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Top Management Team Heterogeneity, Global Strategic Posture, and Firm Performance: Evidence from MNEs Headquartered Around the World

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TOP MANAGEMENT TEAM HETEROGENEITY,

GLOBAL STRATEGIC POSTURE, AND FIRM PERFORMANCE:

EVIDENCE FROM MNES HEADQUARTERED AROUND THE WORLD

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By

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ABSTRACT / KEYWORDS

This study empirically examines the relationship between top management team (TMT) heterogeneity and firm performance for a sample of multinational enterprises (MNEs) headquartered in 31 countries from across the globe. Utilizing the theoretical perspectives of upper echelons (Hambrick & Mason, 1984) and information processing (Daft, Bettenhausen, & Tyler, 1993; Galbraith, 1973), I hypothesize that global strategic posture, a measure of the intensity of a firm's involvement in the multinational business environment, moderates the relationships between TMT heterogeneity and firm performance. My findings reveal an "enhancing" interaction (Cohen, Cohen, West, & Aiken, 2003: 285-286) between the different TMT heterogeneities investigated and the corresponding firm performance measures. Implications, limitations and future research directions are discussed.

Top Management Team, TMT Heterogeneity, Global Strategic Posture, Multinational Enterprise, MNE Firm Performance

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INTRODUCTION

Top Management Team (TMT) characteristics, according to prevailing views in the strategic management domain, are organizational factors that affect strategic outcomes and firm performance (Certo, Lester, Dalton, & Dalton, 2006; Hambrick & Mason, 1984). For many of these studies, the measure of similarity, or more precisely dissimilarity, of these TMT member characteristics is termed TMT heterogeneity. Upon investigating this heterogeneity concept and associations with organizational outcomes, researchers have found mixed results (e.g. Goll, Sambharya, & Tucci, 2001; Murray, 1989; Norburn & Birley, 1988; West & Schwenk, 1996). Perhaps boundary conditions exist that shed light on or lend meaning to these findings to date. Could the global involvement that firms have provide a moderating effect or a missing piece to the boundary puzzle?

Top Management Team studies began to increase in number and significance with the publication of a seminal article written by Hambrick and Mason (1984). In this conceptual work, the authors proposed the upper echelons theory. This theoretical perspective asserts that top managers interpret the strategic situations they face, and these interpretations are a function of their past experiences, personalities, and values. Methodologically, the upper echelons perspective provides a theoretical approach linking top managers' attributes or characteristics to organizational outcomes. These managerial characteristics may include factors such as

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organizational tenure, educational background, and functional orientation, which are then used to calculate a TMT's measure of heterogeneity.

In conjunction with this upper echelons perspective, could other factors be affecting and moreover moderate the relationship between TMT heterogeneity and firm performance? TMTs headquartered in countries throughout the world and operating in multinational environments may provide insight into this question. These TMTs differ in heterogeneity characteristics, and they also address differing degrees of highly diverse and complex business contexts (Carpenter & Fredrickson, 2001). Thus, a goal of this study is to begin a dialogue involving the characteristics of top managers, a firm's global involvement, and organizational outcomes.

The use of the construct global strategic posture is one measure used to capture the intensity of a firm's involvement in the multinational business environment. It indicates the global presence of a multinational enterprise (MNE). More specifically, global strategic posture "reflects the degree to which a firm depends on foreign markets for customers and factors of production and the geographical dispersion of the markets and factors" (Carpenter & Fredrickson, 2001: 534).

The purpose and contributions of this study are to empirically investigate firm performance from the perspective of top management teams based in countries around the world managing multinational enterprises. This cross section of TMTs has received little attention in the extant TMT and strategic management literature (Hambrick, 2007). More importantly, however, this study will explore the moderating role of the MNE's intensity or involvement in the global environment on the main relationship between TMT heterogeneity and firm performance.

I first disentangle the broad heterogeneity concept to hypothesize main effects relationships between specific TMT heterogeneity characteristics and firm outcomes. Higher levels of organizational tenure heterogeneity are hypothesized to negatively affect firm performance. Conversely, both higher levels of educational background heterogeneity and functional orientation heterogeneity are hypothesized to positively affect firm performance.

To then explore new ground within the TMT and strategic management research domains, I hypothesize that a firm's global strategic posture moderates these main effect relationships described above. Specifically, global strategic posture is hypothesized to negatively moderate organizational tenure heterogeneity while the same construct is hypothesized to positively moderate educational background heterogeneity and functional orientation heterogeneity. These hypotheses are based on a theoretical rationale known as the information processing perspective (Daft, Bettenhausen, & Tyler, 1993; Galbraith, 1973). The hypothesized relationships are represented in Figure 1. The hypotheses are tested on a sample of 300 TMTs leading multinational firms and headquartered in 31 different countries across the globe.

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┌─────────────────────────────────────────────────────────────────────┐
│                    ┌──────────────────────────────────────┐          │
│                    │  GLOBAL STRATEGIC POSTURE:            │          │
│                    │                                        │          │
│                    │  Composite measure of:                 │          │
│                    │    - Foreign Sales to Total Sales      │          │
│                    │    - Foreign-Owned Assets to Total     │          │
│                    │      Assets                            │          │
│                    │    - Geographic Diversity              │          │
│                    └──────────────────────────────────────┘          │
│                                                                        │
│                            ( - ) Organizational Tenure Heterogeneity   │
│                            ( + ) Educational Background Heterogeneity   │
│                            ( + ) Functional Orientation Heterogeneity   │
│                                                                        │
│   ┌───────────────────────────────┐    ┌─────────────────────────┐   │
│   │  MNE TMT HETEROGENEITY:       │    │  FIRM PERFORMANCE:      │   │
│   │                               │    │                         │   │
│   │  • Organizational Tenure      │    │  • Lagged ROA           │   │
│   │    Heterogeneity      ( - )   │──► │                         │   │
│   │                               │    │  • Lagged ROS           │   │
│   │  • Educational Background     │    │                         │   │
│   │    Heterogeneity      ( + )   │    │  • Lagged ROE           │   │
│   │                               │    │                         │   │
│   │  • Functional Orientation     │    │  • Composite measure of │   │
│   │    Heterogeneity      ( + )   │    │    lagged ROA, ROS, and │   │
│   │                               │    │    ROE                  │   │
│   └───────────────────────────────┘    └─────────────────────────┘   │
└─────────────────────────────────────────────────────────────────────┘
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FIGURE 1

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Theoretical Perspectives of the TMT

Whether called dominant coalitions (Cyert & March, 1963), inner circles (Thompson, 1967), or top management teams (Bourgeois, 1980), these groups of company top-level executives have been extensively investigated in the strategic management literature. Here forward referred to as top management teams, or simply TMTs, these groups have sparked two major and competing theoretical perspectives. The focus lies on the question of whether these TMTs are believed to significantly impact organizational/firm outcomes.

One view, which arises out of the domain of population ecology (Hannan & Freeman, 1977) and new institutional theory (DiMaggio & Powell, 1983) views top managers as having little effect on their organizations. The perspective posits that firms are "exceedingly inertial, swept along by external forces, and constrained by a host of conventions and norms" (Hambrick, 2007: 335). External forces such as government intervention and regulation, economic conditions, interest rate and currency fluctuations, industry type, and competition are perceived as drivers of firm outcomes and not the decisions and intervention of the TMT (Webber & Donahue, 2001). The TMTs influence remains tenuous; these top executives are indeed seen as interchangeable in so much as their replacement will not significantly affect the direction and performance of the firm.

The prevailing view from the strategic management domain, however, claims quite the opposite. To researchers and practitioners alike, this "link between the people at the strategic apex of the organization and that organization's performance" is a subject of paramount importance (Pitcher & Smith, 2001:1). It is this strategic leadership view (Finkelstein &

Hambrick, 1996; Hambrick, 1989) that suggests that the top executives greatly influence the strategies and outcomes of their firms. The seminal theoretical perspective and the impetus for a great amount of research on TMTs was proposed by Hambrick and Mason (1984). Their article introduces the upper echelons theory.

The upper echelons theory proposes that top executives interpret their strategic situations, and these interpretations are a function of their individual experiences, values, and personalities. While most strategic management researchers have not directly measured the top executive's psychological and cognitive frame, often referred to as the "black box" (Lawrence, 1997: 2), researchers have used demographic data to investigate these top managers. It is this data, which includes characteristics such as organizational tenure, educational background, functional orientation, and to a lesser extent characteristics such as age and sex, that have been tied to organizational outcomes in an effort to ascertain if significant relationships exist. Thus, it has also been these characteristics that have been used as valid, albeit noted as imprecise and incomplete, proxies of the top executive's psychological and cognitive frame. Collectively, these characteristics have been described as "stocks" of organizational knowledge and embody a certain level of the firm's human capital at a point in time (Becker, 1964; Smith, Collins, & Clark, 2005).

Important extensions or refinements of the upper echelons theory in the past two and a half decades come from research into moderators proposed to influence the main heterogeneity-firm outcome relationship. Some of these moderators are posited to affect the theory's predictive strength and more importantly, some have also been posited to reconcile the two opposing theoretical views. Two of the more significant moderators proposed include managerial

discretion (Hambrick & Finkelstein, 1987) and executive job demands (Hambrick, Finkelstein, & Mooney, 2005).

The first, managerial discretion, addresses the TMT's latitude of action. TMTs with greater managerial discretion face less constraint and more ambiguity in their decision making environment, and thus, multiple alternatives exist within their organizations. This presents an opportunity in their executive decision making where they more heavily rely on their own personal characteristics and background attributes to reach decisions; these factors are then reflected in firm strategy and performance (Hambrick, 2007). Therefore, greater managerial discretion implies that the predictive ability of upper echelons theory should be strengthened.

A second proposed moderator is termed executive job demands and takes into account three managerial factors. The first factor, task challenges, addresses the difficulty of strategic conditions. The second factor, performance challenges, includes consideration of difficult situations created by demanding owners and/or boards of directors. Lastly, the third factor, executive aspirations, acknowledges the top manager's strong interpersonal desire to yield optimal results, such as maximizing performance (Hambrick, 2007).

Higher levels of executive job demands, similar to managerial discretion, are proposed to increase the predictive ability of upper echelons theory. The rationale is as follows. As executive job demands increase, executives are forced to take mental shortcuts; these shortcuts result in the executive relying on his or her personal characteristics and background. These characteristics are then once again prominently reflected in firm strategies and performance (Hambrick, 2007).

Thus, the upper echelons theory has evolved and been refined since its introduction in 1984. The central premise still remains, however, "if we want to explain why organizations do

the things they do, or in turn, why they perform the way they do, we must examine the people at the top" (Hambrick, 1989: 5). This simple but clear statement encapsulates the goal of TMT research; it also extends research that only focuses on the CEO as the strategic decision maker within the firm. It has been noted that leadership, especially in large and complex organizations, is a shared responsibility (Hambrick, 2007). Top management teams are, therefore, perceived as having a central responsibility for their various stakeholders and for the firm; they extend influence on organizational culture, company policy, impending strategies, financial position, and organizational-level outcomes, (Barrick, Bradley, Kristof-Brown, & Colbert, 2007; Mayer & Gavin, 2005).

TMT Heterogeneity, Firm Performance, and Possible Moderation

The relationship between managerial characteristics and performance has provided impetus for both researchers and practitioners to study team composition and configuration of member attributes. Researchers have, therefore, operationalized TMT demographic diversity or more precisely TMT heterogeneity in many different ways. This issue may in fact be reason as to why different conclusions have been drawn and the findings mixed. Moreover, the generalizability of these results is called into question because the samples investigated in these empirical studies have most often only included U.S.-based firms (Hambrick, 2007).

In a study of Fortune 500 companies within the oil industry, a positive association was found between TMT heterogeneity and long-term firm performance. Age, firm tenure, and TMT tenure were used as measures of heterogeneity. In the same study, which also investigated the food industry, no TMT heterogeneity-firm performance relationships were detected (Murray, 1989). In a study by Norburn and Birley (1988) on five different U.S. industries, characteristics

such as functional orientation, tenure, and educational background were examined. The results were both positively and negatively associated with firm performance depending upon the particular type of heterogeneity and industry. Finally, more recently West and Schwenk (1996) investigated stable and dynamic U.S. industries and were unable to detect any heterogeneity relationships with firm performance, neither positive nor negative.

A meta-analysis was conducted concerning different types of diverse work groups and their corresponding performance (Webber & Donahue, 2001). Where TMTs were concerned, the researchers indicated that the performance variable most often investigated was firm-level financial performance (i.e. return on investment, return on equity, return on assets, profitability during the year, and/or sales increase). No relationships were uncovered. It was suggested by the researchers that future studies both stop treating diversity as a "generic concept" (Webber & Donahue, 2001: 159) as many studies in their sample had and that they also stop proposing diversity of all types will have a positive relationship with performance.

In a more recent meta-analysis investigating twenty-seven empirical studies on the relationship between TMT heterogeneity and firm performance (Certo, Lester, Dalton, & Dalton, 2006), a positive and significant relationship was found between TMT functional heterogeneity and ROA and also between TMT executive tenure heterogeneity and ROA. No significant relationships were found for organizational tenure heterogeneity and ROA or between educational heterogeneity and ROA. With respect to the other firm performance variables investigated (three year averaged ROA, ROA growth, three year averaged ROE, and sales growth), either there were no relevant empirical studies, less than three observations, or insignificant findings for these other various firm performance measures.

These findings are an invitation to continue this line of research and to employ several different measures of TMT heterogeneity and firm performance in order to unmask the significant relationships within these inconsistent findings. These past studies call on researchers to investigate firms operating in the global business environment in order to find generalizable relationships across differing business conditions. Furthermore, the TMT-firm performance meta-analysis by Certo, Lester, Dalton, & Dalton (2006) draws attention to the possibility of moderators acting upon the heterogeneity-firm performance relationship; moderators may shed light on the inconsistent findings to date.

Thus, for purposes of my research, TMT heterogeneity and firm performance will be explicitly measured in several different ways. Specifically with heterogeneity, it is presumptuous to believe one large measure of dispersion can be calculated to encompass several types of characteristics. These different characteristics may indeed be acting opposite to one another or have no individually significant effect on firm performance. Hypotheses, therefore, will be developed for specific and relevant types of TMT heterogeneity. Moreover, these relevant types of heterogeneity will be tested with several different dependent variable measures of firm performance.

It should be noted that the constructs used to develop the main effect hypotheses herein have been previously tested in the extant literature. However, this study's uncommon and wide-reaching sample provides a secondary-level contribution. Multinational enterprises headquartered and operating in different countries spread across the world is far from the norm for Top Management Team studies (Hambrick, 2007). A recent Academy of Management Journal editorial (Eden, 2002) also persuasively reaffirms the importance of these replication

studies; in particular, the use of different measures and samples was emphasized in order to advance theory.

This study, therefore, is more correctly likened to that of constructive replication (Lykken, 1968). My study tests hypothesized relationships among the same theoretical constructs as previous work; however, the operationalization of these constructs varies. The validity of the hypothesized associations is then strengthened by the confirmation of these same hypotheses using different methods.

Most importantly, however, to make my primary-level research contribution and ultimately extend the theoretical domain of this study beyond constructive replication, the TMT heterogeneity-firm performance relationship will also be investigated from a moderating perspective. This moderating influence will be hypothesized on the main effects relationships developed herein. Exploring the possibility of a moderating relationship, however, cannot take place without first developing and testing hypotheses concerning the direct relationships. I will, therefore, first examine the main effects relationships and then proceed to the exploration of possible moderation.

Heterogeneity and the TMT

This dialogue is continued by more closely examining the functional and dysfunctional outcomes of TMT heterogeneity. On the more advantageous end, diverse or heterogeneous TMTs in general should alleviate team issues such as groupthink (Hambrick & Mason, 1984); groupthink is the phenomenon in which the norm for consensus overrides the realistic appraisal of alternative courses of action (Janus, 1982). Heterogeneity is further posited to provide TMTs with greater cognitive resources, wider peer networks, multiple perspectives, greater levels of

information, and higher quality solutions (Bantel & Jackson, 1989; Certo, Lester, Dalton, & Dalton, 2006; Webber & Donahue, 2001; Williams & O'Reilly, 1998).

A more balanced perspective, however, occurs while peering into the "black box" (Lawrence, 1997: 2) between executive demographics and organizational outcomes, where researchers propose that one of the key process variables affecting the heterogeneity-firm performance relationship is conflict. Depending upon the type of conflict the TMT engages in, advantageous or disadvantageous results may occur. Different conclusions, therefore, may then be drawn.

From one perspective, cognitive conflict, also similarly known as task conflict, process conflict and functional conflict, aids the TMT as team members disagree about their ideas and issues such as the content of work, key decisions, the goals of work, procedures on how work gets completed, and choices for action (Amason, 1996; Pelled, Eisenhardt, & Xin, 1999). It is this kind of conflict that scholars agree generates improved decisions (Pelled, Eisenhardt, & Xin, 1999).

Another type of conflict, however, known as interpersonal conflict, also relatedly termed relationship conflict (Simons & Peterson, 2000), emotional conflict (Pelled, Eisenhardt, & Xin, 1999), or affective/dysfunctional conflict (Amason, 1996), is evident in interpersonal hostilities and personality clashes within the group. It is this type of conflict that is considered to decrease cohesion and hinder the TMT as heterogeneity increases (Knight et al., 1999; Webber & Donahue, 2001).

Moreover, and in line with interpersonal conflict, another important issue to consider as group heterogeneity increases is categorization (Pelled, Eisenhardt, & Xin, 1999). This phenomenon is the "subconscious tendency of individuals to sort each other into social

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categories. [...] Individuals tend to think positively of their own categories and more negatively about other categories" (Certo et al., 2006: 818). Categorization ultimately results in interpersonal conflict (Pelled, Eisenhardt, & Xin, 1999) as group members make inferences regarding other team members' attributes (Webber & Donahue, 2001).

In summary, researchers have noted that an increase in interpersonal conflict is often a result of issues such as categorization as well as other critical group issues to include informal communication, social integration, and behavioral integration (Hambrick 1998; Hambrick, 1994; Smith et al., 1994; Williams & O'Reilly, 1998). Categorization, previously described, becomes a disadvantage to more heterogeneous teams. Team heterogeneity also does not facilitate the ease and frequent exchange of informal communication (Smith et al., 1994), which is vital for efficient team coordination (Hambrick, Cho, & Chen, 1996). Finally, social and behavioral integration address similar but distinct concepts concerning group cohesion and collective and effective group interaction; these issues in lower levels are proposed to be associated to higher levels of interpersonal conflict (Knight et al., 1999; Webber & Donahue, 2001).

Thus, TMT heterogeneity and TMT homogeneity both have their benefits and hindrances. These issues will be more closely explored and hypotheses subsequently developed. One caveat is more fully expounded upon, however, before this action is taken; it is that of Lawrence's (1997) concern with the black box of organizational demography.

In using demographic predictors to explain outcomes, I broach the issue of using imprecise proxies, as researchers have also done in past studies, in an attempt to measure the executive's psychological and cognitive frame. As I use process concepts such as conflict to develop my arguments for hypotheses development herein, this concern is appropriately noted. It is also, however, noted that this type of research is still beneficial. In an update on nearly

twenty-five years of upper echelons research, Hambrick (2007: 337) states that actually performing black box research is extremely difficult; "it requires very intrusive access to large numbers of executives and TMTs, who are notoriously unwilling to submit themselves to scholarly poking and probing." Furthermore, it requires researchers that have "an interest in and facility with both microprocesses and macro-organizational phenomena" (Hambrick, 2007: 337). Therefore, this issue is recognized as a limitation of the present study. It is also recognized, however, as an avenue for future research as well when important findings are made. In summary, it should be noted that both macro and micro types of research studies are, therefore, required moving forward to unravel the enigma of top management teams.

