ng. 86

JOURNAL OF MANAGERIAL ISSUES
Vol. X Number 1 Spring 1998:86-102

Toward A Model For Relating Executive Career Experiences And Firm Performance*

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Within certain constraints, it is widely accepted that decision makers have significant influence on a firm's performance (Astley and Van de Ven, 1983). According to March and Simon (1958), decision makers bring their own set of "givens" to the decision-making forum. Further research developed by Hambrick and Mason (1984), commonly referred to as upper echelons theory, suggests that the values, knowledge, and beliefs espoused by a firm's top leaders are reflective of various observable characteristics, such as age, education, and career experiences (Finkelstein and Hambrick, 1990; Michel and Hambrick, 1992; Wiersema and Bantel, 1992).

In their earlier work, Hambrick and Mason (1984) noted that research on the upper echelon may help to guide the development or

"molding" of a firm's top executives. Indeed, we suggest that upper echelon theory provides an entree for examining the career development of top management team (TMT) members and its effects on team composition and strategic decision making. Unlike prior research, which has focused on group-level TMT heterogeneity (e.g., Bantel and Jackson, 1989; Murray, 1989), the model and research propositions presented in this article center on the intra-personal heterogeneity of TMT members. We examine the use of job rotation as a means of developing intra-personal heterogeneity in TMT members to influence firm performance by improving TMT decision-making processes. As conceived here, intra-personal heterogeneity is the degree to which a TMT member has accumulated an array of knowledge, skills, and insights

^{*} The authors gratefully acknowledge the assistance of Charles Schwenk, Jo Ellen Moore, the journal's anonymous reviewers, and conference participants at the Southern Management Association in New Orleans LA where an earlier draft of this manuscript was presented.

from his/her prior career experiences. Intra-personal heterogeneity can be developed with lateral career moves that expose managers to a variety of roles within the firm.

While the value of job rotation strategies has long been espoused in promoting employee learning, career satisfaction, and interpersonal collaboration effectiveness (Campion et al., 1994; McCall et al., 1988; London, 1989), no clear link to firm performance has been made. This article hypothesizes that link. In doing so, the somewhat disparate literatures of human resource management and strategic management are applied in a complementary fashion.

We begin with a review of upper echelons theory, followed by an examination of job rotation strategies and their influence on TMT heterogeneity. A model is then generated, linking intra-personal heterogeneity and firm performance via an enhanced TMT dominant logic and reduced cognitive biases. Lastly, implications for future research and practice are discussed.

Theoretical Background Upper Echelons Theory

Hambrick and Mason's (1984) upper echelons theory suggests that top managers' background characteristics, such as their career experiences, education level, socioeconomic background, and tenure, affect the strategic behavior of the organization. For instance, in a study of hospitals, Kimberly and Evanisko (1981) found that an executive's level of education is related to the firm's receptivity to innovation. Likewise, management research consistently associates managerial youth with corporate growth (Child, 1974). Other research find-

ings indicate that executives with longer industry tenure or company tenure are more likely to be committed to the *status quo* and engage in persistent strategies (Finkelstein and Hambrick, 1990; Hambrick et al., 1993). Entrepreneurs tend to originate from lower socio-economic backgrounds and pursue aggressive strategies (Collins and Moore, 1970).

Of particular interest in this article are career variables, such as functional background, which have also been investigated from the upper echelons perspective (e.g., Gupta and Govindarajan, 1984). For example, Dearborn and Simon (1958) found that when given a case study, executives defined the major issues in the study conforming with their primary functional area's goals. This suggests that executives can suffer from selective perception. Although subsequent empirical research has not consistently supported the relationship between functional background and cognitive structures (Lyles, 1987; Walsh, 1988), recent work suggests that career experiences shape TMT members' cognitive and attitudinal perspectives, and, consequently, how the top team identifies, formulates, and evaluates strategic decisions (Gunz and Jalland, 1996; Zajac and Westphal, 1996).

