

BRIDGING THE MACRO-MICRO DIVIDE: AN EXAMINATION OF THE  
PROXIMAL TOP MANAGEMENT TEAM FACTORS THAT INFLUENCE  
STRATEGY IMPLEMENTATION AND ORGANIZATIONAL PERFORMANCE

A Dissertation

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## ABSTRACT

Organizational research has historically investigated *strategy formulation* while giving far less consideration to *strategy implementation*. This is surprising given that between 70 and 90 percent of formulated strategies fail. Moreover, the few studies that do address strategy implementation focus almost entirely on how the organization, a distal situational determinant, impacts strategy implementation. In addition to prior research focusing on distal situational determinants, most of these studies are conceptual or rely on qualitative or archival data.

To fill this gap in theory and research, this dissertation proposes that an organization's top management team (TMT) is a proximal determinant of strategy implementation, and more specifically, the TMT's strategy implementation efforts. Indeed only by first understanding the *strategists* and their effects on TMT strategy implementation can one hope to gain clarity on the alarming rates of implementation failures. Drawing on "macro-organizational" theory, this treatise develops a new theoretical framework that emphasizes TMTs as being an influential proximal determinant of strategy implementation. To my knowledge, no studies have examined the role that top executive *teams* have in strategy implementation. Furthermore, using "micro-organizational" constructs, this dissertation examines the processes and structures that affect strategy implementation and organizational performance. In this sense, rather than argue (as many strategy scholars have) that *distal organizational* structures or processes influence strategy implementation, I argue a more *proximal team*

structure of executive team interdependence and executive team processes influence the executive team's strategy implementation, which, in turn, influences the organization's performance. Accordingly, this dissertation offers an important theoretical contribution to both literature streams that move beyond extant conceptions that the distal organization and its attributes impact strategy implementation and bridges the prevalent micro-macro divide that exists in the literature today. Next, this dissertation provides a valuable empirical contribution by first applying a construct-oriented micro-organizational scholarly approach to tidy up extant strategy implementation and TMT process constructs and then submits these and other proposed factors to an empirical test. Last, given the strikingly high rates of strategy implementation failures, a practical implication of this dissertation is to help top executives optimize their structure, process, and strategy implementation tasks in order to enhance their organization's performance.

## DEDICATION

To God, who holds my future and without whom I can do nothing. To Sehnaz and Zarina, both of whom supported me, encouraged me, and inspired me to achieve. With reverence and respect to my mother, Zubeda, who taught me to persevere through life's *temporary* challenges. To my committee members, I deeply appreciate all of their help, especially Dr. Barrick, who tirelessly helped me to more clearly convey the ideas presented in this manuscript.

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## CHAPTER I

### INTRODUCTION

“...*great strategy, shame about the implementation.*” - Okumus and Roper (1998: 218)

During the last fifty years, organizational scholars have devoted much effort toward understanding the strategic management process. To date, however, scholars have accumulated more knowledge regarding the strategy formulation aspect of the strategic management process, while largely ignoring the strategy implementation aspect (Aktinson, 2006; Hrebiniak, 2008; Noble, 1999). The lack of research on strategy implementation is surprising since between 70 and 90 percent of formulated strategies fail (Mankins & Steele, 2005; Raps, 2004).

In those rare instances where strategy implementation scholarship has been generated, scholars generally assert that *organizations* affect strategy implementation (e.g. Barney, 1991; Chandler, 1962; Murray, 1988; Parnell, 2000). Research in this regard can be placed into three categories. The first category speaks to the effects of organizational processes on strategy implementation models or tactics (e.g. Bourgeois & Brodwin, 1984, Nutt, 2006; Raes, Heijltjes, Glunk, & Roe, 2011). The second category delves into the effects of organizational structures on these organizational processes (e.g. Bourgeois & Brodwin, 1984; Miles & Snow, 1978; Mintzberg, 1990; Porter, 1980). The third category looks at the contingency effects of organizational structures on the organizational processes and organizational outcome models or tactics relationships (e.g. Govindarajan, 1988; Heracleous, 2000; Schaap, 2006). However, such a focus on distal

*organizational-level* factors ignores proximal influences that may also affect strategy implementation, ultimately ignoring some of the meaningful variance in strategy implementation (Child, 1972; Finkelstein, Hambrick, & Canella, 2009). That is, while exploring how the distal organization (and its factors) influences strategy implementation tactics or methods is important, doing so provokes another set of questions, is there a (more) proximal influence to strategy implementation? And, if so, what are the proximal factors that influence strategy implementation?