I now continue by more closely examining three critically relevant types of TMT heterogeneity strongly associated to the psychological and cognitive processes of the TMT: organizational tenure, educational background, and functional orientation (Olson, Parayitam, & Bao, 2007). While any attribute of TMT heterogeneity may have relevance for organizational outcomes, I focus primarily on these three because they are also highly job related and thus more salient to the strategic and operational tasks facing TMTs than other aspects of heterogeneity such as race, gender, and age, for example, which are lower in job relatedness (Pelled, Eisenhardt, & Xin, 1999).

Organizational Tenure Heterogeneity

A critical TMT heterogeneity characteristic is tenure, the period of time during which an employee's position has been held. In the Top Management Team literature, the concept of tenure has been investigated as tenure within the TMT, tenure within the executive ranks, and tenure within the organization. Capturing tenure within the organization, however, provides

much greater opportunity for an employee to acclimate to a firm's culture; this process more profoundly shapes the views and ultimately the decisions of a firm's managers. Interestingly enough, however, it is also this acculturation that may constrict an employee's perspectives (Harrison & Carroll, 1991; Robbins, 2005).

Studies have shown that associations among team heterogeneity and performance depend upon the type of work the team performs (Bell, 2007). Using Devine's (2002) team type taxonomy, teams are grouped into two overarching dimensions, physical teams (e.g. production, service) and intellectual teams (e.g. advisory, executive). TMTs are categorized as the latter, intellectual teams, where thinking is principle and fundamental to the task. These intellectual teams utilize nonlinear work processes and mental skills; their primary result is new knowledge and information (Bell, 2007).

As these teams use their skills of thinking and reasoning, however, organizational culture, norms and routines are imprinted on this process. Knowledge, more specifically tacit knowledge, which is personal know-how difficult to confirm and convey, guides the development and use of these company norms and routines (Smith, Collins, & Clark, 2005). As acculturation takes place for employees with longer organizational tenures, the cognitive diversity/heterogeneity of the group is impacted. In essence, longer tenures lead to cognitive homogenization (Harrison & Carroll, 1991; Robbins, 2005).

Similarly, longer organizational tenures among the top management team members also lead to an issue characterized as becoming stale in the saddle (Miller, 1991). This concept, described by research performed by Miller (1991) through the investigation of longer tenured CEOs, captures an executive's desire to resist external pressures for change due to issues such as the gaining over time of a controlling balance of power, entrenchment in the ideology of the

firm, and the surrounding of themselves with other executives that have views very similar to their own. This also homogenizes the TMT and the organization (Miller, 1991). This homogeneity of the team, furthermore, leads to other issues such as groupthink (Janus, 1982), a team disadvantage previously described.

In contrast to TMT members with longer organizational tenures, TMT members with less organizational tenure are characterized as more willing to challenge the status quo. Issues associated with TMTs becoming stale in the saddle are posited to be countered (Simons, Pelled, & Smith, 1999). But the question truly becomes, are they?

It is posited that the issue of categorization between the longer tenured and shorter tenured executives takes its negative toll on group processes. This form of heterogeneity more strikingly separates team members into one of two groups, those with longer tenures versus those with shorter tenures. In this respect, this particular heterogeneity measure is methodologically different than heterogeneity measures such as educational background and functional orientation, which will be subsequently addressed and have more classifications and possible subgroups that may be encountered.

Thus, it is this process of categorization that leads to relationship/dysfunctional conflict and ultimately and negatively impacts team processes, decisions, and outcomes. Since the heterogeneity of TMT firm tenure connotes that some TMT members will have spent more time with the organization while others are fairly new to the organization, the increase in group organizational tenure heterogeneity in essence has divisive ramifications leading to the disadvantageous issues described herein.

This dysfunctional conflict is responsible for the hindrance of team cohesion and group performance. Ultimately, poorer TMT decisions and negative firm performance will be

manifested via the increased organizational tenure heterogeneity of the top executives. This

perspective also falls in line with insight gained from the team-performance meta-analysis

performed by Webber and Donahue (2001), which suggests that researchers stop proposing that

diversity of all types naively and simply have a positive relationship with performance. Thus,

due to the arguments provided, I hypothesize a negative association between organizational

tenure heterogeneity and firm performance. Stated in hypothesis form:

    H1:   Greater TMT Organizational Tenure Heterogeneity is negatively associated with

             Firm Performance.

Figure 2 provides graphical representation of this hypothesis along with other pertinent statistical

details.

Firm
Performance

TMT Organizational
Tenure Heterogeneity

H1:   Greater TMT Organizational Tenure Heterogeneity is negatively

       associated with Firm Performance.

Variable Operationalization: (details/references listed in variable table)

          Sample description and TMT definition

          DV: firm performance

          IV: TMT organizational tenure heterogeneity

          Controls: firm size, firm age, TMT size, primary industry
                       type

          Method: hierarchical OLS regression

                            $Y = b_1 X + b_0,$

                       where b_1 is (-)

FIGURE 2

Educational Background Heterogeneity

Contrary to the hypothesis developed for organizational tenure, greater heterogeneity for certain types of characteristics should be more advantageous for group processes and will, therefore, positively influence the group and ultimately, firm performance (Webber & Donahue, 2001). Proposed as a highly critical group characteristic, educational background has been described as notably relevant to cognitive work tasks. It is proposed to have "a stronger impact on the task-relevant group processes and performance" (Webber & Donahue, 2001: 143) than most other characteristics. Moreover, conflict related to the team's tasks and processes has already been described to lead to improved decision-making (Pelled, Eisenhardt, & Xin, 1999).

Regarding teams and their members' educational backgrounds, psychologists further support the associations between the level and breadth of education with improved knowledge structures, information processing, and cognitive performance (Glaser, 1984; Smith, Collins, & Clark, 2005). In accordance with upper echelons theory and because this study specifically examines top executives, this connection extends to the TMT's improved outcome - organizational performance.

Level and breadth of education also tie to another important psychological construct, general mental ability (GMA). Recalling Devine's (2002) team type taxonomy, TMTs are characterized as intellectual teams and charged with creating new knowledge (Bell, 2007). GMA has been found to be more highly associated with intellectual teams rather than physical teams, and in two recent meta-analyses, GMA has surfaced as a strong predictor of performance (Devine & Phillips, 2001; Stewart, 2006). Finally, researchers have posited that more highly and broadly educated executive teams would have greater cognitive abilities and have the ability to generate more novel and creative firm solutions (Bantel & Jackson, 1989). Thus, consistent with

previous TMT literature, I hypothesize a positive association between educational background

heterogeneity and firm performance. Stated in hypothesis form:

      H2:   *Greater TMT Educational Background Heterogeneity is positively associated with*

           Firm Performance.

Figure 3 provides graphical representation of this hypothesis along with other pertinent statistical
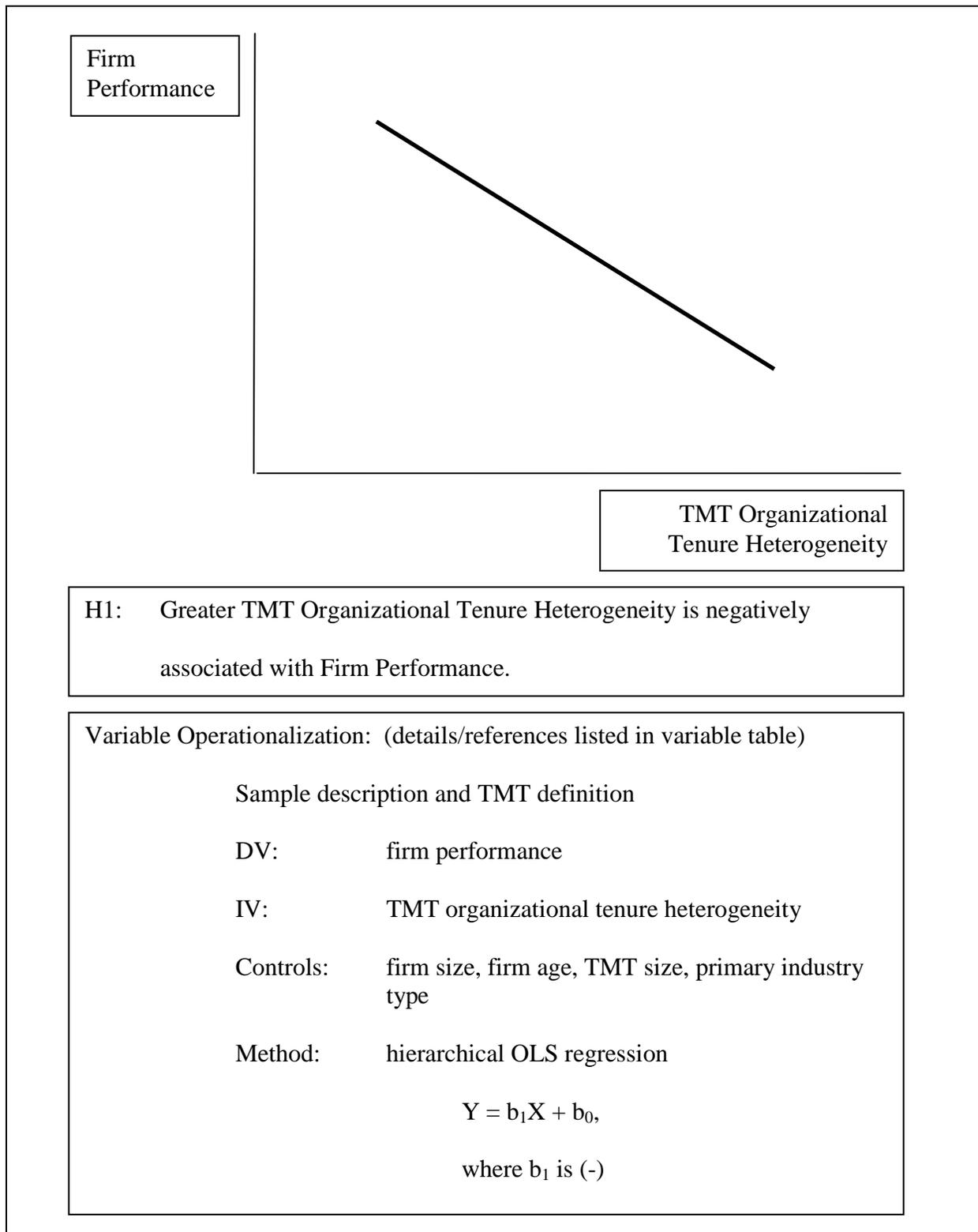
details.

Firm
Performance

TMT Educational
Background Heterogeneity

H2:   Greater TMT Educational Background Heterogeneity is positively

associated with Firm Performance.

Variable Operationalization: (details/references listed in variable table)

Sample description and TMT definition

DV: firm performance

IV: TMT educational background heterogeneity

Controls: firm size, firm age, TMT size, primary industry type

Method: hierarchical OLS regression

$$Y = b_1 X + b_0,$$

where b_1 is (+)

FIGURE 3

Functional Orientation Heterogeneity

A third relevant TMT characteristic that has been posited to have a prominent effect on firm performance is functional orientation; this particular form of team diversity has been cited as the most frequently studied aspect of TMT heterogeneity (Cannella, Park, & Lee, 2008; Carpenter, Geletkanycz, & Sanders, 2004; Finkelstein & Hambrick, 1996). This type of heterogeneity distinguishes executives by their primary occupational profession, such as marketing, operations, finance, counsel, etc. (Hambrick, Cho, & Chen, 1996). Thus, noted as a critical heterogeneity measure (Hambrick & Mason, 1984), it is posited to influence how managers perceive and define business problems (Hambrick, 1989).

This heterogeneity attribute is highly relevant to cognitive work tasks and posited to also be significantly associated to task-relevant group processes and performance (Webber & Donahue, 2001). Executives from different functional backgrounds inject their individual perspectives from working in different types of arenas and the tendency towards groupthink is avoided (Certo et al., 2006). Moreover, this type of heterogeneity ties to the effective utilization of functional conflict, productive knowledge exchanges, and wider perspectives (Smith, Collins, & Clark, 2005).

Thus, in line with the more general consensus of functional orientation heterogeneity studies that have posited positive, linear relationships with firm performance, I too hypothesize a positive relationship between functional orientation heterogeneity and firm performance. Stated in hypothesis form:

H3:   *Greater TMT Functional Orientation Heterogeneity is positively associated with*

Firm Performance.

Figure 4 provides graphical representation of this hypothesis along with other pertinent statistical
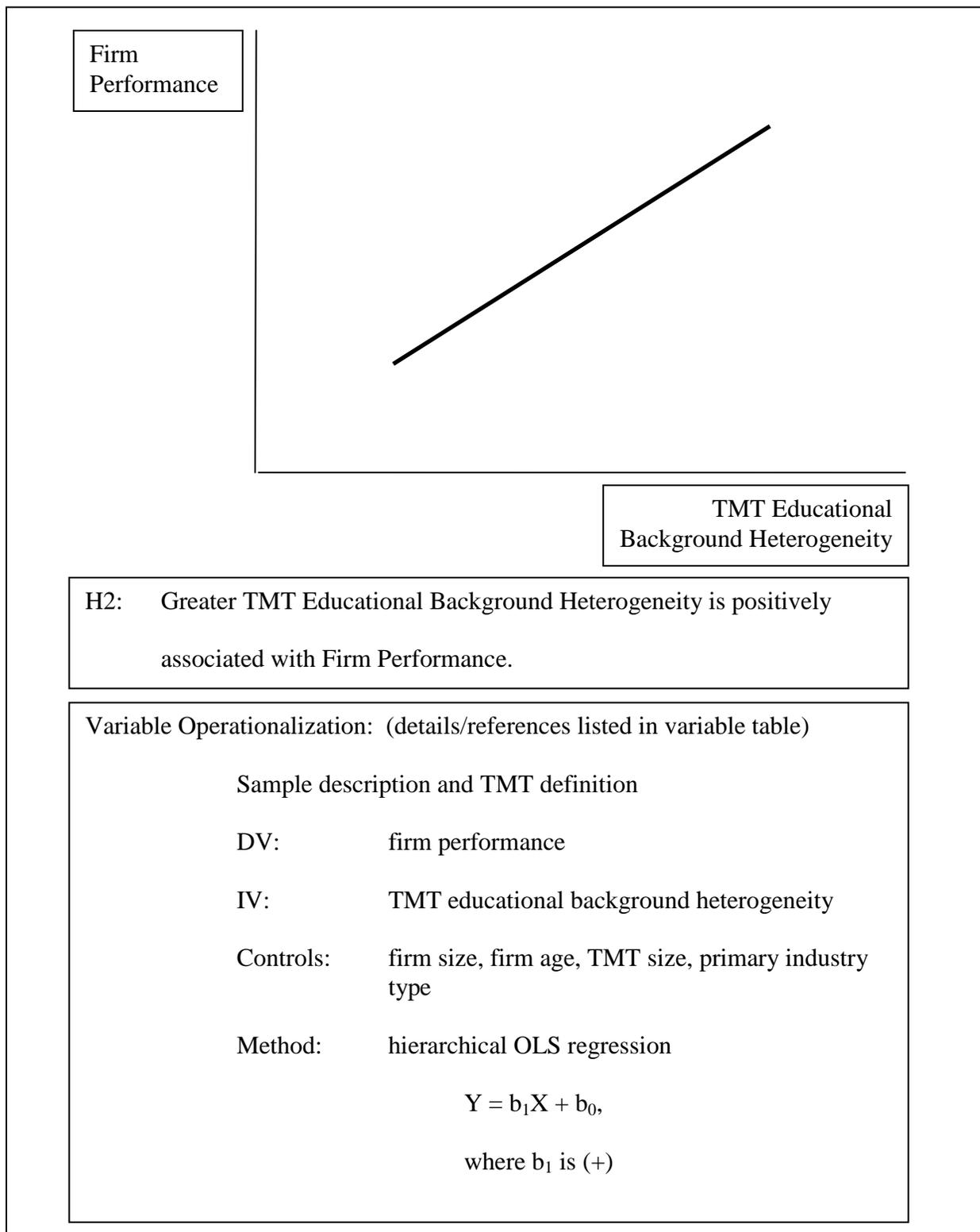
details.

```
Firm
Performance


                                                            TMT Functional
                                                      Orientation Heterogeneity
```

H3:   Greater TMT Functional Orientation Heterogeneity is positively

       associated with Firm Performance.

Variable Operationalization: (details/references listed in variable table)

       Sample description and TMT definition

       DV: firm performance

       IV: TMT functional orientation heterogeneity

       Controls: firm size, firm age, TMT size, primary industry
                   type

       Method: hierarchical OLS regression

                        $Y = b_1 X + b_0$,

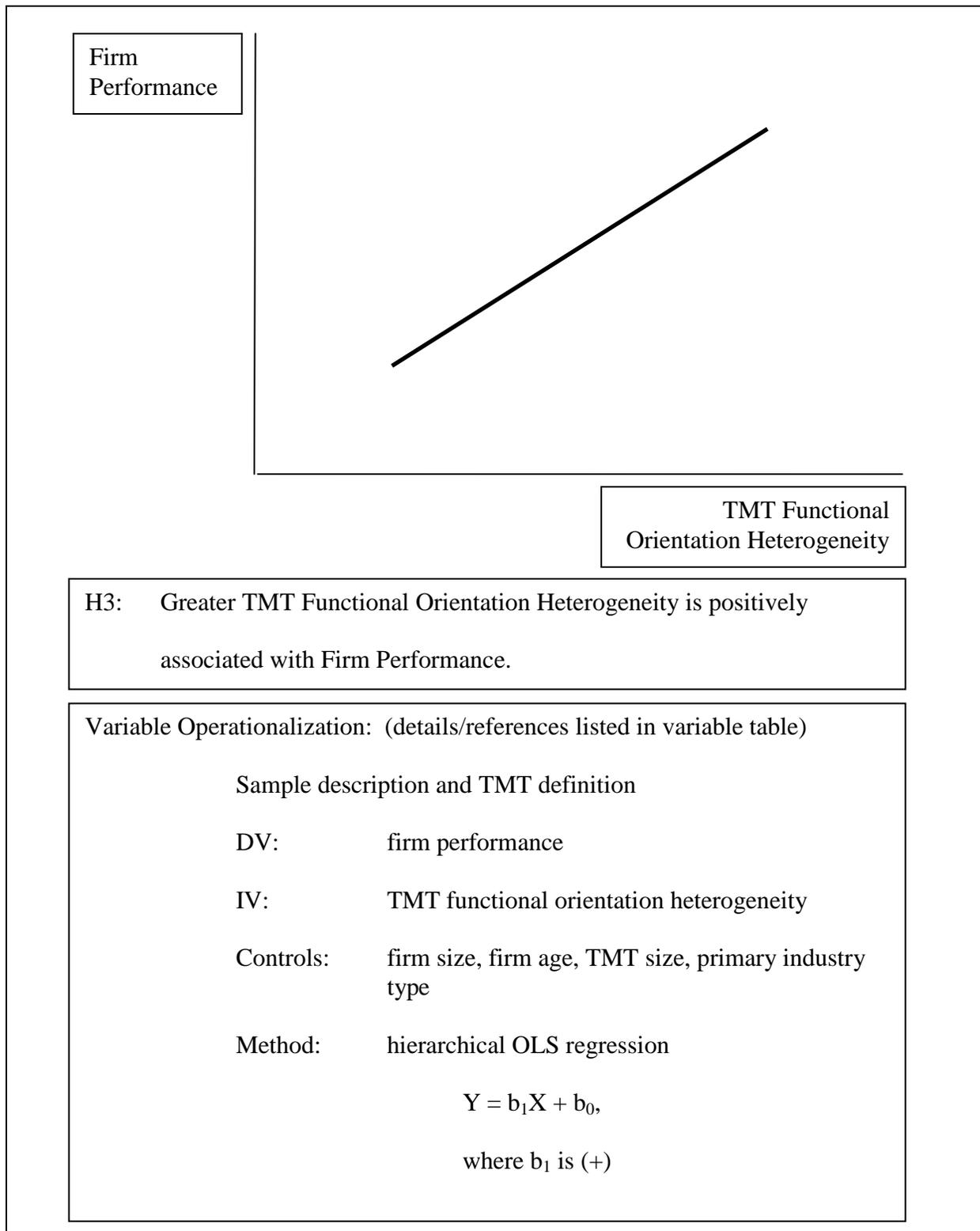   where b_1 is (+)

FIGURE 4

TMTs and the International Context

One of the main concerns to date with TMT research in the strategic management domain is the issue that most of the findings and conclusions have been drawn from studies of U.S.-based organizations. In a recent review on the state of the field, one of the most prolific and impactful TMT researchers stated, "The overwhelming majority of empirical upper echelons studies have used samples of American firms" (Hambrick, 2007: 339). In order to extend the theoretical perspective on this subject, researchers must examine TMTs and firms operating in the international context or as Hambrick describes, the "macrosocial context" (Hambrick, 2007: 339); this effort will allow researchers to determine if upper echelons theory takes on a different representation.

