



Pergamon

Journal of Management 2004 30(6) 749–778

**JOURNAL OF
MANAGEMENT**

Upper Echelons Research Revisited: Antecedents, Elements, and Consequences of Top Management Team Composition

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Received 15 February 2004; received in revised form 14 June 2004; accepted 16 June 2004

Available online 14 July 2004

This study reviews recent research building on Hambrick and Mason's [Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. Academy of Management Review, 9: 193–206] upper echelons (UE) perspective with the aim of identifying challenges and opportunities for future UE-based organizations research. Our review highlights a number of central facets of the UE perspective: It is at once a theoretical framework predicting that organizations will be a reflection of their top management teams and a methodology that relies on executive demography as a measurement proxy for underlying individual and group cognitions and behaviors. In proposing new research directions, we challenge organizations researchers to (1) reconsider the universality of the top management team (TMT) construct, (2) carefully explore the practical and theoretical meaning of TMT demographic characteristics vis-à-vis the deeper constructs they are presumed to proxy, (3) integrate other determinants of managerial cognition and behavior into UE theorizing, and (4) revisit the roles of causality and intertemporal dynamics among the antecedents, consequences, and composition of top management teams.

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The last several decades have witnessed a surge of interest in top executives. For organizations researchers, a central catalyst was the 1984 publication of Hambrick and Mason's upper echelons perspective (hereafter, we refer to Hambrick & Mason, 1984 as "H&M"). In that work the authors articulated a model in which top executives play a pivotal role in shaping major organizational outcomes. The study's citation in over 500 subsequent refereed journal articles reflects its formidable impact and far-reaching scope. For that matter, H&M's core ideas have extended beyond the management discipline to also shape research in psychology (e.g., Peterson, Smith, Martorana & Owens, 2003) and mainstream economics (e.g., Bertrand & Schoar, 2003). With little indication that the scale or pace of the work's diffusion is abating, the 20-year anniversary of Hambrick and Mason's (1984) upper echelons (UE) perspective presents an auspicious occasion for us to review the impact, controversies, and challenges their theoretical article and framework created, and to explore some opportunities for future investigation.

The original UE model is recreated in Figure 1. At its core, the UE perspective centers on executive cognitions, values, and perceptions and their influence on the process of strategic choice and resultant performance outcomes. Because executive cognitions, values, and perceptions are difficult to measure, the UE perspective invokes prior research on demography to suggest that managerial characteristics are reasonable proxies for underlying differences in cognitions, values, and perceptions. Reviewing briefly, the left-hand side of H&M's original model shows the organization's internal and external situation. Upper echelon characteristics such as age, functional background, and educational experiences are next taken as observable proxies for the psychological constructs that shape the team's interpretation of the internal and external situation and facilitate formulation of appropriate strategic alternatives. The prominent role of psychological constructs, such as values and perceptions, are attributed to executives' bounded rationality.

In other words, faced with such common decision challenges as information overload, ambiguous cues, and competing goals and objectives, executives' perceptions of stimuli are filtered and interpreted through cognitive bases and values. Because these psychological constructs are unobservable, the theory posits that observable managerial characteristics are efficient proxies that provide reliable indicators of the unobservable psychological constructs. What's more, managers are expected to economize on these efforts by working collectively as a team. In turn, H&M propose that demography's impact on cognitive processes will subsequently be revealed in strategic outcomes. Thus, the third box reports a range of strategic variables, from innovation to response time, that are expected to reflect executive team characteristics. Finally, H&M's model predicts that resultant organizational performance, gauged along a number of dimensions from profitability to the firm's basic survival, will ultimately be impacted.

The original UE perspective is characterized by a number of important features. First, as outlined by H&M, the underlying UE framework is a linear one—the situation is enacted by the TMT, enactment leads to strategic choices, and those choices affect performance. The linkages connecting the situation directly to UE characteristics and strategic choices are never explicitly addressed, though selected propositions include contingency predictions that implicitly incorporate these two latter arrows.

Second, the study gave rise to both a theoretical perspective and a methodology. Again, the three central tenets of the UE perspective are that (1) strategic choices made in firms are

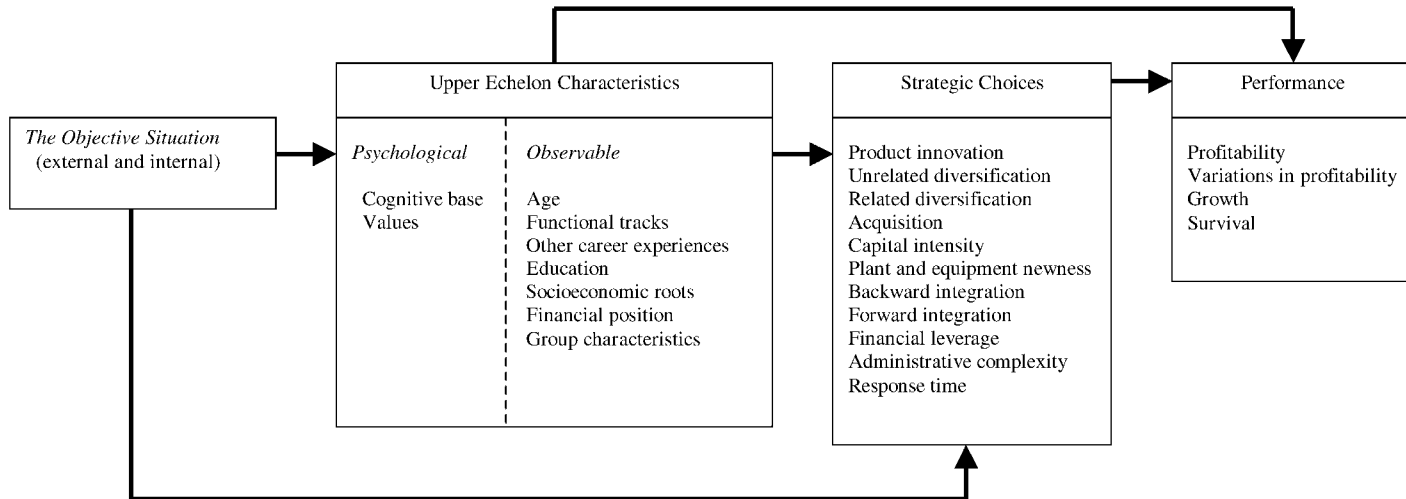


Figure 1. Hambrick and Mason's (1984) upper echelons perspective of organizations.

reflections of the values and cognitive bases of powerful actors, (2) the values and cognitive bases of such actors are a function of their observable characteristics like education or work experience, and as a result (3) significant organizational outcomes will be associated with the observable characteristics of those actors. These three central tenets frame the UE proposition that an organization and its performance will be a reflection of its top managers and provide a basis for studying underlying team dynamics by demographic proxy.

Finally, the stated spirit of H&M was to serve as an anchor for continued theory building. Thus, the TMT characteristics, strategic choices, performance outcomes, and later propositions articulated were not meant to be exhaustive. Rather, as the authors stated, “They are illustrative and appear to be some of the most supportable and interesting” (1984: 168). In that vein, new directions and extensions were expected to emerge.

Despite the widespread impact of H&M’s research, it is surprising that the only comprehensive reviews of the UE literature are Jackson (1992) and a chapter on the group bases of action in Finkelstein and Hambrick (1996). A consequence of the proliferation of UE studies, combined with the lack of methodological review articles, has resulted in a large body of literature that lacks integration. Moreover, some scholars have suggested that empirical results have been rather ambiguous, leading to conclusions that more questions remain or have been created by UE research than have been answered (Priem, Lyon & Dess, 1999; West & Schwenk, 1996).

It is against this backdrop that we undertake the current review, synthesis, and discussion of contemporary work. Our aim is to identify the major inroads that have been made not only in testing, but also in building upon the original UE framework, and to identify fruitful avenues for continued inquiry. The hope is that this effort will, to paraphrase Ketchen (2002, p. 586), help to close the gap between what “we know” and what “we need to know” about the upper echelon and the role of the UE perspective in organizations theory and research.

