate control*, or how group value creation should be managed, covering issues such as corporate processes, (de)centralization, standardization, roles of the headquarters and corporate structure. Around this issue, some writers favor a strong interference of corporate headquarters (Chandler, 1962; Raynor and Bower, 2001), advertising a high level of standardization or centralization of corporate procedures (Jacques, 1990; O'Donnell, 2000), while others articulate the importance of subsidiaries and bottom-up involvement (Birkinshaw and Hood, 1995; Paterson and Brock, 2002).

The issues of corporate alignment and corporate control are intertwined issues, one usually following the other. Whether 'strategy follows structure' (Chandler, 1962) or not, often the two will be related to one another. For instance, Markides (2002) puts forward that "the answer to the question 'what is the role of the centre?' depends on what the centre is trying to achieve", while Whittington (2003) states that "without fixing the right structure, a strategy is not really done". Even though the two issues will be related, in order to create the necessary depth of analysis for this study, the issues will be analyzed separately.

## POSITIONAL ANTECEDENTS OF CORPORATE-LEVEL STRATEGY BELIEFS

Whereas academics have different views on corporate-level strategy, managers can also think differently on how their corporation should capture and manage corporate value. Some managers will believe that the business units in his organization should be aligned as much as possible, for instance arguing that operational costs can then be saved by harvesting economies of scale, innovation can be spurred by sharing knowledge and ideas, or the company should be present in relatively similar markets to leverage its brand. In order to capture these corporate synergies, headquarters should play an important role, taking the lead and providing guidelines for business units. Other managers may believe the opposite, proposing that more value can be created if a corporation functions as a group of independent business units, for instance arguing that only then entrepreneurship or speed of decision-making can be fostered, or that capturing synergies only leads to too much bureaucracy. Inherent to corporate-level strategy is a tension between an 'integrated organization perspective' and a 'portfolio organization perspective' (De Wit and Meyer (2004). Campbell and Faulkner (2003) attribute these two perspectives to the academic 'synergy school' and 'portfolio school'.

The beliefs of most managers will be more equivocal than these two extremes, but differences would still occur. Key proposition in this paper is that the beliefs that managers have on corporate alignment and corporate control are related to the position that they uphold within their organization. Whereas assumptions from *upper-echelons theory* would relate these beliefs to demographic characteristics such as a manager's age, education or background, insights from *agency-theory* and *social influence theory* would argue otherwise. As managers make sense of their environments and thus define what they believe the corporate-level strategy of their company should be, they will be guided by their own interests and the social context in which they operate.

*Agency theory* emphasizes position-based preferences (Fama and Jensen, 1983) in a way that, as Eisenhardt (1989) states, it has "reminded us that much of organizational life...is based on self-interest". Agency theory explains the effects of the relationship between employers or shareholders (principals) and employees (agents), in which agents act according to different desires or goals. Agency theory attempts to describe this relationship in terms of a contract (Jensen and Meckling, 1976; Eisenhardt, 1989). Williamson (1981), who also speaks about the firm as network of contracts between people, adds that "... human agents are subject to bounded rationality and ... at least some agents are given to opportunism" and "whereas economic man engages in simple self-interest seeking, [organizational man's] opportunism makes provision for self-interest with guile".

Even though agency theory mostly focuses on potential conflicts of interests between shareholders and the 'corporate elite' of CEO's, executive, and non-executive directors (Jensen and Zajac, 2004), it can also be expanded towards other managerial 'elites': across an organization, managers can have different interests and goals, but these can differ per position. According to Jensen and Meckling (1976), "the problem of inducing an 'agent' to behave as if he were maximizing the 'principal's' welfare is quite general...it exists in all organizations, and in all cooperative efforts – at every level of management". Jensen and Zajac (2004) indicate

that the incomprehensiveness of individual characteristics of executive beliefs is due to the different theoretical perspectives used, stating that “there is considerable value in accepting the relevance of both demography and positions”.

*Social influence* theory emphasizes that people form and reproduce their beliefs through interacting with others, which Chattopadhyay et al (1999) conclude from a review of research around social influence and its effect on belief systems, drawing on logics such as organizational communication (e.g. McGrath, 1984), socialization (e.g. Jablin, 1997), social control (e.g. Nemeth and Staw, 1989) and social information processing (e.g. Fulk et al, 1987). Through ‘symbolic interactionism’ (Blumer, 1969), people act toward things based on the meaning those things have for them, whereas these meanings are derived from social interaction. As managers in organizations act in different ‘cognitive communities’ (Porac and Thomas, 2002), their beliefs will be related to the cognitive communities they are in and thus the positions they uphold. The group of peers in their functional area might be an important cognitive community on which they base their belief systems.

With regard to positional antecedents as exploratory variable of beliefs, especially functional area is often used in managerial cognition research. For instance, Finkelstein and Hambrick (1996) argue that individuals become socialized and inculcated with the functional area’s dominant mode of thinking and acting, but also might have already chosen a specific functional area because it fitted their cognitions. Dearborn and Simon (1958) first posted that functional position influenced executive perception through ‘departmental identification’. Houghton and Neubaum (1994) found correlations between current functional area and belief structures: in their research among executives in the hospital industry, they found that financial managers tend to hold more financially oriented beliefs, while marketing managers believed more in market-reputation beliefs.

