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THE EFFECTS OF TOP MANAGEMENT TEAMS ON ORGANIZATION: A LITERATURE
REVIEW

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ABSTRACT

Since the emergence of the Upper Echelons (UE) perspective introduced by Hambrick and Mason (1984), numerous research studies in the management field have focused on the top management team (TMT) characteristics, often through the analysis of demographic variables, to measure their impact on firm performance. Because the use of demographic variables yielded inconsistent study results, many later studies have built on UE literature by adding a variety of constructs onto the original UE model. This thesis presents a summary and review of past research findings concerning the TMT influence in driving organizational outcomes. From a theoretical perspective, this paper will examine the relationship between top executives and firm performance in the context of four distinct areas: cognitive and behavioral perspective, CEO impact, environmental influence, and demography. After analyzing the existing UE literature, this paper presents a research opportunity that may provide an important avenue for future UE studies.

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Chapter 1: Introduction

During the past several decades, many organizational theorists put efforts into answering questions such as “Why do organizations act as they do?” Until the late 1970s, it appears that some scholars in the field of strategic management focused on finding answers in relation to “techno-economic factors,” relying on financial and economic measures that play roles in strategic decision making processes. In this view, individuals in the organizations who are involved in decision-making processes are disregarded to a large extent. Moreover, Lieberman and O'Connor's (1972) ‘inertial organization’ theory stated that organizations “somehow run themselves,” showing no need to consider human contributions to organizational outcomes (summarized in Hambrick and Mason, 1984, p.193-194). In response to these theories, Hambrick and Mason (1984) created the “upper echelons theory,” arguing that top executives truly matter and that their impacts are reflected in organizational outcomes. This initial upper echelons theory published by Hambrick and Mason (1984) has left significant impact on organizational researchers, stimulating arguments and controversies, as well as guiding future research direction.

The Initial Upper Echelons Theory

The central premise of the initial Upper Echelons (UE) perspective states that the most important strategic decisions, as opposed to operational decisions, are made at the top level of an organization by a team of the most influential executives, rather than at the bottom level of an organization. This particular perspective views leadership at a large, complex organization as a ‘shared activity’ and therefore, the combined set of ‘cognitions, capabilities, and interactions’ of the entire top management teams drive strategic outcomes (Hambrick, 2007, p. 334). This

perspective contradicts the prior research which mainly focused on top individuals, such as CEOs, and their influences on organizational behaviors. It is also important to notice that in the initial upper echelons theory, teams of top executives of the organizations are considered as one unit of analysis. Because CEOs often tend to share managerial strategies, Hambrick and Mason (1984) argue that studying the characteristics of a group of executives as a whole, rather than those of one individual top executive, provides better explanations of organizational outcomes.

As demonstrated in Figure 1, the original UE model created by Hambrick and Mason (1984), demographic characteristics of top executives—such as ‘age, functional tracks, other career experiences, education, socioeconomic roots, financial position, and group characteristics’—are empirically measured as observable proxies for more complicated psychological processes of top management teams. The basis of this argument is that top management teams personally interpret strategic situations influenced by their own personal biases, beliefs, and values, reflecting them in the strategic choices and decisions they make. Accordingly, these strategic behaviors can be studied through an observable lens (i.e. demography). Hambrick and Mason (1984) claim that the use of demography as the main variables to predict organizational behaviors is due to the difficulties associated with access to such teams as well as the inability to measure and observe top management teams’ cognitive processes that ultimately lead to strategic decisions.

Lastly and most importantly, Hambrick and Mason (1984) recognize the inherent limitations of their study and encourage future research to build on this initial UE model by creating more complicated and better-explained conceptual models of theories (p. 198). From their statement, in which they admit having created “relatively crude assumptions” about these psychological processes of top managers by relying on demographic characteristics (p. 193), it is

noted that this initial model was created to simply provoke controversies and challenges as well as to stimulate future studies to bring forth additional branches of various theoretical concepts and ideas that can help provide better explanations of the links between TMTs and firm performance. It is also worth noting that this initial UE perspective only arranges a theoretical relationship, without empirical testing, between TMT characteristics and their impact on firm performance. Nonetheless, their premises that support their model have continued to be the center of many organizational researchers' attention and the cause of many debates.

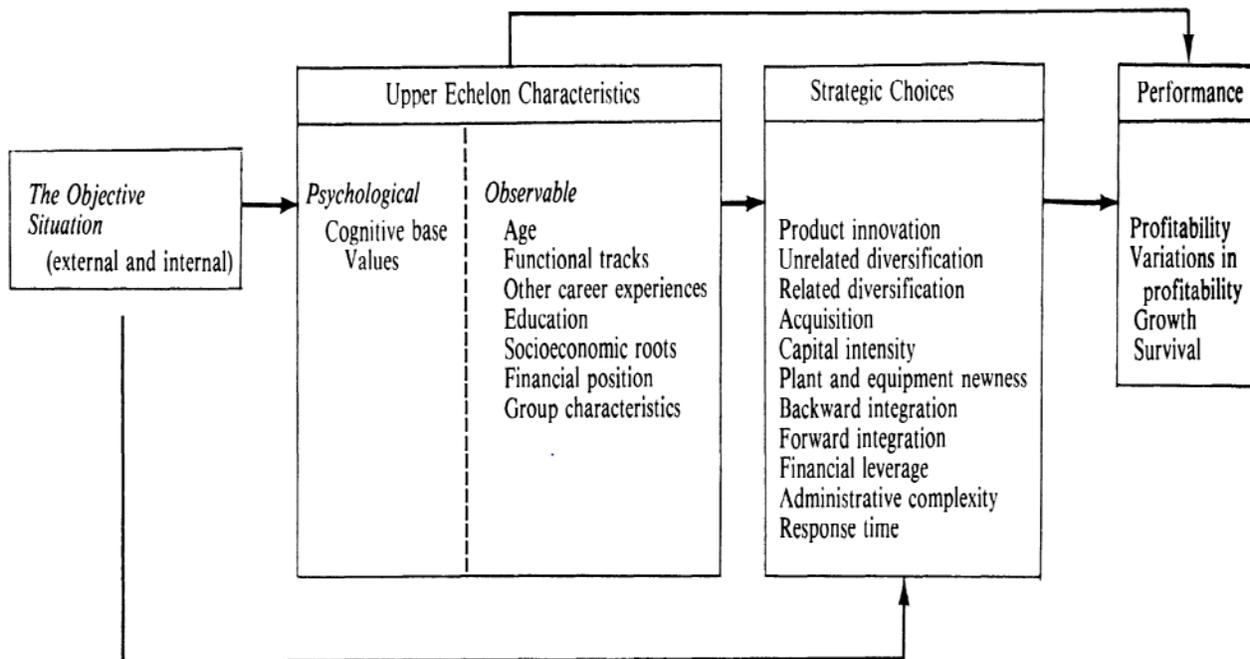


Figure 1. Hambrick and Mason (1984)'s initial upper echelons perspective

Chapter 2: Scope and Purpose of the Review

This study mainly presents a review and summary of the past research findings concerning TMT influences in driving organizational outcomes. From a theoretical perspective, this study examines the relationship between top executives and organizational outcomes in the context of demography as well as behavioral and social psychology. Specifically, this paper is intended to review the related literature that examines the following categories: (1) relationships between TMT compositions (demographic/psychological/cognitive) and organizational strategies and performance; (2) role of TMT processes that impact organizational behaviors; and (3) various contextual effects that moderate the influence of top executives on organizational outcomes. This TMT framework is largely motivated by Finkelstein et al. (2009) in which the authors demonstrate the interrelationships between TMT composition (i.e. “heterogeneity”), TMT structure (i.e. “role interdependence and team size”), and TMT process (i.e. “social integration and consensus”). In this review, however, role interdependence is considered as a part of TMT processes. Moreover, I referenced the popular review of the literature published by Carpenter et al. (2004) when creating the layout of this paper, which includes: briefly reviewing the initial UE model as well as discussing the main effects of the relationships between TMTs and performance. In addition, this paper includes a visual conceptual model that summarizes the past research findings as well as a summary chart that provides a brief review of the UE literature published during the last decade. This is intended to help the reader better visualize the complicated, yet noteworthy, processes that explain the effects of TMTs on the organizational outcomes.