Scope of the Review

The proliferation of executive leadership studies and research that use managerial demographic characteristics made it necessary to develop specific criteria to limit the scope of our review. To begin, in cases where a relatively large number of studies share a common theme we have included those that are indicative of the overall thrust and its general conclusions. Beyond this, four additional criteria guided the scope of our review:

First, we focus on empirical articles that, through citation or invocation of underlying tenets, have a fairly clear relationship with the upper echelons perspective. This constraint helped us to keep the review to a manageable set of studies that are centrally focused on upper echelons, a focus that would not have been possible if we expanded the criteria to include all studies that employ managerial demographic characteristics or address the topic of executive leadership.

Second, we directed our attention to studies concerned with top executives, not lower-level managers, the broader workforce, or other individuals not holding a senior management office (e.g., outside board members, consultants). This decision rule does not imply that the perspective is not valuable in other domains; it is simply a basis for again making the review somewhat manageable. Hambrick and Mason (196–197) were careful to specify the

TMT as their unit of analysis, thus advocating a focus on teams and officers holding top management positions. We strived to remain true to their focus in our review. That said, selected studies of CEO leadership are called upon in instances where they buttress what we have learned from studies focusing on the broader TMT or, alternatively, where they directly challenge the arguments and conclusions presented in H&M.

Third, since both Jackson (1992) and Finkelstein and Hambrick (1996) do a comprehensive job of cataloging most prior UE studies up to the time of their publication, we simply note selected earlier works that are indicative of an idea or concept and then direct our attention to studies published after 1995.

Finally, the breadth of influence of the UE perspective spans not only the globe but diverse academic fields as well. Yet not all of the journals across the globe and across academic disciplines have the same currency for management scholars. Thus we attempted to exhaustively review articles published in the major management outlets (*Administrative Science Quarterly*, *Academy of Management Journal*, *Journal of International Business Studies*, *Journal of Management*, *Management Science*, *Organization Science*, and *Strategic Management Journal*) and selectively review studies from other sources. A representative cross-section of these studies is summarized in Table 1.

Who Constitutes the Top Management Team?

In light of the UE model's dual role as both a theoretical framework and a research methodology, the definition of the TMT takes center stage. Conceptually, in most studies the definition is expected to generalize to a theoretical construct that is based on Cyert and March's (1963) "dominant coalition." Authors who invoke the UE perspective typically argue that this group of senior executives should be of interest because the group and its members provide an interface between the firm and its environment, and are relatively powerful, and therefore their choices and actions are likely to have an impact on the organization (Hambrick, Finkelstein & Mooney, *in press*). The top team construct and team membership are often identified using the measurement heuristic of senior hierarchical level, as indicated by title or position, since individuals at higher levels are expected to have greater influence on decisions that are strategic in nature. Thus, for most research in this vein the logic tends to flow such that, because these individuals are at a strategic level in the firm, they will likely have influence on the particular strategic outcome of interest to the UE researcher.

A few studies have followed an opposing tack where the conceptual definition of the TMT is based on the particular outcome in question, although perhaps because primary data are needed, such cases are somewhat rare (cf. Amason, 1996; Bantel & Jackson, 1989; Hoffman & Hegarty, 1993; Knight et al., 1999; Smith et al., 1994). This latter approach follows Pettigrew's (1992: 178) assertion that "rather than assuming titles and positions as indicators of involvement, the first task . . . is to identify which players are involved and why" and is echoed by Jackson's (1992) call to examine strategic issue processing groups. Thus, to get at the team construct a key informant like the CEO is asked to identify the contingent of TMT members most likely to be involved with the decision.

In terms of application, the empirical definition of the top management team varies considerably more than does its conceptual definition (cf. Table 1). Early UE work, again

Table 1
Cross-section of upper echelon studies: 1996 through 2003

Author(s) (year)	TMT definition	Data source	Key constructs and outcomes	TMT size, mean (<i>SD</i>)
Amason (1996)	Top managers involved in strategic decision making identified by the CEO	CEO interview	Relationships among conflict (cognitive, affective), strategic decisions (decision quality, consensus, acceptance), and organizational performance (implied relationship)	3.45 (1.2)
Hambrick et al. (1996)	All executives above vice president level	Trade publications	Top management teams that were diverse, in terms of functional backgrounds, education, and company tenure, exhibited a relatively great propensity for action, and both their actions and responses were of substantial magnitude. Heterogeneous teams, by contrast, were slower in their actions and responses and less likely than homogeneous teams to respond to competitors' initiatives	8.6 (3.4)
Tushman and Rosenkopf (1996)	CEO and direct reports	Trade publications	Explores the performance consequences of executive succession, executive team change, and strategic reorientation in the American cement industry from 1918 to 1986. Both change in CEO and change in TMT composition have positive effects on change in performance. Details the effects of both entries to and exits from the executive team	5.3 (n.a.)
West and Anderson (1996)	Top managers involved in strategic decision making identified by the CEO	CEO/GM questionnaire	Team heterogeneity (size, tenure, and individual member innovativeness) and organizational characteristics (resources and size) lead to team innovativeness	9.0 (3.7)
West and Schwenk (1996)	Top managers involved in strategic decision making identified by the CEO	CEO/GM questionnaire	Strategic consensus and TMT homogeneity not related to firm performance	n.a. (n.a.)
Amason and Sapienza (1997)	Top managers involved in strategic decision making identified by the CEO	CEO interview	Team characteristics (size, openness, mutuality) lead to conflict (cognitive and affective)	3.4 (n.a.)

Boeker (1997a)	CEO and direct reports	Market research firms publications	CEO and TMT characteristics interact with poor firm performance to predict strategic change. Firms with long-tenured CEOs and TMTs, and diversity in team tenure were more likely to change, and this effect was greater under conditions of poor performance	n.a. (n.a.)
Boeker (1997b)	CEO and direct reports	Market research firms publications and company interviews and reports	Migration of executives across firms influences strategic change. In-migration by executives possessing experience in products or markets unfamiliar to the focal firm increases the likelihood that the firm will enter the segment. These effects are stronger when the focal firm has a small TMT and a short-tenured TMT	n.a. (n.a.)
Geletkanycz and Hambrick (1997)	All executives above the level of vice president	D&B's <i>Reference Book of Corporate Managements</i> and S&P's <i>Registry of Corporate Directors and Executives</i>	Network ties of TMT members affect the propensity of firms to exhibit strategic non-conformity. Conformity is increased by trade association ties and very long-tenured teams. Non-conformity is associated with extra industry ties and short-tenured teams. Performance in non-conforming firms is enhanced by inter-industry ties	6.2 (n.a.)
Iaquinto and Fredrickson (1997)	Top managers involved in strategic decision making identified by the CEO	CEO interview	Relationships between team agreement and comprehensiveness of strategic decision process, and from past firm performance to team agreement	4.2 (1.4)
Keck (1997)	Vice president and above	Industry trade journals and directories	Shorter-tenured, heterogeneous teams are found to provide the skills needed to address environmental complexities and will be more productive in turbulent environments. Longer-tenured, homogeneous teams are found to be more productive in stable environments. Firms that are the most successful financially are ones that match their team structures to the environmental context over time	Cement: 5.27 (3.6) omp: 7.8 (4.9)

Table 1 (Continued)

Author(s) (year)	TMT definition	Data source	Key constructs and outcomes	TMT size, mean (SD)
Reuber and Fischer (1997)	All members of the top management team	Survey	Internationally experienced top management teams have a greater propensity to develop foreign strategic partners and to delay less in obtaining foreign sales after start-up, and these behaviors are associated with a higher degree of internationalization	n.a. (n.a.)
Sanders and Carpenter (1998)	Executive vice president and above; sensitivity analysis with all executives identified as officers of the corporation	S&P's <i>Registry of Corporate Directors and Executives</i>	Information-processing demands associated with greater levels of firm internationalization is positively associated with TMT size	6.47 (3.19) 8.3 (11.39)
Amason and Mooney (1999)	Top managers involved in strategic decision making identified by the CEO	CEO interview	Relationship between past performance and conflict (cognitive and affective)	4.9 (1.5)
Knight et al. (1999)	Top managers involved in strategic decision making identified by the CEO	CEO interview	Relationships among team diversity (function, age, education, and tenure), team processes (interpersonal conflict and agreement seeking), and strategic consensus	n.a. (n.a.)
Simons et al. (1999)	Top managers involved in strategic decision making identified by the CEO	CEO interview	Relationships between team diversity (age, tenure, function) and debate, and decision comprehensiveness and firm performance	6.1 (2.8)
Gordon et al. (2000)	All executives list on 10-K filing	10-K	The results find industry turbulence and CEO turnover as precursors to strategic reorientation. Alternatively, the results indicate that top management team turnover is negatively related to strategic reorientation. Heterogeneity was not significantly associated with strategic reorientation	n.a. (n.a.)
Peng and Luo (2000)	n.a. ("top managers")	Survey	Using survey data from China, the authors demonstrate that managers' micro interpersonal ties with top executives at other firms and with government officials help improve macro organizational performance	n.a. (n.a.)