Thus, upper echelons theory provides a unique lens through which to view the effects of individual background variables, such as career experiences, on the behavior of top team members in the strategic decision-making process. Indeed, there exists substantial evidence that the TMT is a useful predictor of firm behavior (Gunz and Jalland, 1996). As such, upper echelons theory provides a nexus between individual-level

TMT characteristics and organizational-level outcomes.

Job Rotation Strategies

In light of the new business reality, developing TMT talent may be among the most critical strategic tools for maintaining competitiveness (Baldwin and Padgett, 1993; Hall and Foulkes, 1991). Indeed, career experiences are a critical stock for a firm to manage because most management development occurs on the job and, ultimately, most CEO career succession happens by promoting from within the organization (Hambrick and Mason, 1984; McCall et al., 1988). One of the more progressive development career strategies, known as job rotation, is used to proactively enhance the breadth of work experiences (Campion et al., 1994). Granted, other mechanisms, such as cross-functional teams or temporary task forces created to accomplish a specific task, can expose a manager to a diversity of experiences; however, the focus of the present article is on the formalized management of lateral career moves.

A job rotation is defined as a lateral move, accompanied by a meaningful change in job content or assignment, although not in compensation grade (Campion et al., 1994). The objective of job rotation is to provide managers assignments in different areas of the company to gain an overall appreciation of organizational goals, to create a broad knowledge base of different areas of the business, to develop a network of organizational contacts, and to increase problem-solving and decision-making skills (Noe and Ford, 1992). While there may be tradeoffs between a "specialist" versus "generalist" career development strategy, current conventional wisdom suggests a profound importance of cross functional experience (Allred et al., 1996) which can be acquired through job rotation.

Job rotations can be dichotomized into intra-functional or inter-functional lateral moves (Burke, 1997). An intra-functional move occurs when an employee is rotated among several assignments within a given functional area. In inter-functional lateral moves, an employee gains experience in a functional area that does not represent his/her primary area of functional expertise. For example, an employee who is trained in finance may be given a cross-functional move in human resources or marketing. Firms tend to use interfunctional moves so that high-potential employees become familiar with various functional areas in the firm while being groomed for top-management positions (Derr et al., 1988). Inter-functional experience is critical for future managers and hence our primary concern.

The literature suggests several benefits of job rotation. McCall et al. (1988) found that the events executives experienced in previous jobs had an influence on what they learned with regard to management business strategy. Gabarro (1987) found that executives' past work experiences were critical in determining their successful adjustment after a transition. London (1989) evaluated job rotation programs for scientists and engineers, and the findings indicated that employees participating in job rotation had a greater understanding of the rewards associated with collaboration, the value of initiating and comparing different problem solutions, and the value of other functional viewpoints. Cam-

pion et al. (1994) examined the rewards and costs of job rotation in the finance function of a large midwestern firm and concluded that benefits consisted of: stimulating work, organizational integration (e.g., networks), awareness of self and management style, and career satisfaction and involvement. Finally, research has consistently shown that the number of different positions held by a manager is positively associated with higher career attainment (Forbes and Wertheim, 1995).

Nonetheless, the focus in prior research efforts remains on individual outcomes. Little effort has been made to link job rotation to executive decision making and firm performance. Therefore, as a conceptual bridge, upper echelons theory provides a mechanism for analyzing the impact of individual TMT member characteristics, such as their career experiences, on firm performance.

TMT Heterogeneity

Given our focus on the experiential breadth of TMT members, it is important to understand how these experiences are ultimately reflected in the composition of the top team. Traditionally, TMT composition has been addressed in the literature by discussing team heterogeneity or homogeneity. For example, homogeneity (i.e., similarity of TMT members) is thought to improve social integration and communication, which in turn makes consensus and decision implementation easier. In contrast, heterogeneity is viewed as producing a multitude of perspectives, greater creativity, and enhanced information processing capacity in the team (O'Bannon and Gupta, 1992). In this section, we discuss (1) how TMT heterogeneity has been conceptualized in the literature and how it can be reconceptualized to reflect the diversity of a manager's career experiences and (2) how TMT heterogeneity relates to firm performance. Each issue is discussed in turn.