To further substantiate the need for research extension into the international domain, in a review of 222 articles published in leading strategic management and international business journals from 1986 through 1995, Lohrke and Burton (1997:41) noted that TMT research is "notably absent" from the international strategic management literature. Athanassiou and Nigh (1999), moreover, determined that studies concerning TMTs in multinationals are extremely rare. I plan to address these two concerns simultaneously by not only investigating TMTs based/headquartered in different countries across the globe, but more specifically, by investigating TMTs based in different countries around the world that are engaged in managing MNEs - multinational enterprises.

It should be noted that there are a handful of studies that do investigate TMTs in the international context; however, while these investigations do examine multinational firms, they are still U.S.-based firm studies. For example, Sambharya (1996) tests the association between international experience of U.S.-based multinational top management teams and international

diversifications strategies. Athanassiou and Nigh (2000; 1999) examine U.S.-based MNE TMTs and internationalization. The fate of top executives in U.S.-based multinational firms following a merger or acquisition is investigated by Krug and Hegarty (2001). More recently, Carpenter and Sanders (2004a) investigate the associations between TMT compensation, the firm's degree of internationalization, and U.S.-based MNE performance. These studies begin to address important organizational behavior and strategic management issues. More importantly, however, they extend upper echelons theory into the international business (IB) arena.

TMTs and the Global Business Environment

By incorporating the study of the characteristics of top managers along with the business environment's seemingly ubiquitous call to globalize the firm (Levy, 2005), the TMT managing the multinational enterprise provides a unique and promising context to test and extend the theoretical perspective of upper echelons. I have theoretically explored the characteristics of the TMT and accordingly developed hypotheses concerning relevant heterogeneity attributes with respect to firm performance. I will now turn my attention to examining the significance of the MNE and the global business environment.

Before advancing onward, however, another theoretical perspective needs to be introduced, addressed and considered in this dialogue. This similarly important theory, most notably for top management team studies, is termed the information processing perspective (Daft, Bettenhausen, & Tyler, 1993; Galbraith, 1973). According to this perspective, "organizations are information processing systems, and strategic decisions require information processing by the managers" (Olson, Parayitnam, & Bao, 2007: 198). The theory is used by TMT researchers (e.g. Certo, Lester, Dalton, & Dalton, 2006; Haleblian & Finkelstein, 1993) to

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suggest that one of the chief duties of executive managers is to process information; then

relatedly, the effective execution of this responsibility, posited through the use of team

heterogeneity, is associated with increased firm performance (Henderson & Fredrickson, 1996).

This relationship is another, albeit not completely unrelated, rationale for investigating the

associations between TMT demographic variables, team heterogeneity, and organizational

outcomes (Certo, Lester, Dalton, & Dalton, 2006). This theoretical perspective also becomes

more pronounced with the examination of TMTs managing in the global business environment

as previous literature further suggests that the top management team does play an important role

in determining the success of the multinational enterprise and does influences MNE performance

(Goll, Sambharya, & Tucci, 2001; Li, Xin, Tsui, & Hambrick, 1999; Murray, 1989; Norburn &

Birley, 1988; Schuler, 2001).

MNEs are described as firms that operate in several countries (Deresky, 1997; Stopford,

1992). For TMTs engaged in making strategic decisions for the MNE, operating in this type of

business environment introduces high levels of uncertainty and dissimilarity (Caloria, Johnson,

& Sarnin, 1994; Prahalad & Doz, 1987). These conditions give rise to what social psychologists

term weak situations (Mischel, 1977), where top managers are characterized as having more

decision making discretion. Thus, the individual characteristics of the top executives are most

likely to dominate group and organizational norms (Carpenter & Fredrickson, 2001; Finkelstein

& Hambrick, 1990; Hambrick & Finkelstein, 1987).

The concept of decision making discretion is very similar to and closely aligned with the

concepts of managerial discretion and executive job demands (specifically task challenges)

previously discussed. These concepts are posited to moderate and possibly even reconcile the

theoretical perspectives on TMTs and organizational outcomes (Hambrick & Finkelstein, 1987;

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Hambrick, Finkelstein, & Mooney, 2005). At higher levels of decision-making and managerial

discretion and task challenges, like those found in the MNE context, managerial predispositions

and personal characteristics are more pronounced in influencing strategy and performance.

Stated in yet another way, TMT characteristics are prominently reflected in firm strategies and

performance; the influence of leadership is magnified. This, in essence, increases the predictive

ability of upper echelons theory in the MNE environment (Hambrick, 2007).

MNEs also present a context where organizations are more complex. This greater

complexity is associated with increased information processing requirements for the top

executive team (Carpenter & Fredrickson, 2001). Since the task of information processing

represents one of the primary responsibilities of the TMT, the realization and execution of this

duty is paramount to organizational functioning and firm performance (Henderson &

Fredrickson, 1996). As the environment becomes more complex, more unstable, and more

uncertain, the perceived risk of organizational failure is also greater (Hambrick & Finkelstein,

1987). These environmental conditions can impact the relationships between executive

characteristics and organizational performance (Hambrick & Finkelstein, 1987) and are,

therefore, posited to moderate the main heterogeneity-performance relationship.

The realization as described by Finkelstein and Hambrick (1996: 20) is that under

conditions of greater uncertainty, top managers are "embedded in ambiguity, complexity, and

information overload." Indeed, the global context appears to affect the TMT and thus, ultimately

firm outcomes as well. While the global economy has "created an increasingly complex

decision-making environment characterized by information overabundance, uncertainty, and

ambiguity," (Levy, 2005: 797) the TMTs still only have limited information processing capacity

as they pay attention to a finite number of issues, interpret them, and take subsequent action

(Levy, 2005). Therefore, as firms continue to expand their global presence, it is hypothesized that due to the information processing theoretical perspective, this expansion will have an interacting effect on the main relationship between TMT heterogeneity and firm performance. Will this interacting effect, however, be positive or negative?

The information processing perspective proposes that diverse team characteristics facilitate the heterogeneity-firm performance relationship. In essence, this theory posits that increased information processing has a magnification effect on the main relationships. The perspective further advances the idea that not only information processing but information overload as well, will ultimately moderate team heterogeneity and firm performance. Thus, the gaps that exist in the scholarly understanding of TMTs and organizational outcomes invites exploration of this possible moderator and potential boundary condition.

Global Strategic Posture

By introducing a construct known as global strategic posture, I will address this argument more methodologically. Global strategic posture indicates the level to which an organization relies on foreign markets for "customers and factors of production and the geographical dispersion of these markets and factors" (Carpenter & Fredrickson, 2001: 534).
Even though the complexity of taking a firm global is inherent in the globalization literature, practitioners and researchers alike still continue to support the notion that companies must have a strong global presence in order to achieve long-term success and survival (Barkema & Vermeulen, 1998; Bartlett & Ghoshal, 1989; Carpenter & Fredrickson, 2001; Levy, 2005).

While all MNEs in this study by definition have a multinational perspective because they operate in at least three different countries, I am proposing that increasing global

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involvement/intensity and consequently increasing TMT information processing requirements will magnify the already hypothesized heterogeneity-performance relationships. The disadvantages or advantages gained from the specific types of heterogeneity-performance relationships will be enhanced. Thus, with respect to organizational tenure heterogeneity, global strategic posture will negatively moderate the proposed direct relationship. Conversely, with respect to both educational background heterogeneity and functional orientation heterogeneity, global strategic posture will positively moderate the hypothesized main relationships.   In this way, global strategic posture, which is a measure of the intensity of involvement in the external environment, is hypothesized to magnify or enhance the relationships already developed herein.

To further clarify and highlight the importance of moderation, Cohen, Cohen, West, and Aiken (2003: 285-286) describe three patterns of interactions between two continuous variables. The first, an "enhancing" interaction, describes a situation where the predictor and moderator variables affect the outcome variable in the same direction; their combined effect is stronger than either individual effect. The second pattern, a "buffering" interaction, describes a situation where the moderator variable weakens the effect of the predictor variable on the outcome. Finally, the third pattern termed an "antagonistic" interaction, describes the scenario in which the predictor and moderator variables have the same effect on the outcome, but the interaction is in the opposite direction.

With respect to all three hypotheses, I am proposing an "enhancing" interaction (Cohen, Cohen, West, & Aiken, 2003: 285-286). In other words, where organizational tenure is predicted to have a negative and linear effect on firm performance due to the issues of interpersonal conflict and more specifically categorization, a lack of team cohesion, poor informal communication and ineffective team integration, information overload due to the multinational

business context will only magnify these problematic issues and ultimately firm performance. On the other hand, where TMT educational background and TMT functional orientation are posited to have positive and linear effects on firm performance, effective and efficient information processing in the multinational business environment will enhance the firm outcomes hypothesized. These teams are posited to have the ability to increase absorption and recall of complex issues during decision making, increase cognitive conflict via more distinct individual judgments to address decision making errors, and increase the quantity and quality of potential resolutions in the problem-solving process (Haleblian & Finkelstein, 1993). This suggests the following hypotheses:

> H4:   *Global Strategic Posture negatively moderates the previously proposed linear relationship between TMT Organizational Tenure Heterogeneity and Firm Performance.*

> H5:   *Global Strategic Posture positively moderates the previously proposed linear relationship between TMT Educational Background Heterogeneity and Firm Performance.*

> H6:   *Global Strategic Posture positively moderates the previously proposed linear relationship between TMT Functional Orientation Heterogeneity and Firm Performance.*

Figures 5, 6, and 7 provide graphical representation of these hypotheses along with other

pertinent statistical details.

Firm Performance

Low Global Strategic Posture

High Global Strategic Posture

| Low (mean - 1 sd) | TMT Organizational Tenure Heterogeneity | High (mean + 1 sd) |

H4:   Global Strategic Posture negatively moderates the previously proposed

linear relationship between TMT Organizational Tenure Heterogeneity

and Firm Performance.

Variable Operationalization: (details/references listed in variable table)

Sample description and TMT definition

DV: firm performance

IV: TMT organizational tenure heterogeneity

Moderator: global strategic posture

Controls: firm size, firm age, TMT size, primary industry type

Method: hierarchical OLS regression
$$Y = b_1X + b_2Z + b_3XZ + b_0,$$
where b_1 is (-), b_2 is (-), b_3 is (-)

FIGURE 5

Firm Performance

High Global Strategic Posture

Low Global Strategic Posture

| Low (mean - 1 sd) | TMT Educational Background Heterogeneity | High (mean + 1 sd) |

H5: Global Strategic Posture positively moderates the previously proposed linear relationship between TMT Educational Background Heterogeneity and Firm Performance.

Variable Operationalization: (details/references listed in variable table)

Sample description and TMT definition

DV: firm performance

IV: TMT educational background heterogeneity

Moderator: global strategic posture

Controls: firm size, firm age, TMT size, primary industry type

Method: hierarchical OLS regression
$$Y = b_1X + b_2Z + b_3XZ + b_0,$$
where b_1 is (+), b_2 is (+), b_3 is (+)

FIGURE 6

Firm Performance

High Global Strategic Posture

Low Global Strategic Posture

| Low (mean - 1 sd) | TMT Functional Orientation Heterogeneity | High (mean + 1 sd) |

H6:   Global Strategic Posture positively moderates the previously proposed

linear relationship between TMT Functional Orientation Heterogeneity

and Firm Performance.

Variable Operationalization: (details/references listed in variable table)

Sample description and TMT definition

DV: firm performance

IV: TMT functional orientation heterogeneity

Moderator: global strategic posture

Controls: firm size, firm age, TMT size, primary industry type

Method: hierarchical OLS regression
$Y = b_1X + b_2X^2 + b_3Z + b_4XZ + b_5X^2Z + b_0$,
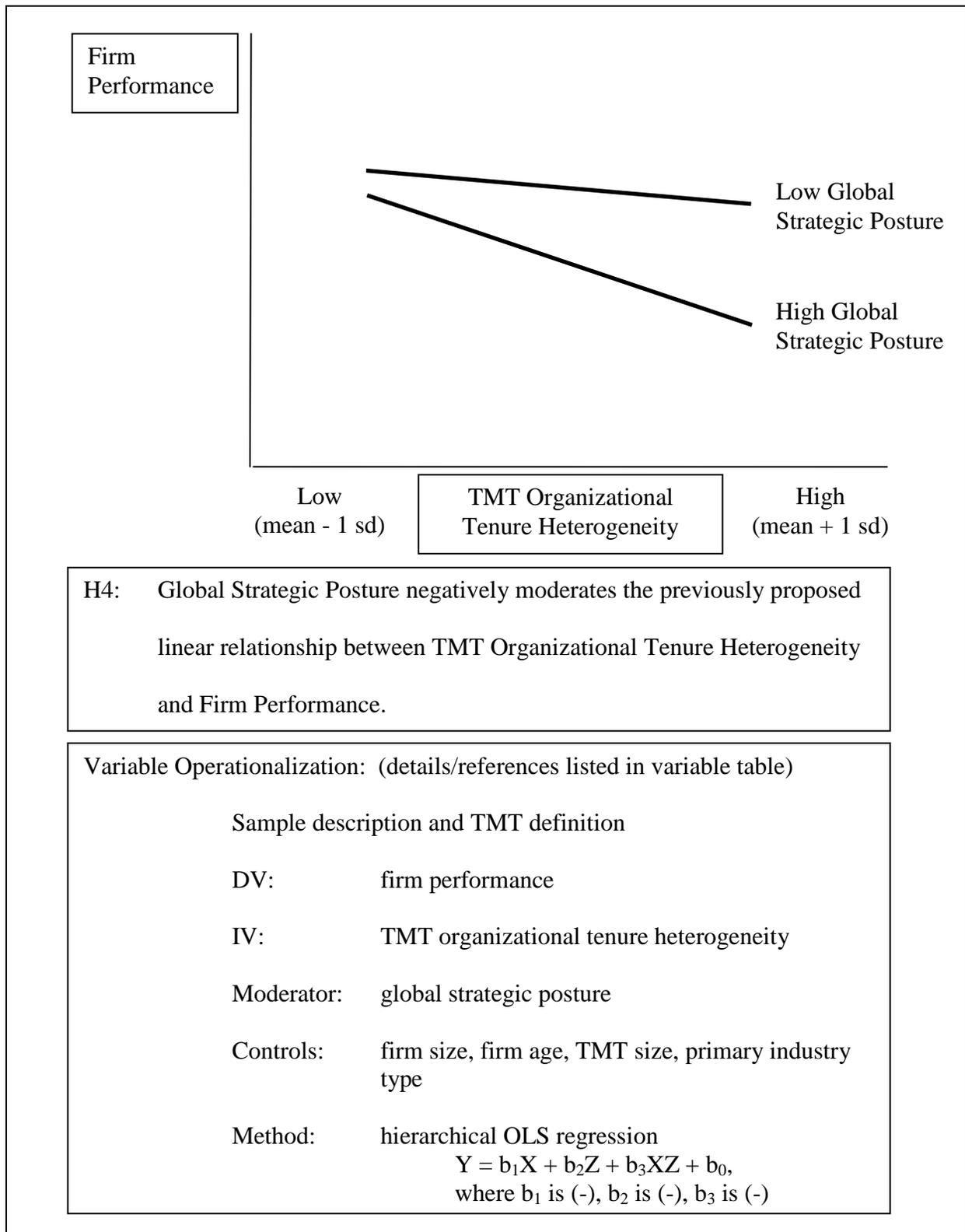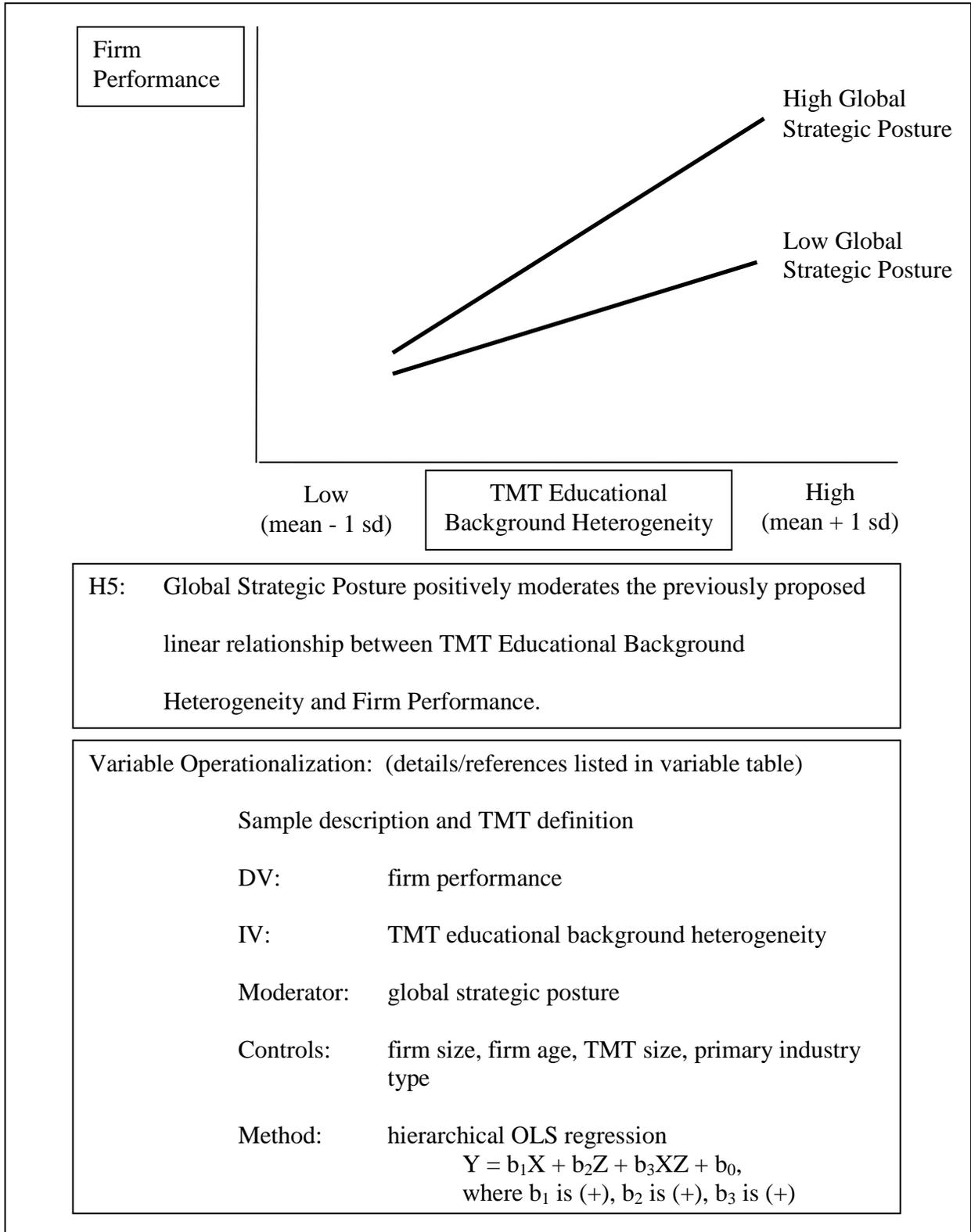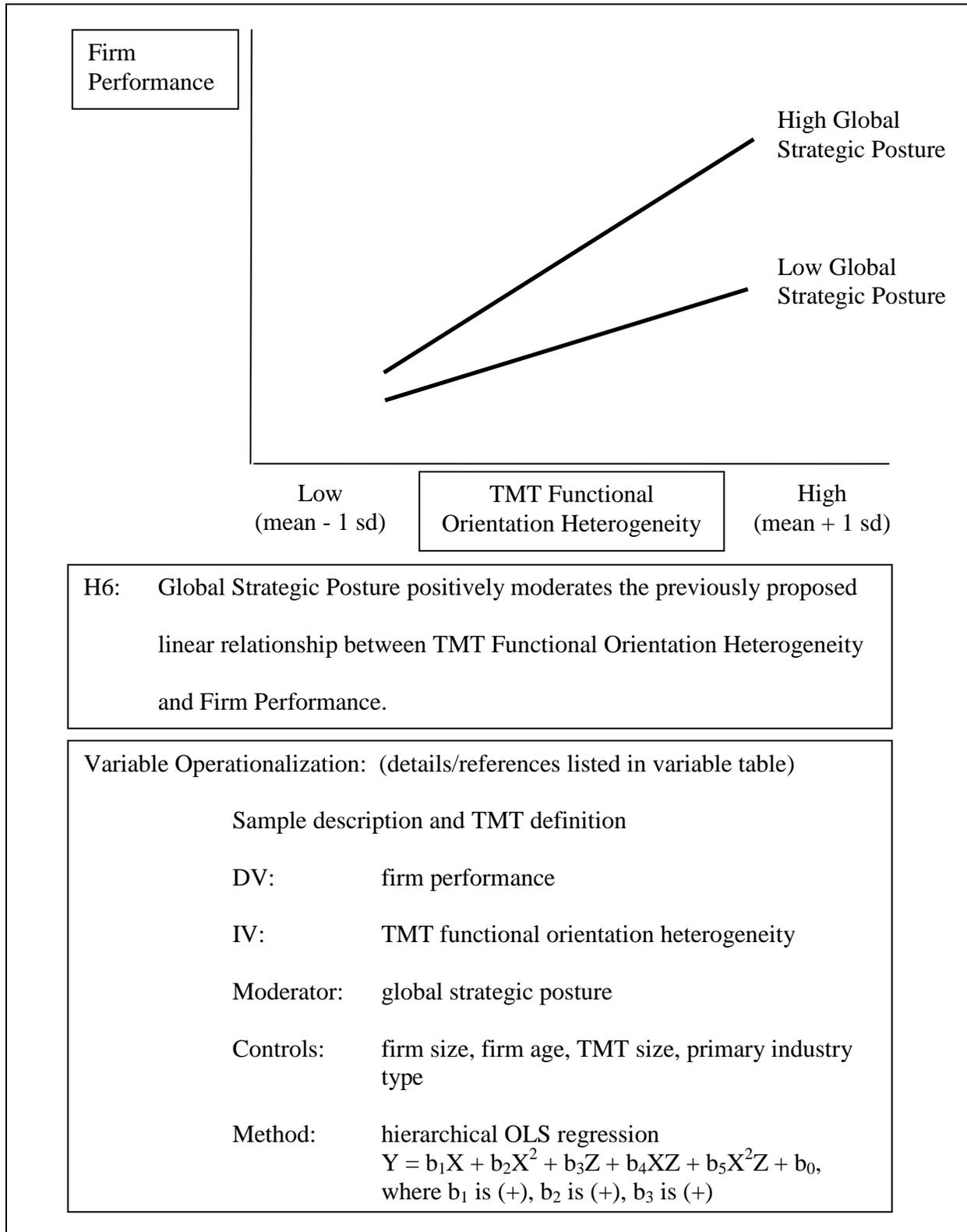where b_1 is (+), b_2 is (+), b_3 is (+)