Tihanyi et al. (2000)	Executive vice presidents and above	D&B's <i>Reference Book of Corporate Managements</i>	This study indicates that lower average age, higher average tenure, higher average elite education, higher average international experience, and higher tenure heterogeneity are associated with firm international diversification	13.20 (9.00)
Bergh (2001)	All executives above the level of vice president, plus any officers not so classified who are members of the board of directors	D&B's <i>Reference Book of Corporate Managements</i>	Acquisition performance is a function of both acquired TMT tenure and the tenure of the TMT in acquiring company	n.a. (n.a.)
Carpenter and Fredrickson (2001)	Top two tiers of an organization's management	D&B's <i>Reference Book of Corporate Managements</i>	Relationship between team heterogeneity (international experience, educational, functional and firm tenure) and organizational outcomes (global strategic posture)	6.0 (1.9)
Carpenter et al. (2001)	All executives above the level of vice president	S&P's <i>Registry of Corporate Directors and Executives</i>	CEO and TMT international assignment experience has a positive influence on the performance of U.S. MNCs. The influence of TMT experience is stronger than that of CEO experience and is necessary for CEO effects to be significant	5.48 (2.21)
Geletkanycz and Black (2001)	Top executives	Survey	Studies the determinants of executive commitment to the strategic status quo (CSQ) by examining the effects of functional and educational experience. Use of regression analyses to reveal that experience in traditionally dominant career tracks, including finance, marketing, and general management, is positively related to CSQ	n.a. (n.a.)
Ferrier (2001)	Chairman, vice chairman, CEO, president, CFO, and COO	D&B's <i>Reference Book of Corporate Managements</i>	TMT characteristics affect competitive interaction among firms. The findings suggest that a firm's sequence of competitive actions is influenced by top management team heterogeneity (composite measure)	n.a. (n.a.)

Table 1 (Continued)

Author(s) (year)	TMT definition	Data source	Key constructs and outcomes	TMT size, mean (SD)
Pitcher and Smith (2001)	Chairman/CEO and key division CEOs	Field study	Single firm study investigating the relationship of demographic indicators between actual cognitive diversity and how executive power can confound the relationship between TMT characteristics and organizational outcomes	9 (n.a.)
Carpenter (2002)	Top two tiers of an organization's management; multi-year collection using archival data	D&B's <i>Reference Book of Corporate Managements</i>	Relationship between team heterogeneity (international experience, education, functional and firm tenure) and ROA	6.1 (1.9)
Papadakis and Barwise (2002)	Top managers involved in strategic decision making identified by the CEO	CEO interview	Shows how CEO personality (need for achievement, risk propensity), CEO demographics (tenure, education) and TMT characteristics (education, competitive aggressiveness) affect strategic decision process, but TMTs and CEOs affect different aspects of the process	n.a. (n.a.)
Bertrand and Schoar (2003)	Top five highest paid executives	Execucomp	Econometric study tracking senior-level executives across multiple firms identifies statistically significant fixed-manager effects on both firm investment activities and firm performance	n.a. (n.a.)
Carpenter et al. (2003)	All members of the top management team identified in public filings related to the IPO	S-1 statements	Board and top team member international experience and their relationship to firm internationalization	6.5 (1.92)
Collins and Clark (2003)	Top managers involved in strategic decision making identified by the CEO	Survey	The range and strength of TMT network ties affects the adoption and success (i.e., firm performance effects) of executive HR practices	5.9 (n.a.)
Kor (2003)	All inside top-level executives, including CEO, COO, business unit heads, and vice presidents	S-1 statements and prospectus	Founders' participation in the top management team and managers' past experience in the industry contribute to the competence of the team in seizing new growth opportunities. The positive effect of founders' participation in the management team on the rate of growth weakens as either the shared team-specific experience or industry-specific managerial experience in the team increases	6.21 (2.06)

using the dominant coalition as the central construct, identified the TMT as executives who also served on the board of directors (cf. Finkelstein & Hambrick, 1990; Halebian & Finkelstein, 1993; Norburn, 1989). Most later work draws on broader measures of the team that range from those executives holding seniormost offices (e.g., senior vice president, executive vice president), to all the executives listed or reported in SEC filings. Some of these latter studies also report results across different definitions of the TMT (Carpenter & Fredrickson, 2001; Murray, 1989). A few studies constrain the definition of the TMT to those for whom compensation data are also available, which typically consists of the top five highest paid executives including the CEO (Carpenter, Pollock & Leary, 2003; Carpenter, Sanders & Gregersen, 2001).

Taken together, most empirical definitions of the TMT reflect convenience sampling, which entails the selection of cases (usually an intact group) using non-probability methods. Data on the TMT typically come from public sources like proxy statements or directories; again, though, a few studies have asked key informants such as the CEO or human resources officer to identify and provide information on members of the TMT. The convenience sampling approach is used in order to have data that are representative of the theoretical construct of interest, in most cases the dominant coalition, as opposed to a random sample of employees or managers. While some claim that the differences in how top management teams are measured may account for inconsistent findings in the current literature, perhaps a more striking observation is that studies using a variety of measures have reported significant associations between top management team characteristics and important firm outcomes.

Recent Upper Echelons Research

The most recent decade of UE research is characterized by several important, and at the same time distinguishing, themes. When contrasted with earlier UE investigation, recent research did not carry the burden of validating the original H&M model. Rather, it was able to capitalize on a foundation of empirical results linking not only TMT characteristics and firm strategic profiles (e.g., Bantel & Jackson, 1989; Finkelstein & Hambrick, 1990; Smith, Grimm, Gannon & Chen, 1991), but also TMT characteristics and firm performance (e.g., D'Aveni, 1990; Halebian & Finkelstein, 1993). Moreover, earlier work had already established that the UE model was applicable in diverse contexts, including U.S. and international organizations (e.g., Hoffman & Hegarty, 1993; Wiersema & Bird, 1993), as well as different life cycle stages, and business and corporate strategy arenas (Cannella & Hambrick, 1993; Eisenhardt & Schoonhoven, 1990; Hambrick, Cho and Chen, 1996).

Recent research has, in turn, focused to a greater extent on adding nuance to our understanding of the processes by which managers affect important firm outcomes, and elaborating on H&M's original model through new enhancements. In Figure 2, we integrate these latest inroads with the original H&M framework. This figure represents our stylized take on the "second-generation" UE model, marrying the empirical findings of more recent research with the original model. Its prominent features include identification of major organizational and environmental antecedents of top management team composition. The model also highlights an array of theoretical constructs proxied by TMT characteristics in recent research and empirically linked to major organizational outcomes. Further, it reflects the most signifi-