TMT heterogeneity has traditionally been defined as a "group-level index of the degree of similarity between members of a group" (Murray, 1989: 129). For example, once established, a TMT is often described in terms of the functional areas currently represented by its members (e.g., finance, sales, research and development). Such an approach fails to consider explicitly the rich history of functional experiences possessed by each member. A TMT member, for example, might have a predominately financial background yet may also have been extensively exposed to production and operations through cross-functional assignments (e.g., as a financial analyst supporting manufacturing). All of these work experiences supply the member with an enhanced understanding of the firm and should be taken into account when analyzing the heterogeneity of the TMT. Indeed, Hitt and Tyler (1991) found that the combination of different functional experiences possessed by an executive influences the type of information used in evaluating specific acquisition opportunities.

By enhancing each TMT member's experiential diversity, the use of job rotation strategies in management development allows firms to create and focus on *intra-personal* heterogeneity. Each TMT member embraces heterogeneity because of the aggregation of experiences and insights he/she brings to the forum. Intra-personal heterogeneity therefore represents a composite of the learn-

ing TMT members have gained from their diverse career experiences. As presented by our model, analyzing TMT heterogeneity from the perspective of individual heterogeneity allows for a richer and more realistic understanding of how the culmination of a manager's work experiences will affect decision making in the TMT.

Although there has been some disagreement in the literature regarding the exact nature of the relationship between TMT heterogeneity and firm performance (O'Bannon and Gupta, 1992), research generally supports a positive relationship. For example, Bantel and Jackson (1989) found in a sample of 199 banks that TMTs with diverse functional areas of expertise demonstrated more innovation, even when size and location were controlled. In Eisenhardt and Schoonhoven's (1990) study on the effect of the founding TMT's characteristics on organizational growth, heterogeneity of industry experience was linked with higher growth. Moreover, Priem (1989) found that even in some stable industries, TMT heterogeneity (in terms of functional background, age, education, tenure) may be positively related to company performance. Finally, Murray (1989) found that heterogeneity of age and tenure in the TMT was positively related to long-term performance in Fortune 500 oil companies.

In sum, by focusing on intra-personal heterogeneity, as opposed to the traditional group-level index, we can further examine the potentially positive impact of yet another type of heterogeneity on firm performance. The next section examines the process by which developing experientially diverse TMT members may influence strategic decision making and, ultimately, firm performance.

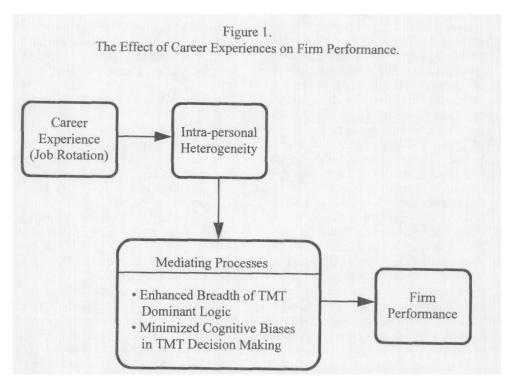
Proposed Model

A primary goal of the proposed model is to provide a more complete explanation for how the conglomeration of career experiences of TMT members can affect the strategic behavior of the TMT and firm performance. This conceptual linkage between individual level variables and organizational outcomes is made possible by incorporating social level phenomena that occur in the presence of TMTs (Gunz and Jalland, 1996). In the next section, we discuss the possible mediating processes that link intra-personal heterogeneity and firm performance.

Mediating Processes

As depicted in Figure 1, there are two mediating factors in our proposed model that may help translate the effect of increased intra-personal heterogeneity, as created by job rotation strategies, on firm performance. These mediating mechanisms include: (1) a more encompassing TMT dominant logic and (2) fewer cognitive biases in the strategic decision-making process. Each mediating factor, and its related theoretical proposition, is discussed in turn.