FIGURE 7

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METHODS

I have tested my hypotheses using established measures from the extant literature on a sample of 300 top management teams (TMTs) managing multinational enterprises (MNEs). A total of 3,392 executives from MNEs headquartered in 31 different countries were investigated. I used hierarchical ordinary least squares (OLS) regression analysis to test the six hypotheses; this also allowed for the inclusion of relevant control variables.

Sample and Measures

Information about TMTs headquartered in countries across the globe that are managing MNEs was obtained from Capital IQ. Capital IQ is a database that provides global market and financial data on privately and publicly held firms. It is operated via a division of Standard and Poor's.

I used Deresky's (1997: 190) characterization of the MNE as "a company that engages in production or service activities through its own affiliates in several countries, maintains control over the policies of those affiliates, and manages from a global perspective" to guide me as I read through the database's company-provided descriptions. I also reviewed the organizational structure/company tree provided in the firm profile that detailed operations and subsidiary activity. Specifically for purposes of this study, I included firms in the sample that fit Deresky's description while also meeting Stopford's (1992) criterion that a firm is characterized as a multinational if it has sales or production in at least three countries.

Via random sampling of organizations meeting the multinational enterprise criteria described, the resulting 300 firms ranged in annual sales from $0.8 million to $179.1 billion

(U.S.). Specific data for the independent variables and control variables were obtained for fiscal year 2006 while each dependent variable was lagged one year to 2007. The firm performance variables, therefore, incorporate a lagged component as previous TMT studies have also previously done (Carpenter & Sanders, 2004a; Collins & Clark, 2003; Goll, Sambharya, & Tucci, 2001; Michel & Hambrick, 1992). Table 1 provides further sample detail to include firm primary industry participation (service-oriented versus manufacturing-oriented) and detail as to which countries the MNEs are headquartered in via a firm count of specific countries found in the sample.

	MNE Home Country	Firm Count by Country	Primary Industry:	
			Manufacturing	Service-Providing
1	Australia	23	13	10
2	Austria	1	0	1
3	Belgium	1	1	0
4	Canada	15	7	8
5	China	2	1	1
6	China (Hong Kong)	15	9	6
7	China (Taiwan)	3	0	3
8	Finland	4	4	0
9	France	11	7	4
10	Germany	8	6	2
11	Greece	2	2	0
12	India	7	3	4
13	Ireland	3	1	2
14	Italy	2	1	1
15	Japan	28	17	11
16	Luxembourg	4	1	3
17	Malaysia	1	0	1
18	Netherlands	8	2	6
19	Norway	3	2	1
20	Philippines	3	2	1
21	Portugal	2	0	2
22	Russia	1	0	1
23	Singapore	16	7	9
24	Slovenia	1	0	1
25	South Korea	1	1	0
26	Spain	2	0	2
27	Sweden	6	2	4
28	Switzerland	9	5	4
29	Thailand	1	0	1
30	United Kingdom	32	10	22
31	United States	85	45	40
	n =	300	149	151

TABLE 1
Breakdown of MNE Detail
Represented in the Sample

Total number of TMT executives = 3,392

The TMT has been operationalized using several different methods in past research. Where possible, some researchers have asked the CEO directly to identify members of his or her top team (Bantel & Jackson, 1989; Fredrickson & Iaquinto, 1989). Eisenhardt and Schoonhoven (1996) defined the TMT as the chief executive officer and those employees who directly report to this individual. This method included executives such as those responsible for sales, manufacturing, finance, and engineering.

A recent meta-analysis on TMTs suggests adopting a definition that is more salient throughout the literature; they have proposed that the TMT include the top executives and the next highest tier (Certo, Lester, Dalton, & Dalton, 2006). As in Hambrick's (1994) study, this definition captures the CEO and all officers above the level of vice president (i.e. the CFO, presidents, executive vice presidents, and senior vice presidents). This operationalization of the TMT has been shown to "provide a nice balance between being inclusive without being over-inclusive" (Certo, et al., 2006: 830). It yields a fairly complete group of executives while still providing parsimony (Chaganti & Sambharya, 1987; Michel & Hambrick, 1992; Murray, 1989; Wagner, Pfeffer, & O'Reilly, 1984). Therefore, this is the definition that is used for this study; the resulting mean TMT size was found to be 11.31.

Dependent Variable. Firm performance, the dependent variable is operationalized using four different methods. This is done to substantiate the robustness of the hypothesized relationships across variations in measurement; this is one of the benefits of constructive replication as described by Eden (2002). Following previous TMT studies, these performance measures incorporate a lag from the independent variables and control variables (Carpenter & Sanders, 2004a; Collins & Clark, 2003; Goll, Sambharya, & Tucci, 2001; Michel & Hambrick, 1992). *Firm performance* is, therefore, measured as: 1) the lagged one year value of ROS (return

on sales), 2) the lagged one year value of ROA (return on assets), 3) the lagged one year value of

ROE (return on equity), and 4) a composite measure of these lagged values of ROS, ROA, and

ROE (Agle et al., 2006). The composite measure is a variation of Haleblian and Finkelstein's

(1993) measure; the three individual measures (ROS, ROA, and ROE) were standardized

(mean=0, s.d.=1) and then averaged by firm to generate the composite measure.

Independent Variables. Four independent variables are investigated in this study. They

are *TMT organizational tenure heterogeneity*, *TMT educational background heterogeneity*, *TMT*

functional orientation heterogeneity, and *global strategic posture*. The first three measures,

measures of executive team heterogeneity, are often used in upper echelon studies because, as

previously mentioned, researchers argue that these characteristics are strongly associated to the

psychological and cognitive processes of the TMT (Olson, Parayitam, & Bao, 2007). The

posited moderating effect of *global strategic posture* is then subsequently investigated.

Moreover, as recommended by Aiken and West (1991), these four independent and interacting

variables were centered to minimize issues caused by high levels of multicollinearity.

As in TMT research by Carpenter and Fredrickson (2001), values of *TMT organizational*

tenure heterogeneity are determined for each MNE by calculating the coefficient of variation

(standard deviation divided by the mean) of the TMT's firm tenure. This operationalization is

preferable to using the standard deviation when interval-level data such as time or age are used

(Allison, 1978).

The next measure, *TMT educational background heterogeneity*, requires that TMT

members first be classified into one of eight categories, as was previously done in research by

Hambrick, Cho, and Chen (1996). The eight categories are listed in Table 2. The heterogeneity

value is then calculated for each MNE using a variation of the Herfindal-Hirschman index. The value is calculated using the following equation,

$$H \;=\; 1 \;-\; \sum_{i=1}^{8} (p_i)^2,$$

where H is the index concentration score and p is the percentage of top executives classified in each of the eight educational background categories. Higher values of H indicate greater *TMT educational background heterogeneity.*

The last heterogeneity measure, *TMT functional orientation heterogeneity*, is calculated by first classifying each of the TMT members into one of sixteen categories, as was also previously done in the study by Hambrick, Cho, and Chen (1996). The sixteen functional orientation categories are listed in Table 2 along with the educational background categories. The heterogeneity value is then calculated for each MNE using a variation of the Herfindal-Hirschman index once again. This value is calculated using the following equation,

$$H \;=\; 1 \;-\; \sum_{i=1}^{16} (p_i)^2,$$

where H for this measure represents the index concentration score and p is the percentage of TMT members classified in each of the sixteen functional orientation categories. Higher values of H indicate greater *TMT functional orientation heterogeneity.*

TABLE 2

Coding Categories for TMT Members' Background

Educational Background:

1. Engineering

2. Science

3. Business Administration

4. Economics

5. Liberal Arts

6. Law (LL.B. / J.D.)

7. Business (other than administration, e.g., accounting, finance)

8. Other

Functional Orientation:

1. CEO (Chief Executive Officer)	9. Marketing/Sales/Customer Service
2. COO (Chief Operations Officer)	10. Information Systems
3. Finance/Treasurer	11. International
4. Planning	12. Maintenance/Field Service
5. Personnel	13. General Management
6. Public Affairs	14. Other Corporate Staff
7. General Counsel/Secretary	15. Accounting/Controller
8. Operations/Field Service	16. Other

Finally, the *global strategic posture* variable is a composite measure of three dimensions: 1) foreign sales, 2) foreign production, and 3) geographic diversity (Carpenter & Fredrickson, 2001). "The first two dimensions, sales and assets, address a firm's dependence on foreign markets and foreign-placed resources (Kim, Hwang, & Burgers, 1993), respectively. The third dimension indicates the geographic and cultural variety associated with the other two" (Carpenter & Fredrickson, 2001: 538).

The first dimension, foreign sales, is determined by calculating the percentage of foreign sales revenue to total sales revenue. Similarly, the second dimension, foreign production, is determined by calculating the percentage of foreign-owned assets to total assets. Lastly, the third dimension, geographic diversity, assesses the extent to which a firm has "subsidiaries in any of the ten cultural zones of the world identified by Ronen and Shenkar (1985)" (Carpenter & Fredrickson, 2001: 538). A subsidiary or subsidiaries in one zone represents a score of 0.10. Therefore, if a firm is present in five zones, the MNE totals a geographic diversity score of 0.50.

The values of the three dimensions are then summed to generate the overall composite score, which is termed *global strategic posture*. The range can, therefore, extend from 0.0 to 3.0. A greater overall composite score indicates a more expansive globalization posture for the particular firm.

Control Variables. The extant literature has introduced many variables that help to explain firm performance. And while it is not possible to include them all, those selected to be used in this study are highly relevant to strategic management and TMT research; they control for performance at multiple levels of analysis. The variables captured are *firm size*, *firm age, TMT size,* and *primary industry participation* (Agle et al., 2006; Michel & Hambrick, 1992; Simons, Pelled, & Smith, 1999; Smith et al., 1994; Thomas, 2006).

Firm size was calculated as the natural logarithm of the number of firm employees reported by the MNE (Smith et al., 1994). The transformation is used to reduce the skewness of the size distribution and to achieve normality and homoskedasticity assumptions of ordinary least squares regression (Tabachnick & Fidell, 1996). *Firm age* was assessed as the number of years the company has been in existence through 2006 (Michel & Hambrick, 1992), a self-reported figure provided by the MNE. *TMT size* was calculated as the number of executives in the top management team per the stated TMT definition provided herein (Simons, Pelled, & Smith, 1999). Finally, *primary industry participation* is controlled for by including a dummy variable for firms primarily oriented towards and operating within the manufacturing industry, coded as 0, versus those primarily oriented towards and operating within the service-providing industry, coded as 1 (Thomas, 2006). This information was captured using the MNEs primary industry classification code identified in the Capital IQ database. All variables described for use in this study are listed in Table 3 along with their operationalizations, references and data sources.

TABLE 3

Variable Operationalization		
Sample and TMT definition:		
Variable	**Operationalization**	**Reference / Data Source**
General Sample Description	The sample is comprised of multinational enterprises (MNEs) headquartered in most major regions of the world to include: 1) Asia, 2) Europe, and 3) North America.	(Deresky, 1997; Stopford, 1972) / Capital IQ
the Top Management Team	The TMT is defined as all firm executives above the level of vice-president (e.g. CEO, CFO, COO, Presidents, and next highest tier of executives such as Executive VPs and Senior VPs).	(Chaganti & Sambharya, 1987; Michel & Hambrick, 1992; Murray, 1989; Wagner, Pfeffer, & O'Reilly, 1984; Certo, Lester, Dalton, Dalton, 2006) / Capital IQ
Dependent Variable:		
Variable	**Operationalization**	**Reference / Data Source**
Firm Performance	return on sales (ROS) - lagged 1 yr from IVs and controls	(Agle et al., 2006) / Capital IQ
	return on assets (ROA) - lagged 1 yr from IVs and controls	(Agle et al., 2006) / Capital IQ
	return on equity (ROE) - lagged 1 yr from IVs and controls	(Agle et al., 2006) / Capital IQ
	composite measure of ROS, ROA, and ROE - lagged 1 yr from IVs and controls	(Haleblian & Finkelstein, 1993) / Capital IQ

TABLE 3 (continued)

Independent Variables:		
Variable	**Operationalization**	**Reference / Data Source**
TMT Educational Background Heterogeneity	TMT members are first classified by highest educational degree obtained to 1 of 8 coding categories (reference Table 2). Then, a variation of the Herfindahl-Hirschman Index is calculated to determine the degree of heterogeneity, where H is the index concentration score and p is the percentage of executives classified in each of the 8 educational classifications. $H = 1 - \Sigma (p_i)^2$, where i = 1-8	(Hambrick, Cho, & Chen, 1996) / Capital IQ
TMT Organizational Tenure Heterogeneity	The variable is measured by calculating the coefficient of variation of the TMT's firm tenure (standard deviation divided by the mean).	(Carpenter & Fredrickson, 2001) / Capital IQ
TMT Functional Orientation Heterogeneity	TMT members are first classified to 1 of 16 work function coding categories (reference Table 2). Then, a variation of the Herfindahl-Hirschman Index is calculated to determine the degree of heterogeneity, where H is the index concentration score and p is the percentage of executives classified in each of the 16 functional classifications. $H = 1 - \Sigma (p_i)^2$, where i = 1-16	(Hambrick, Cho, & Chen, 1996) / Capital IQ

TABLE 3 (continued)

Independent Variables (continued):		
Variable	**Operationalization**	**Reference / Data Source**
Global Strategic Posture	The variable is a composite measure of three dimensions: (1) foreign sales, (2) foreign production, and (3) geographic diversity. Foreign sales is calculated as the percentage of foreign sales revenue to total sales revenue. Foreign production is determined as the percentage of foreign-owned assets to total assets, and (3) geographic diversity gauges the extent to which a firm has subsidiaries in any of the ten world cultural zones identified by Ronen and Shenkar (1985). A presence in each zone counts as 0.10. The three indicators are then summed to generate the composite measure.	(Carpenter & Fredrickson, 2001) / Capital IQ

TABLE 3 (continued)

Control Variables:		
Variable	**Operationalization**	**Reference / Data Source**
Firm Size	natural logarithm of the firm's number of employees	(Smith, Smith, Olian, Sims, O'Bannon, & Scully, 1994) / Capital IQ
Firm Age	number of years the firm has existed	(Michel & Hambrick, 1992) / Capital IQ
TMT Size	number of executives determined to be part of the TMT per the operationalized definition	(Simmons, Pelled, & Smith, 1999) / Capital IQ
Primary Industry Participation	industry dummy variable that differentiates a firm as being either primarily manufacturing oriented or primarily service oriented	(Thomas, 2006) / Capital IQ

ANALYSIS AND RESULTS

Means, standard deviations, and correlations for each variable including all four individually analyzed dependent variables, are reported in Table 4. Upon examination of the correlation magnitudes and the results of the regression diagnostics, it was determined that multicollinearity was not a significant issue (Hair, Anderson, Tatham, & Black, 1996). Moreover, while the natural log of firm size is utilized for the analysis, Table 2 presents the untransformed values of the mean and standard deviation to provide a more clear account of the data. Similarly, for the independent variables of *global strategic posture*, *organizational tenure heterogeneity*, *educational background heterogeneity*, and *functional orientation heterogeneity*, uncentered means are provided.