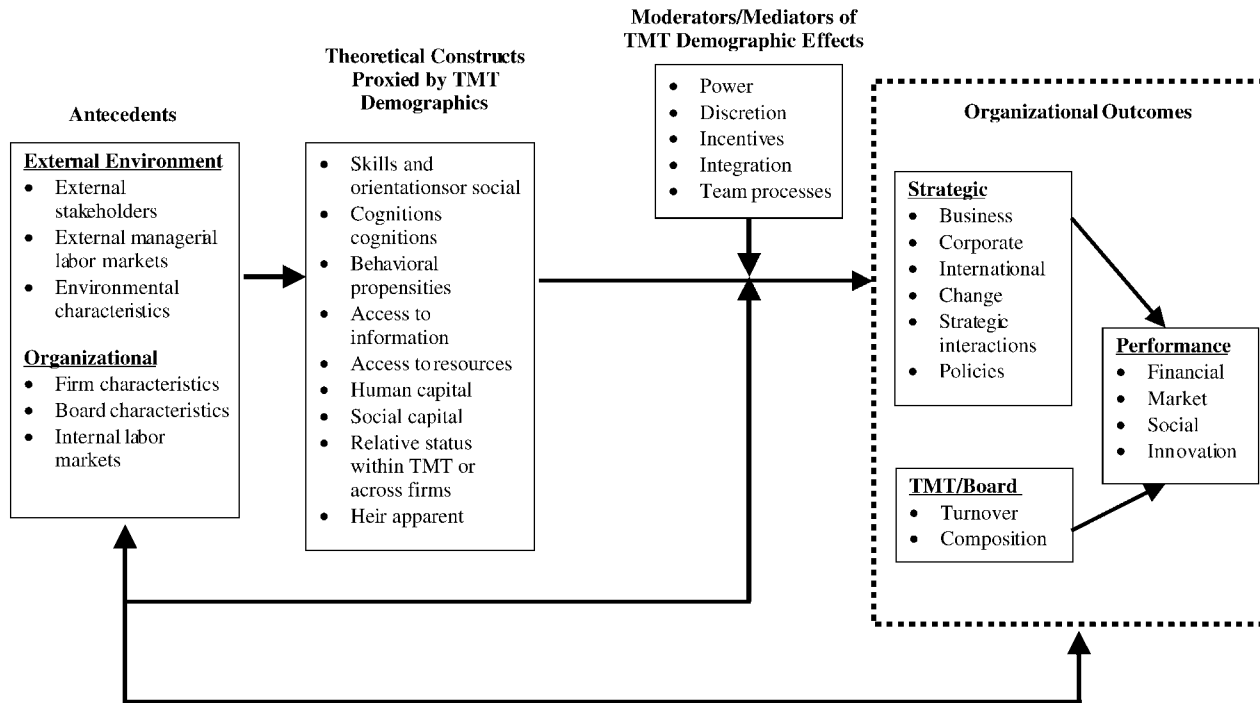


Figure 2. Carpenter, Geletkanycz and Sanders' stylized model of the upper echelons perspective.

cant intervening variables—namely, five moderators and mediators central to the UE framework. Finally, outcomes are differentiated in terms of strategy, performance, and the upper echelon itself, with feedback loops depicting evidence of potentially recursive relationships.

In terms of the body of recent UE literature, we review it in three steps. We first present a summary of work examining managers' direct effects on firm outcomes. These studies largely affirm the baseline H&M model. At the same time, they introduce new variables omitted from the original framework (but that are now cataloged in [Figure 2](#)).

Consistent with earlier trends in UE research, our review uncovers some variation in results—a pattern that has led a number of scholars to call for exploration of the “black box” of TMT interactions and processes. Accordingly, in the second step we summarize recent efforts to explore those intervening processes, and review their findings regarding TMT composition effects on group interactions.

Finally, we review recent UE research incorporating the role of context. This large sub-stream effectively demonstrates that managerial effects are dependent on contextual variables: organizational and environmental contingencies, as well as intrafirm dynamics that are distinct from but nonetheless relevant to the strategic choice process. Not surprisingly, we find that many studies examining contingency relationships shed incremental light on main-effect relationships.

Main Effects: TMT-Strategy and TMT-Performance Linkages

The UE stream's maturation in many ways mirrors the continued evolution of the broader strategic management field. As fresh topics of inquiry—for example, interfirm rivalry, and strategic alliances—have taken hold more broadly, new strategic outcomes have been added to the repertoire first delineated by H&M. [Ferrier's \(2001\)](#) investigation, for example, built on a growing stream of interest into competitive dynamics to consider TMT effects on the sequence and consequences of firms' competitive actions. Using a composite measure of TMT heterogeneity, Ferrier reported that heterogeneity was positively associated with firms' competitive actions. Heterogeneous TMTs were more likely to initiate competitive attacks of greater complexity and shorter duration. The attacks initiated by these heterogeneous teams were related to subsequent gains in market share.

His theoretical reasoning echoed the larger literature on the benefits and costs of team heterogeneity ([Carpenter, 2002](#); [Williams & O'Reilly, 1998](#)). Specifically, sociocognitive benefits allow heterogeneous TMTs to manage greater complexity, but sociocognitive conflict also causes them to incur process losses that eventually undermine the extended cooperative efforts necessary for effective strategy execution.

Yet other scholars have examined the link between executive background and strategic alliances. In a seminal study of alliance formation, [Eisenhardt and Schoonhoven \(1996\)](#) demonstrated a significant link with the prior experiences of the TMT. Specifically, the greater the number of previous employers and senior rank earlier held by the TMT, the greater the rate of alliance formation. Thus, [Eisenhardt and Schoonhoven \(1996\)](#) were among the first to document a relationship between social aspects of executive demography and firm strategy.

However, the dominant trend in recent research involves extension of the original UE model to the global arena. Seven studies linking TMT characteristics with firm globalization

are illustrative of this effort. Sambharya (1996) reported that foreign experience of the top management team was positively associated with their firms' international involvement. Reuber and Fischer (1997) reported that among small Canadian firms, internationally experienced top managers exhibited a greater propensity to enter into international partnerships and their firms obtained foreign sales more quickly than firms lacking such executive experience. Sanders and Carpenter (1998) found that larger TMTs were associated with firm global strategic posture (GSP), a multidimensional indicator of international involvement. Tihanyi, Ellstrand, Daily and Dalton (2000) showed that TMT average tenure, education, international experience, and tenure heterogeneity were positively associated with GSP; however, average TMT age was negatively associated with GSP. Carpenter and Fredrickson (2001) reported similar results for TMT education and international experience, while Carpenter et al. (2003) showed that technology-based IPO firms pursued globalization strategies when the TMT and directors possessed international experience. Finally, in tying GSP to firm performance, Carpenter et al. (2001) reported that TMT size has a positive association with multinational firm performance.

An ancillary consequence of the growing research on global strategy is that it draws attention not only to new strategic variables, but also to managerial characteristics not mentioned by H&M. For instance, Carpenter et al. (2001) showed that international assignment experience—a previously unexplored background characteristic—affected the managerial skill of TMTs. Most managers of U.S. firms spend their entire careers in positions that allow them to live in the United States. These authors argued that the opportunity to serve a stint in an overseas assignment would be invaluable for executives who later found opportunities to ascend to the highest levels of multinational firms. In support of the UE perspective, they reported that the amount of international experience possessed by the TMT was positively associated with the performance of multinational firms.

The attention to international experience echoes other research demonstrating that managerial characteristics beyond those envisioned by H&M are relevant to strategic outcomes. In a study of entrepreneurial firms, Kor (2003) found that experience at multiple levels of analysis—team, firm, and industry—affects organizational growth. Her research uncovered not only the central importance of TMT founding experience as a key managerial asset, but also the greater explanatory power of TMT competence bundles. In other words, consistent with the findings of Carpenter et al. (2001), the interaction of managerial experiences (competences) produces significant effects independent of traditional H&M attributes.

In yet another approach that broadened the set of managerial characteristics under consideration, Geletkanycz and Hambrick (1997) studied how top managers' ties to external organizations give them increased opportunity for boundary-spanning activities. They found that intra-industry ties tend to increase strategic conformity, whereas extra-industry ties tend to increase deviations from industry norms. In addition, they reported that tenure has U-shaped effects on conformity, wherein both short- and long-tenured TMTs tend to pursue the most conformist strategies. Finally, their results showed that performance is enhanced by an alignment of TMT external ties with the informational requirements of the firm's strategy.

Collins and Clark (2003) provide additional evidence of a link between the social networks of TMT members and firm performance. The purpose of their study was to examine how human resource practices aimed at top managers affect the social networks the team is able to develop. They reported that specific practices are associated with the size, range, and

strength of external social networks. More importantly for our purpose, they documented that the range and strength of these external TMT networks had positive associations with firm sales growth and stock market returns.