Both because of individual self-interest and group-interest, managers in different functional areas can unite in their beliefs on corporate-level strategy via social interaction. A corporate-level strategy can have different effects on functional areas, potentially changing the status, content or labor distribution of one or more functions. For instance, Finance, HR, IT and other general staff are usually among the first to be aligned into shared-service units (Kaplan and Norton, 2006), while marketing and sales units would probably want to stay rather independent, in order to cultivate market responsiveness, or R&D and operational units would want to be left alone as much as possible by corporate headquarters to have a free hand. General managers, on the other hand, may advocate more corporate alignment, to engage in more close cooperation with their peers. This discussion suggests the following hypotheses:

*Hypothesis 1a: A manager’s belief on corporate alignment is related to his/her functional area*

*Hypothesis 1b: Finance, general managers and general staff will attribute a higher value to corporate alignment than marketing, sales, operational and R&D managers will*

*Hypothesis 2a: A manager's belief on corporate control is related to his/her functional area*

*Hypothesis 2b: Finance, general managers and general staff will attribute a higher value to corporate control than marketing, sales, operational and R&D managers will*

Not only the functional area, but also other peers in the social environment directly around a manager could be an important cognitive community. For managers in large corporations who are active at headquarters, their colleagues at HQ will be an important social context, but for other (line) managers this would be their division or business unit. Especially regarding the issue of corporate-level strategy, with its emphasis on defining the relationship between headquarters and the business units in an organization, perspectives between the two groups might differ significantly. Nohria and Ghoshal (1994) propose the headquarter-subsidary as a typical case of a principal-agent relationship, in which the principal's group interests differ from the agent's local interests. Birkinshaw et al. (2000) agree in this, at least about cognitive diversity between headquarters and country units: "we would expect to see significant differences in opinions between HQ and subsidiary managers on just about everything". This has also been classified as an 'us vs. them mentality' (Paterson and Brock, 2002).

Self-interest with regard to corporate alignment and management might be even more important than in the functional areas. For instance, a manager at HQ will propose a far more important role for the corporate unit, because it could elevate his status, improve content of the work for him and his group of peers. On the other hand, a business manager might think corporate value should indeed be pursued, but can also believe that this should not come at the expense of the value for his business and thus his KPI's. He will then advocate relative independence, with less top-down corporate management but more upward influence and decision-making autonomy for the business units. These beliefs can merely be based on self-interest, but will only be enforced by the interaction with other managers within HQ or the business. In other words, beliefs on corporate level-strategy are expected to differ per 'corporate position':

*Hypothesis 3a: A manager's belief on corporate alignment is related to his/her corporate position*

*Hypothesis 3b: Managers positioned at corporate headquarters will attribute a higher value to corporate alignment than other managers will*

*Hypothesis 4a: A manager's beliefs on corporate control is related to his/her corporate position*

*Hypothesis 4b: Managers positioned at corporate headquarters will attribute a higher value to corporate control than other managers will*

Not only across corporate positions, but also across managerial levels corporate-level strategy beliefs are expected to differ. Note that managerial level and corporate position are not necessarily the same. For instance, a business manager can have a high hierarchical level as business director and thus corporate board member or a lower level as manager of the marketing department for a product-market combination, while a corporate manager can also have a relatively low hierarchical level as functional manager. Sometimes a manager might think as ‘corporate’ or ‘business’ manager, but sometimes he might think as ‘managing director’ or ‘department head’.

Empirically, a person’s position in an organization’s hierarchy has been shown to be related to his beliefs. For instance, Ireland et al. (1987) concluded from their research that perceptions towards firm-specific strengths and weaknesses and environmental uncertainty differ per managerial level, building on UE-theory in stating that members of each managerial level are likely to be near the same (organizational) age and will have shared experiences. However, Markoczy (1997) found no relation between hierarchical position and beliefs on strategic change. On corporate-level strategy, Ambrosini and Bowman (2003), who found some cognitive diversity on corporate-level strategy within the organizations that they researched, suggested that these could be explained by “the distance and complexity between the apex and other managers”. The larger the distance, the more detachment might be felt from achieving ‘group’ value, disregarding of corporate position. Agency theory might also explain this cognitive diversity, because each group of managers at specific levels represent different agents, whose interests are served differently by the strategy of their corporation. This discussion is formulated into the following hypotheses:

*Hypothesis 5a: A manager’s belief on corporate alignment is related to his/her managerial level*

*Hypothesis 5b: Higher-level managers will attribute a higher value to corporate alignment than lower-level managers will*

*Hypothesis 6a: A manager’s beliefs on corporate control is related to his/her managerial level*

*Hypothesis 6b: Higher-level managers will attribute a higher value to corporate control than lower-level managers will*

## **METHOD**

### **Sample**

The sample was restricted to large multinational organizations, due to the subject of corporate-level strategy. Data was collected from 372 managers in 5 corporations across industries and countries: an international financial service firm (250 executives assessed), a Dutch technology and service firm (25 executives assessed), a Scandinavian manufacturing and service firm (50 executives assessed), an international bank (40 executives assessed) and the customer service division of an international technology firm (45 executives assessed). The numbers of employees of each firm ranges from 18.000 to 120.000, with a mean of 45.000. The sample included Board members, headquarter staff, division heads, business unit managers and functional managers with diverse functions, demographic characteristics and levels of experience. The access to these organizations, the large sample size and the high hierarchical levels and large experiences of the managers involved contribute to the distinctiveness of this data set.