While focusing on the brief history of the early and recent studies published regarding TMT compositions and performance linkages, this study also includes a more thorough review of

the literature with respect to the importance of the effects of TMT processes and various contexts on firm performance that are recently updated UE conceptual models. Due to time constraints, I excluded from this review of the literature the aspect of pay differentials among top management teams and their effects on firm performance as well as the impact of succession processes on TMT behaviors, the areas of which have been considered to have significant influences on top executives' behaviors. Furthermore, due to the importance of analyzing TMTs as opposed to individuals (i.e. CEO), I treated TMTs in this paper as one unit of analysis, following the important notion indicated in Hambrick and Mason (1984). Accordingly, I excluded articles that considered senior executives as individuals for one unit of analysis, such as CEOs or Board of directors.

The primary database that I used to conduct research was Pennsylvania State University's library search engine. The additional sources were drawn from Google Scholar database and citations from related scholarly journal articles which I believed were worth delving into. Throughout my research process, I tried to broaden my search as much as possible so that I could gain all the relevant sources related to main categories of topics. The main search terms that I used when gathering data were: top management teams, organizational outcomes, top management team compositions, strategic decision making, effects of top management team, etc. The credentials of authors, such as their educational backgrounds, publishing history, and professional experience, were considered for review during my research process.

The intended purpose of my thesis is to review previous studies conducted on how top managers of an organization impact strategic decisions and organizational outcomes. Although this is a promising area of research, there have been only a few comprehensive reviews on these works of literature including Carpenter et al. (2004) and Finkelstein et al. (2009). Perhaps, a

recent work published by Yamak, Nielsen, & Escribá-Esteve (2014) represents the most comprehensive review of the literature solely concerning the role of environmental contexts in top management teams and firm performance. As noted by Carpenter et al. (2004), nonetheless, the lack of the integrated literature reviews published in this body of research has led to inconsistent results among many studies due to the failure of acknowledging gaps between research findings (p. 4).

As opposed to the past literature reviews that involved earlier works, my review of the past literature is intended to focus mainly on more of the recent works published during the past decade from the year 2005 through the year 2015. Because my research scope was limited in terms of the years in which studies were published and simply relied on the summary of research findings of the earlier works to assist with my understanding of those prior works of study, I acknowledge that I may lack understanding of the entire picture of how Upper Echelons literature has evolved.

As a review of the past research findings, this study is aimed at assessing different contextual approaches that provide useful insights into improving decision-making and implementation processes that occur at the top level of an organization. Importantly, this present review is motivated by recognizing the need to lessen the ambiguity of current research results regarding the association between TMTs and their influences on organizational performance and effectiveness. By summarizing the past research findings, this paper includes future research opportunities that has the potential to provide further explanations of the relationship between top management teams and firm performance.

Chapter 3: Who Are Considered for Top Management Teams?

A majority of earlier and recent Upper Echelons (UE) researchers have included what they define as top management teams in their studies. The question of who makes up the top management teams appears that have originated to better explain the important notion from Hambrick and Mason (1984), which states that important strategic decisions are made at the top level of the organization and that those who do have power to make those decisions are worth investigating in order to predict organizational outcomes. Thus, defining and determining who make up of these top management teams has sparked interest among many UE researchers. Furthermore, popular reviews of the UE literature by Carpenter et al. (2004) and Finkelstein et al. (2009) also included their analysis of past research involving the definition of top management teams.

Carpenter et al. (2004) presented a summary table of studies published from 1996 through 2003 (p.39-40). This paper includes a visual that summarizes some of the more recent studies published from 2005 through 2016 (see Table 1). Throughout the UE literature, there seems to be a general consensus among earlier UE studies that top management teams consist of individuals whose executive titles are Vice President (VP) or above, including CEOs (Amason, Shrader, & Tompson, 2006; Carmeli and Halevi, 2009; Carmeli and Schaubroeck, 2006; Carmeli, Sheaffer, Halevi, 2009; Carpenter et al., 2004; Herrmann and Datta, 2005; Levy, 2005; Menz, 2012). Many of UE studies have shown that TMTs are individuals who are identified by CEOs of organizations and are involved in important strategic decisions. In addition, due to their significant contributions to the company, they are listed in annual reports and recognized for their performance. Some studies also indicated that CEOs and senior executives who directly report to their CEOs are considered TMTs (Carmeli and Halevi, 2009; Carmeli, Schaubroeck, &

Tisher, 2011; Carmeli, Tisher, & Edmondson, 2012; Carpenter et al., 2004; Lin, Dang, & Liu, 2016).

Some studies articulated specific titles of these executives whereas others gave a much broader definition such as “all managers above the Vice President level” (Herrmann and Datta, 2005). The executive titles such as COO and CFO are most commonly used, whereas a few studies indicated the titles of senior executives such as “VPs for marketing and human resources” (Carmeli, Sheaffer, & Halevi, 2009), significant equity stakeholders (Ensley and Hmieleski, 2005), CTOs (Chief Technology Officers), CFOs (Chief Financial Officers), CIOs (Chief Information Officers), CSO (Chief Security Officers), CMOs (Chief Marketing Officers), CKO (Chief Knowledge Officers), or General Managers (Lin, Dang, & Liu, 2016; Menz, 2012). Depending on strategic issues or contexts under consideration by each study, senior executives with a variety of functional areas have been identified for TMT definitions (Finkelstein et al., 2009). For example, studies concerning TMTs’ impact on firms’ diversification strategies may gather survey results from CEOs, CIOs, CMOs, or COOs, rather than CTOs. Likewise, studies concerning TMTs’ influences on firms’ security systems may focus more on the roles of CSOs, CIOs, or CKOs, rather than CMOs.

Chapter 4: TMT Characteristics - Strategies Linkages

A considerable amount of research has investigated relationships between TMT characteristics and firm strategies as well as performance. Consistent with the propositions suggested in Hambrick and Mason (1984), many of these studies relied on demographic variables, such as age, career-related experiences, educational background, and socioeconomic background. In particular, many researchers focused on how heterogeneity in these executive characteristics affects TMT strategic behaviors, which they believed are the ultimate reflections of different organizational outcomes. Although many types of TMT characteristics as well as a variety strategies have been identified in prior research, this paper will only discuss the dominant topic studied, including top management team tenure and firms' international strategies.

Some of these studies have examined the impact of top management team demographic characteristics on certain business strategies that they implement to grow and improve organizational performance. In today's globalized economy, firms need to be constantly aware of changing environments, and adapt to different needs of their stakeholders as well as the accelerating shift of economic activity in order to stay competitive. The key to success depends on firms' focus on innovation, such as developing new products or designing improvements to existing products or services that could help them penetrate a new market segment without the overall goal of exceeding their competitors. Consequently, the interplay of TMT characteristics and organizations' strategic innovation, especially in times of increasing competition and rapidly changing markets, has received increased attention from UE researchers over the past few decades.

In the same manner, Hambrick, Cho, & Chen (1996) investigated how TMT heterogeneity in their functional and educational background, as well as company tenure,

influences firms' competitive behaviors. The study found mixed results regarding these relationships, showing that TMT heterogeneity can be both beneficial and disadvantageous under different circumstances. Whereas diverse TMTs are often willing to take bolder actions, such diversity can have negative impacts on the speed of decision making processes due to difficulty achieving consensus among conflicting ideas and opinions. Similarly, in their study of German start-up firms, Talaulicar, Grundei, & Werder (2005) found that heterogeneity is positively associated with efficient decision-making in a way that facilitates 'debate and comprehensiveness' among diverse team members; however, it can slow down the processes in which strategic decisions are made (p. 533). In fact, Murray (1989) suggests that in competitive situations, deceleration in decision making processes associated with team heterogeneity is only a short-term negative aspect due to inefficient interactions among the members. In longer periods, however, Murray (1989) argues that heterogeneous TMTs are positively associated with adaptive behaviors during times of organizational change (p. 138).