Research that examines the implications of senior executive tenure has increasingly tended to focus on network relationships, not only ties across but also ties within firms. For instance, Bergh (2001) builds on the research of Cannella and Hambrick (1993) by finding that the tenure of executives in both the acquired and acquiring firm affects the likelihood of a successful acquisition. Krishnan, Miller and Judge (1997) also found that post-acquisition performance was positive when the merged teams were dissimilar or complementary. Whereas Cannella and Hambrick (1993) reported that retention of target managers was crucial, Bergh finds that this success is a function of the tenure of the retained executives. Specifically, retention of long-tenured executives was more positively associated with acquisition performance. The author attributed this to the deeper knowledge of the acquired firm possessed by long-tenured executives. Challenging in part arguments that executive effectiveness in senior positions reaches a relatively early peak (e.g., Hambrick & Fukutomi, 1991), this study suggests that long-tenured executives' knowledge of internal workings, as well as established relationships, figure prominently in firm success.

Finally, there is new, important research coming from the economics front that endeavors a more fine-grained examination of executives' strategic choices—specifically, resource allocation decisions. Bertrand and Schoar (2003), in a study published in the *Quarterly Journal of Economics*, examined a manager-firm matched panel data set of large companies between 1969 and 1999 that tracked managers as they moved across two or more firms. After controlling for fixed-firm effects, their results show that top managers have a statistically significant effect on how corporate resources are deployed—specifically, differences in investment levels, the number of acquisitions, the number of diversifying acquisitions, cash holdings, dividends, R&D investment, advertising investment, and SGA expenditures. Moreover, their analyses were able to disaggregate team effects to examine fixed effects of CEOs, CFOs, and other top executives' effects on individual investments and firm performance.

Main Effects: TMT Demography-Process Linkages

As the volume of research linking TMT and strategy grows, so too does the call for research that goes inside the “black box” of the upper echelons. Noting that proxies like team size and functional backgrounds can be unreliable, scholars cite a fervent need for inquiry into intervening processes (Lawrence, 1997). The argument is bolstered by studies showing little to no support for straightforward demographic effects on firm performance or theorized processes (e.g., Smith et al., 1994). While limited in number for the obvious reason that it is hard to publish null results (cf. West & Schwenk, 1996) and difficult to conduct process research, studies such as Denis, Lamothe and Langley (2001) and Smith et al. (1994) nonetheless draw attention to the need for improved understanding of the mechanisms and processes by which TMT characteristics shape firm outcomes. Indeed, the black box criticism is so common among reviews of journal submissions that the majority of UE studies contain a paragraph or two in the discussion section addressing this important and recurring limitation.

Though much work remains to be done, three recent studies begin to address this issue. Amason and Sapienza (1997) examine how some demographic measures are related to

black box processes that are assumed to transpire within teams. They reported that TMT size was positively associated with cognitive and affective conflict, which are precursors to socio-cognitive complexity and behavioral conflict, respectively. In a study of Greek firms, Papadakis and Barwise (2002) investigate how TMT characteristics affect strategic decision-making processes. They find that CEOs and other members of the TMT affect these processes, but along different dimensions. CEO tenure was associated with more decentralized decision making, whereas TMT education and competitive aggressiveness affected the comprehensiveness of decision-making processes. In turn, Athanassiou and Nigh (1999) showed that TMTs in highly global firms, a firm characteristic shown to be highly correlated with the international experience of its executives (Sambharya, 1996), were more likely to have extensive global advice networks.

Curiously, one of the most informative pieces on TMT processes comes from outside the field of management. Peterson et al. (2003), published in the *Journal of Applied Psychology*, provide one of the most comprehensive studies to date showing how a CEO's personality can impact the dynamics of the top management team, and those dynamics, in turn, become reflected in performance differences among firms. Their basic theory is that CEO individual differences such as conscientiousness, emotional instability, agreeableness, extraversion, and openness impart a distinct effect on TMT group processes, and that these dynamics would be reflected in firm performance. In confirmation of this logic, they reported a strong positive CEO effect, mediated entirely by TMT dynamics, for sales growth and returns on investment and assets.

Contextual Effects

As mentioned previously, many of the UE studies examining contingencies impart dual benefits: they establish boundary conditions for empirical relationships and also shed incremental light on main effects. In many ways, recent UE research has elaborated on H&M's fundamental main-effects model by developing more complicated models that specify contingencies for those main effects. Through a relatively small part of the geography of our stylized Figure 2 model, the understanding of such contingencies is perhaps the single greatest advance in UE theorizing and application. We try to capture these varied contributions, organizing our review around the three natural clusters demonstrated in the literature—environmental, organizational, and leadership contingencies.

Environmental context. Executive leadership effects have been studied in a variety of domains. Perhaps the broadest context is national culture. Early work by Hoffman and Hegarty (1993) showed that the effects of executive characteristics on certain types of innovation varied among four Western cultures. Similarly, Wiersema and Bird (1993) showed that TMT heterogeneity was associated with greater turnover in Japanese firms than in U.S.-based organizations. More recently, Geletkanycz (1997) examined the moderating role of national culture on executives' commitment to the status quo. This study built on earlier work showing that in U.S. firms executive tenure was a good predictor of the degree to which firms remained locked into their strategy and organizational profile (Hambrick, Geletkanycz, & Fredrickson, 1993; Miller, 1991). Using survey data from top managers in 20 countries, Geletkanycz (1997) showed that tenure no longer predicted commitment to the status quo

once cultural backgrounds were accounted for. Her study also reported that Hofstede's (1992) cultural differences of individualism, uncertainty avoidance, power distance, and long-term orientation were strongly related to the executives' status quo commitment.

More generally, though, the environment is examined at the industry level, with considerable attention paid to stability and change. This is reflected in Keck's (1997) study of the effects of heterogeneity and tenure across two industries: cement companies and mini-computer manufacturers. The cement industry was characterized as rather stable but subject to a significant shock, whereas the mini-computer industry was characterized as relatively turbulent throughout the period of observation. Keck (1997) predicted that in complex environments (i.e., the mini-computer industry), short-tenured teams and heterogeneous teams would be most effective, while in stable environments (i.e., the cement industry), long-tenured and homogeneous teams would be most effective. Interesting differences emerged when the two types of turbulence were examined (i.e., constant turbulence versus shocks): variation in tenure had negative effects in the shock context but positive effects in the context of constant turbulence. Meanwhile, stratification (i.e., how top-heavy the team was in terms of titles) had negative effects in the shock environment but positive effects in the environment with constant change.

There appears to be general consensus that environmental characteristics, particularly those that represent uncertainty for the firm and its managers, will have implications for the UE model. In some early work, industries described as highly uncertain were held to afford executives greater discretion, which in turn has been shown to moderate TMT demographic effects (Finkelstein & Hambrick, 1990; Halebian & Finkelstein, 1993). Indeed, uncertainty also plays a key role in the model presented by Carpenter and Fredrickson (2001). Drawing on the social-psychological notion of situation strength (Mischel, 1977), they argued that TMT demographic effects would be moderated by environmental uncertainty. In a sample of U.S. Fortune 500 industrial firms, they found that the heterogeneity of TMT tenure, educational background, and functional work experience were all positively related to firm globalization in low uncertainty industries; at the same time, tenure and functional heterogeneity exhibited negative effects in high uncertainty industries. These results complement Greening and Johnson (1997), who report a curvilinear relationship between TMT functional and tenure heterogeneity and firms' responses to organizational crisis. If crisis is viewed as a source of uncertainty, an interesting parallel is observed across the two studies.

Organizational context. Recent research suggests that the internal context also creates a host of relevant contingencies, often emanating from strategy and structure. Carpenter (2002), for example, showed that relationships between various indicators of TMT heterogeneity and performance were stronger in firms with high levels of internationalization. Similarly, while Carpenter et al. (2001) reported that specific TMT work experiences had strong main effects on the success of multinational firms, they also found this effect to be stronger in firms of greater global presence. Most recently, Ferrier and Lyon (in press) showed that the relationship between the simplicity of a firm's strategy and its performance was moderated by the heterogeneity of the TMT.