Data was collected by asking the participants to fill out an online assessment. The total number of invitations for the online assessment was 500, meaning that the response rate was 75%. Managers filling out the sample were usually participants to in-company executive teaching classes or strategy conferences. This was a factor explaining the high response rate, together with the accessibility of the assessment. From the 372 assessments, 22 were eliminated from the data set because of missing data or incoherent scores after a consistency check. As a result, the final data set for analysis included 350 scores.

### **Measuring corporate-level strategy beliefs**

Data on the corporate-level strategy beliefs was gathered by using a web based assessment, 'Strategy Profiler'. This instrument was successfully validated by Meyer (2007), who studied managerial beliefs on a complete range of strategy issues. It follows the premises underlying the concept of *paradoxical tensions* in strategy (Poole and Van de Ven, 1989; Lewis, 2000), in which theoretical constructs are defined according to diametric suppositions. The assessment adopts an *open card sort* technique, in which participants are asked to place cards with statements into 1 of 5 boxes on a 5-point Likert scale, as also adopted by Daniels et al. (1995) to assess managers' models of competitive structures. Once all ratings of the statements are provided in the assessment, it closes with questions on the participants' characteristics across positional, demographic and experience attributes. Some of the positional characteristics, such as managerial level, were supplemented in coordination with the organization under research, while the other individual characteristics were checked with other sources, such as the HR-departments and organizational structures of the organizations.

The 'Corporate Strategy Profiler' that was ultimately sent out for this study was developed in four steps. First, the issue-based frame work was designed from theoretical studies. The issue of corporate alignment was

assessed along two opposing concepts, *synergy vs. independence*, themes including sources of synergy, advantages of synergies and autonomy, corporate scope focus and relatedness. The issue of corporate control was assessed along the constructs of *authority vs. self-organization*, themes including corporate processes such as centralization and standardization, corporate structure, roles of the headquarters and corporate culture. Second, the framework was presented and deliberated during interviews, class sessions and discussions with executives, strategy consultants and academics. Several alterations and supplements were made. Third, from a broad review of the literature on corporate level strategy, statements were developed following a more in-depth clustering of each of the two corporate strategy issues in the assessment, using insights from authors of academic journal articles dealing with corporate-level strategy. All items deal with the participant's view on what should be the corporate level strategy of the corporation he works for. Examples of statements are 'In the corporation that I work for, businesses should be aligned to reduce operational costs' (synergy), 'To be accountable for results, businesses in the corporation that I work for should be independent' (independence), 'In the corporation that I work for, the business units should be closely monitored by corporate headquarters' (authority), or 'In the corporation that I work for, business units should be actively involved in the strategy process of the corporation' (self-organization). Fourth, the draft assessment was empirically tested by sending it to a selection of 80 management professionals and consultants, with a 53% response rate. Based on this test, various changes in the items were made to construct the final version of the 'Corporate Strategy Profiler'.

**Dependent variables: beliefs on corporate alignment and corporate control**

In order to assess and increase reliability of the test, factor analysis was done on the belief scores on corporate-level strategy of the 350 managers in the sample, to eliminate internal variance of the scores before explaining the variance caused by the independent variables (Hair et al, 2006). Principal Component Analysis (factor loadings >0,4; eigenvalues >1) meant the disposal of various items, but also a better insight into the scores. Further data reduction in scale analysis, analyzing Crombach's alpha as measure for reliability, also caused the elimination of a number of items. Based on this scale analysis, several items were eliminated, leaving 31 items to measure beliefs on corporate alignment and corporate control (table 1). Generally, the minimum Cronbach's alpha set for these types of exploratory questionnaires is 0.6 (Hair et al., 2006), which guideline is met by the assessment used.

**Table 1: Factors and number of items in Corporate Strategy Profiler**

Corporate Alignment			Corporate Control		
	Factor	Nr of items		Factor	Nr of items
<b>Synergy</b> Cr. $\alpha$ = 0,62	Internal synergies	4	<b>Authority</b> Cr. $\alpha$ = 0,61	Power concentration	2
	Relatedness in acquisitions	3		Institutional control	3
<b>Independence</b> Cr. $\alpha$ = 0,79	Advantages of autonomy	6		Top-down management	3
	Negative synergies	3	<b>Self-organization</b> Cr. $\alpha$ = 0,65	Business unit freedom	5
		16		Organizational involvement of business units	2
					15

In order to arrive at a single score for corporate alignment and corporate control, correlations were measured between the four constructs first (table 1). *Synergy* and *independence* were negatively correlated (-0.29,  $p < 0,01$ ), meaning that when a manager thinks about corporate alignment and favors synergy, he will disfavor independence, or the other way around, favoring independence between businesses and disfavoring synergies in the corporation. This was also the case with *authority* and *self-organization* (-0.44,  $p < 0,01$ ). These correlations gave ground to combine scores on synergy and independence into beliefs on corporate alignment, while authority and self-organization were combined into corporate control. To do so, the scores of independence were inverted to arrive at their score on a 10-point *corporate alignment* scale. In other words, ‘totally agree’ with a synergy-statement would be a ‘5’ on the alignment-scale, while ‘totally agree’ with an independence-statement would become a ‘1’ on the alignment scale. The same conversion was conducted for scores on self-organization in *corporate control*. Table 2 also shows the expected correlation between the two issues alignment and management. Even though correlation is high, the issues still remained separated in order to conduct further analysis. Scores are distributed normally, while spread as indicated by the standard deviations reveals that cognitive diversity on corporate-level strategy exists among managers.