Prior UE researchers concerning firms' innovation have focused on newer ventures that are more likely to be concerned with their entrepreneurial orientation (Amason, Shrader, & Thompson, 2006; Ensley & Hmieleski, 2005; Kor, 2006; Talaulicar, Grundei, & Werder, 2005). These studies focus on the effect of TMT heterogeneity on the team's information-processing abilities that are often required to make difficult strategic choices (Nielsen, 2009, p.278). Furthermore, diversity allows for a collective knowledge base that helps teams develop better products and services. Also, it is important to note that these studies consider top management teams as one aggregate decisional unit that interacts with one another to form quality strategic decisions through information sharing (Kor, 2006).

For instance, Kor (2006) examined the associations between TMT heterogeneity and several firms' engagement in R&D investment strategies. Specifically, the study found that longer-tenured TMTs negatively impact firms' tendencies to implement R&D investment whereas shorter-tenured TMTs are more likely to follow such strategy. The same logic can be used to associate top management teams' tenure with firms' competitive behaviors. Specifically, shorter-tenured TMTs, rather than longer-tenured ones, tend to make riskier decisions and are willing to explore alternative strategic choices for organizational growth. However, earlier UE works produced opposite research findings, stating that TMT tenure diversity as well as TMT functional diversity are negatively associated with firms' strategic activities that contribute to the development of new products and technologies (summarized in Barkema and Shvyrkov, 2007, p. 664).

According to past research findings, it appears that, among a firm's strategies, in particular, international diversification has been the most popular research area, probably because of increased globalization and complex international operations. Specifically, TMT international experience linking TMT diversity in a variety of demographic characteristics has been examined in a growing number of studies (Barkema and Shvyrkov, 2007; Carpenter and Fredrickson 2001; Carpenter, Sanders, and Gregersen, 2001; Carpenter, 2002; Chen, 2011; Hermann and Datta, 2005; Lee and Park, 2006; Nielsen, 2009; Nielsen and Nielsen, 2013; Tihanyi, Ellstrand, Daily, & Dalton, 2000). The increasing trend of study in this area is perhaps because these studies have recognized the need for teams of diverse top executives who have deeper insights of "global markets and foreign cultures and business practices" (Nielsen, 2009, p. 283).

For instance, Carpenter (2002) examined how the effect of TMT heterogeneity on firm performance depends on the level of a firm's international involvement. The study findings showed strong support for the associations between TMT heterogeneity and firm performance whereas it found little or no support for other TMT demographic characteristics such as educational and functional background. In particular, the study found these effects to be stronger among short-tenured top management teams. This supports some of the previous research findings that stated that longer-tenured teams of top executives often promote groupthink and are more likely to adhere to existing conditions, thereby decreasing firm performance in situations dealing with high levels of complexity (p. 277-278). In addition, Barkema and Shvyrykov (2007) reported similar results, finding that TMTs that are diverse in their tenure are more likely to expand into global areas while showing no support for TMT educational background as an impetus for global expansion.

As shown in previous research findings, the information-processing capabilities that TMT diversity fosters help diverse top management teams increase their chances of success in their international investment strategies. More specifically, the study by Nielsen and Nielsen (2013) found these benefits to be stronger in nationally diverse TMTs, due to their broader set of "valuable knowledge, resources, expertise, and network" (p. 376). These relate to international business strategies, which help them minimize the risk associated with international expansions.

There seems to be a general consensus among these studies that firms' international expansion strategies act to strengthen the relationships between TMT diversity and firm performance (Carpenter, 2002, p. 281; Nielsen, 2009). A majority of these studies found stronger support in TMT tenure diversity, rather than in other demographic characteristics, for better explanations of empirical links between TMT diversity and firm performance. However, there

have been some inconsistent results relating to the effect of TMT heterogeneity on firm performance among these studies. Past research results seemed to support that TMT heterogeneity can be both advantageous and disadvantageous to firm performance depending on the situations the firms are engaged in. Consequently, as suggested by Carpenter (2002), it would be helpful for future research to consider specific attributes of team diversity and consider how it contributes both positively and negatively to certain situations (p. 378).

Chapter 5: TMT Process - Performance Linkages

During the past decade, scholars in the field of strategic management have increasingly shown their interest in analyzing interactions among group members to view how the executives' values, personalities, and experiences influence their actions and behaviors (Smith et al., 1994; Simons et al., 1999; Carmeli et al., 2006; Carmeli et al., 2008; Alexiev et al., 2010; Simsek et al., 2005; and Kisfalvi et al., 2016). Specifically, these scholars empirically measure top executives' psychological and cognitive processes as influential determinants of various organizational outcome measures. The increasing efforts in investigating more complex, unobservable processes have been made in order to provide better explanations for unresolved pieces of how top management demographic diversity can impact behaviors of those top executives. This social psychology perspective, which serves as middle bridges to connect the relationship between demography and outcomes, has been regarded by many as a promising area of study and has been used to enhance the understanding of these relationships.

In the early 1990s, Smith et al. (1994) formulated hypotheses of the impact of the top management team demography and process on organizational performance under the following conditions: (1) "demography model", in which demography is directly and entirely responsible for organizational outcomes; (2) "process model", in which both demography and process are

equally but independently associated with organizational performance; and (3) “intervening model,” in which team processes act as a moderator of the relationship between team demography and team performance (p. 414). Contrary to popular results published by earlier scholars, this research found very little support on the direct association between team demography and performance. On the other hand, the study found the results of the third model to be well supported, arguing that team demography, such as tenure and heterogeneity, influences team processes, which in turn, affects organizational performance (Smith et al. 1994).

Although this particular body of empirical research is yet limited in number--compared to ones focused on the links between demography and performance, a growing number of studies over the past few years have reported the significance of examining group dynamics and team processes that occur at the top level of organizations and their influences on organizational outcomes (Kisfalvi et al., 2016). This stream of research focused on many different aspects of team dynamics, including communication quality and frequency (Smith et al., 1994); social integration (Smith et al., 1994), behavioral integration (Carmeli et al., 2006; Carmeli et al., 2009; Lubatkin et al., 2006; Simsek et al., 2005; Kisfalvi et al., 2016), interdependence (Barrick, Bradley, and Colbert., 2007; Hambrick et al., 2014), and consensus (West and Schwenk, 1996).

It is noteworthy that a majority of this area of research focuses on the intervening team processes as key moderators of the relationship between team demography and organizational outcomes, thereby indirectly supporting the intervening model proposed by Smith et al. (1994). As pointed out by Carpenter et al. (2004), many, if not all, upper echelon studies criticize the “black box” problem (Hambrick, 2007) in the discussion section of their work. Perhaps, this is the reason that some recent studies started to shift their research interests in

exploring internal team processes, hoping to reduce the ambiguity of past research results on the relationship between TMT demography and its influences on organizational performance.

Behavioral Integration

Among recent studies of TMT processes, the concept of behavioral integration appears to be a popular topic of research (Alexiev et al., 2010; Carmeli and Schaubroeck.,2006; Carmeli et al., 2009; Lubatkin et al., 2006; Simsek et al., 2005; Kisfalvi et al., 2016). In their 1994 work, Hambrick et al., first proposed the concept of behavioral integration, which refers to a “meta-construct” that involves the following key dimensions that allow the team to collaboratively interact with one another in their social and task-related processes: (1) “collaborative behavior”; (2) “quality information exchange”; and (3) “joint decision making” (Summarized in Simsek et al., 2005, p. 69). Thus, a behaviorally-integrated TMT yields higher work productivity and positive work performance as they are more likely to produce synchronized solutions and decisions through their collective behaviors (Carmeli and Schaubroeck, 2006; Lubatkin et al., 2006). The literature concerning the concept of behavioral integration within TMT has attempted to find links between the interactions between team members and their effects on the team’s ability to make effective decisions (Carmeli et al., 2009) or to efficiently coordinate organization strategies (Alexander et al., 2010; Carmeli et al., 2006; Lubatkin et al., 2006).