In an inspired examination of agency structure, Jensen and Zajac (2004) were also able to show that management and governance arrangements impact demography effects. Specifically, in a study of diversification activity, they observed that the impact of executive back-

ground, considered here a proxy for investment proclivities, was contingent upon agency positioning (i.e., whether relevant background experience was embodied in the CEO, TMT, or board). This study, apart from demonstrating the importance of structural arrangements, also points to important implications regarding measurement of the TMT.

Leadership context. There exists yet another set of discovered moderators, which, while internal to the firm (organizational context), are distinguished from the preceding moderators (namely, strategy and structure) by their concentration on the individuals found at the apex of the firm. This set of variables is specific to the firm's senior leadership and most often emanates from internal dynamics, including TMT processes (apart from strategic choice). For example, [Simons, Pelled and Smith \(1999\)](#) reported that the effect of TMT diversity (education, functional background, and tenure) on firm performance was moderated by debate. Teams with social interaction practices fostering debate were better able to leverage the advantages of heterogeneity than TMTs in organizations that limit debate. Heterogeneous teams that engaged in debate were more likely to formulate comprehensive strategies, which also led to higher levels of performance.

In a study drawing on many of the same arguments but using demographic characteristics alone and the terminology of behavioral integration ([Hambrick, 1994](#); [Simsek, Veiga, Lubatkin & Dino, in press](#)), [Carpenter \(2002\)](#) found that the relationship between TMT heterogeneity and firm performance was strongest among short-tenured TMTs. His study addressed the untested notion that top managers are somehow affected by their differences, but that those differences may change over time due to the extent to which members of the team become behaviorally integrated.

Another set of studies focuses on potential implications of differences between the CEO and the TMT. Clearly, the CEO's position, title, and remuneration are distinct from those accruing to other top executives. Recent research indicates that these differences in power and status yield dynamics that may impact UE relationships. For example, in a study of acquisition premiums, [Hayward and Hambrick \(1997\)](#) reported that firms that pay the CEO significantly more than other TMT members were more likely to overpay for acquisitions by offering premiums that far exceeded industry norms. This pay gap was interpreted as an indicator of CEO hubris, and its effect on firm strategic outcomes was significant. Also underscoring the potential impact of CEO–TMT differences (and the antithesis, similarity), [Carpenter and Sanders \(2002\)](#) reported that firms that “overpaid” non-CEO TMT members, relative to the CEO, significantly outperformed firms that either accepted normative gaps in pay or underpaid non-CEO TMT members.

Of course, complementarity can extend to dimensions beyond pay. For instance, [Carpenter et al. \(2001\)](#) reported that multinational firms that possessed both CEOs and TMTs with international assignment experience outperformed those that lacked experience at either of the two levels. More recently, [Carpenter et al. \(2003\)](#) showed that technology IPO firms were most likely to pursue globalization strategies when the TMT's international experience was complemented by the international experience of a board member or venture capital investor. [Kor \(2003\)](#), too, showed how bundles of executive characteristics can interact. In a sample of entrepreneurial firms she found that founders' participation in the TMT and managers' past experience in the industry contribute to the competence of the team in seizing new growth opportunities. Thus, the UE perspective may be well suited for

examinations of configurational approaches rather than simple contingency approaches (cf. Delery & Doty, 1996, who compare the testing of contingency and configurational theories in another area).

Finally, no UE review would be complete without attention to succession processes and their impact on the relationships among top executives. The core of this work is captured by recent research on heirs apparent, defined as insiders who are presumably being groomed to replace the CEO (Vancil, 1987) and empirically identified by the title of president or chief operating officer (Cannella & Lubatkin, 1993; Cannella & Shen, 2001). Herrmann and Datta (2002), for instance, found that the characteristics of the CEO successor affected the choice of foreign market entry mode. Bigley and Wiersema (2002) also showed that heir apparent status carries long-standing consequences for strategic decision making, including the tendency to undertake corporate strategic refocusing once promotion to CEO is effected. In their study, heir apparent experience was shown to interact with four power indicators—compensation, functional expertise, elite education, and number of outside boards on which the new CEO is seated. More importantly, it moderated the extent to which new CEOs adhered to the strategic status quo, shunning strategic change in favor of established policy.

The link between succession processes, heirs apparent, and H&M's thesis is affirmed by Hambrick and Cannella (in press), who studied the organizational implications of the separation of CEO and COO titles. In an examination of more than 400 organizations, they discovered that performance suffered when the CEO did not assume the COO role, but rather assigned it to another TMT member. Such division of labor not only affects the structural configuration of the TMT, but evidently also impacts executive effectiveness as measured by firm performance.

Context has played another role in the development of the UE perspective—the inroads that the framework has made into new fields of study and novel contexts within the field of management. As noted earlier, the UE perspective has recently been adopted in a major study within economics (Bertrand & Schoar, 2003) and psychology (Peterson et al., 2003). As mentioned previously, the work of H&M has also played a prominent role in recent work in international business (Athanassiou & Nigh, 1999; Herrmann & Datta, 2002).

Synthesis

When viewed collectively, studies over the past 10 years have accorded a number of important insights into executives' effects on organizational outcomes. Free of the burden of providing initial validation of the UE model, recent studies have greatly enhanced its "generalizability." Thus, for example, researchers have demonstrated that executive effects exist in not only domestic but also international settings, mature firms as well as newly founded firms, and for-profit enterprises and public agencies. Further, they have provided critical evidence to suggest that TMT demography impacts strategy in its various forms—not only business and corporate strategy profiles (as per H&M), but also international agendas, alliance formation, and acquisitions. What is especially intriguing about the latter results is that they suggest that decision issues that are newly emergent—that is, outside of the realm of executives' *prior* experience—are nonetheless also impacted by TMT background and values.

Another critical insight offered by recent research is new understanding of the link between TMT demography and TMT process. Whereas the original H&M model argued that team demography will proxy well for cognitive processes that shape strategic decision making, scholars have unveiled a wealth of evidence indicating that other team processes are likewise impacted. In some cases, these alternative processes, including communication and debate, mediate the effect of demography on strategic choice; in others, they serve as a separate mechanism ultimately impacting firm performance. Clearly, discovery of the various mechanisms and processes by which executives impact firms is important. So too are the suggestions these findings raise as to previously unexplored interactions within TMTs.

Finally, recent inquiry not only extends the legitimacy of the UE field but has helped to spread the perspective to other disciplines, among them psychology and economics. In reciprocal fashion, these studies lend nuance to our views on TMT effects. Peterson et al.'s (2003) study in the *Journal of Applied Psychology* illustrates that personality, not just demographics, impacts TMT dynamics. Similarly, Bertrand and Schoar's (2003) economics-based inquiry helps to pinpoint the exact activities embedded in the strategic choice process—in this case, resource allocation—that are shaped by top executives and ultimately affect organizational performance.

Unresolved Debates . . . and New Directions

Clearly, the UE stream is a flourishing one. At the same time, it stands at an important crossroads. While ample empirical evidence now exists to suggest that executives “matter” to organizations, results are not wholly consistent. And, as scholars continue to uncover new underlying processes and variables, a number of debates emerge. We believe these debates, addressing both underlying theory and methodology, present several avenues for future advancement of executive leadership research and the UE perspective. We begin with some methodological issues and progress to more theoretically relevant ones.

Upper Echelons Methodology

Defining the organizational upper echelons. In their original thesis, H&M were explicit in arguing the need to focus on the top management *team* as opposed to other units, most especially the CEO alone. Their collectivist approach was born of observations that strategic choice is an arduous task, far exceeding the capabilities of individual executives (Cyert & March, 1963). In subsequent research Hambrick (1994) instituted a challenge to the TMT label, arguing that top management *group* (TMG) may be a more apt moniker given the high potential for intrateam fragmentation. Among the greatest benefits of this reframing is attention to the diverse array of interactions and configurations possible within senior organizational ranks (e.g., competitive, coalescing). However, a shift from TMT to TMG label nevertheless maintains emphasis on the broader collectivity of senior management.