According to Gunz and Jalland, "A consistent view is beginning to emerge from a variety of streams in the literature, to the effect that strategic behavior can be understood by examining systems of meaning shared by firms' managers" (1996: 738). One attempt to conceptualize a system of shared meanings has been provided by Prahalad and Bettis (1986), who introduced the construct of dominant logic. They defined a



"dominant logic" as a shared schema executives develop through their experience in the core business. It is a 'mindset or a world view or a conceptualization of the business" (Prahalad and Bettis, 1986: 491). The dominant logic represents a common understanding of the issues relevant the business' strategy (Grant, 1988). As such, this shared set of beliefs, or knowledge structure (Lyles and Schwenk, 1992), espoused by the TMT can affect the way the firm is operated (Gunz and Jalland, 1996). While the concept of dominant logic was originally employed to explain performance differences of diversified firms, it has since been used to study strategic change and adaptability (Bettis and Prahalad, 1995).

Cross-functional mobility (i.e., job rotation) can help to "program in"

an organization-wide perspective and integration of corporate goals (Hall, 1984: 170). Thus, as supported by the prior conceptual work of Hall (1984) and Prahalad and Bettis (1986), career experiences play a major role in shaping the TMT's view of the world and the tools they use to identify, define, and make strategic decisions. It can be argued that job rotation allows for a more expansive dominant logic among members of top management. Specifically, all TMT members will be knowledgeable of more aspects of the business, based on their varied career experiences, and will better understand how the parts of the organization interact in complex organizational issues.

Bettis and Prahalad (1995) utilize the heuristic of "bandwidth" to describe this shared mindset and the ca-

pacity of a firm's dominant logic for learning and interpreting rich information. With the enhanced experiential diversity of TMT members through job rotation, the bandwidth, or breadth of the TMT dominant logic, will likely increase. In a certain sense, this breadth in a TMT's dominant logic is analogous to the scope of possible chess patterns or moves within the repertoire of chess experts at various levels. While a grandmaster may have developed over 50,000 possible patterns or acceptable responses to various contingencies, a player of more amateur status is likely to possess closer to 1,300 patterns of play (Simon, 1979). If we extend this to the TMT, diversity in the career experiences of the members may provide for a larger menu of acceptable responses or strategic moves. To summarize, the following proposition is extended.

Proposition 1. Increasing intra-personal heterogeneity of TMT members will be associated with a more expansive TMT dominant logic.

Intra-personal heterogeneity should also minimize cognitive biases demonstrated by top management teams in strategic decision making. Specifically, it may diminish escalation of commitment and overconfidence biases. Each cognitive bias, and its related proposition, is discussed in turn.

Escalation of commitment refers to the tendency to increase commitment to a failing course of action (Staw and Ross, 1987). It has been suggested that employees who rotate through a variety of jobs are more objective, flexible, and tend to avoid obsolescence (Straub, 1991). Indeed, such characteristics would be useful in avoiding tendencies of over-commitment to failing strategies. Further-

more, research shows that in TMTs possessing a diverse set of perspectives and opinions, cognitive conflict (i.e., conflict that is task-oriented and focused on common objectives) produces enhanced decision quality (Amason, 1996). Cognitive conflict is important in that it symbolically demonstrates to team members that a decision-making process is fair and open and is focused on the good of the organization. It can be argued that when members in TMTs have high levels of intra-personal heterogeneity, a higher level of cognitive conflict will exist in strategic decision making. Such TMTs will, overall, be more receptive to differing perspectives due to their breadth in experience and understanding of the organization as a whole. Ultimately, a more objective orientation in strategic decision-making will be facilitated, and TMTs will be less susceptible to escalation of commitment

Moreover, when members have high levels of intra-personal heterogeneity, TMTs may be able to avoid escalation of commitment by their ability to transcend routine decisionmaking scripts and fixed solutions. Rotated managers enter the upper echelon after having been exposed to a variety of decision-making styles, networks of information, and organizational contacts that provide them with a stock of capabilities to draw upon when making complex decisions (Wanous and Youtz, 1986). As a result, selective perception biases should be minimized.