Some recent studies measured specific behavioral qualities of top management teams to investigate the role of team processes on firm performance. Drawing from a relatively small number of samples, these studies analyzed top management teams’ behavioral attributes in order to measure their impact on the quality and effectiveness of strategic decision-making processes. For instance, Carmeli, Sheaffer, and Halevi (2009) used a survey sample of 94 TMTs to examine

how top management teams' high participatory approach to decision making processes can influence the effectiveness of the strategic decisions that they make and implement. The study found that TMTs that are highly participatory in their decision making processes are more likely to form more effective strategic decisions. The study maintains that in an actively participating decision-making environment, TMTs are encouraged to suggest and consider different ideas and alternatives as well as enhance their abilities to solve conflicts.

Furthermore, Alexiev et al. (2010) studied top executives' internal and external advice-seeking behavior as the important team quality that influences a firm's ability to pursue exploratory innovation. In this study, exploratory innovation is defined as the learning or seeking of new knowledge or opportunities, which is significant to the longevity of companies that operate in continuously changing environments (p. 1343). This study found positive associations between TMT internal and external advice-seeking behavior and a firm's tendency to be exploratory and innovative. When the factor of team heterogeneity was considered, however, the study found these relationships to be less stronger. In particular, the study found that heterogeneous teams may not benefit from external advice gathering because they already possess diverse sets of "knowledge sources and skills" that they could utilize to pursue exploratory innovation (p. 1358).

Some studies have selected the human trait of ambidexterity as a metaphor to describe the competency of organizations (Carmeli and Halevi, 2009; Lubatkin, Simsek, Ling, & Veiga, 2006). In particular, by using the idea of ambidexterity, these studies recognized the need of an organization to focus on both exploratory and exploitative innovation in order to survive from environmental ambiguities and challenges. In a study of small to medium-sized firms, Lubatkin, Simsek, Ling, & Veiga (2006) conducted surveys on top executives from 139 firms to investigate

the effect of top management teams' behavioral integration in the firm's ambidexterity in performing exploratory innovation and exploiting existing knowledge and capabilities in order to yield positive levels of performance. The study found that the firms with behaviorally integrated TMTs rather than less integrated TMTs are better able to seek exploitative innovation (i.e. using existing knowledge) and exploratory innovation (i.e. pursuit of new opportunities), thereby achieving higher levels of performance.

Similarly, Alexiev and colleagues (2010) viewed that such TMTs' underlying internal processes facilitate dynamic knowledge capabilities, which result in the higher possibility of TMTs pursuing exploitative and exploratory innovation. As Lubatkin et al. (2006) note, through the combining of top management team's social- and task-related processes, "a behaviorally integrated TMT can promote a more diverse and deeper understanding of the team's existing explicit knowledge base, as well as a better use of that base" (p. 651). According to the study by Carmeli and Halevi (2009), TMTs that are behaviorally integrated engage in complex behaviors, such as utilizing a variety of leadership roles in the right situation, which ultimately allow them to pursue ambidexterity (p. 212). To summarize, organizations with behaviorally integrated TMTs are more likely to develop balanced intellectual capital that allows them to be better able to adapt to changing environments and create better solutions and new strategies when faced with different environmental challenges.

In a study of small groups of TMTs from two Canadian hospitals, Kisfalvi et al. (2016) introduce the concept of microdynamics (i.e. a set of recurring patterns of "personal relationships, perceptions, emotions, and communications," p. 434), which are micro-processes that determine the effectiveness of TMT behavioral integration. The five types of microdynamics that were observed are as follows: (1) "constellation," which refers to the degree of cohesiveness

of groups; (2) “bridge,” which centers on mutual respect that enable the processes of connecting those with different mental states; (3) “triangle,” which refers to tension or opposition formed between groups of people; (4) “umbrella,” in which someone is continually protected by another person in the team; and (5) “island,” in which an individual is frequently detached from team interactions (p. 434-436). Based on the interviews with TMTs, the study showed that a majority of microdynamics (i.e. constellation, triangle, and umbrella) can bring mixed results for behavioral integration. While bridge can positively affect behavioral integration by enhancing exchange of information and communication among TMTs, the state of island can negatively impact TMT behavioral integration due to minimized team cohesion. Although this study carries the important implications for TMT behavioral integration, the inherent limitation of this study lies in the fact that these results were based only on two TMTs that were observed only for a short period of time (p. 443).

While many studies agree that collaborative team dynamics can lead to significantly positive organizational results, it has proven to be difficult to achieve such behavioral integration within TMTs due to contradictory sets of learning, perceptions, thoughts, experiences, and attitudes. Many recent studies that have examined TMT dynamics refer to the 1994 work produced by Hambrick et al., as the basis of their theories. According to their work, failure to produce a collaborative team environment, which is based on “coherent, collaborative information processing and decision-making units,” can generate negative organizational results due to unsuccessfully integrated decision-making processes (summarized in Carmeli and Schaubroeck, 2006, p. 443).

In their study of 116 top management teams, Carmeli and Schaubroeck (2006) further capitalized on this viewpoint and investigated how crucial high levels of TMT behavioral

integration is in the face of organizational adversities and unexpected external challenges. The study concluded that TMT behavioral integration is positively associated with the quality of strategic decisions. Furthermore, this behavioral integration helps top management teams be better prepared for negative environmental conditions that could possibly lead to organizational decline (p. 443). In other words, more behaviorally integrated TMTs were not only perceived to make important strategic decisions, but they also were better able to adapt and provide solutions to changing business situations.

The Effects of TMT Heterogeneity on TMT Processes

While some scholars mainly focus on internal TMT processes the team itself, the study conducted by Simsek and colleagues (2005) investigates links between TMT heterogeneity and TMT demographic variables such as tenure and size, and their impact on TMT processes. For instance, a heterogeneous top management team is negatively related to the team's behavioral integration because of their perceived difficulties associated with a lack of information sharing and harmony. Similarly, the study argues that a larger TMT size is negatively associated with the team's behavioral integration because of a larger, conflicting set of "opinions, values, and interests" (p. 72). Surprisingly, the study found no apparent link between longer-tenured top management teams and behavioral integration, unlike the findings from previous studies that showed links between TMT tenure and firm performance.

Team Interdependence

In order to gain a fuller understanding of the associations between team behavioral integration and performance, Barrick, Bradley, and Colbert (2007) argue that the construct of team interdependence should be considered in terms of its effectiveness on team functioning (p. 545). By definition, team interdependence is “the degree to which units of individuals affect each other” (Hambrick, Humphrey, & Gupta, 2015, p.451). In their study that used survey data of 94 TMTs, the study findings showed that team interdependence moderates the relationship between TMT processes (i.e. communication and cohesion) and performance at the team and organizational level. Specifically, top management teams that were highly interdependent performed better. This is because they formed higher levels of cohesion and engaged more effectively with one another to coordinate their strategic decisions.

Chapter 6: The Impact of CEO on TMT Processes

Interestingly, some studies have shown that certain CEO personalities or leadership qualities have major influences on building the team dynamics described above. For example, Simsek and colleagues (2005) used samples of interviews with 35 senior executives who attended an executive education program to examine how CEO’s collectivistic orientation affects TMT process. Individuals with collectivistic orientation are people-oriented and characterized by selfless acts such as promoting interests of others above their own. Therefore, the study concluded that collectivistic CEOs rather than other CEOs are better able to develop and encourage cooperative and productive teams. In this study, cooperative behaviors act as a mediator of the relationship between behavioral integration and firm performance by measuring

the three dimensions: collaborative behavior, information exchange, and joint decision making (p. 73).