**Table 2 Relations between dependent variables**

	Mean	SD	<i>Synergy</i>	<i>Independence</i>	<i>Authority</i>	<i>Self-organization</i>	<i>Corporate Alignment</i>
Synergy	3,6	0,53					
Independence	2,5	0,63	-0,286 **				
Authority	3,4	0,53	0,394 **	-0,316 **			
Selforganization	2,9	0,58	-0,200 **	0,652 **	-0,443 **		
Corp. Alignment	6,8	0,94	0,761 **	-0,837 **	0,434 **	-0,550 **	
Corp. Control	6,5	0,95	0,343 **	-0,580 **	0,829 **	-0,866 **	0,583 **

### Independent variables

Hypotheses focus on three independent variables as explanation for cognitive diversity: *functional area*, *corporate position* and *managerial level*. With functional area, spread is relatively ensured: 102 participants were general managers, 21 were finance managers, 80 were marketing or sales managers, while 35 were operations or R&D managers. In the total data set, the distribution of headquarter managers (93) vs. managers at the divisions (257) is about 1:3, which seems representative for the organizations in the research but also in general. Furthermore, the sample shows a variety on four managerial levels: 5 Board members or division heads, 57 business-unit or country directors, 203 department managers and 85 functional managers. Managerial level was measured as the number of hierarchical levels onto the corporate Board above the participant’s level.

The use of other independent variables in this research is grounded in three different logics. First, in order to know whether positional variables do matter for corporate-level strategy beliefs, it should control for other variables that have been shown to have a relationship. Second, further aim of the research is to test the premises of upper-echelons theory, and therefore the explanatory value of demographic and background variables

mentioned by Hambrick and Mason (1984) and others should be compared to the explanatory value of positional variables. Third, research into antecedents of executive beliefs using such a rich set of individual characteristics has not been done before.

Hitt and Tyler (1991) found that *age* influenced the evaluation of acquisition candidates, whereas Chattopadhyay et al. (1999) found disagreement on several belief dimensions between different generations. Schneider and DeMeyer (1991) found *national differences* in the evaluation of strategic issues, as well as Calori et al (1992), who found differences in the way British and French managers viewed their industries, Markoczy (1997) and Meyer (2007) also found significant relationships between national background and strategy beliefs. Further, *education* and *educational level* has been shown to be an attribute (Wiersema & Bantel, 1992). Also the organization is an important cognitive community (Porac and Thomas, 2002). An abundance of researchers have demonstrated collective thought in organizations (for a review see also Walsh, 1995), either explaining the phenomenon by showing the significance of organizational memory (Levitt and March, 1988; Walsh and Ungson, 1991) or by using the argument of social interaction (Daft and Weick, 1984; Weick and Roberts, 1993).

Hambrick and Mason (1984) also proposed individual backgrounds in the form of functional experience as substitutes for beliefs. Research results with regard to tenure, work and functional experience are fairly consistent. Individual managers that have more experience on any of the three levels generally have different beliefs than less experienced managers (Ellis and Child, 1973, Walker, 1985; Hambrick et al., 1996). For instance, an individual's work experience has been shown to result in particular knowledge structures (Walker, 1985; Walsh, 1995). Hambrick et al. (1996) found that TMT's with long organizational tenure showed more risk aversion and made smaller competitive moves than shorter tenured teams.

**Table 3 Independent variables: definition and measurement**

Independent variable	Definition	Measurement
<b>Functional area</b>	Current function	General mgt & strategy, Finance, Marketing & sales, Logistics & operations, R&D, General Staff, Other
<b>Managerial level</b>	Board member, SBU / country head, department manager, functional manager	1 to 4
<b>Corporate position</b>	Headquarter position or business position	0 or 1
<b>Gender</b>	Male or female	0 or 1
<b>Age</b>	Date of birth	1940 - 1949, 1950 - 1959, 1960 - 1969, 1970 - 1981
<b>Nationality</b>	Country of origin	Netherlands, Belgium, Rest of NW-Europe, SW Europe, US/Canada, other (AUS, NZ, Asia, Middle-east)
<b>Organization</b>	Employer at corporate level	Org 1 to 4
<b>Educational level</b>	Highest educational level, e.g. high school, bachelor degree, master degree, PhD	1 to 4
<b>Work experience</b>	Years since start of first full-time job	<1, 1-3, 4-9, 10-19, 20-29, 30-39, >40
<b>Management experience</b>	Years since start of first management position	<1, 1-3, 4-9, 10-19, 20-29, 30-39, >40
<b>Functional experience</b>	Years since start in current functional area	<1, 1-3, 4-9, 10-19, 20-29, 30-39, >40
<b>Organizational tenure</b>	Years since start in current organization	<1, 1-3, 4-9, 10-19, 20-29, 30-39
<b>Divisional experience</b>	Years since start in current division	<1, 1-3, 4-9, 10-19, 20-29, 30-39
<b>Educational background</b>	Study area	Economics, Business, Engineering, Law, Other
<b>Most experienced functional area</b>	Functional area in which most experience	General mgt & strategy, Finance, Marketing & sales, Logistics & operations, R&D, General Staff, Other