Indeed, both scholars and practitioners have conceptually argued that a more proximal influence does exist – namely an organization’s top management team (TMT; Bossidy & Charan, 2002; Finkelstein et al., 2009; Schendel & Hofer, 1979). To date, however, no systematic theory or theoretical framework exists that links this team of executives to *strategy implementation*. Furthermore, no systematic research exists that identifies factors that explain how and why these executive teams influence strategy implementation. Put differently, whereas organizational-level factors have been identified, team- or TMT-level factors have not. Last, no clear conception of strategy implementation has emerged, making it very difficult to empirically test (Atkinson, 2006; Finkelstein et al., 2009; Noble, 1999). For example, some call strategy implementation adherence to plans (Covin, Slevin, & Schultz, 1997), while others call it CEO strategy implementation tactics, approaches, or models (Bourgeois & Brodwin, 1984; Nutt, 1987). Furthermore, the measurement of strategy implementation has varied. For example, some have measured it by third-party case study assessments, others using yes-no items, and yet others assess lower-level organizational members. These

approaches however, do not consider the individuals that formulate and guide the strategy implementation tasks – namely the TMT executives (Schendel & Hofer, 1979; Finkelstein et al., 2009). Combined, an opportunity exists to theoretically link an organization’s TMT to strategy implementation, identify and test specific TMT factors that would influence TMT strategy implementation, and conceptually clear up and empirically test these assertions.

Leveraging this opportunity will move current conversations away from a near-myopic focus on organizational-level determinants of strategy implementation to a team-level focus. Such an approach can also yield significant practical insights since proximal factors are often more direct and in the immediate control of executive team members rather than distal factors, and thus can be more easily modified (Beer & Eisenstat, 2000). Thus, the overarching purpose of this research is (1) to articulate a theory on why TMTs proximally influence strategy implementation, and more specifically, TMT strategy implementation, (2) identify and test specific TMT factors that influence TMT strategy implementation in small businesses, and (3) clearly define, and thereby refine, the concept of strategy implementation. To articulate why TMTs proximally influence strategy implementation, I will draw on the macro-organizational “upper echelons” theory. To develop a model on TMT-level factors, I will draw on existing literature on how an organization’s distal processes and structures influence strategy implementation. In particular, instead of highlighting *organizational-level* processes and structures, my model will highlight *TMT-level* processes and structures. To identify TMT-level processes, I will draw on the “micro-organizational” literature to develop a broad

executive team process construct (Cohen & Bailey, 1998; Jackson, 1970; Kozlowski & Bell, 2013). To identify TMT-level structures, I will draw on the “micro-organizational” construct of team interdependence (Kozlowski & Bell, 2013; Mathieu, Maynard, Rapp, & Gilson, 2008). To distill the concept, construct, and measurement of executive team strategy implementation, I will rely on the “micro-organizational” *construct-oriented approach* developed by Jackson (1970), which begins by identifying or developing a theoretically-based definition of the construct, making certain it is not prone to socially desirable responses, is relatively generalizable, and has high discriminant validity to existing scales. Combined, this dissertation relies on both micro- and macro-level theories which in turn, bridge the prevalent micro-macro divide that exists in the literature today.

These assertions will be tested on a sample of small-to-medium sized businesses (SMBs). SMBs will be used since it has been stated that the direct and immediate control by the TMT can be more clearly seen in small businesses because, in comparison to larger publicly traded organizations, small businesses have simple or flatter organizational structures with less hierarchical layers of management (Mintzberg, 1980). Moreover, small business TMTs are not only comprised of top managers (e.g. CEO, COO, etc.) found in larger organizations, but also, middle and operating managers (e.g. Directors of Finance, Production, Technology, and Marketing, Controllers, etc.). As such, the contextual setting to test the model that will be presented in this dissertation are small businesses.