Perhaps, Peterson et al. (2003) provides the most comprehensive details on how different CEO personality traits play a major role in TMT dynamics, which in turn, have influences on organizational outcomes (Carpenter et al. 2004). From a psychology perspective, this study observed five dimensions of personality variables—such as conscientiousness, emotional instability, agreeableness, openness, and extraversion—of 17 CEOs from different firms to measure their impact on team dynamics. In this study, Peterson and colleagues (2003) found significant links between CEO personality traits and top management team processes and that these personality traits are important indicators of different organizational performance measures such as “growth in sales, return on investment, and return on assets” (p. 801).

Other studies focused on the influences of CEO leadership qualities and their effects on quality and effectiveness in TMT decision making processes, including the following: CEO authoritarian leadership (Flood et al., 2000), CEO relational leadership (Carmeli, Tishler, & Edmonson, 2012), CEO empowering leadership (Carmeli, Schaubroeck, & Tishler, 2011), CEO ethical leadership (Hoogh and Hartog, 2008), CEO transactional leadership (Flood et al., 2000), and CEO transformational leadership (Colbert et al., 2008; Flood et al., 2000; Lin, Dang, and Liu, 2016). These studies view the relationship between CEO and top executives influenced by vertical leadership rather than distributed leadership that TMTs generate from within their group. This particular research area on the leadership qualities of CEOs appears that the way a CEO leads the team of top executives has explanatory power in the levels of TMT interactive processes (i.e. how they are encouraged to interact with one another), which ultimately become reflected in their strategic decisions and choices (Peterson et al., 2003, p. 798).

Impact of CEO Duality on Firm Performance

For the past few decades, there has been an increasing interest among researchers to examine relationships between CEO duality and firm performance. CEO duality refers to having the same top executive both as CEO and chairperson of the board of directors (Baliga, Moyer, & Rao, 1996; Finkelstein and D'aveni, 1994; Kim, Al-Shammari, Kim, & Lee, 2009; Kim and Buchanan, 2011; Kim, Burns, & Prescott, 2009). The role of the board is to oversee the management of an organization and ensure that the CEO executes managerial duties in the best interest of shareholders instead of his or her individual interest such as maximizing personal wealth (Kim and Buchanan, 2011; Shen, 2003, p. 466).

The topic of CEO duality has sparked many debates among researchers concerning its positive or negative effects on firm performance. The reason behind the particular research interest in CEO duality leadership is that such organizational structure can lead to significant firm performance influenced by monitoring activities of the board (Kim and Buchanan, 2011). For instance, supporters of "Agency Theory" negatively viewed CEO duality, asserting that duality organizational structure could place the CEO in a very strong position in a way that negatively influences effective monitoring processes facilitated by the board of directors. On the other hand, according to the advocates of "Organization Theory," a CEO holding such a strong leadership position proves to the board that the CEO has a strong strategic vision and sense of direction for an organization's outcomes, thereby emphasizing "unambiguous leadership" (Finkelstein and D'aveni, 1994., p. 1082-1084). These two theories have served as the theoretical basis for many recently published studies.

Baliga et al. (1996) advised that different measures used by studies have contributed to the inconsistent prior research results concerning CEO duality and firm performance. A recent

study by Kim, Burns, & Prescott (2009) asserts that considering different environmental contexts, such as dynamic or complex environments in which the firm is engaged, can provide theoretical clarifications in the areas proved to lack in explanations in the prior studies. The study focused on the impact of a board's engagement in organizational strategies on firm performance, emphasizing the importance of an actively and effectively involved board that monitor strategic decision making processes. Specifically, the study assessed how the board plays a key role in strategic action capabilities. These are "strategy formulation and implementation processes" top management teams that evaluate the "speed and breadth" (i.e. range) of strategic actions as firm performance measures (p. 728). The important study finding suggests that a heterogeneous board, in which a CEO does not occupy another position as the chairperson, is most efficient in monitoring TMT strategic decision-making processes in the context of slow, yet complex, environments (p. 735). This is consistent with the argument made by Finkelstein and D'aveni (1994) that recognized the need to consider different circumstances when examining the role of CEO duality on a firm's strategic behaviors.

In the context of large U.S. corporations, a few studies seem to have found the negative impact that this duality corporate structure can have on firm performance. These studies suggest that an ineffective board's monitoring of a firm's strategic decision-making processes influences what kind of decisions are formulated and implemented. For example, Kim and Buchanan (2011) and Kim et al. (2009) agree that CEO duality is negatively associated with the top management teams' proclivity to consider and execute riskier strategic decisions such as creating strategies to penetrate new areas (i.e. unrelated diversification). On the other hand, these studies have found positive associations when they empirically examined the relationship between combined leadership (i.e. non-duality corporate structure) and corporate risk-taking behavior.

Prior research examining links between CEO duality and firm performance have not been restrained to one national context. Particularly, a growing amount of recent research has investigated this relationship in the context of developing countries, including Malaysia (Nahar, 2004), Taiwan (Chen, 2011), and China (Peng, Li, Xie, Su, 2010), as well as Indonesia, Korea, and Thailand (Ramdani and Witteloostuijn, 2010).

In a study of Taiwanese firms, Chen (2011) investigated how TMT demographic characteristics are related to international strategies and how board independence (i.e. CEO non-duality) can strengthen this relationship. Interestingly, the study found that longer-tenured, yet younger TMTs are more likely to explore international experience. Also, consistent with the previous findings, this study argued that the relationship between TMT tenure and firm's internationalization is stronger when an independent board of directors, which includes many outside directors with no affiliations with a CEO, is engaged with a firm's strategic decision making processes.

In addition, an emerging interest in this body of literature involves the examination of the impact of a corporate structure in family-oriented businesses on firm performance (Minichilli, Corbetta, & MacMillan, 2010; Pieper, Klein, & Jaskiewicz, 2008). A study by Minichilli et al. (2010) argued that there is a higher risk of "managerial entrenchment" for family-controlled firms with family members who seek their own interests rather than the interests of shareholders. Also, the study suggests that open and honest communication between board members and top executives about managerial tasks in family-oriented firms is less likely to be encouraged, making it difficult for board members to provide accurate judgments about firm performance (p. 218). Interestingly, in a study of private German family businesses, Pieper et al. (2008) found that family-controlled firms without a board are less likely to achieve goal alignment and have

difficulty ensuring across the organization that everyone in the organization is working toward the same goal. Ultimately, failure to align goals with the overall organization could lead to less work productivity, resulting in negative firm performance.

Chapter 7: Contextual Effects

TMT's impact on firm performance has been further investigated in recent studies with considerations of different contexts for different levels of analysis (Carpenter 2004 et al., p. 15-16). These attempts have been made to enhance the understanding of "when and under what conditions" TMT composition is related to organizational performance (Nielsen and Nielsen 2013, p. 378). Some scholars have believed that adding the external environment to the original upper echelon model could provide better explanations of the links between TMT and firm performance (Carpenter et al., 2004; Finkelstein et al., 2009). Although upper echelon theory has recognized the significance of focusing on the role of environmental contexts (Hambrick and Mason, 1984) or different cultures (Hambrick, 2007), only a small fraction of upper echelon literature has attempted to fully delve into the external environments that impact top management teams' behaviors (Yamak, Nielsen, and Escribá-Esteve., 2014, p. 70; Qian, Cao, and Takeuchi., 2013, p. 110-111).

Environmental Factors

Prior studies have examined the effects of contexts on the relationship between TMT characteristics and firm performance at the industry level. Most studied industries include: service sector, computer industry, banking/financial industry, and airline industry (Yamak, Nielsen, and Escribá-Esteve., 2014). In a study of top management teams in cement and minicomputer industry, Keck (1997) showed that the effects of TMT heterogeneity on firm performance can be better explained by evaluating the environment in which team operates. The study findings showed strong support for its initial hypothesis in which states that short-tenured, heterogeneous teams would result in greater financial performance in minicomputer industry during turbulent periods. At the same time, the study found positive links between TMTs with less stratification (i.e. “differences in rank” among top executives) and greater fluctuation (i.e. “entries and exits of team members”) and firms’ financial performance in turbulent environments (p.145). On the other hand, the study concluded that long-tenured, homogeneous team with more stratification and lower fluctuation in stable environments (i.e. cement industry) would result in higher financial growth.