Of the participants, 46 are female (13%) and 304 are male (87%). Age is normally distributed from 25 to 65, with a mean of 40-50 years old. Managers in the sample are diverse in nationality, with a focus on the Benelux: 148 were from the Netherlands, 64 from Belgium, 26 were from Southwest Europe and 26 from North America, and others the rest of the world (Australia, Asia, Africa, Middle East; n=86). Being managers, most study backgrounds in the sample are Economics (114) and Business Studies (81). Also largely represented are Engineering (48) and Law (49). Other studies (58) include Natural Science, Computer Science, Mathematics and Social Science. In this research, five different types of experience were included: work experience, management experience, organizational tenure, division experience and functional experience. Collinearity diagnostics revealed no collinearity between the independent variables, except between work experience and age. Logically, of course, older managers have more work experience, so age can be taken as a proxy for the latter. Work experience was so strongly related to age (0,86,  $p < 0.01$ ) that only the latter variable was kept.

## RESULTS

Table 4 shows the relations between the dependent variables ‘corporate alignment’ and ‘corporate control’ and the independent variables described above.

**Table 4 Correlation and ANOVA tests**

Correlations	F-values (ANOVA)	
	Alignment	Management
Managerial level	0,06	-0,12 **
Age	0,00	-0,02
Educational level	-0,03	-0,01
Management experience	-0,06	-0,02
Functional experience	-0,04	-0,09
Organizational experience	-0,03	0,02
Division experience	-0,01	-0,07

  

	F-values (ANOVA)	
	Alignment	Management
Functional area	0,72	1,31
Corporate position	2,14	6,23 **
Gender	0,44	0,3
Country of origin	3,51 ***	2,81 **
Study area	0,59	1,26
Organization	5,77 ***	4,15 ***

\*\*  $p < 0,05$ ; \*\*\*  $p < 0,01$

In order to further test the hypotheses, OLS regression was used in order to show whether each of the antecedent groups added to explaining variance in corporate-level strategy beliefs. Table 5 and 6 show the results from multivariate analysis.

The following regression model was estimated: ( $CSB = Corporate-level Strategy Belief$ )

$$CSB = \alpha + \beta_1 Gender + \beta_2 Age + \beta_3^{1-5} Origin^{1-5} + \beta_4 EducLevel + \beta_5^{1-4} Org^{1-4} + \beta_6 MgtExp + \beta_7 FuncExp + \beta_8 OrgExp + \beta_9 DivExp + \beta_{10}^{1-4} StudyArea^{1-4} + \beta_{11}^{1-6} Function^{1-6} + \beta_{12} MgrLev + \beta_{13} CorpPos + \varepsilon_i$$

**Table 5 Individual characteristics regressed on corporate alignment belief**

		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
		Demography	1+ Organization	2+ Experience	3+ Study Area	4+ Function	5+Mgr level & Corp.position
<b>Gender</b>		0,053	0,042	0,460	0,039	0,044	0,014
<b>Age</b>		0,032	0,053	0,241	0,073	0,067	0,070
<b>Origin</b>	Netherlands	0,160	0,193 *	0,106	0,157	0,190	0,172
	Belgium	0,213 **	0,212 **	0,027 **	0,201 **	0,228 **	0,206 **
	Rest of North-West Europe	0,266 ***	0,215 **	0,029 **	0,230 **	0,248 **	0,218 **
	South-West Europe	0,207 ***	0,139 *	0,075 *	0,142 *	0,163 **	0,157 **
	US/Canada	0,015	0,014	0,812	0,007	0,021	0,008
<b>Education Level</b>		-0,012	0,004	0,951	-0,012	-0,008	-0,005
<b>Organization</b>	Org 2		-0,027	0,605	-0,021	-0,027	0,007
	Org 3		0,215 ***	0,000 ***	0,239 ***	0,240 ***	0,301 ***
	Org 4		-0,118 **	0,030 **	-0,102 *	-0,110 **	-0,109 **
	Org 5		0,008	0,947	0,046	0,073	0,128
<b>Functional Experience</b>				0,389	-0,053	-0,042	-0,047
<b>Study</b>	Economics				0,156 **	0,155 *	0,165 **
	Business				0,111	0,102	0,121
	Engineering				-0,033	-0,033	-0,038
	Law				0,104	0,104	0,130 *
<b>Function</b>	General Mgt & Strategy					0,052	0,096
	Finance					0,048	0,050
	General Staff					0,017	-0,051
	Marketing & Sales					-0,048	0,002
	Logistics & Operations					0,033	0,010
	Research & Development					-0,052	-0,063
<b>Managerial Level</b>							-0,022
<b>Corporate Position</b>							-0,194 ***
<b>Model F</b>		2,326 **	3,275 ***	3,078 ***	2,861 ***	2,293 ***	2,484 ***
<b>R<sup>2</sup></b>		0,052	0,104	0,106	0,128	0,139	0,161
<b>Adjusted R<sup>2</sup></b>		0,029	0,073	0,072	0,083	0,079	0,096