Clearly the value of studying top executives in aggregate (especially their multiple knowledge bases and viewpoints) is not disputed. However, mounting evidence suggests that in studying executives collectively, important individual-level effects have been overlooked (e.g., Bertrand & Schoar, 2003; Jensen & Zajac, 2004). In fact, a growing volume of em-

pirical studies reports that asymmetry in the TMT is itself a powerful force (e.g., Bigley & Wiersema, 2002; Carpenter & Sanders, 2002). It introduces a number of mechanisms and processes unanticipated by the original UE model yet nonetheless relevant for major organizational outcomes. For example, studies report that power (Pitcher & Smith, 2001), executive celebrity (Hayward & Hambrick, 1997), and networks (Eisenhardt & Schoonhoven, 1996; McDonald & Westphal, 2003) are but three means by which executive leaders directly impact the range of strategic alternatives available to the firm, as well as the choices ultimately effected. Yet when compared to factors outlined in the original UE model (e.g., age, functional background), these variables are not uniformly distributed among managers. Most often, they tend to accrue to CEOs, suggesting that the team (or group) is not a universally apt unit of analysis.

This observation is in many ways consistent with earlier calls to tailor the unit of analysis to specific research questions (Jackson, 1992; Pettigrew, 1992). With yet another decade of research in hand, there is little doubt that differences exist within executive ranks and that those differences matter for UE-related outcomes. Thus, while use of a team-based approach is appropriate to some questions (e.g., “How do team decision processes affect organizational outcomes?”), team aggregation is not universally advisable. In fact, it may inhibit consideration of variables and processes nevertheless germane to organizational outcomes, yet which arise at different units of analysis (e.g., individual or CEO).

Finally, research shows that individuals outside of the TMT may also impact the UE model. Perhaps the most pivotal actors residing outside of immediate team boundaries are the board of directors. Board members (most notably, outsiders) have been shown to exert a direct influence on organizational strategy and performance (e.g., Geletkanycz & Hambrick, 1997), often through the provision of important information, legitimacy, and other resources. At the same time, they exert an indirect effect (e.g., Carpenter & Westphal, 2001; Westphal & Fredrickson, 2001) not limited to counsel and advice, but also through selection (dismissal) of CEOs. These findings thus support the idea that a broader and more flexible approach to the question “Who at the apex of the firm impacts organizational outcomes?” is important, and that in asking this question researchers’ focus should not be exclusively internal to firm management.

Team definition. In those research contexts where the TMT is indeed the most relevant unit of analysis, ambiguity persists with regard to how best to measure the aggregate group. Clearly, one aim of scholars is to explain the greatest amount of variance possible. Thus, a wide net is cast, with the extreme being Finkelstein and Hambrick’s (1996) concept of the “supra-TMT,” which aggregates members of the TMT and board into a singular unit. Yet the “supra-TMT” concept is challenged both theoretically and empirically. First, the board and management team not only assume distinct roles but also maintain competing, if not sharply divided, goals and agendas (Fama, 1980). Second, Jensen and Zajac (2004) provide rigorous evidence of an inconsistency in results when competing definitions (more traditional TMT limited to executives alone and the supra-TMT combining the board and executive body), leading to the conclusion that “it is critically important to aggregate or disaggregate along the appropriate governance positions . . . [however], rather than focusing on corporate elites as an aggregate whole, one should distinguish between all the different subgroups of corporate elites that occupy similar governance positions.” Clearly, while

broader aggregation may increase variance, it appears to do so only at the expense of confounding influences emanating from diverse entities.

Demography's limits. With the most significant elements of the H&M model already tested, and authors claiming the results of such research to be firm evidence of the intervening role of process, tremendous barriers exist to publishing yet another study that examines the main effect of TMT demographic effects on another organizational outcome. We are not simply talking about the hurdles facing studies that replicate the findings of prior empirical work. Despite a replication's merits to the field, the bar has been raised such that any new UE study that looks at the effect of demographic characteristic *X* on organizational outcome *Y* is likely to be viewed as simply reaffirming that which is already understood—namely, that executives and their demographics matter.

Challenges also extend to the coarse nature of demographics. The potential for ambiguity associated with underlying phenomena has led numerous scholars to suggest that demographics be abandoned in favor of richer variables. Toward that end, Priem et al. (1999) offer a comprehensive, impassioned plea for the study of more “substantive” dimensions of executive heterogeneity, including processes, attitudes, and judgments. Their work is not alone in suggesting that a movement away from the use of demographics as proxies is likely to provide greater insight into the actual activities of senior managers, and the actual processes by which executives impact organizational outcomes (Lawrence, 1997). According to Sarason (1995), for instance, “Hambrick and Mason (1984) hypothesize that managers’ demographics can influence their decisions. However, in Giddens’ (1984) model manager’s awareness of how their demographics change their decisions could also influence those decisions” (Sarason, 1995: 48). Thus, for any new UE publication there remains a need to show how, why, and when TMT demographics map on to particular cognitions, socio-cognitions, and behaviors.

In our own view, the ambiguity surrounding some earlier studies and their findings is problematic, but at the same time, it begs for resolution. For example, ambiguous findings may partially reflect the fact that measures of TMT heterogeneity themselves vary across studies. In fact, Bunderson and Sutcliffe (2002) showed the ways in which different operationalization of TMT functional heterogeneity had differing implications for process and performance. A related source of study heterogeneity may rest with the use of archival versus survey data for the identification of TMT characteristics. Since the sampled members are meant to be representative of the dominant coalition construct, an important opportunity exists to compare the demographic profiles of TMTs calculated with public data (from proxies, directories, etc.) with those based on primary data provided by the same firm, typically the CEO. Such a study may show, for instance, whether the source of data matters. To the extent that there is agreement across data sources, the data provide a reasonable indicator of the underlying theoretical construct.

A related word of caution is in order for scholars studying the effects of TMT heterogeneity on firm outcomes. It is imperative that such studies control for the size of the TMT. It is surprising to note the frequency with which team size is not controlled. Table 1, for instance, includes a number of studies that purportedly examine the effects of TMT heterogeneity but do not account for the independent effects of TMT size. Heterogeneity is well-known to be positively associated with the size of the group being studied (Allison,

1978). Consequently, failing to control for team size makes one unable to infer whether significant statistical associations should be attributed to heterogeneity or to the unobserved effects of TMT size. Indeed, in and of itself size has been cited to have implications for team conflict and information processing capacity, and at the very least the economic notion of division of labor (Haleblian & Finkelstein, 1993). Thus, extreme care must be taken when comparing the results of UE studies that do and do not account for this important TMT characteristic.

Only relatively recently has the set of demographic characteristics of interest been expanded to include international career experience (Carpenter et al., 2001; Daily, Certo & Dalton, 2000; Sambharya, 1996; Tihanyi et al., 2000). Race and gender, too, represent relatively recent and needed innovations in the characteristics that upper echelons research encompasses (Richard et al., 2004; Westphal & Milton, 2000). While relevant experiential variables have been expanded to include exposure to organizational founding (Kor, 2003), other types of business experience (e.g., turnaround management, selection and integration of acquisitions) remain to be explored. The same can be said of diverse managerial experiences. For example, while scholars have recently begun to explore how CEO activities such as experience on outside boards and the firsthand insights it provides affect organizational strategy (Carpenter & Westphal, 2001; Westphal & Fredrickson, 2001), other behaviors and activities, whether past or present (e.g., government or military service, non-profit leadership), that bear a marked, formative influence on executive perspective have been overlooked.

Also, personality variables have long been included in the parlance of the UE literature but rarely incorporated specifically in studies. Recent advances in methodological sophistication and rigor have created opportunities to reintroduce these variables. The work of Peterson et al. (2003), for instance, provides dramatic evidence of the impact of CEOs on firm performance through their effect on TMT dynamics. As those authors attest, their study would likely not have been possible prior to the advent and refinement of meta-analysis and the subsequent emergence of consensus around the measurement and description of personality variables and constructs.

At the same time, there is tremendous need for research to acknowledge the complexity of decision makers and the resultant implications for demographic research (Harrison, Price & Bell, 1998). Whereas the majority of UE studies tend to treat diverse background characteristics and attributes as independent of one another, recent inquiry has called this practice into question. It cites the tendency for executives to embody a “bundle” of attributes and suggests that the decision-making process is more likely to reflect the interaction or configuration of diverse characteristics and competences than individual variables in isolation (Kor, 2003). Sarason’s (1995) suggestion that executives may second-guess demographic effects adds further potential complexity to the mix. There exists tremendous need and opportunity for additional investigation into how executive-level variables interact and their combined, cumulative effects on individual and organizational outcomes.