TABLE 4

Means, Standard Deviations, and Pearson Correlations

Variable	Mean	s.d.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Return on Assets (dv)	4.32	6.69											
2. Return on Equity (dv)	18.04	103.22	0.28 ***										
3. Return on Sales (dv)	9.03	35.33	0.47 ***	0.09									
4. Composite Measure of ROA, ROE, & ROS (dv)	0.00	0.72	0.81 ***	0.64 ***	0.72 **								
5. Global Strategic Posture	1.29	0.61	0.12 *	0.12 *	0.08	0.15 *							
6. Organizational Tenure Heterogeneity	0.60	0.31	0.00	0.00	0.10 ^{t}	0.05	0.11 *						
7. Educational Heterogeneity	0.57	0.20	-0.01	0.06	-0.04	0.00	-0.01	0.32 ***					
8. Functional Orientation Heterogeneity	0.73	0.12	0.09	0.06	0.01	0.07	0.00	0.30 ***	0.08				
9. Firm Size: ln(Number of Employees)	27228	52129	0.25	0.09	0.32 ***	0.31 ***	0.32 ***	-0.13 *	0.09	-0.11 ^{t}			
10. Firm Age (years)	63.25	71.03	0.04 ***	0.03	0.14 *	0.10 ^{t}	0.19 ***	-0.07	0.08	-0.14 *	0.36 ***		
11. Service Provider (vs Manufacturer)	0.50	0.50	0.07	0.09	0.19 ***	0.16 **	-0.04	0.00	0.09	-0.05	0.06	-0.03	
12. TMT Size	11.31	6.60	0.08	0.08	0.16 **	0.15 *	0.21 ***	-0.17 **	0.02	-0.15 **	0.59 ***	0.28 ***	0.19 ***

n = 300

Notes: Mean and standard deviation values of Variable 9 (Firm Size) reflect untransformed data.

Mean values of variables 5, 6, 7, and 8 (Independent Variables) reflect uncentered data.

Two-tailed test of significance

^{t} p<0.10

* p<0.05

** p<0.01

*** p<0.001

Hierarchical Ordinary Least Squares (OLS) regression was used to test all six hypotheses. As there were four different dependent variables (firm performance outcomes) to evaluate, there were also several iterations of hierarchical OLS regression analysis that were performed. Thus, several tables of analysis are presented; however, all tables present the analysis in the same manner.

Each table is labeled in the title bar with the firm performance dependent variable that is being utilized for analysis. The first model in each table includes only the control variables in the regression. The second model in each table then adds the main effects (i.e. independent) variables. It is in this second model, within each table, where hypotheses 1, 2, and/or 3 are tested. Finally, the third model in each table then adds the interaction terms to the regression analysis; in this model, hypotheses 4, 5, and/or 6 are tested. Overall model statistics are presented in the bottom portion of the table. It is also noted that unstandardized regression coefficients are employed because standardized regression coefficients for interaction terms lead to erroneous results (Aiken & West, 1991). Finally, since all six hypotheses developed herein predict a relationship in a specific direction and the moderating effects in the reverse direction are not meaningful (i.e. firms actively seeking less global involvement), one-tailed tests of significance were also employed (Borenstein et al., 1997).

In an attempt to keep the results clear, the findings are presented in subsections by each of the four firm performance dependent variables that were examined: (1) ROA, (2) ROS, (3) ROE, and (4) Composite Measure of ROA, ROS, and ROE. Furthermore, in each section, regression analyses results are first presented using all the control variables and only the TMT heterogeneity variable of interest. Then, a full model analysis is presented where all the control variables and all the TMT heterogeneity variables collected in the study are presented.

Return on Assets

Organizational Tenure Heterogeneity. Table 5 reports the hierarchical OLS regression output of firm performance using the dependent variable of ROA and the specific independent variable of *TMT organizational tenure heterogeneity*. Within Table 5, Model 1 only introduces the control variables. The overall model is statistically significant (p<.001). As in previous studies (Chen & Hambrick, 1995; Weiner & Mahoney, 1981), a positive and significant (p<.001) relationship between *firm size* and firm performance is found. Of interest as well, a negative and significant (p<.05) relationship is found between *TMT size* and firm performance. This is consistent with Organizational Behavior literature, which has found that increasing team size hinders group outcomes (Liden et al., 2004; Wagner, 1995).

Model 2 in Table 5 then introduces the direct effects of the independent variables *organizational tenure heterogeneity* and g*lobal strategic posture*. This model is found to be statistically significant (p<.001), however, no new statistically significant relationships are uncovered.

Finally, Model 3 includes the cross product of the two independent variables from model 2. Model 3 in Table 5 shows good overall model fit (p<.001). Most notably, the interaction between *global strategic posture*, *organizational tenure heterogeneity*, and firm performance is found to be statistically significant (p<.10). These results find initial support for Hypothesis 4; they show a moderating influence of *global strategic posture* on the relationship between *organizational tenure heterogeneity* and firm performance.

TABLE 5
Results of Regression Analysis Predicting Firm Performance (DV = ROA)

Variable	Model 1	Model 2 (H1)	Model 3 (H4)
Constant	-3.75 *	-3.82 *	-3.45 *
Control Variables			
Firm Size: ln(Number of Employees)	1.07 ***	1.03 ***	1.01 ***
Firm Age	0.00	-0.01	0.00
Service Provider (vs Manufacturer)	0.88	0.98	0.96
TMT Size	-0.12 *	-0.13 *	-0.13 *
Main Effects			
Organizational Tenure Heterogeneity		-0.69	-1.10
Global Strategic Posture		0.69	0.74
Interactions			
Global Strategic Posture x Organizational Tenure Heterogeneity			-3.49 [t]
R^2	0.08	0.08	0.09
ΔR^2	-	0.00	0.01
Adjusted R^2	0.06	0.06	0.07
F	6.27 ***	4.39 ***	4.13 ***

n = 300
Unstandardized regression coefficients shown.
One-tailed test of significance
[t] $p<0.10$
* $p<0.05$
** $p<0.01$
*** $p<0.001$

Educational Background Heterogeneity. For the hierarchical OLS regression output of firm performance using the dependent variable of ROA and the specific independent variable of *TMT educational background heterogeneity,* no significant relationships are uncovered for the independent variables and the testing of moderation. No table was, therefore, constructed to report these insignificant findings.

Functional Orientation Heterogeneity. Table 6 reports the hierarchical OLS regression output of firm performance using the dependent variable of ROA and the specific independent variable of *TMT functional orientation heterogeneity*. Within Table 6, Model 1 analysis and results are exactly the same as in Table 5. Thus, findings too are identical.

Model 2 in Table 6 then introduces the direct effects of the independent variables *TMT functional orientation heterogeneity* and g*lobal strategic posture*. This model is found to be statistically significant (p<.001). Consistent with Hypothesis 3, greater *TMT functional orientation heterogeneity* is positively and significantly (p<.05) associated with firm performance.

Then again, Model 3 includes the cross product of the two independent variables from Model 2. Model 3 in Table 6 shows good overall model fit (p<.001). Most notably, the interaction between *global strategic posture*, *TMT functional orientation heterogeneity*, and firm performance is found to be statistically significant (p<.10). These results find initial support for Hypothesis 6; they show a moderating influence of *global strategic posture* on the relationship between *TMT functional orientation heterogeneity* and firm performance.

TABLE 6
Results of Regression Analysis Predicting Firm Performance (DV = ROA)

Variable	Model 1	Model 2 (H3)	Model 3 (H6)
Constant	-3.75 *	-8.44 **	-8.32 **
Control Variables			
Firm Size: ln(Number of Employees)	1.07 ***	1.03 ***	1.00 ***
Firm Age	0.00	0.00	0.00
Service Provider (vs Manufacturer)	0.88	0.97	1.01 ^{t}
TMT Size	-0.12 *	-0.11 ^{t}	-0.09
Main Effects			
Functional Orientation Heterogeneity		5.63 *	5.40 *
Global Strategic Posture		0.59	0.63
Interactions			
Global Strategic Posture x Functional Orientation Heterogeneity			6.67 ^{t}
R^2	0.08	0.09	0.10
$\triangle R^2$	-	0.01	0.01
Adjusted R^2	0.07	0.07	0.08
F	6.27 ***	4.94 ***	4.53 ***

n = 300
Unstandardized regression coefficients shown.
One-tailed test of significance
^{t} p<0.10
* p<0.05
** p<0.01
*** p<0.001

Aiken and West (1991:12) suggest that once a significant interaction is obtained, the interaction should be plotted to "sharpen our understanding of its meaning." For my plot, the x-axis represents *TMT functional orientation heterogeneity*, and the y-axis represents firm performance, measured as ROA. Values of *global strategic posture*, the intervening variable represented on the z-axis, were chosen to compute slopes. Since *TMT functional orientation heterogeneity* is continuous, the researcher is free to choose any value within the full range of the variable (Aiken & West, 1991). The values of z, however, should be sensible and within the observed range. In following with common practice (Cohen, Cohen, West, & Aiken, 2003), therefore, I chose one standard deviation above and below the mean to represent the high and low values. Figure 8 displays the graphical representation of my plotted result.

Interactive Effects of Global Strategic Posture
and Functional Orientation Heterogeneity
on Firm Performance (ROA)
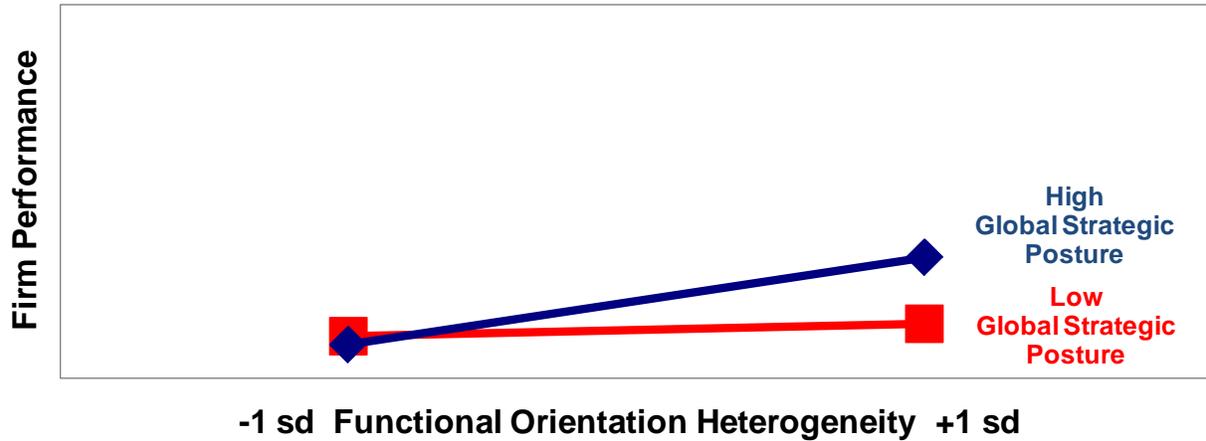
Firm Performance in High Global Strategic Posture: High TMT Organizational Tenure Heterogeneity: M = .8244, SD = .0321; Low TMT Orgnizational Tenure Heterogeneity: M = .6391, SD = .1269; t = 12.2596, p < .001. Firm Performance in Low Global Strategic Posture: High TMT Organizational Tenure Heterogeneity: M = .8196, SD = .0379; Low TMT Organizational Tenure Heterogeneity: M = .6510, SD = .1062; t = 12.9489, p < .001.

FIGURE 8

I also previously described three patterns of interactions between two continuous variables (Cohen, Cohen, West, & Aiken, 2003: 285-286) and hypothesized that the moderator would act as an "enhancing" interaction, where the predictor and moderator variables affect the outcome variable in the same direction so that their combined effect is stronger than either individual effect. From my plot, it may be noted that consistent with Hypothesis 6, *global strategic posture* positively and significantly (p<.10) moderates the previously proposed linear relationship between *TMT functional orientation heterogeneity* and firm performance. Thus, high levels of *global strategic posture* and high levels of *TMT functional orientation heterogeneity* significantly strengthen firm performance.

To conclude Table 6's analysis, a t-test was employed to determine whether significant mean differences existed between high and low *TMT functional orientation heterogeneity* of firm performance and high *global strategic posture*. The means were found to be significantly different (p<.001). The same test was exercised for high and low *TMT functional orientation heterogeneity* of firm performance and low *global strategic posture*. These means were also found to be significantly different (p<.001). These results, noted in the caption of Figure 8, provide further support for the moderating relationship proposed in Hypothesis 6. Thus, the level of *global strategic posture* moderates the relationship between *TMT functional orientation heterogeneity* and firm performance: high levels of *global strategic posture* "enhance" the positive relationship between *TMT functional orientation heterogeneity* and firm performance. It may be noted that low levels of *global strategic posture* also "enhance" the same relationship but to a lesser degree (Cohen, Cohen, West, & Aiken, 2003: 285-286).

Full Model. Table 7 reports the hierarchical OLS regression output of firm performance

using the dependent variable of ROA and all three TMT heterogeneity independent variables to

present a full model analysis. Within Table 7, Model 1 analysis and results again are exactly the

same as in Table 5 and Table 6. Thus, findings are once again identical as well.

Model 2 in Table 7 then introduces the direct effects of all the TMT heterogeneity

variables and *global strategic posture*. This model is also found to be statistically significant

(p<.001). Consistent again with Hypothesis 3, greater *TMT functional orientation heterogeneity*

is positively and significantly (p<.05) associated with firm performance.

Finally, Model 3 describes the relationship between the moderator, each of the three

forms of TMT heterogeneity individually, and firm performance. Model 3 in Table 7 shows

good overall model fit (p<.001). Most notably, the interaction between *global strategic posture*,

organizational tenure heterogeneity, and firm performance is found to be statistically significant

(p<.05). These results find initial support for Hypothesis 4 as were also found in Table 5; they

show a moderating influence of *global strategic posture* on the relationship between

organizational tenure heterogeneity and firm performance.

TABLE 7
Results of Regression Analysis Predicting Firm Performance (DV = ROA)

Variable	Model 1	Model 2 (H1, H2, H3)	Model 3 (H4, H5, H6)
Constant	-3.75 *	-8.11 **	-7.57 **
Control Variables			
Firm Size: ln(Number of Employees)	1.07 ***	1.03 ***	0.98 ***
Firm Age	0.00	0.00	0.00
Service Provider (vs Manufacturer)	0.88	1.03 ^{t}	1.08 ^{t}
TMT Size	-0.12 *	-0.12 ^{t}	-0.10 ^{t}
Main Effects			
Organizational Tenure Heterogeneity		-0.84	-1.25
Educational Heterogeneity		-0.41	0.05
Functional Orientation Heterogeneity		6.01 *	5.56 *
Global Strategic Posture		0.64	0.71
Interactions			
Global Strategic Posture x Organizational Tenure Heterogeneity			-4.20 *
Global Strategic Posture x Educational Heterogeneity			3.28
Global Strategic Posture x Functional Orientation Heterogeneity			6.00
R^2	0.08	0.09	0.11
$\triangle R^2$	-	0.02	0.02
Adjusted R^2	0.07	0.07	0.08
F	6.27 ***	3.76 ***	3.22 ***

n = 300
Unstandardized regression coefficients shown.
One-tailed test of significance
^{t} p<0.10
* p<0.05
** p<0.01
*** p<0.001

Again, following prior research recommendation (Aiken & West, 1991:12), once a significant interaction is obtained, the interaction should be plotted to "sharpen our understanding of its meaning." For this plot, the x-axis represents *TMT organizational tenure heterogeneity*, and the y-axis represents firm performance, measured as ROA. Values of *global strategic posture*, the intervening variable represented on the z-axis, were then once again chosen to compute slopes. For reasons previously described, I chose one standard deviation above and one standard deviation below the mean to represent the high and low values. Figure 9 displays the graphical representation of my plotted result.

Interactive Effects of Global Strategic Posture and Organizational Tenure Heterogeneity on Firm Performance (ROA)
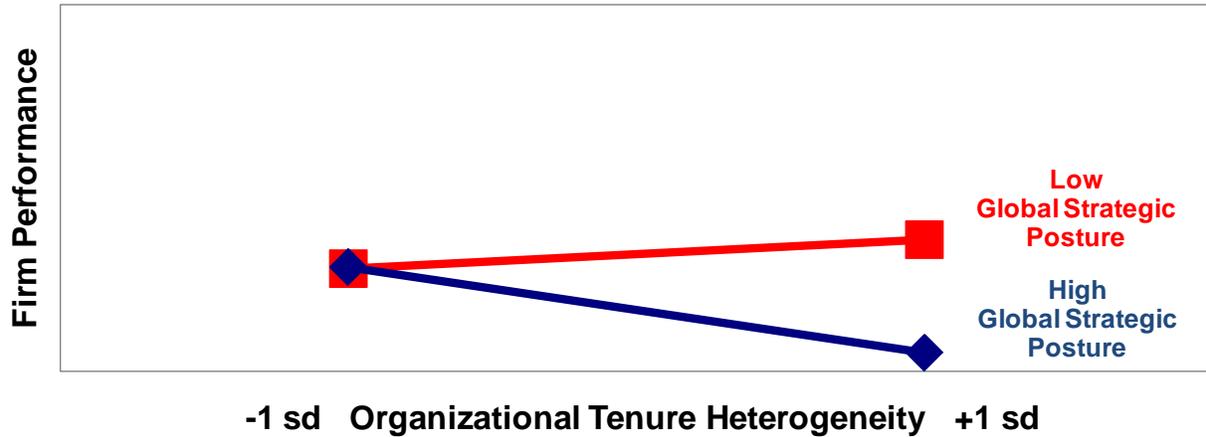
Firm Performance in High Global Strategic Posture: High TMT Organizational Tenure Heterogeneity: M = .8227, SD = .1740; Low TMT Orgnizational Tenure Heterogeneity: M = .4164, SD = .1665; t = 14.6107, p < .001. Firm Performance in Low Global Strategic Posture: High TMT Organizational Tenure Heterogeneity: M = .8532, SD = .1863; Low TMT Organizational Tenure Heterogeneity: M = .2909, SD = .1959; t = 18.0130, p < .001.

FIGURE 9

Again, I previously described three patterns of interactions between two continuous variables (Cohen, Cohen, West, & Aiken, 2003: 285-286) and hypothesized that the moderator would act as an "enhancing" interaction, where the predictor and moderator variables affect the outcome variable in the same direction so that their combined effect is stronger than either individual effect. From my plot, it may be noted that consistent with Hypothesis 4, *global strategic posture* negatively and significantly (p<.05) moderates the previously proposed linear relationship between *TMT organizational tenure heterogeneity* and firm performance. Thus, high levels of *global strategic posture* and high levels of *TMT organizational tenure heterogeneity* significantly weaken firm performance.