In a study of TMTs in banking industry, for instance, Bantel and Jackson (1989) found direct associations between banks’ innovativeness and TMTs’ functional background as well as their educational level. In a study of airline industry, Hambrick, Cho, and Chen (1996) found positive relationships between TMT heterogeneity and firm performance with respect to functional backgrounds, education, and company tenure. In the similar context, Goll, Nancy, and Rasheed (2008) investigated relationships between TMT demographic variables, such as age, tenure, education, and functional background, and their impact on TMT strategies such as low

cost, differentiation, and scope. Goll, Nancy, and Rasheed (2008) found significant associations between these variables, in the case of airline deregulation. In addition, Cho and Hambrick (2006) stated that changes in the characteristics of TMTs occur, through managerial attention, in response to the deregulated policies, causing strategic planning such as “increased experience in output functions such as marketing, sales, customer services, short tenures in the airline industry, and increased heterogeneity” (p. 456). In the literature review by Yamak, Nielsen, and Escribá-Esteve (2014), such sudden events (i.e. “deregulation, environmental jolts, and discontinuities”) are categorized as “transformational” environmental characteristics (p. 73).

Furthermore, the links between TMT heterogeneity and organizational outcomes have been examined in the context of “national culture” (Carpenter et al., 2004, p. 15). In a sample of 122 Chinese high technology firms, a recent study conducted by Qian, Cao, and Takeuchi (2013) examined the influences of competitive environments as well as institutional support (i.e. the extent to which governmental institutions support businesses through promotion of certain policies) in the relationship between TMT diversity and cognitive or affective conflict. Due to Chinese cultural characteristics that focus on a collectivist society with emphasis on “*guanxi*” (i.e. interpersonal harmony), the study found little or no association between the links between TMT functional diversity and cognitive and affective conflicts (p.111-119). Also, by contextualizing their study in teams of top executives in Swiss firms, which are often known to be composed of nationally diverse individuals, Nielsen and Nielsen (2013) found strong associations between TMT nationality diversity and performance. In particular, the study argues that Swiss’ business culture of high levels of internationalization has strengthened these relationships. However, TMT nationality diversity played little role in the study conducted by Carpenter (2002) which contextualized North America, because the study included samples of

TMTs that reported to have included no more than one foreign executive in their teams (Carpenter 2002, p. 280; Nielsen and Nielsen 2013, p. 380).

One of the key environmental aspects considered in the work of Finkelstein et al. (2009) was 'environmental complexity,' which is defined as a variety of environmental variables that influence organizations. Top managers of organizations that operate in complex environments often face conflicting demands and changes that require diverse viewpoints and expertise from top managers that allow them to create innovative solutions. In these complex environments, TMTs are often confronted with greatest amount of uncertainty in decision-making processes that necessitate increased information-processing capabilities (Finkelstein et al., 2009, p.138-139; Nielsen 2009, p. 285). Therefore, Finkelstein et al. (2009) postulate that heterogeneous TMTs and larger-sized TMTs are more suitable for complex environment. The study results from Dhaouadi (2014) also seem to support this proposition, adding that younger teams of top executives operate better in a more turbulent (i.e. complex) environment. These research findings are consistent with the study results from Keck (1997), which stated that heterogeneous teams better respond to industry turbulence by reducing uncertainty during strategic decision-making processes.

As suggested by Finkelstein et al. (2009) and Nielsen and Nielsen (2013), TMT diversity leads to positive firm performance when they operate in munificent environments due to teams' enhanced information-processing abilities. It is agreed by both studies that munificent environments, which pose less constraint, allow room for a greater availability of resources and wider range of strategic solutions from a diverse set of managerial knowledge and perspectives. Thus, munificent environments present TMTs with better growth opportunities and help them better prepared in case of negative external influences. Nielsen and Nielsen (2013) stated that

munificent environments are beneficial for firms with executive teams that consist of more nationally diverse individuals at the apex of organizations because these firms allocate available resources to pursue new strategies with flexibility in responding to their competitors (p. 376).

On the other hand, Finkelstein, Hambrick, and Cannella (2009) discuss somewhat negative consequences that environmental munificence can bring on TMT diversity attributes. In munificent contexts, firms with slack resources tend to hire more top executives, whereas firms operating in less munificent environments (i.e. more hostile environments) would employ cost-reduction strategies and minimize the number of executives (p. 142). As opposed to dynamic environments that favor team heterogeneity, Nielsen (2009) maintains that TMT homogeneity is preferred for munificent environments, due to less perceived needs for diversity in managerial knowledge bases to make strategic decisions (p.286).

Chapter 8: Overall Synthesis

Taken together, recent UE literature over the past decade has built on the original UE perspective by Hambrick and Mason (1984) by adding a variety of constructs that provide better predictions of the empirical links between top management team characteristics and firm performance. Consistent with the original UE perspective, many early UE researchers have discussed the effect of diversity in team member demographic characteristics on firm performance, with special attention to the influence of TMT tenure on firms' strategies. Many recent studies showed ample evidence that team demography has significant impact on TMT proclivity to execute major business-related strategies, such as international diversification, acquisition, R&D, etc. Particularly, TMTs' competitive behaviors that impact international strategies have caught many researchers' attention. While about half of these studies were

conducted in the United States, a variety of foreign countries were chosen for the context of other studies, including, Germany, Israel, Canada, Netherlands, Spain, Switzerland, China, etc (summarized in Appendix). In addition, an increasing interest in the influence of top management team characteristics of new ventures on firm outcomes has been found.

Figure 2 shows the newly integrated UE model relating to TMT theories. This was created based on the existing literature in comparison to the original UE model (see Figure 1). Compared to Chart 1 that only examines TMT demography, over the past several decades, a lot of recent UE researchers have provided a considerable amount of insight into the relationship between TMTs and firm performance with theoretical considerations of different environmental factors, such as CEO impact, CEO duality impact, and TMT interaction processes. This ensures that the original UE perspective serves as fundamental guidance, providing the great potential for more complicated integrated theoretical models in the future.

While some UE researchers provided important evidence of the links between TMT demography and performance, others have criticized the suggested theory about direct causation between demography and performance. Consequently, an increasing number of recent UE studies extended the exploration of the nature of interaction among top managers. From a social psychology perspective, these studies analyzed how these interactions can explain the cognitive and psychological processes that influence strategic decisions they make. Among different mechanisms studied, the construct of behavioral integration seemed to be the dominant research area, due to its significant impact on top management teams' strategic decision making processes. Several studies examined the effect of TMT demography and processes, validating that these constructs are interrelated with one another, and together influence strategic choices made. It appears that, among many UE studies, those that are able to present a theoretical model

of more complex relationships between TMTs and firm performance are recognized for yielding enhanced explanations.

Just as it is important how each organization's top management team is defined, the specific definition of TMT must be seen as the driver of any of the four components of the theoretical base. For example, in a study of family-controlled firms concerning the relationship of their TMTs and firm performance, the answer to the question of who constitutes the top management team may be different than those in studies that focus on the effect of TMT on performance from publicly-owned organizations. This understanding of TMT definition is critical as each definition can affect the outcomes of the following: TMT demographics, TMT behavioral integration, and environmental factors. Each of these constructs, in turn, can result in different firm performance outputs depending on how TMT is considered in the first place.