### **TMTs as an antecedent of strategy implementation**

Scholars have suggested that executive teams serve as an important proximal influence on the direction of an organization (Finkelstein et al., 2009). Cyert and March (1963) began to formalize theory in this regard with their view that an organization's "dominant coalition" influences organizational strategies. Similarly, Andrews and his colleagues at Harvard emphasized the personal role of executives in shaping their organizations (Andrews, 1971). However, the first conceptual treatise that clearly and directly linked executives to organizational strategies came from Child's (1972) article on strategic choice. Child (1972) suggested that top executives play a prominent role in determining an organization's structure and the organization's strategies. Finally, Schendel and Hofer's (1979) treatise on the strategic management process brought to fore the critical role executives have on the strategic management process.

Building on the work of Cyert and March (1963), Andrews (1971), and Child (1972), Hambrick and Mason (1984) developed a formalized "upper echelons" theory (Finkelstein et al., 2009). Their theory is based on the view that the executive management team makes strategic choices on behalf of the organization. These choices are guided by executive team processes and specific TMT composition and structural factors. Although some conceptual research has been conducted on the influence of TMTs, no research articulates an association between TMTs and strategy implementation, which, along with strategy formulation, is a key aspect of the strategic management process. As such, based on the rationale outlined above, I assert that TMTs do indeed affect strategy formulation, but even more so strategy implementation.

My proposed model is shown in **Figure 1** and is briefly explained below. A more extensive explanation of this model, including a detailed explanation for my choice of constructs and the theoretical bases of the relationships proposed in the model, are provided in Chapter II.

### **Theoretical model**

*TMT strategy implementation.* Strategy implementation is part of the strategic management process and begins after the strategy is formulated (Schendel & Hofer, 1979). Dan Schendel and Charles Hofer, who have been credited for paving most, if not all, of the strategy management research in existence today (Phelan, Ferreira, & Salvador, 2002), were the first to assert the distinctiveness between strategy formulation and implementation. Strategy formulation and strategy implementation differ because each carries its own set of tasks and goals (Schendel & Hofer, 1979). For example, when formulating a strategy the goal may be to develop a high-value products and services strategy. This goal may culminate in what is known as a “premium” pricing strategy (Kotler & Armstrong, 2010). When implementing this “premium” pricing strategy, it would be far too simplistic for the executive team to merely state to *organizational members* and to each other that they should pursue a “premium” strategy. Questions such as “how will this be done?” and “what tasks are required to accomplish this strategy?” will inevitably arise. Instead, executive teams would first need to specify objectives or action steps on how to implement the “premium” pricing strategy. In this regard, the goals and objectives or action steps of strategy formulation and the goals and objectives or action steps of strategy implementation are distinct. Accordingly, strategy

implementation and strategy formulation differ—each carrying its own set of goals and tasks.

Schendel and Hofer (1979) referred to strategy implementation as a “...set of organizational actions...that include...an attempt to respond to deviations from the planned strategy or between the actual levels of performance” (Schendel & Hofer, 1979: 222). Because Schendel and Hofer (1979) generally assert that an organization’s executives have a prominent function in the strategic management process, they contend that these organizational actions are the tasks an executive team must effectively accomplish in order to implement a given strategy (Finkelstein et al., 2009). According to Finkelstein et al. (2009), to enable these strategic “organizational actions” executives must agree on the implementation goals, be mutually committed to pursue those strategic implementation goals, and be able to mobilize resources needed to execute those implementation goals (Finkelstein et al., 2009). In essence, disagreement on the implementation goals and the absence of mutual commitment to pursue these implementation goals will lessen the TMT’s ability to amass, coordinate, and monitor resources, ultimately leading to a waste of valuable time and a failed implementation effort (Finkelstein et al., 2009).