In other words, as Michel and Hambrick (1992) claim, executives who have been rotated through various assignments develop a firm-specific human capital that minimizes the potential for subunit parochial-

ism and encourages a firm-wide perspective. Prior empirical evidence also indicates that rotated managers increasingly value other functional viewpoints (London, 1989) and thus should be more likely to consider alternative ways of viewing business problems. This less entrenched perspective, coupled with an emphasis on cognitive conflict in the decision-making process, should help to minimize escalation of commitment biases.

Proposition 2a. Increasing intra-personal heterogeneity of TMT members will be associated with less escalation of commitment in TMT decision making.

Intra-personal heterogeneity, as developed by job rotation, may help to reduce overconfidence bias in TMT decision making. Overconfidence bias, also referred to as the "success syndrome," exists when individuals overestimate their ability, knowledge, and chance of success, or perhaps their degree of control over events (Kotter, 1986).

When experiencing lateral career moves, managers are often placed in difficult positions with a high potential for learning and required to attain numerous skills without much initial preparation — positions referred to as frame-breaking experiences (London, 1989). Frame-breaking experiences rigorously challenge managers' views of solving problems within the organization and encourage them to think critically about alternative solutions. Sugalski et al. (1995) suggest that critical thinking skills should be enhanced with multiple lateral assignments, as managers identify the novel associations and linkages among past and present situations. By identifying conceptual parallels and distinctions amongst

the aggregation of career experiences, managers are more likely to effectively frame and evaluate decision scenarios. Thus, critical thinking skills, developed through varied work experiences, may enable top managers to avoid overestimating the accuracy of their personal assumptions.

In addition, intra-personal heterogeneity may reduce overconfidence bias due to the rich and dense network of contacts developed via rotating assignments (Campion et al., 1994). By positioning themselves within a fabric of relationships, research suggests that managers can more effectively and efficiently acquire new knowledge when making decisions (Sugalski et al., 1995). They can also establish an integral location within their social network, one which facilitates their interpretation of decision information. It is argued, then, that repeated exposure to a wide array of personal histories, opinions, and insights will decrease a TMT's tendency to overestimate their ability, knowledge, and chance of success in strategic decision making.

Proposition 2b. Increasing intra-personal heterogeneity of TMT members will be associated with less overconfidence bias in TMT decision making.

An interesting alternative prediction to proposition 2b should also be noted. After experiencing a vast spectrum of assignments throughout the company, an executive might feel a false sense of security in his/her knowledge about the business, especially given his/her success in previous challenging assignments. The result may be overconfidence in decision making. Therefore, proposition 2b requires close empirical scrutiny.

Effect of Mediating Processes on Firm Performance

Finally, the proposed model suggests that these two mediating processes, enhanced breadth of the TMT dominant logic and minimized cognitive biases in decision making, will impact firm performance. In this last section, we discuss the impact of these mediating processes on firm performance.

An organization's dominant logic can be viewed as a double-edged sword. The idiosyncratic managerial capabilities of the firm may provide for a lasting competitive advantage (Schoemaker, 1990). Furthermore, the fit between the TMT dominant logic and the managerial needs for a particular business sector can make the difference between success and failure. Alternatively, it can be argued that a dominant logic may be detrimental to firm performance by constraining an organization and keeping it from the learning adaptation required for survival (Bettis and Prahalad, 1995). For instance, Miller and Friesen (1984) discuss the concepts of strategic momentum, inertia, and the persistence of the status quo over time. An organization's TMT may form a "zone of acceptance" with regard to certain actions, while alternatives remain outside the management team's discretion (Hambrick and Finkelstein, 1987). In essence, firms may become captives of their past as they develop a tolerance for a limited set of strategic moves.

Ultimately, we argue that the likelihood of a firm becoming captive of its past is a function of the breadth in the dominant logic of its TMT and the TMT's capacity to handle new and unfamiliar situations. Changes in strategy are often necessary in volatile

conditions and over time, even within normally stable sets of businesses, major structural revisions can occur. Furthermore, given today's hypercompetitive markets, the most stable of business sectors may undergo significant changes, requiring an increasingly broad TMT mindset. A firm possessing a relatively narrow dominant logic may not have the necessary adaptation capacity. However, a more expansive dominant logic, created by diverse career experiences, will include a larger set of cause-effect relationships and limit the possibility of getting "stuck in the past." Essentially, flexibility should increase.