To conclude Table 7's analysis, a t-test was employed to determine whether significant mean differences existed between high and low *TMT organizational tenure heterogeneity* of firm performance and high *global strategic posture*. The means were found to be significantly different (p<.001). The same test was exercised for high and low *TMT organizational tenure heterogeneity* of firm performance and low *global strategic posture*. These means were also found to be significantly different (p<.001). These results, noted in the caption of Figure 9, provide further support for the moderating relationship proposed in Hypothesis 4. Thus, the level of *global strategic posture* moderates the relationship between *TMT organizational tenure heterogeneity* and firm performance: high levels of *global strategic posture* "enhance" the negative relationship between *TMT organizational tenure heterogeneity* and firm performance. Interestingly, here it may be noted that low levels of *global strategic posture* actually "buffer" the same relationship (Cohen, Cohen, West, & Aiken, 2003: 285-286).

Return on Sales

Organizational Tenure Heterogeneity. Table 8 reports the hierarchical OLS regression output of firm performance using the dependent variable of ROS and the specific independent variable of *TMT organizational tenure heterogeneity.* Within Table 8, Model 1 only introduces the control variables. The overall model is statistically significant (p<.001). A positive and significant (p<.001) relationship is found between *firm size* and firm performance. Moreover, a significant (p<.001) relationship is also found between *primary industry participation* (service providing versus manufacturing) and firm performance. Finally, a negative and significant (p<.10) relationship is found between *TMT size* and firm performance.

Model 2 in Table 8 then introduces the direct effects of the independent variables *organizational tenure heterogeneity* and g*lobal strategic posture.* This model is found to be statistically significant (p<.001), however, no new statistically significant relationships are uncovered.

Finally, Model 3 includes the cross product of the two independent variables from model 2. Model 3 in Table 8 shows good overall model fit (p<.001). Most notably, the interaction between *global strategic posture*, *organizational tenure heterogeneity*, and firm performance is found to be statistically significant (p<.10). These results find initial support for Hypothesis 4; they show a moderating influence of *global strategic posture* on the relationship between *organizational tenure heterogeneity* and firm performance.

TABLE 8
Results of Regression Analysis Predicting Firm Performance (DV = ROS)

Variable	Model 1	Model 2 (H1)	Model 3 (H4)
Constant	-44.12 ***	-45.98 ***	-44.25 ***
Control Variables			
Firm Size: ln(Number of Employees)	5.86 ***	5.88 ***	5.82 ***
Firm Age	0.03	0.02	0.03
Service Provider (vs Manufacturer)	12.97 ***	12.50 ***	12.40 ***
TMT Size	-0.49 t	-0.46	-0.47
Main Effects			
Organizational Tenure Heterogeneity		5.84	3.93
Global Strategic Posture		-1.45	-1.21
Interactions			
Global Strategic Posture x Organizational Tenure Heterogeneity			-16.44 t
R^2	0.14	0.14	0.15
ΔR^2	-	0.00	0.01
Adjusted R^2	0.12	0.12	0.13
F	11.86 ***	8.04 ***	7.22 ***

n = 300
Unstandardized regression coefficients shown.
One-tailed test of significance
t p<0.10
* p<0.05
** p<0.01
*** p<0.001

Educational Background Heterogeneity. For the hierarchical OLS regression output of firm performance using the dependent variable of ROS and the specific independent variable of *TMT educational background heterogeneity,* no significant relationships are uncovered for the independent variables and the testing of moderation. No table was, therefore, constructed to report these insignificant findings.

Functional Orientation Heterogeneity. For the hierarchical OLS regression output of firm performance using the dependent variable of ROS and the specific independent variable of *TMT functional orientation heterogeneity,* no significant relationships are uncovered for the independent variables and the testing of moderation. No table was, therefore, constructed to report these insignificant findings either.

Full Model. Table 9 reports the hierarchical OLS regression output of firm performance using the dependent variable of ROS and all three TMT heterogeneity independent variables to present a full model analysis. Within Table 9, Model 1 analysis and results again are exactly the same as in Table 8. Thus, findings are once again identical as well.

Model 2 in Table 9 then introduces the direct effects of all the TMT heterogeneity variables and *global strategic posture*. This model is also found to be statistically significant (p<.001). Consistent with Hypothesis 3, greater *TMT functional orientation heterogeneity* is positively and significantly (p<.05) associated with firm performance.

Finally, Model 3 describes the relationship between the moderator, each of the three forms of TMT heterogeneity individually, and firm performance. Model 3 in Table 9 shows good overall model fit (p<.001). Most notably, the interaction between *global strategic posture*, *organizational tenure heterogeneity*, and firm performance is found to be statistically significant at the p<.05 level. These results find initial support for Hypothesis 4 as were also found in Table

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8; they show a moderating influence of *global strategic posture* on the relationship between *organizational tenure heterogeneity* and firm performance.

TABLE 9
Results of Regression Analysis Predicting Firm Performance (DV = ROS)

Variable	Model 1	Model 2 (H1, H2, H3)	Model 3 (H4, H5, H6)
Constant	-44.12 ***	-53.98 ***	-51.74 ***
Control Variables			
Firm Size: ln(Number of Employees)	5.86 ***	5.86 ***	5.68 ***
Firm Age	0.03	0.03	0.03
Service Provider (vs Manufacturer)	12.97 ***	12.64 ***	12.87 ***
TMT Size	-0.49 ^{t}	-0.46	-0.47
Main Effects			
Organizational Tenure Heterogeneity		6.71	4.70
Educational Heterogeneity		-6.91	-6.42
Functional Orientation Heterogeneity		15.64	16.43
Global Strategic Posture		-1.57	-1.48
Interactions			
Global Strategic Posture x Organizational Tenure Heterogeneity			-20.55 *
Global Strategic Posture x Educational Heterogeneity			26.94 ^{t}
Global Strategic Posture x Functional Orientation Heterogeneity			-13.48
R^2	0.14	0.14	0.16
$\triangle R^2$	-	0.00	0.01
Adjusted R^2	0.12	0.12	0.12
F	11.86 ***	6.14 ***	4.84 ***

n = 300
Unstandardized regression coefficients shown.
One-tailed test of significance
^{t} p<0.10
* p<0.05
** p<0.01
*** p<0.001

Again, following prior research recommendation (Aiken & West, 1991), the interaction is plotted to better understand the relationship. For this plot, the x-axis represents *TMT organizational tenure heterogeneity*, and the y-axis represents firm performance, measured as ROS. Values of *global strategic posture*, the intervening variable represented on the z-axis, are once again chosen to compute slopes. And similarly again, I have chosen one standard deviation above and below the mean to represent the high and low values. Figure 10 displays the graphical representation of my plotted result.

Interactive Effects of Global Strategic Posture
and Organizational Tenure Heterogeneity
on Firm Performance (ROS)
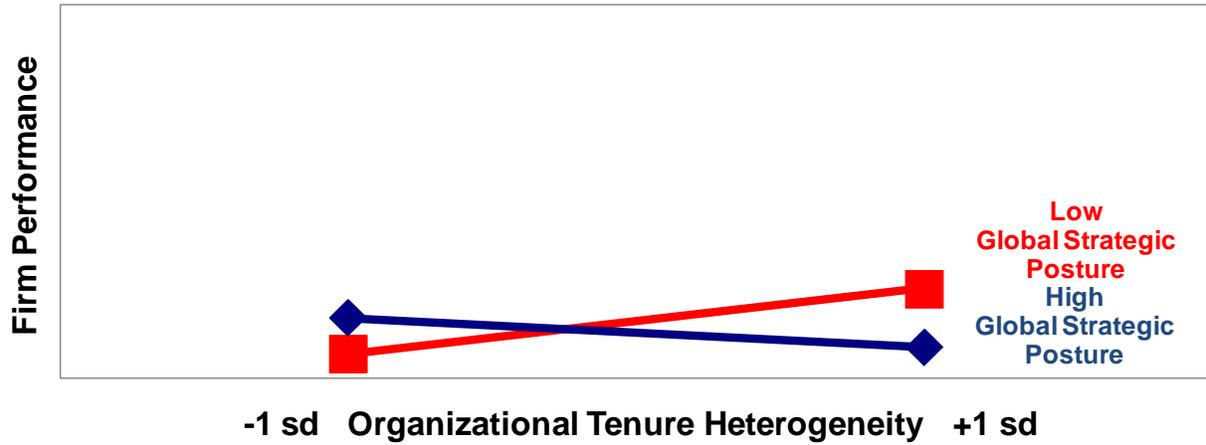
Firm Performance in High Global Strategic Posture: High TMT Organizational Tenure Heterogeneity: M = .8227, SD = .1740; Low TMT Orgnizational Tenure Heterogeneity: M = .4164, SD = .1665; t = 14.6107, p < .001. Firm Performance in Low Global Strategic Posture: High TMT Organizational Tenure Heterogeneity: M = .8532, SD = .1863; Low TMT Organizational Tenure Heterogeneity: M = .2909, SD = .1959; t = 18.0130, p < .001.

FIGURE 10

Again, I previously described three patterns of interactions between two continuous variables (Cohen, Cohen, West, & Aiken, 2003: 285-286) and hypothesized that the moderator would act as an "enhancing" interaction, where the predictor and moderator variables affect the outcome variable in the same direction so that their combined effect is stronger than either individual effect. From my plot, it may be noted that consistent with Hypothesis 4, *global strategic posture* negatively and significantly (p<.05) moderates the previously proposed linear relationship between *TMT organizational tenure heterogeneity* and firm performance. Thus, high levels of *global strategic posture* and high levels of *TMT organizational tenure heterogeneity* significantly weaken firm performance.

To conclude Table 9's analysis, a t-test was employed to determine whether significant mean differences existed between high and low *TMT organizational tenure heterogeneity* of firm performance and high *global strategic posture*. The means were found to be significantly different (p<.001). The same test was exercised for high and low *TMT organizational tenure heterogeneity* of firm performance and low *global strategic posture*. These means were also found to be significantly different (p<.001). These results, noted in the caption of Figure 10, provide further support for the moderating relationship proposed in Hypothesis 4. Thus, the level of *global strategic posture* moderates the relationship between *TMT organizational tenure heterogeneity* and firm performance: high levels of *global strategic posture* "enhance" the negative relationship between *TMT organizational tenure heterogeneity* and firm performance. Again as with the dependent variable of ROA, it should be noted that low levels of *global strategic posture* actually "buffer" the same relationship (Cohen, Cohen, West, & Aiken, 2003: 285-286).

Return on Equity

Organizational Tenure Heterogeneity. For the hierarchical OLS regression output of firm performance using the dependent variable of ROE and the specific independent variable of *TMT educational background heterogeneity,* no significant relationships are uncovered for the independent variables and the testing of moderation. No table was, therefore, constructed to report these insignificant findings.

Educational Background Heterogeneity. For the hierarchical OLS regression output of firm performance using the dependent variable of ROE and the specific independent variable of *TMT educational background heterogeneity,* no significant relationships are uncovered for the independent variables and the testing of moderation. No table was, therefore, constructed to report these insignificant findings either.

Functional Orientation Heterogeneity. Moreover, for the hierarchical OLS regression output of firm performance using the dependent variable of ROE and the specific independent variable of *TMT functional orientation heterogeneity,* no significant relationships are uncovered for the independent variables and the testing of moderation. No table was, therefore, constructed to report these insignificant findings.

Full Model. Finally, for the hierarchical OLS regression output of firm performance using the dependent variable of ROE and all three TMT heterogeneity independent variables to represent the full model analysis, no significant relationships are uncovered. Alas, no table was, therefore, constructed to report these insignificant findings either.

Composite Measure of Return on Assets, Return on Sales, and Return on Equity

   Organizational Tenure Heterogeneity. Table 10 reports the hierarchical OLS regression

output of firm performance using the dependent variable of the composite measure of ROA,

ROS, and ROE and the specific independent variable of *TMT organizational tenure*

heterogeneity. Within Table 10, Model 1 only introduces the control variables. The overall

model is statistically significant (p<.001). A positive and significant (p<.001) relationship is

found between *firm size* and firm performance. Moreover, a significant (p<.01) relationship is

also found between *primary industry participation* (service providing versus manufacturing) and

firm performance.

   Model 2 in Table 10 then introduces the direct effects of the independent variables

organizational tenure heterogeneity and g*lobal strategic posture*. This model is found to be

statistically significant (p<.001), however, no new statistically significant relationships are

uncovered.

   Finally, Model 3 includes the cross product of the two independent variables from model

2. Model 3 in Table 10 shows good overall model fit (p<.001). Most notably, the interaction

between *global strategic posture*, *organizational tenure heterogeneity*, and firm performance is

found to be statistically significant (p<.10). These results find initial support for Hypothesis 4;

they show a moderating influence of *global strategic posture* on the relationship between

organizational tenure heterogeneity and firm performance.

TABLE 10

TABLE 10

Results of Regression Analysis Predicting Firm Performance (DV = Composite Measure of ROA,ROE,ROS)

Variable	Model 1	Model 2 (H1)	Model 3 (H4)
Constant	-1.04 ***	-1.09 ***	-1.05 ***
Control Variables			
Firm Size: ln(Number of Employees)	0.12 ***	0.11 ***	0.11 ***
Firm Age	0.00	0.00	0.00
Service Provider (vs Manufacturer)	0.22 **	0.23 **	0.22 **
TMT Size	-0.01	-0.01 ^{t}	-0.01 ^{t}
Main Effects			
Organizational Tenure Heterogeneity		0.00	-0.04
Global Strategic Posture		0.08	0.08
Interactions			
Global Strategic Posture x Organizational Tenure Heterogeneity			-0.33 ^{t}
R^2	0.12	0.12	0.13
ΔR^2	-	0.00	0.01
Adjusted R^2	0.11	0.11	0.11
F	9.92 ***	6.82 ***	6.14 ***

n = 300
Unstandardized regression coefficients shown.
One-tailed test of significance
^{t} p<0.10
* p<0.05
** p<0.01
*** p<0.001

Educational Background Heterogeneity. Table 11 reports the hierarchical OLS regression output of firm performance using the dependent variable of the composite measure of ROA, ROS, and ROE and the specific independent variable of *TMT educational background heterogeneity*. Within Table 11, Model 1 analysis and results are exactly the same as in Table 10. Thus, findings too are identical.

Model 2 in Table 11 then introduces the direct effects of the independent variables *TMT educational background heterogeneity* and g*lobal strategic posture*. This model is found to be statistically significant (p<.001), however, no new statistically significant relationships are uncovered.

Then again, Model 3 includes the cross product of the two independent variables from Model 2. Model 3 in Table 11 shows good overall model fit (p<.001). Most notably, the interaction between *global strategic posture*, *TMT educational background heterogeneity*, and firm performance is found to be statistically significant (p<.10). These results find initial support for Hypothesis 5; they show a moderating influence of *global strategic posture* on the relationship between *TMT educational background heterogeneity* and firm performance.

TABLE 11

Results of Regression Analysis Predicting Firm Performance (DV = Composite Measure of ROA,ROE,ROS)

Variable	Model 1	Model 2 (H2)	Model 3 (H5)
Constant	-1.04 ***	-1.16 ***	-1.16 ***
Control Variables			
Firm Size: ln(Number of Employees)	0.12 ***	0.12 ***	0.11 ***
Firm Age	0.00	0.00	0.00
Service Provider (vs Manufacturer)	0.22 **	0.23 **	0.23 **
TMT Size	-0.01	-0.01	-0.01
Main Effects			
Educational Heterogeneity		0.12	0.14
Global Strategic Posture		0.08	0.08
Interactions			
Global Strategic Posture x Educational Heterogeneity			0.54 ^{t}
R^2	0.12	0.12	0.13
$\triangle R^2$	-	0.00	0.01
Adjusted R^2	0.11	0.11	0.11
F	9.92 ***	6.88 ***	6.24 ***

n = 300
Unstandardized regression coefficients shown.
One-tailed test of significance
^{t} p<0.10
 * p<0.05
 ** p<0.01
*** p<0.001

Functional Orientation Heterogeneity. Table 12 reports the hierarchical OLS regression output of firm performance using the dependent variable of the composite measure of ROA, ROS, and ROE and the specific independent variable of *TMT functional orientation heterogeneity*. Within Table 12, Model 1 analysis and results are exactly the same as in Tables 10 and 11. Thus, findings again are identical too.

Model 2 in Table 12 then introduces the direct effects of the independent variables *TMT functional orientation heterogeneity* and g*lobal strategic posture*. This model is found to be statistically significant (p<.001). Consistent with Hypothesis 3, greater *TMT functional orientation heterogeneity* is positively and significantly (p<.05) associated with firm performance.

Then, Model 3 includes the cross product of the two independent variables from Model 2. Model 3 in Table 12 shows good overall model fit (p<.001), however, no new statistically significant relationships are uncovered.

TABLE 12

Results of Regression Analysis Predicting Firm Performance (DV = Composite Measure of ROA,ROE,ROS)

Variable	Model 1	Model 2 (H3)	Model 3 (H6)
Constant	-1.04 ***	-1.55 ***	-1.54 ***
Control Variables			
Firm Size: ln(Number of Employees)	0.12 ***	0.12 ***	0.11 ***
Firm Age	0.00	0.00	0.00
Service Provider (vs Manufacturer)	0.22 **	0.23 **	0.23 **
TMT Size	-0.01	-0.01	-0.01
Main Effects			
Functional Orientation Heterogeneity		0.61 *	0.59 *
Global Strategic Posture		0.07	0.08
Interactions			
Global Strategic Posture x Functional Orientation Heterogeneity			0.59
R^2	0.12	0.13	0.14
$\triangle R^2$	-	0.01	0.01
Adjusted R^2	0.11	0.12	0.12
F	9.92 ***	7.49 ***	6.63 ***

n = 300

Unstandardized regression coefficients shown.

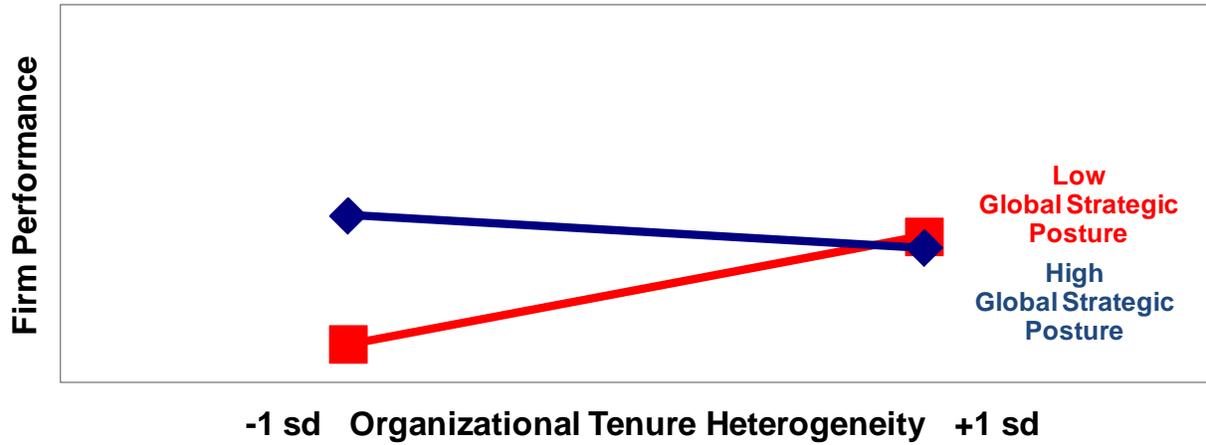One-tailed test of significance

  [t] p<0.10

  * p<0.05

 ** p<0.01

*** p<0.001

Full Model. Table 13 reports the hierarchical OLS regression output of firm performance using the dependent variable of the composite measure of ROA, ROS, and ROE and all three TMT heterogeneity independent variables to present a full model analysis. Within Table 13, Model 1 analysis and results again are exactly the same as in Tables 10, 11, and 12. Thus, findings are once again identical as well.