\* p<0,1; \*\* p<0,05; \*\*\* p<0,01

**Table 6 Individual characteristics regressed on corporate control belief**

		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
		Demography	1+ Organization	2+ Experience	3+ Study Area	4+ Function	5+Mgr level & Corp.position
<b>Gender</b>		0,045	0,042	0,039	0,047	0,048	0,022
<b>Age</b>		0,014	-0,019	0,015	0,030	0,057	0,050
<b>Origin</b>	Netherlands	-0,076	-0,025	-0,039	-0,047	-0,053	-0,061
	Belgium	0,023	0,015	0,019	0,019	0,017	0,008
	Rest of North-West Europe	0,084	0,100	0,099	0,117	0,108	0,083
	South-West Europe	-0,002	0,017	0,019	0,013	0,015	0,010
	US/Canada	-0,154 **	-0,150 **	-0,142 *	-0,151 **	-0,161 **	-0,161 **
<b>Education Level</b>		0,016	0,006	0,004	0,001	0,020	0,013
<b>Organization</b>	Org 2		-0,053	-0,056	-0,058	-0,065	-0,059
	Org 3		-0,014	-0,016	-0,006	-0,023	0,071
	Org 4		-0,194 ***	-0,194 ***	-0,178 ***	-0,193 ***	-0,186 ***
	Org 5		-0,132 **	-0,140 **	-0,118 *	-0,117 *	-0,023
<b>Functional Experience</b>				-0,104 *	-0,111 *	-0,113 *	-0,115 *
<b>Study</b>	Economics				0,129	0,138 *	0,140 *
	Business				0,145 **	0,147 **	0,168 **
	Engineering				0,018	0,026	0,017
	Law				0,032	0,026	0,050
<b>Function</b>	General Mgt & Strategy					-0,093	-0,078
	Finance					-0,046	-0,040
	Marketing & Sales					-0,067	-0,011
	Logistics, Operations, Procurement					0,049	0,037
	Research & Development					-0,114 **	-0,124 **
	General Staff					0,032	-0,020
<b>Managerial Level</b>							-0,146 **
<b>Corporate Position</b>							-0,119 ***
<b>Model F</b>		1, 838 *	2,691 ***	2,759 ***	2,477 ***	2,261 ***	2,461 ***
<b>R<sup>2</sup></b>		0,041	0,081	0,096	0,113	0,138	0,160
<b>Adjusted R<sup>2</sup></b>		0,019	0,055	0,061	0,067	0,077	0,095

\* p<0,1; \*\* p<0,05; \*\*\* p<0,01

In terms of model fit, the final regression models with all independent variables included are both significant ( $F = 2.48$  and  $2.46$ ,  $p < 0.01$ ). Looking at each regression step,  $R^2$  and adjusted  $R^2$  increased with every step, sometimes slightly, but mostly the increase was relatively high: for instance, when organization was added to demographic variables (model 2) adjusted  $R^2$  changed considerably. From model 4 to model 6, in which with each model a positional variable was added, adjusted  $R^2$  increased with 35% and 55% for corporate alignment and management respectively. In the final model, model 6, 16% of variance for both issues can be explained. With the regression results, the relationship between individual positional variables (functional area, corporate position and managerial level) is assessed.

Hypotheses 1a stated that managers' beliefs on corporate alignment are related to their functional area. From the bivariate analysis, this cannot be supported, as no significant relation is found. Therefore, hypothesis 1b is not supported either. However, a weak relationship is revealed in the regression analysis between functional area, in particular R&D, and corporate control ( $\beta_{11} = -0.124$ ,  $p < 0.05$ ). This partially supports hypothesis 2b, in which, among other functions, R&D managers were expected to score low on corporate control, but this is not enough ground to support hypothesis 2a. Overall, hypothesis 1 and 2 are not supported, since only one significant relationship exists between a functional area of a manager and his beliefs on corporate-level strategy.

With regard to corporate position, a highly significant relationship is affirmed with managers' belief on corporate alignment ( $\beta_{13} = -0.194$ ,  $p < 0.01$ ). Hypotheses 3b proposed that HQ managers would 'score' higher than business managers. As corporate position was measured as a binary variable, where HQ managers were scored as '0' and business managers '1', the negative regression-coefficient supports this hypothesis. Overall, hypothesis 3 is supported. A relationship between corporate positions and beliefs on corporate control, as proposes in Hypothesis 4a is also confirmed ( $\beta_{13} = -0.119$ ,  $p < 0.01$ ). Furthermore, as the highest managerial level (board member) was given a '1' score, and the lowest level (functional manager) a '4', conclusion is that the lower the level of a manager, the less he believes in corporate alignment. Hypothesis 4b is also supported.

Relationships between managerial level and corporate alignment or corporate control are diametrical. Hypothesis 5 is not supported, as no significant relation between managerial level and corporate alignment was revealed. Yet beliefs on corporate control do relate to managerial level, with a negative coefficient ( $\beta_{12} = -0.146$ ,  $p < 0.05$ ). In other words, the higher the managerial level, the more corporate control is favored. This supports Hypotheses 6a and 6b.