Proposition 3a. A more expansive TMT dominant logic will be associated with enhanced firm performance.

Lastly, it is proposed that demonstrating fewer cognitive biases in strategic decision making, particularly escalation of commitment overconfidence bias, will lead to enhanced firm performance. If TMTs do not assess critical information realistically, or thoroughly evaluate decision information, strategic choices will likely be ineffective and firm actions may consequently suffer (Hill and Jones, 1992). Put simply, cognitive biases are sub-optimal for organizational performance.

There exists prior empirical support for this proposition which links cognitive biases to organizational-level outcomes. Specifically, previous empirical evidence suggests that cognitive biases can negatively impact firm performance. For example, Clapham and Schwenk (1991) found that self-serving biases (i.e., unrealistically positive views of personal qualities and abilities) in letters to shareholders were negatively related to future firm performance. Similarly,

Lyles (1987) pointed to and identified cognitive biases as potentially responsible for many failures of interorganizational linkages (e.g., joint ventures). To summarize, the following proposition is extended.

Proposition 3b. The use of fewer cognitive biases in strategic decision making will be related to higher firm performance.

Implications for Research

Several implications from this article exist for researchers concerned with the impact of career development strategies, such as job rotation, on organizational-level outcomes. These research implications are considered in terms of methodological issues and directions for future research.

Methodological Issues

There are certain methodological issues regarding our proposed model that should not be minimized. We briefly review three of these issues: the nature of the constructs in the proposed model, potential confounding variables, and difficulties allied with collecting appropriate data.

Some constructs in the proposed model may be operationalized rather simply by employing direct indicators. For example, financial indicators derived from archival sources could be used in measuring firm performance. Also, career histories could be used in measuring intra-personal heterogeneity. More specifically, a heterogeneity measure at the individual level could be calculated in much the same way that diversification is measured at the firm level (e.g., Montgomery, 1982). The following formula could be utilized:

$$1 - \sum m_i^2$$

where m_i is equal to the percentage of career time spent in function j, with j ranging from 1 to the total number of functions the executive has had experience in. This diversity measure can range from 0 (i.e., experience in only one functional area), to a limit approaching 1 as intra-personal diversity increases. An average intra-personal heterogeneity measure could then be calculated for the TMT. Granted, this formula (and our underlying rationale) implies that the organization is utilizing some variation of a functional structure (e.g., functional designs, divisional structures, or matrix organizations). However, the formula is quite flexible. For example, in an instance where a particular job cuts across functions (e.g., a financial analyst supporting research and development), the formula could be applied by having the executive estimate the amount of time spent dedicated to each function (e.g., Hitt and Tyler, 1991).

Yet other constructs in the model may be more difficult to identify empirically. For example, few reported attempts have been made to measure a TMT dominant logic. While the development of dominant logic measures is in its infancy, Bettis and Prahalad (1995) suggest that the scope of a firm's dominant logic can be partially determined by thoroughly interviewing top managers about basic views of strategy and the industry. Gunz and Jalland (1996) specifically suggest using a social method of inquiry, such as case studies involving ethnographic methodologies, as well as a cognitive mapping methodology. Cognitive mapping essentially refers to a variety of techniques designed to

generate a pictorial summarization of mental schemas (Huff, 1990). These qualitative methodologies may be necessary to explore such complex social phenomena. However, as with many qualitative methods, they can be resource intensive, lack generalizability, and involve excessive researcher interpretation.

Past strategic management search utilizing the concept of dominant logic has typically assumed that dominant logic, and its scope or expansiveness, to be an unobservable construct. That is, no existing instrument is capable of adequately measuring the phenomenon (Godfrey and Hill, 1995). The value of these unobservables rests upon the often argued positivist versus realist debate. According to the positivist perspective, if one cannot see it, touch it, or measure it, the concept has no value. Alternatively, the realist school of thought suggests that empirical support for a theory based upon unobservable constructs gives reason for believing that such unobservables exist and are influential. Indeed, the realist perspective is more accepting of using unobservable constructs in creating normative rules for managerial action (Godfrey and Hill, 1995).