Model 2 in Table 13 then introduces the direct effects of all the TMT heterogeneity variables and *global strategic posture*. This model is also found to be statistically significant ($p<.001$). Consistent again with Hypothesis 3, greater *TMT functional orientation heterogeneity* is positively and significantly ($p<.05$) associated with firm performance.

Finally, Model 3 describes the relationship between the moderator, each of the three forms of TMT heterogeneity individually, and firm performance. Model 3 in Table 13 shows good overall model fit ($p<.001$). Most notably, the interaction between *global strategic posture*, *organizational tenure heterogeneity*, and firm performance is found to be statistically significant ($p<.05$). Moreover, the interaction between *global strategic posture*, *educational background heterogeneity*, and firm performance is also found to be statistically significant ($p<.05$). These results find initial support for Hypothesis 4 and Hypothesis 5. They show a moderating influence of *global strategic posture* on the relationship between *organizational tenure heterogeneity* and firm performance, and a moderating influence of *global strategic posture* on the relationship between *educational background heterogeneity* and firm performance.

TABLE 13

Results of Regression Analysis Predicting Firm Performance (DV = Composite Measure of ROA,ROE,ROS)

Variable	Model 1	Model 2 (H1, H2, H3)	Model 3 (H4, H5, H6)
Constant	-1.04 ***	-1.55 ***	-1.55 ***
Control Variables			
Firm Size: ln(Number of Employees)	0.12 ***	0.12 ***	0.11 ***
Firm Age	0.00	0.00	0.00
Service Provider (vs Manufacturer)	0.22 **	0.23 *	0.24 **
TMT Size	-0.01	-0.01	-0.01
Main Effects			
Organizational Tenure Heterogeneity		-0.03	-0.07
Educational Heterogeneity		0.02	0.07
Functional Orientation Heterogeneity		0.60 *	0.58 *
Global Strategic Posture		0.07	0.08
Interactions			
Global Strategic Posture x Organizational Tenure Heterogeneity			-0.46 *
Global Strategic Posture x Educational Heterogeneity			0.70 *
Global Strategic Posture x Functional Orientation Heterogeneity			0.41
R^2	0.12	0.13	0.15
$\triangle R^2$	-	0.01	0.02
Adjusted R^2	0.11	0.11	0.12
F	9.92 ***	5.58 ***	4.72 ***

n = 300

Unstandardized regression coefficients shown.

One-tailed test of significance

[t] $p<0.10$

* $p<0.05$

** $p<0.01$

*** $p<0.001$

Once again, following prior research recommendations by Aiken and West (1991:12), when a significant interaction or interactions are obtained, they should be plotted to "sharpen our understanding" of their meaning. For the first plot, Figure 11, the x-axis represents *TMT organizational tenure heterogeneity*, and the y-axis represents firm performance, measured as the composite measure of ROA, ROS, and ROE. Values of *global strategic posture*, the intervening variable represented on the z-axis, are then once again chosen to compute slopes. Moreover, for reasons previously described, I have chosen one standard deviation above and one standard deviation below the mean to represent the high and low values. Figure 11 displays the graphical representation of my plotted result.

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**Interactive Effects of Global Strategic Posture
and Organizational Tenure Heterogeneity
on Firm Performance
(Composite Measure of ROA, ROE, ROS)**

Firm Performance in High Global Strategic Posture: High TMT Organizational Tenure Heterogeneity: M = .8227, SD = .1740; Low TMT Orgnizational Tenure Heterogeneity: M = .4164, SD = .1665; t = 14.6107, p < .001. Firm Perfor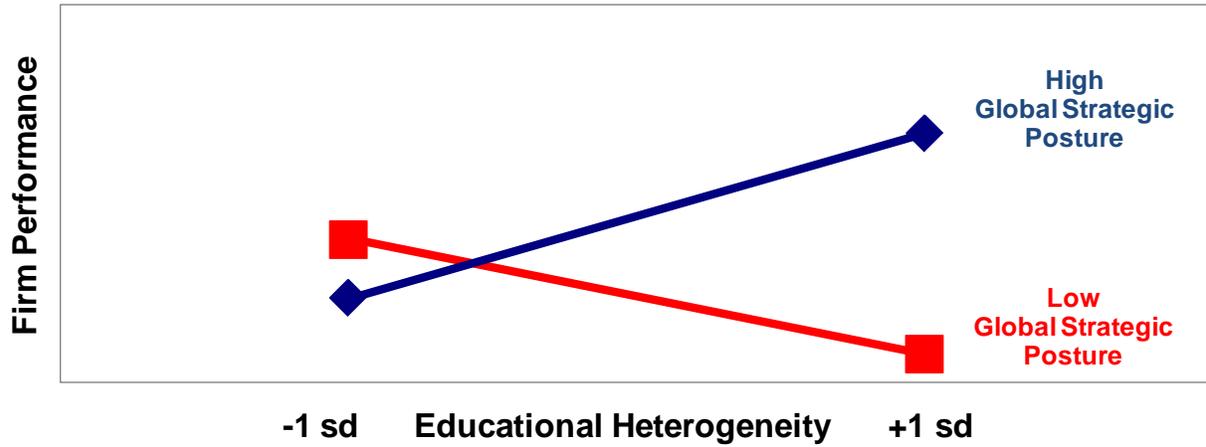mance in Low Global Strategic Posture: High TMT Organizational Tenure Heterogeneity: M = .8532, SD = .1863; Low TMT Organizational Tenure Heterogeneity: M = .2909, SD = .1959; t = 18.0130, p < .001.

FIGURE 11

Again, I previously described three patterns of interactions between two continuous variables (Cohen, Cohen, West, & Aiken, 2003: 285-286) and hypothesized that the moderator would act as an "enhancing" interaction, where the predictor and moderator variables affect the outcome variable in the same direction so that their combined effect is stronger than either individual effect. From my plot, it may be noted that consistent with Hypothesis 4, *global strategic posture* negatively and significantly (p<.05) moderates the previously proposed linear relationship between *TMT organizational tenure heterogeneity* and firm performance. Thus, high levels of *global strategic posture* and high levels of *TMT organizational tenure heterogeneity* significantly weaken firm performance.

To once again provide further support of Table 13's analysis of this moderating effect, a t-test was employed to determine whether significant mean differences existed between high and low *TMT organizational tenure heterogeneity* of firm performance and high *global strategic posture*. The means were found to be significantly different (p<.001). The same test was exercised for high and low *TMT organizational tenure heterogeneity* of firm performance and low *global strategic posture*. These means were also found to be significantly different (p<.001). These results, noted in the caption of Figure 11, provide further support for the moderating relationship proposed in Hypothesis 4. Thus, the level of *global strategic posture* moderates the relationship between *TMT organizational tenure heterogeneity* and firm performance: high levels of *global strategic posture* "enhance" the negative relationship between *TMT organizational tenure heterogeneity* and firm performance. It should once again be noted that low levels of *global strategic posture* actually "buffer" the same relationship (Cohen, Cohen, West, & Aiken, 2003: 285-286).

For my second plot, Figure 12, from the Table 13 analysis, the x-axis represents *TMT educational background heterogeneity*, and the y-axis represents firm performance, measured as the composite measure of ROA, ROS, and ROE. Values of *global strategic posture*, the intervening variable represented on the z-axis, are then once again chosen to compute slopes. Once again I have chosen one standard deviation above and one standard deviation below the mean to represent the high and low values. Figure 12 displays the graphical representation of my plotted result.

**Interactive Effects of Global Strategic Posture
and Educational Background Heterogeneity
on Firm Performance
(Composite Measure of ROA, ROE, ROS)**

Firm Performance in High Global Strategic Posture: High TMT Educational Background Heterogeneity: M = .7103, SD = .0521; Low TMT Educational Background Heterogeneity: M = .4284, SD = .1748; t = 13.3845, p < .001. Firm Performance in Low Global Strategic Posture: High TMT Educational Background Heterogeneity: M = .7134, SD = .0511; Low TMT Educational Background Heterogeneity: M = .4163, SD = .1846; t = 13.4329, p < .001.

FIGURE 12

I previously described three patterns of interactions between two continuous variables (Cohen, Cohen, West, & Aiken, 2003: 285-286) and hypothesized that the moderator would act as an "enhancing" interaction, where the predictor and moderator variables affect the outcome variable in the same direction so that their combined effect is stronger than either individual effect. From my plot, it may be noted that consistent with Hypothesis 5, *global strategic posture* positively and significantly ($p<.05$) moderates the previously proposed linear relationship between *TMT educational background heterogeneity* and firm performance. Thus, high levels of *global strategic posture* and high levels of *TMT educational background heterogeneity* significantly strengthen firm performance.

To conclude Table 13's analysis, a t-test was employed to determine whether significant mean differences existed between high and low *TMT educational background heterogeneity* of firm performance and high *global strategic posture*. The means were found to be significantly different ($p<.001$). The same test was exercised for high and low *TMT educational background heterogeneity* of firm performance and low *global strategic posture*. These means were also found to be significantly different ($p<.001$). These results, noted in the caption of Figure 12, provide further support for the moderating relationship proposed in Hypothesis 5. Thus, the level of *global strategic posture* moderates the relationship between *TMT educational background heterogeneity* and firm performance: high levels of *global strategic posture* "enhance" the positive relationship between *TMT educational background heterogeneity* and firm performance. Here it may also once again be noted that low levels of *global strategic posture* actually "buffer" the same relationship (Cohen, Cohen, West, & Aiken, 2003: 285-286). To conclude my analysis and present the results in a more concise manner, Table 14 has been

created to summarize the significant findings from the testing of all six hypotheses. The synopsis is as follows.

TABLE 14

Summary of Hypotheses Testing

H1: Greater TMT Organizational Tenure Heterogeneity is negatively associated with Firm Performance.   - hypothesis NOT supported

H2: Greater TMT Educational Background Heterogeneity is positively associated with Firm Performance.   - hypothesis NOT supported

H3: Greater TMT Functional Orientation Heterogeneity is positively associated with Firm Performance.
 	
   - hypothesis SUPPORTED
 	
    - Table 6 - DV=ROA - overall model statistically significant (p<.001) - beta statistically significant (p=.0340)
 	
    - Table 7 - DV=ROA - overall model statistically significant (p<.001) - beta statistically significant (p=.0310)
 	
    - Table 12 - DV=Composite Measure - overall model statistically significant (p<.001) - beta statistically significant (p=.0310)
 	
    - Table 13 - DV=Composite Measure - overall model statistically significant (p<.001) - beta statistically significant (p=.0380)

H4: Global Strategic Posture negatively moderates the previously proposed linear relationship between TMT Organizational Tenure Heterogeneity and Firm Performance.
 	
   - hypothesis SUPPORTED
 	
    - Table 5 - DV=ROA - overall model statistically significant (p<.001) - beta statistically significant (p=.0595)
 	
    - **Table 7 - DV=ROA - overall model statistically significant (p<.001) - beta statistically significant (p=.0360) - interaction plotted as Figure 9**
 	
    - Table 8 - DV=ROS - overall model statistically significant (p<.001) - beta statistically significant (p=.0750)
 	
    - **Table 9 - DV=ROS - overall model statistically significant (p<.001) - beta statistically significant (p=.0435) - interaction plotted as Figure 10**
 	
    - Table 10 - DV=Composite Measure - overall model statistically significant (p<.001) - beta statistically significant (p=.0830)
 	
    - **Table 13 - DV=Composite Measure - overall model statistically significant (p<.001) - beta statistically significant (p=.0300) - interaction plotted as Figure 11**

TABLE 14 (continued)

Summary of Hypotheses Testing

H5: Global Strategic Posture positively moderates the previously proposed linear relationship between TMT Educational Background Heterogeneity and Firm Performance.

- hypothesis SUPPORTED

- Table 9 - DV=ROS - overall model statistically significant (p<.001) - beta statistically significant (p=.0815)

- Table 11 - DV=Composite Measure - overall model statistically significant (p<.001) - beta statistically significant (p=.0695)

- **Table 13 - DV=Composite Measure - overall model statistically significant (p<.001) - beta statistically significant (p=.0385) - interaction plotted as Figure 12**

H6: Global Strategic Posture positively moderates the previously proposed linear relationship between TMT Functional Orientation Heterogeneity and Firm Performance.

- hypothesis SUPPORTED

- **Table 6 - DV=ROA - overall model statistically significant (p<.001) - beta statistically significant (p=.0815) - interaction plotted as Figure 8**

DISCUSSION

I began my study by revisiting the idea of whether top-level executive characteristics affect organizational level performance. While past research has found several differing relationships between Top Management Team (TMT) heterogeneity and firm performance (e. g. Goll, Sambharya, Tucci, 2001; Murray, 1989; Norburn & Birley, 1988), most prior TMT studies have only examined U.S. firms or U.S.-based multinational enterprises, also known as MNEs (Hambrick, 2007; Lohrke and Burton, 1997). Because of these inconsistent findings and mostly domestic studies, I posed the question of whether perhaps boundary conditions exist that provide insight into this quandary. Could the increasingly global involvement of these MNEs, measured as *global strategic posture* in my study, shed light on these inconsistent findings to date? My investigation lies at the crossroads between the domains of International Business and Strategic Management, where 3,392 top-ranking business executives managing 300 firms headquartered in 31 different countries located across the globe may provide the key to gaining a better understanding.

In my exploratory analysis, I posited that TMT heterogeneity and *global strategic posture* jointly influence firm performance. I first disentangled TMT heterogeneity into three highly job related and critical forms: *organizational tenure heterogeneity, educational background heterogeneity*, and *functional orientation heterogeneity* (Olson, Parayitam, & Bao, 2007; Pelled, Eisenhardt, & Xin, 1999). I then tested for a moderating influence between these three forms of heterogeneity and *global strategic posture* on firm performance.

I found that the interaction of high levels of *global strategic posture* and high levels of *organizational tenure heterogeneity* significantly weaken firm performance. Conversely, I found

that the interaction of high levels of *global strategic posture* and high levels of *educational background heterogeneity* significantly strengthen firm performance. Finally, similar to the educational background results, I found that the interaction of high levels of *global strategic posture* and high levels of *functional orientation heterogeneity* significantly strengthen firm performance as well. All three moderating influences took the form of "enhancing" interactions as hypothesized, where the predictor and moderator variable affected the outcome variable in the same direction, their combined effect stronger than either individual effect (Cohen, Cohen, West, & Aiken, 2003: 285-286). Thus, my results suggest that a firm's *global strategic posture*, their intensity of global business involvement, in conjunction with the heterogeneous nature of TMT characteristics does significantly influence firm performance.

Implications: Research and Managerial

My results have important implications for research, for MNEs in general, and for CEOs and their respective TMTs specifically. First, they illustrate how the concept of TMT heterogeneity should not be considered as one large measure of dispersion or diversity. Heterogeneity does indeed take on different forms, and as it appears via this study, these different forms result in different organizational outcomes when combined with strategic plans to globalize the firm.

In this respect, organizational tenure, in particular, does reveal that heterogeneity is more of a double-edged sword. There are advantages and disadvantages to consider from having certain types of diverse teams. The findings suggest that when heterogeneity presents itself in the form of a small number of different subgroups or even more specifically, a team with an in-group and an out-group (i.e. longer tenured executives versus shorter tenured executives),

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dysfunctional conflict may hinder effective group decision making processes. This problem

becomes magnified when increasing amounts of information processing are required by the team

to analyze more complex and demanding issues and business environments. The team

significantly becomes burdened, with organizational outcomes ultimately being affected.

Thus, CEOs, top strategy managers, and the highest-level of human resource (HR)

managers must stay vigilantly aware so that this issue may be addressed. The issue may be

addressed before the fact in the assembly of the TMT; however, this is recognized as a truly

difficult task since there are many variables that go into deciding who should be part of a top

management team. The issue more appropriately may be addressed after the fact by team

building at the highest levels. This is a strategic HR issue in that the TMT needs to be involved

in training, as teams are at all other levels of the organization, to address critical group matters

such as team cohesion, informal communication, social integration and behavioral integration

(Hambrick 1998; Hambrick, 1994; Smith et al., 1994; Williams & O'Reilly, 1998). It is often an

incorrect assumption to believe that HR programs are no longer necessary at the highest echelons

of executive rank. To the contrary, these teams must continually strive towards functioning as a

collective to improve in-group well being (Earley & Gibson, 1998; Hofstede, 1980) and

consequently firm performance.

With respect to educational background and functional orientation, teams with higher

levels of these types of heterogeneity appear to strive in the more complex environment of

multinational business. As the call for growing our businesses continues and local and domestic

markets become even more saturated, the stage is set for a continued surge of business across

country lines. With this global march, it again appears that effective information processing is

enhanced by these two types of diversity. Moreover, as it was suggested with organizational

tenure, in these instances it appears heterogeneity is more about the many subgroups involved versus only a few. TMTs are made up of educational degrees from fields as varied as engineering, science, marketing, finance, and law for example. In that same vein, managers oversee and are responsible for functions as varied as operations, research and development, sales, treasury, and counsel. Both of these types of heterogeneity appear to bring wider and more analytical perspective to the strategic practice of information processing and effective decision making.

Thus, again it the responsibility of CEOs, top strategy managers, and the highest-level of HR managers to ensure that the TMT remains a team of diverse individuals with many educational backgrounds and functional orientations represented. It is duly noted that the upper-most echelon of the organization must also strike a balance in the size of the team. Evidence from the study does illustrate that ultimately a TMT size that is too large begins to have significant and detrimental effects on firm performance. In summary, the academic and real world implications are that the theoretical frameworks of upper echelons and information processing do help predict how executive characteristics and global involvement provide a better assessment of when heterogeneity may truly be a critical factor for TMTs and MNEs alike.

Limitations and Future Research Directions

There are several limitations to the present study. First, one of my research objectives was to provide insight into MNEs that are headquartered around the world. While 31 countries are represented in my sample and this is a more heterogeneous sample than most TMT studies to date, some countries via random sample are represented in much greater numbers than others.

For example, the U.S., with the largest sample representation, still accounts for approximately 28 percent of the MNEs examined.

Second, low adjusted R^2s are a concern in the empirical analysis. The models, however, are found to be statistically significant. The relationships may be noted as truly robust because significant effects are found within the sample of firms from multiple industries. Because of the highly heterogeneous nature of the sample, the influence of a strategic variable such as *global strategic posture* is almost certain to be less prominent, in effect leading to lower R^2s (Slater & Atuahene-Gima, 2004). It may also be noted that while there may be many factors that are related to a firm's performance, this exploratory study attempts to isolate a few critical ones in order to hypothesize and test these important pieces of the TMT-performance puzzle.

Third, accounting standards vary from country to country. These variations may be cause for concern with respect to the moderator and firm performance variables employed in my study. The firms in my sample, however, are also all publicly-traded firms. This fact should provide some control over the accounting and reporting of performance measures as more and more countries align themselves with International Financial Reporting Standards (IFRS) and the International Accounting Standards Board (IASB). Even for those MNEs that follow U.S. GAAP (Generally Accepted Accounting Practices) and the Financial Accounting Standards Board (FASB), it may be noted that these two standards are converging, providing investors with greater transparency and a more unified accounting code. The IASB and the FASB published a joint memorandum of understanding known as the Norwalk Agreement in 2002 to work towards removing differences between IFRS and U.S. GAAP (Epstein & Jermakowicz, 2008). Lastly, the use of the composite measure of firm performance may also address this concern as several

measures of firm performance (i.e. ROA, ROS, and ROE) are first standardized and then averaged to generate this measure of measures.