However, not only positional variables explain the variance in corporate-level strategy beliefs. The largest influence on variance is from the organization itself. Furthermore, study area showed significant relationships, just as country of origin. These relationships are congruent, always relating both to corporate alignment and corporate control. Age showed no relationship with any of the beliefs. Regression analysis was also done with work experience, but this also did not reveal any significant relationships with corporate-level strategy beliefs. Simultaneously, several separate regression models were estimated using the other five experience types. Only

functional experience revealed a significant relationship ( $\beta_7 = -0.115$ ,  $p < 0.05$ ), in this case with corporate control. Only this variable was included in the final regression models.

## DISCUSSION AND IMPLICATIONS

In a recent review and update on upper echelons theory, Hambrick (2007) emphasizes the importance of measuring the individual characteristics of managers to predict their actions through the relation with their cognitive biases. He also emphasizes the need for enhancement of UE-theory, in particular with regard to other variables than demographic characteristics as ‘surrogates’ for managerial beliefs:

*“If we want to understand why organizations do the things they do, we must consider the biases and dispositions of their powerful actors ... Researchers can reliably use information on executives’ functional backgrounds, industry and firm tenures, educational credentials, and affiliations to develop predictions of strategic actions. Granted, the use of [these] demographic indicators leaves us at a loss to the real psychological and social processes that are driving executive behavior.”*

The final regression models’ levels of variance explained (16%) are very much comparable to or higher than other research into determinants of executive beliefs. For example, Chattopadhyay et al (1999), predicted between 6% and 13% of the variance in managerial beliefs with the influence of functional background and peer’s beliefs, while Markoczy’s regression model (1997) on determinants of beliefs on strategic change, such as nationality, managerial level and functional background had an R-squared between 0.02 and 0.22. Results from this study imply at least three important observations.

First, results show that demographic variables, in particular country of origin and study background, are yet important variables of managerial beliefs. This signifies the relevance that upper echelons theory still has in its prediction of managerial outcomes. However, the second notable observation from this study is that the notion that belief comes with experience, as implied by several researchers, does not come to the fore – with the exception of functional experience. Furthermore, some typical demographic characteristics as suggested by UE-theory (age and educational level) are not related to corporate-level strategy beliefs. This may show the value of using a comprehensive set of explanatory variables in a large and heterogeneous data set, despite some limitations on the amount of variables compared to sample size (degrees of freedom). The third observation, and perhaps the most important contribution of this study, is that it shows organizational positions of managers, in particular their hierarchical levels and corporate positions, as key antecedents of their beliefs on corporate-level strategy. This implies that both agency theory and social influence theory, in which a relationship between these variables is rooted, provide a valuable addition to upper echelon theory in its attempt to explain managerial outcomes.

Managers have different goals and interests given their position in the organization, while their belief is enforced by their peers around them. Of the positional characteristics that are the focal point of this study,

corporate position is the most important explanatory variable. In other words, HQ managers lean more towards capturing synergies by aligning the business units as much as possible, while business managers will rather want to stay independent. Simultaneously, managers at the corporate headquarters favour strong corporate control, while business managers show an opposite view. The relationship between the corporate centre and country subsidiaries is an important topic in the international business literature (e.g. Birkinshaw and Hood, 1998; Nohria and Ghoshal, 1994). This study shows that not only in international strategy, but also in corporate-level strategy, which deals with the organization as a set of businesses in stead of country subsidiaries, the 'us vs. them' mentality can be an important barrier in the strategy process. As the variable 'corporate position' has not been included in other research into strategy beliefs, it may serve as a relevant academic contribution.

When dealing with managers across hierarchical levels, corporate-level strategy is a balancing act of different needs and interests as well. When thinking about the way the corporation should be managed (corporate control), higher managerial levels believe more in strong leadership by corporate headquarters, including guidelines and centralization of certain activities. The lower a manager is sitting on the corporate ladder, the more he believes in decision-making autonomy. However, this level is not related to differences in beliefs on corporate alignment. This signifies the reasoning behind separating the two issues in this study and future research, as well as in practice. The high mean for *synergy* and low mean for *independence* suggest that managers across levels agree that corporate alignment by capturing synergies is important, but they disagree on the way it should be managed. A corporate-level strategy focusing on an important role of HQ and strict corporate processes will meet more opposition the further it is pushed down into the organization.

This is an important consideration when formulating and communicating strategy, as lower level managers have been shown to influence corporate-level strategy formulation (Watson and Wooldridge, 2005). Furthermore, it has implications for UE-theory research to the extent that the 'dominant coalition', as proposed by Hambrick and Mason (1984), may be larger than the top management team (TMT). Conclusion from this research is that organizations may not have one 'dominant logic', as Prahalad and Bettis (1986) suggest, but several. If one wants to know "why organizations act as they do" (Hambrick and Mason, 1984), in future investigations of managerial processes, the depth and relevance of upper echelon theory can be increased even more by the inclusion of more hierarchical levels than the TMT only.