A related methodological opportunity in the area of defining and measuring TMT demographic characteristics is suggested by Ferrier (2001). In that study he identified TMT heterogeneity as a “meta-construct that is manifested along a number of different, yet correlated dimensions” (2001: 867). Kor (2003), too, suggested the value of studying bundles of executive characteristics. Indeed, if the theoretical construct is TMT diversity, then the use

of more sophisticated methodologies like structural equation modeling will allow a study to use multiple indicators of TMT heterogeneity like functional background, education, tenure, and other characteristics as the basis for theory testing. The advantage of such an approach is that measurement error becomes less of a factor and the odds of generating spurious results from single-item demographic variables is significantly reduced.

An evolutionary perspective on the UE model is lacking. Clearly, executive perspectives and attributes are not static, but rather tend to change over time. Thus, for example, an executive's functional background may prove more potent at earlier career stages but may dissipate as greater exposure to other influences (e.g., firm, industry) mounts. An examination of time- and/or context-dependent variations might not only shed critical light on the evolution of executive demographics but might also help explain earlier competing findings. Such a perspective begs for longitudinal and possibly qualitative methods.

Finally, it is critical to recall that the practice of using demographic proxies is only a methodological convenience. Demography is used to proxy larger, complex, and hard-to-get-at constructs. Demography itself is not the key theoretical driver of strategic processes and choices. Rather, the theoretical model posits that cognitions, values, and perceptions affect strategic choice. Consequently, with recent developments in measures and with the emergence of complementary theories, there is ample opportunity for scholars to supplement simplistic measures of demographic profiles with richer measures of mechanisms and processes that affect top management cognition, values, and perceptions and, consequently, strategic choices.

Upper Echelons Theory

Alternative processes. Clearly, strategic choice ranks as one of the dominant roles and responsibilities of senior management. However, studies of the past decade suggest that a singular focus on this process of rational decision making, as per the original UE model, overlooks other important avenues of executive influence on strategic outcomes. For example, studies by Eisenhardt and colleagues (e.g., Bourgeois & Eisenhardt, 1988; Eisenhardt, 1989; Eisenhardt & Bourgeois, 1988; Eisenhardt, Kahwajy & Bourgeois, 1997) suggest that more complex decision processes not only characterize the interactions of many TMTs but also lead to more successful outcomes. The fact that alternative decision processes may exist within top managerial ranks, and prove more suitable given various firm or team contexts, has received scant attention.

A related issue is that the UE perspective focuses on executive backgrounds as the primary indicator of their mindsets and potential behaviors. This, however, ignores other structural determinants of their behaviors and orientations such as corporate governance (e.g., boards and compensation) and organizational structure. For instance, while Eisenhardt and Schoonhoven (1990) reported that TMT characteristics affected new venture success, Carpenter et al. (2003) showed that the effects of TMT characteristics on the strategies of technology IPO firms was dependent upon characteristics of their boards of directors, the experience of their venture capitalists, and the form of TMT member compensation. Indeed, it is through the integration of theories that are concerned with executive behaviors and choice that the UE perspective may provide its richest predictions.

At the same time, the UE model overlooks other modes by which executives influence organizational outcomes. Decision making is but one of several roles assumed by senior leaders. Recent inroads suggest that executive attention to institutional constraints (through representative or liaison roles) may directly affect organizational strategy and performance (e.g., D'Aveni & Kesner, 1993; Ingram & Roberts, 2000). Similarly, indirect effects may be observed in adherence to socially constructed, normative standards. Thus, rather than reflect the decision processes outlined in H&M, executive effects may reflect the firm's (and its management's) embeddedness in a broader institutional environment. This problem illustrates the need to simultaneously consider alternative explanations and control, to the extent possible, for additional mechanisms associated with executive effects on firm outcomes (whether adopting the UE perspective or one of the alternatives).

And, of course, evidence continues to mount in support of the notion that executive change in and of itself constitutes a powerful mechanism of strategic change. Whether through the importation of critical know-how (Boeker, 1997a, 1997b), or through signaling processes (e.g., Hambrick & Cannella, 2004), adjustment in the composition of the executive cadre can impart powerful effects of firm strategy and performance. It holds the distinct potential to disrupt the established order of the top group, thus introducing the opportunity for political dynamics (as compared to rational strategic processes) to shape major organizational outcomes (Bigley & Wiersema, 2002).

Finally, there is growing evidence to suggest that top managers and the decisions they make are not purely defined by the past (as the H&M focus on background would imply), but rather reflect future aspirations and goals as well. Though not alone in focusing on managerial self-interest, Hayward and Hambrick (1997) draw attention to the fact that CEO hubris and personal ambitions are potent influences on executive action and, by extension, organizational outcomes. Greater attention to the variety of behavioral processes at work in the upper echelons of firms, apart from rational decision making, can only further our understanding of the multiple ways in which firms are impacted.

In fact, a side benefit of exploring new processes is that it encourages exploration of new, and as yet understudied, dependent variables. Though much has been learned about how executive attributes shape organizational performance as well as business, corporate, and international strategic profiles, other potential outcomes have received far less attention. For example, subsequent research might delve into implications for corporate ethics, social responsibility, organizational risk taking, and preferences for alternative modes of growth.

Moving toward recursive and dynamic models. In their original model, H&M emphasized a linear, progressive relationship. At the same time, they conceded that causality surrounding the UE model may be muddled (1984, p. 197), highlighting in particular the potential for industry and strategic context to affect TMT composition. Recent research not only confirms these suspicions but also provides compelling evidence that top executives (and their activities) fail to occur in a vacuum. To the extent that senior management plays a role in the shaping of firm outcomes, firm outcomes and context (including environmental and industry contingencies) play a critical role in determining who serves among the firm's top leaders, as well as the nature of their impact on firm behaviors.

As depicted in Figure 2, the context in which executives operate is both a result and a major determinant of executive composition. Research of the past decade has helped us to elucidate

the numerous ways in which firm behaviors help to shape the organization's environment, thus revealing new dimensions of critical import. Whereas industry and strategic context were once deemed paramount, it is now clear that the board and other managers (comprising the internal labor market) are also powerful influences. At the same time, our understanding of external constraints has expanded to include stakeholder interests, institutional forces, and broader factors such as environmental uncertainty. Similar inroads have been made in the study of top management composition.

Together, the observance of recursive effects underscores the need for more comprehensive, if not dynamic, theoretical approaches in ensuing UE research. Scholars have succeeded in bringing to our attention the multi-directional nature of the UE model. As yet, however, little systematic investigation examining concomitant processes has emerged. One recent attempt at a more integrative model showed that managerial perception of environmental change influenced the strategic adaptive response of the organization and the selection of top managers (Strandholm, Kumar & Subramanian, 2004). They further found that organizations that are able to achieve alignment among perceived environmental change—strategic adaptive response—managerial characteristics exhibited superior performance in terms of a variety of performance outcomes as compared to organizations where such alignment is lacking. Given the increasingly rapid pace of change facing most organizations, coupled with the availability of longitudinal data on firms' activities from their birth, we expect that it is only a matter of time before more such research attends to this intriguing and important area of the upper echelons.

Conclusion

Our objective was to provide an overview of the past and present in UE research with an eye toward identifying future research challenges and opportunities. With regard to the past and present, H&M's tremendous impact is clearly evidenced by the research, knowledge, and controversies that it has spawned. Perhaps the two most striking contributions of recent work is the elaboration of underlying theoretical constructs that demographics might proxy, along with the provision of theoretical contingencies and boundary conditions on the UE model. While the impact of the UE perspective in the management field is impressive, it is equally impressive that this impact is reverberating across other disciplines as well. Indeed, the citation rate over the past five years has been slowing somewhat in the management field, but this slowdown is being completely offset by increasing citations in other fields and disciplines. Regardless, we expect that the dual aspects of the UE perspective—as a theoretical framework and as a methodology—will continue to motivate new research and contribute to our understanding of the complex roles played by top managers and top management teams for many years to come.

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