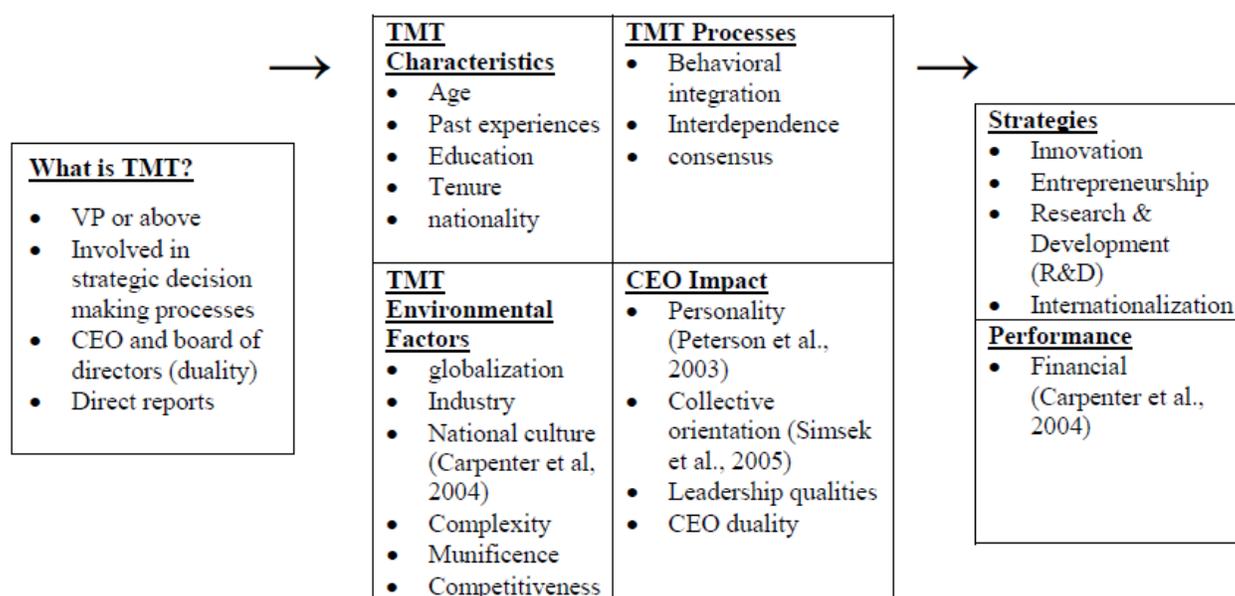


Figure 2. A collective view of the relationship between TMTs and firm performance

Limitations of the Review

The biggest limitation with respect to this review of the existing UE literature is the amount of research from which I selected for review. With the most common search term, ‘top management team,’ one can see more than 3.5 million scholarly articles that have been published. Due to this extensive scope of the UE literature, I limited my research focus to the studies that were published during the last decade. Specifically, this review included the analysis of recent studies that connected TMT effect on firm performance with respect to TMT demography, TMT processes, CEO impact, and environmental factors. Compared to the number of studies relating to UE literature that have been performed, the breath of my review of the existing literature may not be sufficient to provide an accurate representation of all the UE literature.

With the exclusion of other important aspects of TMT literature such as the effect of TMT pay structure, this paper did not analyze the branches of the UE literature that explains other factors that could drive TMT strategic behaviors. Although many articles that are included in this paper are prestigious and highly cited, this review also included some of the recent studies that are relevant to the literature, even though they have not been frequently cited or highly influential in the UE literature. The use of this latter group of studies may skew my conclusions, but only to a minimal extent.

Future Research Suggestion

Since the original UE perspective introduced by Hambrick and Mason (1984), many studies have investigated the influence of TMTs on firm performance from various theoretical perspectives. Without a doubt, these theories that have built on Hambrick and Mason (1984) have proven to be very promising in providing better predictions of firm performance. Yet, past research findings have often shown inconsistent results among studies, due to a variety of environmental or unpredictable circumstances in which firms operate. Therefore, it appears that there is a need to call for a new TMT theoretical base that is, rather, a stable indicator of TMT strategic behaviors as well as firm outcomes in a theoretical sense.

The truth is, UE researchers have failed to give sufficient attention to the importance that shareholders can have on TMT strategic behaviors and firm performance. Rather than suggesting a new TMT theory, a majority of the UE existing literature that I reviewed focused on further building on the theory of Hambrick and Mason (1984).

In fact, shareholders, or investors of a public organization, have significant impact on many aspects of the firm's businesses, including the management, operations, and finance. In particular, these investors closely monitor the organization's top management teams since the most influential individuals make the most significant decisions. These investors critically examine how competent top managers are as well as how ethical they are. Not only do these shareholders ensure that top managers embody both managerial capabilities and desirable characteristics, but they are also extremely concerned with a firm's financial results. If top managers of public organizations fail to achieve one or the other, shareholders are hesitant to further invest in these companies or they become very vigilant in their investments. It is also

important for public companies to be completely transparent with these shareholders about important managerial aspects of the organizations.

This is to say, top managers of public organizations operate in constantly, high pressure environments. Consequently, they must be alert in which strategic decisions they implement as well as how they manage their personal lives and the organizations in the most ethical way. Having invested in a company, shareholders mostly analyze how profitable their investment will be. If the company's financial performance does not seem to yield returns for them, investors can walk away from the company and invest their money somewhere else. When there are less investments in the company, a company's value decreases, creating the top managers' least desired outcome. Due to this great external pressure, I propose that shareholders of public companies have significant influence on top management teams' strategic behaviors and the choices that they make and implement.

As many UE researchers pointed out regarding the use of demography, it is important to note that no direct causation relationship can be established among any of the suggested theories about their links with firm performance. However, I believe that studying the influence of shareholders may provide better predictions of their effect on firm performance and yield more consistent study results. As it is a very promising area of study, I hope that this idea will help next generation in the design of a TMT theoretical base.

Appendix. Summary of Recent TMT Literature from 2005 through 2016

Authors	Year	Publication	TMT Definitions	Country/Context	Methodology	Focus of Study	TMT Sample & TMT Mean Size
Simsek, Veiga, Lubatkin, Dino	2005	Academy of Management Journal	N.A.	U.S.	Survey & interviews	CEO-, team-, and firm-level determinants that shape TMT behavioral integration	TMT members from 402 small- to medium sized firms 4.75 members
Amason, Shrader, Tompson	2005	Journal of Business Venturing	Managers with executive level titles (i.e. vice-president and above)	U.S.	**IPO data	Relationships between TMT characteristics and new venture performance	174 high-potential newly ventured IPO firms 3.96 members
Ensley and Hmieleski	2005	Research Policy	Founders/significant equity stakeholders/active in strategic decision-making processes	U.S.	Survey	TMT heterogeneity influences on performance between university-based and independent high-tech ventures	102 high-tech university-based start-ups & 154 independent high-tech new firms N.A.
Herrmann and Datta	2005	British Journal of Management	All managers above the vice-president level	U.S.	Survey	Relationships between TMT characteristics and firm international diversification	112 large, internationally diversified firms N.A.
Lubatkin, Simsek, Ling, and Veiga	2006	Journal of Management	N.A.	New England	Survey	The impact of TMT behavioral integration in organizational ambidexterity	TMT members from 139 Small-to-Medium sized firms

							4.4 members
Auh and Menguc	2005	Industrial Marketing Management	Senior executives that play a key role in the strategic management	N.A.	Survey questionnaires	The impact of TMT diversity on innovativeness	242 SBUs (Strategic Business Units) from various manufacturing industries 6.38 members
Talaulicar, Grundei, & Werder	2005	Journal of Business Venturing	Top executives that deal with strategic issues that affect the overall company	Germany	Survey questionnaires	Effect of TMT heterogeneity in speed of decision making processes in high-technology start-up firms	56 start-up companies; mean TMT size is unknown
Levy	2005	Journal of Organizational Behavior	Executives above the level of vice president	U.S.	**Global Strategic Posture (GSP)	The influence of TMT cognitive capabilities on firms' globalization	69 technologically intensive firms
Ensley, Hmieleski, Pearce	2006	Leadership Quarterly	N.A.	U.S.	Survey questionnaires	Influence of vertical and shared leadership within new venture TMTs	2.55 ~ 2.71 TMTs
Talaulicar, Grundei, Werder	2005	Journal of Business Venturing	N.A.	Germany	Survey	Effect of TMT characteristics and processes on strategic decision making in start-ups	56 high-tech german start-up firms N.A.
Cho and Hambrick	2006	Organization Science	N.A.	N.A.	**Automated text analysis	The effect of TMT attentional orientation (i.e. cognition) in the case of airline deregulation	TMTs from 30 publicly traded airline companies