Consistent with the realist perspective, empirical support linking intrapersonal heterogeneity to performance may give additional credence to the concept of dominant logic. Moreover, it would enhance the argument that the scope of a firm's dominant logic is at the heart of the intra-personal diversity-performance relationship. Thus, while we encourage other researchers to take up the challenge of designing measures of dominant logic, we also accept the realist perspective and the potentially normative value of the dominant logic con-

cept regardless of its immediate measurability.

In addition, there are potential confounding variables in the proposed model that future researchers will need to account for in their designs. That is, even though TMTs can provide a great deal of explanatory power in predicting corporate behavior, other factors may be responsible for strategy implementation and firm performance. This is especially a concern when considering the multitude of other factors that affect the strategic decision-making process at the organizational level. For example, Gunz and Jalland (1996) specifically suggest, in this area of research, that organizational structure and size could be considered nuisance variables because of their effect on performance outcomes, and hence propose that they be controlled.

Finally, collecting data of the nature discussed in the proposed model can be difficult. Not only is access to multiple organizations at this level in the organization a challenge, but multiple research methods may be required (e.g., archival sources, surveys, interviews). The familiar trade-off of utilizing numerous organizations to enhance generalizability versus concentrating on a rich, more detailed study of a few organizations remains present. Nonetheless, given the nature of the constructs and their available measurement options, the latter approach may be more appropriate for examining the present conceptual model.

Directions for Future Research

Several research recommendations concerning conceptual developments and future research questions can be made. Specifically, there may

be various dimensions of career experiences - functional, organizational, industry, and international and future research could conceptually integrate the effects of multiple forms of career experiences on propositions dealing with strategic decision making. For example, if a TMT is composed of members who possess experience with several organizations in an industry or multiple industries, might this further reduce the use of cognitive biases and enhance the TMT's dominant logic? Also, would international career experiences further reduce cognitive biases due to the communication skills developed by the numerous challenges that pervade cross-cultural business negotiations and other interactions?

Researchers could also empirically investigate TMT diversity from the more traditional perspective; that is, in terms of gender, ethnicity, and race. It may be that these specific demographic variables, as a result of the multifarious life experiences that they invoke, influence team interaction and team performance (either positively or negatively). For example, assuming different "identity groups" have unique experiences, researchers could explore the likely effects of similar and/or different life and work experiences within the TMT's performance. The performance variables to explore include: the degree of social integration, the ability to communicate and formulate consensus, the team's information processing capacity, and their success in decision implementation.

Finally, researchers could analyze other mechanisms used in organizations to create a breadth of understanding of the firm's goals, strategies, technologies, and processes. One potential research question

could address the particular benefits that cross functional teams, task forces, and committees produce at particular points in a manager's portfolio of career experiences. In other words, what type of "executive development value" do such short-term career development mechanisms create? The re-engineering craze, for example, has generated around various firm processes (e.g., product development), merging such functions as R & D and marketing. In this vein, researchers might investigate how such team experiences enhance the future decisions of those who progress to the executive suite.

Implications for Practice

Several implications for practice may be drawn from this work and any future empirical work in this area. Ultimately, these practical suggestions are dependent on future empirical verification.

At the most basic level, management development initiatives should be thoughtfully designed to develop experientially diverse top team members so that their contribution in the upper echelons may be recognized. However, some of the specific issues that will arise when embarking on this career management effort will likely include determining: (1) the critical mix of functional experiences, (2) the optimal amount of job rotation, and (3) the specific skills to target for development in rotation assignments.