Finally, by addressing TMT heterogeneity, *global strategic posture*, and firm performance via the "intervening processes" (Lawrence, 1997:4) of functional and dysfunctional conflict, I need to also address research concerns (Hambrick, 2007; Lawrence, 1997) about the black box that exists between the organizational demographic variables and corresponding organizational outcomes. This intervening process explanation treats subjective concepts, such as conflict and effective decision making processes as mediators between the demographic predictors and firm performance outcomes. As previously mentioned, I used these concepts in my exploratory study to understand factors produced by the TMT demographic distributions; these concepts led me to develop my testable hypotheses.

These limitations, however, also lead to opportunities for future research. With respect to the black box issues discussed, future research may test the subjective concepts posited to be mediating or linking this study's independent and dependent variables. As noted, however, this will take researchers with an "an interest in and facility with both microprocesses and macro-organizational phenomena" (Hambrick, 2007: 337). As initial relationships are uncovered, as in this study, future research can continue by then peering within the black box. As this occurs, more elaborate relationships will be unmasked, and theory will ultimately be strengthened.

Future research should also test the measure of a firm's global intensity using other measures, such as environmental uncertainty for example. This too will strengthen the findings and make them more robust. Moreover, future studies should test others moderators as well. It is my preliminary assessment that TMT heterogeneity has encountered mixed results to date because there are boundary conditions that exist, which require theoretical forethought and

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analytical experimentation to uncover. Future samples of TMTs headquartered in countries throughout the world will also prove beneficial in testing other possible moderators such as cultural boundaries, executive compensation boundaries, managerial boundaries (i.e. strength of the board of directors versus that of the TMT), growth stage of the firm (i.e. small-to-medium sized enterprises, SMEs, versus MNEs), and market boundaries (emerging versus developing versus developed). My dataset was created with these future studies already in mind. Some data has already been collected to continue my academic career moving forward; more will be required in the future. Finally, firm performance variables will also be continued to be collected to create two and three year averages of firm performance, which may provide a more complete picture of the strategic formulation, implementation, and evaluation process and corresponding organizational outcomes.

Conclusion

In conclusion, longitudinal studies may prove most fruitful as they will provide greater perspective and perhaps uncover insightful dynamic models where relationships are not explicitly unidirectional (Lawrence, 1997) – for example, bounded TMT heterogeneity leads to firm performance and consequently firm performance then leads to further heterogeneity and so on. This study begins to explore these concepts, which overlap the research domains of international business and strategic management. My research illustrates the value of continuing to explore Top Management Team issues and why they are important on both a macro and micro level. MNE TMTs, in particular, face difficult challenges as they take their firms global. They need to heed the cautionary words and take note of the implications of these preliminary findings: heterogeneity is indeed a double-edged sword. These findings advance the theoretical

perspectives of upper echelons and information processing (Daft, Bettenhausen, & Tyler, 1993; Galbraith, 1973; Hambrick & Mason, 1984), and finally, they support the relevance of top managers.

REFERENCES

Agle, B.R., Nagarajan, N.J., Sonnenfeld, J.A., & Srinivasan, D. 2006. Does CEO charisma matter? An empirical analysis of the relationships among organizational performance, environmental uncertainty, and top management team perceptions of CEO charisma. *Academy of Management Journal*, 49 (1): 161-174.

Aiken, L. S. & West, S. G. 1991. *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Allison, P. 1978. Measures of inequality. American Sociological Review, 43: 865-880.

Amason, A.C. 1996. Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal*, 39: 123-148.

Athanassiou, N., & Nigh, D. 1999. The impact of U.S. company internationalization on top management team advice networks: A tacit knowledge perspective. *Strategic Management Journal*, 20: 83-92.

Bantel, K.A., & Jackson, S.E. 1989. Top management and innovations in banking: Does the composition of the top team make a difference? *Administrative Science Quarterly*, 45: 802-836.

Barkema, H.G., & Vermuelen, F. 1998. International expansion through start-up or acquisition: A learning perspective. *Academy of Management Journal*, 41: 7-26.

Barrick, M.R., Bradley, B.H., Kristof-Brown, A.L., & Colbert, A.E. 2007. The moderating role of top management team interdependence: Implications for real teams and working groups. *Academy of Management Journal*, 50 (3): 544-557.

Bartlett, C. & Ghoshal, S. 1989. *Managing across borders*. Boston: Harvard Business Press.

Becker, G.S. 1964. *Human capital*. New York: Columbia University Press.

Bell, S.T. 2007. Deep-level composition variables as predictors of team performance: A meta-analysis. *Journal of Applied Psychology*, 92 (3): 595-615.

Borenstein, M., Rothstein, H., & Cohen, J., Schoenfeld, D., Berlin, J., & Lakatos, E. 1997. *Power and Precision*. Englewood, NJ: Lawrence Erlbaum Associates.

Bourgeois, L.J. 1980. Performance and consensus. *Strategic Management Journal*, 1: 227-248.

Calori, R., Johnson, G., & Sarnin, P. 1994. CEOs' cognitive maps and the scope of he organization. *Strategic Management Journal*, 15: 437-457.

Cannella, A. A., Park, J.-H., & Lee, H.-U. 2008. Top management team functional background diversity and firm performance: Examining the roles of team member colocation and environmental uncertainty. *Academy of Management Journal*, 51(4): 768-784.

Carpenter, M.A., & Fredrickson, J.W. 2001. Top management teams, global strategic posture, and the moderating role of uncertainty. *Academy of Management Journal*, 44 (3): 533-55.

Carpenter, M.A. Geletkanycz, M.A., Sanders, Wm.G. 2004. The upper-echelons revisited: Antecedents, elements, and consequences of top management team composition. *Journal of Management*, 60: 749 - 778.

Carpenter, M.A., & Sanders, Wm.G. 2004a. The effects of top management team pay and firm internationalization on MNC performance. *Journal of Management*, 30 (4): 509-528.

Certo, S.T., Lester, R.H., Dalton, C.M., & Dalton, D.R. 2006. Top management teams, strategy and financial performance: A meta-analytic examination. *Journal of Management Studies*, 43 (4): 813-839.

Chaganti, R., & Sambharya, R. 1987. Strategic orientation and characteristics of upper

management. *Strategic Management Journal*, 8: 393-401.

Chen, M.J. & Hambrick, D. C. 1995. Speed, stealth, and selective attack: How small firms

differ from large firms in competitive. *Academy of Management Journal*, 38(2): 453-482.

Cohen, J., Cohen, P., West, S.G., & Aiken, L.S. 2003. *Applied multiple regression/correlation*

analysis for the behavioral sciences (3rd ed.). Mahwah, NJ: Lawrence Erlbaum

Associates, Inc.

Collins, C.J., & Clark, K.D. 2003. Strategic human resource practices, top management team

social networks, and firm performance: The role of human resource practices in creating

organizational competitive advantage. *Academy of Management Journal*, 46 (6): 740-

751.

Cyert, R.M., & March, J.G. 1963. *A behavioral theory of the firm*. Englewood Cliffs, N.J.:

Prentice-Hall.

Daft, R.L., Bettenhausen, K.R., & Tyler, B.B. 1993. Implications of top managers'

communication choices for strategic decisions. In G.P. Huber and W.H. Glick (Eds.),

Organizational change and redesign, 112-146. Oxford: Oxford University Press.

Deresky, H. 1997. *International management: Managing across borders and cultures (2nd ed.)*.

South Bend, IN: Addison-Wesley.

Devine, D.J. 2002. A review and integration of classification systems relevant to teams in

organizations. *Group Dynamics: Theory, Research, and Practice*, 6 (4): 291-310.

Devine, D.J., & Phillips, J.L. 2001. Do smarter teams do better? A meta-analysis of cognitive

ability and team performance. *Small Group Research*, 32, 507-532.

DiMaggio, P.J., & Powell, W.W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48: 147-160.

Earley, P. C. & Gibson, C. B. 1998. Taking stock in our progress on individualism-collectivism: 100 years of solidarity and community. *Journal of Management*, 24(3): 265-304.

Eden, D. 2002. Replication, meta-analysis, scientific progress, and AMJ's publication policy. *Academy of Management Journal*, 45: 841-846.

Eisenhardt, K.M., & Schoonhoven, C.B. 1996. Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms. *Organization Science*, 7 (2): 136-150.

Epstein, B.J. & Jermakowicz, E. 2008. Interest capitalization: One small step toward convergence. *Journal of Accountancy*, 205(5): 80.

Finkelstein, S., & Hambrick, D.C. 1996. *Strategic leadership: Top executives and their effects on organizations.* Los Angeles: West Publishing Company.

Finkelstein, S., & Hambrick, D.C. 1990. Top management team tenure and organizational outcomes: The moderating role of managerial discretion. *Administrative Science Quarterly*, 35 (3): 484-503.

Fredrickson, J.W., & Iaquinto, A.L. 1989. Inertia and creeping rationality in strategic decision making processes. *Academy of Management Journal*, 32 (2): 516-542.

Galbraith, J. 1973. *Designing complex organizations*. Reading, MA: Addison-Wesley.

Glaser, R. 1984. Education and thinking. *American Psychologist*, 39: 93-104.

Goll, I., Sambharya, R.B., & Tucci, L.A. 2001. Top management team composition, corporate ideology, and firm performance. *Management International Review*, 41 (2): 109-129.

Hair, J. F. J., Anderson, R. E., Tatham, R. L., & Black, W. C. 1996. *Multivariate data analysis with readings* (3rd ed.). New York: Macmillan.

Haleblian, J. & Finkelstein, S. 1993. Top management team size, CEO dominance, and firm performance: The moderating roles of environmental turbulence and discretion. *Academy of Management Journal*, 36: 844-63.

Hambrick, D.C. 2007. Upper echelons theory: An update. *Academy of Management Review,* 32 (2): 334-343.

Hambrick, D. 1998. Corporate coherence and the top management team. In D. Hambrick, D. Nadler and M. Tushman (Eds.), *Navigating change,* 123-140. Boston: Harvard Business School Press.

Hambrick, D. 1994. Top management groups: A conceptual integration and reconsideration of the "team" label. *Research in Organizational Behavior*, 16: 171-215. Greenwich, CT: JAI Press.

Hambrick, D.C. 1989. Guest editor's introduction: Putting top managers back in the strategy picture. *Strategic Management Journal*, 10: 5-15.

Hambrick, D.C., Cho, T.S., & Chen, M. 1996. The influence of top management team heterogeneity of firm's competitive moves. *Administrative Science Quarterly*, 41 (4): 658-684.

Hambrick, D.C., & Finkelstein, S. 1987. Managerial discretion: A bridge between polar views of organizational outcomes. *Research and Organizational Behavior*, 9: 369-406.

Hambrick, D.C., Finkelstein, S., & Mooney, A. 2005. Executive job demands: New insights for explaining strategic decisions and leader behaviors. *Academy of Management Review*, 30: 472-491.

Hambrick, D.C., & Mason, P.A. 1984. Upper echelons: The organization as a reflection of its top

    managers. *Academy of Management Review*, 9 (2): 193-206.

Hannan, M.T., & Freeman, J.H. 1977. The population ecology of organizations. *American*

    Journal of Sociology, 82: 929-964.

Harrison, J.R., & Carroll, G.R. 1991. Keeping the faith: A model of cultural transmission in

    formal organizations. *Administrative Science Quarterly*, 36 (4): 552-52.

Henderson, A.D., & Fredrickson, J.W. 1996. Information-processing demands as a determinant

    of CEO compensation. *Academy of Management Journal*, 39: 575-606.

Hofstede, G. 1980. Motivation, leadership, and organization: Do American theories apply

    abroad? *Organizational Dynamics*, 9(1): 42-63.

Janis, I.L. 1982. *Groupthink*. Boston: Houghton Mifflin.

Kim, W., Hwang, P., & Burgers, W. 1993. Multinationals' diversification and the risk-return

    trade-off. *Strategic Management Journal*, 14: 275-286.

Knight, D., Pearce, C., Smith, K.G., Olian, J., Sims, H., Smith, K.A., & Flood, P. 1999. Top

    management team diversity, group process, and strategic consensus. *Strategic*

    Management Journal, 20: 445-465.

Krug, J.A., & Hegarty, W.H. 2001. Predicting who stays and leaves after an acquisition: A study

    of top managers in multinational firms. *Strategic Management Journal*, 22: 185-196.

Lawrence, B.S. 1997. The black box of organizational demography. *Organizational Science*, 8

    (1): 1-22.

Levy, O. 2005. The influence of top management team attention patterns on global strategic

    posture of firms. *Journal of Organizational Behavior*, 26: 797-819.

Li., J.T., Xin, K., Tsui, A., & Hambrick, D.C. 1999. Building effective international joint venture leadership teams in China. *Journal of World Business*, 34(1): 55-68.

Liden, R.C., Wayne, S.J., Jaworski, R.A., & Bennett, N. 2004. Social loafing: A field investigation. *Journal of Management*, 30(2): 285-304.

Lohrke, F.T., & Burton, G.D. 1997. Contributions and gaps in international strategic management literature. *Journal of International Management*, 3 (1): 25-57.

Lykken, D.T. 1968. Statistical significance in psychological research. *Psychological Bulletin*, 70: 151-159.

Mayer, R.C., & Gavin, M.B. 2005. Trust in management and performance: Who minds the shop while the employees watch the boss? *Academy of Management Journal*, 48 (5): 874-888.

Michel, J.G., & Hambrick, D.C. 1992. Diversification posture and top management characteristics. *Academy of Management Journal*, 35: 9-37.

Miller, D. 1991. Stale in the saddle: CEO tenure and the match between organization and environment. *Management Science*, 37 (1): 34-52.

Mischel, W. 1977. The interaction of person and situation. In D. Magnusson and N. Endler (Eds.), *Personality at the crossroads: Current issues in interactional psychology*. New York: Erlbaum.

Murray, A.I. 1989. Top management group heterogeneity and firm performance. *Strategic Management Journal*, 10: 125-141.

Norburn, D, & Birley, S. 1988. The top management team and corporate performance. *Strategic Management Journal*, 9 (3): 225-237.

Olson, B.J., Parayitam, S., and Bao, Y. 2007. Strategic decision making: The effects of cognitive diversity, conflict, and trust on decision outcomes. Journal of Management, 33 (2): 197-222.

Pelled, L.H., Eisenhardt, K.M., & Xin, K.R. 1999. Exploring the black box: An analysis of work group diversity, conflict, and performance. *Administrative Science Quarterly*, 44 (1): 1-28.

Pitcher, P., & Smith, A.D. 2001. Top management team heterogeneity: Personality, power, and proxies. *Organizational Science*, 12: 1-18.

Prahalad, C.K., & Doz, Y. 1987. *The multinational mission, balancing local demands and global vision*. New York: Free Press.

Robbins, S.P. 2005. *Essentials of organizational behavior*. Upper Saddle River, New Jersey: Pearson Prentice Hall.

Ronen, S., & Shenkar, O. 1985. Clustering countries on attitudinal dimensions: A review and synthesis. *Academy of Management Review*, 10 (3): 435-454.

Sambharya, R.B. 1996. Foreign experience of top management teams and international diversification strategies of U.S. multinational corporations. *Strategic Management Journal*, 17: 739-746.

Schuler, R.S. 2001. Human resource issues and activities in international joint ventures. *International Journal of Human Resource Management*, 12 (1): 1-52.

Simons, T.L., Pelled, L.H., & Smith, K.A. 1999. Making use of difference: Diversity, debate, and decision comprehensiveness in top management teams. *Academy of Management Journal*, 42: 662-673.

Simons, T.L., & Peterson, R.S. 2000. Task conflict and relationship conflict in top management

    teams: The pivotal role of intragroup trust. *Journal of Applied Psychology*. 85 (1): 102-

    111.

Slater, S. F. & Atuahene-Gima, K. 2004. Conducting survey research in strategic management.

    In D. J. Ketchen & D. D. Bergh (Eds.), *Research methodology in strategy and*

    management. Greenwich, CT: JAI Press.

Smith, K.G., Collins, C.J., & Clark, K.D. 2005. Existing knowledge, knowledge creation

    capability, and the rate of new product introduction in high-technology firms. *Academy of*

    Management Journal, 48 (2): 346-357.

Smith, K.G., Smith, K.A., Olian, J.D., Sims, H.P., O'Bannon, D.P., & Scully, J.A. 1994. Top

    management team demography and process: The role of social integration and

    communication. *Administrative Science Quarterly*, 39: 412-438.

Stewart, G.L. 2006. A meta-analytic review of relationships between team design features and

    team performance. *Journal of Management*, 32: 29-54.

Stopford, J. 1992. *Directory of multinationals*. New York: MacMillan.

Tabachnick, B.G., & Fidell, L.S. 1996. *Using multivariate statistics (4th ed.).* Boston: Allyn and

    Bacon.

Thomas, D.E. 2006. International diversification and firm performance in Mexican firms: A

    curvilinear relationship? *Journal of Business Research*, 59: 501-507.

Thompson, J.D. 1967. *Organizations in action*. New York: McGraw-Hill.

Wagner, J.A. 1995. Studies of individualism-collectivism: Effects on cooperation in groups.

    Academy of Management Journal, 38(1): 152-172.

Wagner, W.G., Pfeffer, J., & O'Reilly, C.A. 1984. Organizational demography and turnover in

    top-management groups. *Administrative Science Quarterly*, 29: 74-92.

Webber, S.S., & Donahue, L.M. 2001. Impact of highly and less job-related diversity on work

    group cohesion and performance: A meta-analysis. *Journal of Management*, 27: 141-162.

Weiner, N. & Mahoney, T. A. 1981. A model of corporate performance as a function of

    environmental, organizational, and leadership influences. *Academy of Management*

    Journal, 24(3): 453-470.

West, C.T., & Schwenk, C.R. 1996. Top management team strategic consensus, demographic

    homogeneity and firm performance: A report of resounding nonfindings. *Strategic*

    Management Journal, 17 (7): 571-576.

Williams, K.Y., & O'Reilly, C.A. 1998. Demography and diversity in organizations: A review of

    40 years of research. *Research in Organizational Behavior*, 20: 77-140.

CURRICULUM VITA

Adrian Gil was born in El Paso, Texas. The second son of Juan Hector Gil and Elena Olivia Gil, he attended elementary school and junior high locally with the distinctions of All Cielo Vista Elementary School Boy and All MacArthur Middle School Boy respectively. He graduated from Burges High School, El Paso, Texas, in the spring of 1991 with a G.P.A. of 98.94 and a rank of 3rd out of 395 graduates. He was voted by the faculty, students, and staff as most likely to succeed. He entered The University of Texas at El Paso in the fall with the following scholarship awards: NASA Undergraduate Student Researcher Scholar (1/12 awarded in Texas), UTEP Presidential Scholar, General Motors (GM) & League of United Latin American Citizens (LULAC) Scholar, and National Hispanic Science Foundation Scholar. While pursuing a bachelor's degree in mechanical engineering, he took part in a 9-month co-op program with Anheuser-Busch's Corporate Engineering Department in St. Louis, Missouri. After graduation in May of 1996, Adrian worked in the manufacturing industry fast-tracking through several functional positions with two large multinational firms. During this time, he returned to The University of Texas at El Paso to obtain his master of business administration, completing this degree in December of 2000. Adrian began coursework once more in the spring of 2004 with the inaugural class of The University of Texas at El Paso's International Business Doctoral Program. Noted accomplishments during this process include acceptance and presentation of four first-authored conference papers, publication of a first-authored article in *International Business Review*, and successfully defending his dissertation in August of 2009.

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