Another important individual characteristic related to a manager's position, functional area, does not affect his beliefs on corporate-level strategy. The research presented in this paper suggests that only when a manager is active in R&D will he have significantly different beliefs than other functional areas. Asakawa (2001) signals increasing tension between corporate headquarters and R&D departments because of 'perception gaps': information is usually shared ineffectively with R&D departments. The argument of using more than one managerial level can also help to explain the surprising lack of a relation of corporate-level strategy beliefs with other functional areas. The results from this study are in contrast to studies by Walsh (1988), researching middle

managers, Houghton and Neubaum (1994) researching junior managers, and Beyer et al. (1997), focusing on MBA students. In comparison, participants in this study not only come from different levels, but these levels are generally more senior as well. Chattopadhyay et al (1999), who did not find much relation between cognitive diversity and functional position either, argue that more senior-level managers see more connections between functional areas than junior managers do (Kirschenbaum, 1992). An interesting avenue for further research could be to focus on the moderating factor of diversity in managerial levels on the relationship between functional area and managerial cognition in a more homogenous group of managers.

The corporation for which a manager works also shows a large relationship with his corporate-level strategy beliefs. This could be due to the nature of the questions, which was chosen to increase comparability between items in order to enforce reliability, in which each statement's stem is *'the corporation I work for...'*. As such, the content of a firm's corporate-level strategy can be important, as different strategies can invoke different perspectives. This relationship strengthens other research conclusions on organizations as 'cognitive communities' (Daft and Weick, 1984; Walsh and Ungson, 1991). Following Porac and Thomas (2002), "organizations [are] interpretation systems in which retention mechanisms store collective strategic beliefs". Yet, as only five organizations were part of the data set, to really compare these results to previous research it should be extended to more organizations.

Experience is often seen as an important source of executive beliefs (Schwenk, 1984; Fiske and Taylor, 1984) and some forms of experience have been shown to impact belief structures (Lord and Foti, 1986; Bantel and Jackson, 1989; Ireland et al, 1997). As such, the conclusion that most forms of experience do not matter at all for manager's beliefs on corporate-level strategy is a surprising outcome from this research. Experience in the organization, as a worker, in a division or as a manager, does not relate to corporate-level strategy beliefs. The only experience variable that showed a significant relationship was functional experience, or the amount of years spend in a particular function, but this relationship did not show a very strong relation. These results also logically support the initial hypotheses of this study, in that when dealing with corporate-level strategy the position of a manager is important. For instance, higher ranked managers have more experience in a function, in a division or as a manager than lower ranked managers (also shown by further bivariate analysis). However, these experiences are not important when they think about corporate-level strategy: where one sits, is where one stands.

Porac and Thomas (2002) and Jensen and Zajac (2004) refer to the influence of the context of managers and firms on their belief systems. In terms of further research other than mentioned above, whereas this study examines the agency and social context further, other context variables could also be taken into account to increase the predictability of managerial believes. For instance, as the national environment of a firm can significantly affect managerial outcomes (Carpenter et al., 2004), the region in which a manager operates can simultaneously affect his beliefs. The industry context can also influence managerial thinking: industries have

been frequently shown to expose shared beliefs, codes and values in 'industry recipes' (Spender, 1989; Huff, 1982). Furthermore, besides its managers other stakeholders can also be important actors in corporate-level strategy. For instance, Jensen and Zajac (2004) research the actions of non-executive board members, but also other important stakeholders can have different beliefs on strategy than the dominant coalition in an organization. Another interesting route for research into the explanatory variables of strategic beliefs is to take the psychological traits of managers into account, as also suggested by Hambrick (2007) as mentioned above. For instance, Galavan (2005) compares 'NEO-FFI' personality types of managers, such as neuroticism and extraversion, to perceptions of managerial discretion and shows significant results.

## **CONCLUSION**

The upper-echelon perspective proposes that individual characteristics can be surrogates for managerial beliefs. The study described in this paper has examined the beliefs that managers have on corporate-level strategy. It has shown that managers show different beliefs when dealing with corporate-level strategy across an organization. A more complete understanding of cognitive diversity is provided by adopting a complete set of possible explanations, using demographic, background and positional variables. The diversity in corporate-level strategy beliefs can be due to their different needs and interests across managerial levels and their station either at corporate headquarters or one of the businesses, while their beliefs are enforced by the social influence of other managers in similar organizational positions. In that sense, this study has shown the relevance of both agency theory and social influence theory for the upper-echelon perspective. As this study is among the first to map the beliefs on corporate-level strategy of managers using a comprehensive set of issues, it can serve as a contribution to corporate-level strategy theory in general. With regard to managerial cognition research, it provides more insight into the important issue of 'why and where do managers think differently'. Including positional attributes as potential explanatory variables in future research into managerial beliefs would add to the explanatory value of these studies.

Corporate-level strategy specifically deals with managing a set of businesses and aligning business units with headquarters. For corporations, the reality that beliefs on corporate-level strategy differ across manager's positions in the organization means that defining a corporate-level strategy cannot simply be a task for the top management team or corporate headquarters alone. For instance, even though this tension is a barrier to the strategy process to overcome, including more levels of management or more business managers in general can help to overcome strategic inertia. Furthermore, this can increase the acceptance of a new corporate direction, positively affecting its implementation at a later stage. In conclusion, as managers across an organization are indispensable non-market stakeholders, the results from this study suggest that it is important to take differences in belief systems across positions of managers into account when formulating and implementing corporate-level strategy.

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