First, when developing experientially diverse top executives, certain functional experiences appear to be especially desirable for managing in the new business reality (Burke, 1997). These assignments include exposure to the international arena, as well as sales, finance, and human re-

sources. International experience is especially critical for those aspiring top management positions so that they can better understand foreign markets, how to motivate foreign workers, and how to form international alliances. In addition, the critical mix of these functional assignments may be dependent upon the type of environment a firm operates within or upon its particular business strategy. For example, empirical research has shown that more complex strategy-making processes are needed in dynamic environments and as the organization grows and matures (Lumpkin and Dess, 1995). Thus, in volatile or unstable environments, a diverse mix of assignments would be desirable to develop the required breadth for solving organizational issues stemming from environmental change.

Second, in developing TMT talent, the optimal number of job rotations a manager should experience is also a valid and practical concern. Managing by a specific number of rotations is not an effective career development strategy as it will likely compromise either employee development needs or organizational productivity needs (Burke, Rather, rotation rates should be managed according to the time required to achieve a person's developmental needs (Campion et al., 1994). Firms should ultimately focus on the quality of the individual's work experiences and not the quantity of assignments he/she rotates through. Also, in order to acquire intra-personal heterogeneity that is sophisticated enough to be useful in the hypercompetitive, global marketplace, it may become even more important for managers to build into their work portfolio other company experiences.

Finally, an organization must identify the specific managerial skills to develop with rotation assignments. In doing so, the organization must have an eye toward the future so as to develop top managers who can navigate in an increasingly complex business environment. Else, the firm could ultimately develop mere clones of current leaders. Some guidance for identifying managerial competencies needed in the new business reality can be gleaned from research dealing with organizational capabilities as sources of a firm's competitive advantage. For example, Lado and Wilson (1994) broadly state two managerial competencies that are potentially important for sustained competitive advantage: the ability of leaders to articulate a vision and to enact a beneficial firm-environment relationship. Regardless of the specific competencies targeted for development, the particular assignments that will aid in advancing such skills will vary, thereby creating different managerial career paths in the firm.

Consequently, to use job rotation as a developmental strategy, organizations must assess the TMT skills needed to thrive in the future business environment and then guide the lateral career moves of high-potential employees to develop those targeted skills (Burke, 1997). Pursuing employee development in this way allows active management of employee learning as it relates to explicit corporate strategies, a key to strategic human resource management (Hall, 1984).

Discussion and Conclusion

Given the new business reality, managers must be able to adapt to changing conditions, establish broad

skills, and be innovative in dealing with ambiguity. In addition, managers must have a fundamental understanding of other functions' paradigms so that multi-disciplinary resources will be efficiently utilized. Such skills may be developed rather compatibly with the increasingly "boundaryless" career systems (Arthur and Rousseau, 1996) evolving in today's firms. Thus, as the traditional notion of confining people to narrow career paths and specializations disappears, the use of non-linear career moves may help instill less subunit parochialism and a broader managerial skill set.

We argue that job rotation strategies can assist organizations in creating such experiential breadth in its TMT members and may ultimately enhance firm performance. A diversity of career experiences as espoused by TMT members would provide a more encompassing dominant logic with a larger set of decision alternatives to consider. Moreover, intra-personal heterogeneity may reduce cognitive biases in strategic decision making, such as escalation to a failing course of action or overconfidence bias. Thus, our goal was to establish a theoretical link between this human resource development mechanism

(i.e., job rotation) and organizational level outcomes.

Furthermore, we maintain that future empirical research into the impact of TMT heterogeneity needs to begin examining heterogeneity at the level of the individual. A more refined composite measure of TMT heterogeneity can be established by aggregating across TMT members. While this approach may lead to certain methodological challenges, we maintain that such efforts will provide insights important to researchers and practitioners alike.

In sum, it is apparent that many organizational issues specifically call for research conducted at the intersection of academic disciplines (e.g., human resource management, strategy, organization behavior and theory). Interdisciplinary research that examines multi-level phenomena (e.g., individuals, groups, and organizations), along with mediating processes, helps researchers move closer to accurately capturing the complexity of the phenomena we study. This article attempts to build such a theoretical foundation. Although not devoid of challenge, we believe cross-level, interdisciplinary research remains an important goal in the organizational sciences and in future theoretical and empirical work.

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