							Range from 5 to 14 members
Kor	2006	Strategic Management Journal	All inside top-level executives including CEO, COO, business head units, and VP	U.S.	Panel data	The effect of TMT demographic compositions on firms' R&D investment strategies	77 high-technology IPO firms; mean TMT size is unknown
Carmeli and Schaubroeck	2006	Leadership Quarterly	CEOs and other senior executive above the level of vice president (president, COO, CFO)	Israel	survey	Role of TMT behavioral integration in decision making qualities and organizational decline	132 firms From various industries 2 TMT members
Certo, Lester, Dalton, and Dalton	2006	Journal of Management Studies	N.A.	N.A.	N.A.	Multi-level analysis on prior research done on the effect of TMTs on performance	N.A.
Barkema & Shvyrkov	2007	Strategic Management Journal	Heads of the main functional departments, such as marketing, finance, accounting, and operations; main governing body for strategic decisions	Netherlands	Probit analysis (using STATA)	Effect of TMT heterogeneity on firms' international expansion/ investment strategies	25 large, nonfinancial Dutch firms ; TMT mean size is unknown
Barrick, Bradley, and Colbert	2007	Academy of Management Journal	N.A.	U.S.	Survey	Role of TMT interdependence on firm performance	94 Credit union firms ; 6.4 TMT members
Hoogah and Hartog	2008	Leadership Quarterly	N.A.	Netherlands	Survey	Role of CEO ethical leadership on TMT effectiveness	73 small and medium-sized organizations; TMT mean size is unknown

Naranjo-Gil, Hartmann, and Maas	2008	British Journal of Management	N.A.	Spain	Survey	Effect of TMT heterogeneity in firm's strategic change and operational performance	92 TMT samples of hospitals
Goll, Nancy, and Rasheed	2008	Management Decision	N.A.	U.S.	N.A.	Effect of TMT demographic characteristics in firm performance in the airline industry	N.A.
Carmeli, Sheaffer, Halevi	2009	Personnel Review	Executives that make strategic decisions; those at or above the level of vice president (CFO, VP for marketing, VP for human resources, COO)	Israel	Survey	Effect of participatory decision-making processes on firm performance	N.A.
Carmeli and Halevi	2009	Leadership Quarterly	CEO & senior executives at or above the level of vice president; those considered to be "direct reports"	N.A.	Literature Review	Relationship between TMT behavioral integration and organizational ambidexterity	N.A.
Nielsen	2009	Strategic Organization	Top executives who are responsible for firm strategy and identified in the company annual report	Switzerland	N.A.	Individual-, firm-, organizational-, environmental-influences on TMT heterogeneity	TMTs from 165 Swiss companies
Alexiev et al.	2010	Journal of Management Studies	N.A.	Netherlands	Survey	Relationship between TMT advice seeking behaviors and firm's exploratory innovation	4.9 TMTs

Carmeli, Schaubroeck, and Tishler	2011	Leadership Quarterly	Senior executives with whom the CEO shares the strategic decision-making process; and those who are considered to be “direct reports”	N.A.	Survey	Impact of CEO empowering leadership on TMT processes	A sample of 82 TMTs from various industries ; average TMT mean size is unknown
Chen	2011	Corporate Governance	All managers above the vice president level	Taiwan	Two-way fixed-effects Regression analysis	Role of board independence in TMT decision making regarding international strategies	254 companies; TMT size is unknown
Carmeli, Tisher, and Edmondson	2012	Strategic Organization	“Direct reports” (senior executives with whom CEO shares the strategic-making process	Israel	Survey questionnaires	Impact of CEO relational leadership on strategic decision quality in TMTs	N.A.
Menz	2012	Journal of Management	Senior executives in the TMT responsible for one or more functional areas (CEOs, CTOs, CIOs, CFOs, COOs)	N.A.	N.A.	Literature review on past research findings on functional TMTs	N.A.
Qian, Cao, and Takeuchi	2013	Strategic Management Journal	CEOs and Chief Technology Officers (CTOs)	China	Survey questionnaires	The moderating effects of competitive and institutional environments in TMT processes and outcomes	122 Chinese technology firms; TMT mean size is unknown
Awino	2013	Journal of Management and Strategy	All executives who report to CEO or COO	Kenya	Cross-sectional survey	The impact of TMT diversity on organizational performance in the service industry	N.A.

Nielsen and Nielsen	2013	Strategic Management Journal	Executive team listed in the company annual reports	Switzerland	N.A.	Influences of different contexts in the relationship between TMT nationality diversity and firm performance	146 Swiss companies
Yang and Wang	2014	Management Decision	Chairpersons, general managers, vice general managers, vice presidents, chief accountants/ chief financial officers	China	N.A.	Impact of TMT characteristics on firm's entrepreneurial strategic orientation	88 Chinese Small-to Medium sized companies
Hambrick, Humphrey, and Gupta	2015	Strategic Management Journal	Senior vice presidents or higher (CEO, executive vice presidents, senior vice presidents)	N.A.	**N.A.	Structural interdependence within TMTs	N.A.
Kisfalvi, Sergi, and Langley	2016	Long Range Planning	CEOs, Vice Presidents, Directors of HR	Canada	Interviews	Microdynamics of TMTs	TMTs of 2 Canadian hospitals
Lin, Dang, Liu	2016	Asia Pacific Journal of Management	CEOs or General Managers (GMs), and those who report directly to them	Vietnam	Survey questionnaires	The impact of CEO transformational leadership on trust among members of TMTs	304 executives from 152 firms 7.51 mean TMT

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ACADEMIC VITA

Jiwon Bae

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Education

The Pennsylvania State University, Abington, PA

B.S Business, *Management and Marketing*

Schreyer Honors College: Honors in Letters, Arts, & Sciences

THE EFFECTS OF TOP MANAGEMENT TEAMS ON ORGANIZATION: A LITERATURE REVIEW

Steven McMillan, Associate Professor of Business

Professional Experience

Germer International, LLC, Blue bell, PA

January 2017 - Present

Associate Recruiter

- Effectively communicate with Candidates in the Pharmaceutical field who are actively looking for employment and uncover some of their personal and professional needs as they search for new opportunities
- Evaluate resumes of Candidates who may hold relevant background/experience for existing openings for Germer International(GI) clients
- Draft cover letters to clients for those candidates that GI chooses to represent
- Ensure Data Management control of In-house Centralized Database

Pennsylvania State University, Abington, PA

Computer Lab Assistant

September 2014- September 2016

- Provided customer service to students in the computer labs
- Managed day to day lab operations, including setting up and shutting down systems, checking inventory, monitoring computer usage, and troubleshooting any issues
- Provided assistance with such issues as guiding users through wireless installs, answering questions related to Office Suite or software installed on computers, and setting up new accounts
- Trusted to independently take the lead with little supervision while overseeing the use and care of equipment valued at over \$250,000

Pennsylvania State University, Abington, PA

June 2014 – September 2014

Summer Camp Counselor

- Organized and managed events in summer camp
- Provided consultation and information to children about various things in summer camp
- Responsible for the summer camp children safety and well being
- Received trainings on managing difficult situations involving with children

Missha, Busan, Korea

June 2013 – September 2013

Sales Associate

- Offered great customer service to customers in a busy environment while assisting with telephone order placement and maintaining adequate stock levels to fulfill orders
- Communicated effectively to the needs of the customers
- Responsible for organizing inventory and stocking products in store

Dunkin Donuts, Busan, Korea

June 2011 – September 2011

Sales Associate

- Managed day to day operations, including opening and closing stores, and checking inventory
- Quickly resolved customer complaints
- Accurately managed funds on a day to day basis under a fast-paced environment
- Developed repeat business by providing high quality customer service

Honors

Schreyer Honors College Annual Academic Scholarship, Schreyer Honors College, July 2015 – Present

Dean's List, PSU, Fall 2013 –Present

Language Proficiency

Fluent in Korean, English, and beginner in Spanish