To accomplish this, the first task that should be pursued is to specify and gain agreement on the strategy implementation goals. Goal specification is defined as the identification and prioritization of goals and sub goals required to implement a strategy (Dickinson & McIntyre, 1997; Prussia & Kinicki, 1996; Saavedra, Early, & Van dyne, 1993). To ensure mutual commitment among TMT members, executive members can

perform the vital task of tracking the progress of the implementation goal. Tracking progress ensures accountability or commitment and is the extent to which TMTs measure and track the progress of the strategic implementation goals (Bourgeois & Brodwin, 1984; Barrick, Thurgood, Smith, & Courtright (2014); Mintzberg & Waters, 1985; Noble, 1999; Raes et al., 2011). Last, because the implementation process normally necessitates a considerable integration of people and resources both in- and outside of the executive team and is therefore sensitive to internal and external circumstances, executive team needs to constantly monitor and adapt to each of these circumstances. Monitoring internal and external circumstances include the TMT constantly monitoring both its internal (e.g. financial, talent, technology) and external environments (e.g. environmental conditions; Fleishman & Zaccaro, 1992; West, Garrod, & Carletta, 1997), enabling them to obtain new information that permits them to more successfully employ the fourth action, which is adaptation. Adaptation is defined as being proactive as necessary in light of these new conditions to alter the current implementation goals and plans to match the challenges presented in these changing circumstances (Kozlowski & Ilgen, 2006; Tjosvold, 1991; West et al., 1997). TMT strategy implementation is important because it is often considered the critical node that links the efforts of formulating a strategy to organization-level outcomes such as firm performance (e.g. Beer & Eisenstat, 2000). As such, the more TMT executives engage in these actions, the more effective the TMT is at implementing the strategy. In the next section, I will explain TMT processes, a broad construct that I posit will be positively related to TMT strategy implementation.

*TMT process.* Whereas TMT strategy implementation reflects “taskwork” processes performed by the TMT, TMT process reflects the degree of sharing or “teamwork” processes of TMTs. “Teamwork” processes focus on establishing patterns of interaction among team members that facilitate the accomplishment of the team’s tasks but does not focus on any particular task (Mathieu et al., 2008). In contrast, “taskwork” processes refer to various executive team tasks (Mathieu et al., 2008). These “taskwork” processes includes, among other things, strategy formulation, decision making, and implementation. In this sense, TMT strategy implementation “taskwork” is focused on “what” the executive team does, and TMT “teamwork” process is focused on “how” they do it. Thus, the construct of TMT process is conceptually distinct from TMT strategy implementation. Because of this independence, a TMT can have a high amount of TMT process and a low amount of TMT strategy implementation and vice versa. This is true because even if TMT executives do not engage in certain “teamwork” processes they may still be able to perform their taskwork effectively (Carmeli & Schaubroeck, 2006).

Instead of using extant “teamwork” processes that have been examined in TMT studies, e.g. behavioral integration (“...the degree to which the group engages in mutual and collective interaction” (Hambrick (1994: 188)) and social integration (“reflects the attraction to the group, satisfaction with other members of the group, and social interaction among the group members” (O’Reilly, Caldwell, & Barnett, 1989: 22)), this research developed its own TMT process construct. I did so, because, in some instances, the manner in which TMT –related constructs have been conceptualized and measured

has been prone to criticism for its lack of applicability, precision, and comprehensiveness (e.g. Barrick, Bradley, Kristof-Brown, & Colbert, 2007; Kozlowski & Bell, 2013).

To assemble a critical set of executive “teamwork” processes, this research reviewed the team process literature. This review revealed that certain types of processes are relevant for some teams, but not for others. For example, the popular episodic team processes framework of action and transition processes developed by Marks, Zaccaro, and Mathieu (2001) are not, by these authors’ admission, applicable to executive teams because TMTs are decision making teams that do not follow a set episodic pattern (Marks et al., 2001). The same is true for processes of other types of teams. For example, production and service teams need to have different types of “teamwork” processes not only because of the tasks performed on these teams, but also the environments in which they operate (Cohen & Bailey, 1997). Thus, in order to assemble a relevant set of processes, I first reviewed the team process literature by team type.

Thereafter, I isolated a set of “teamwork” processes that not only match the types of tasks performed on executive teams, but also the environments in which they operate. This procedure yielded a broad composite measure that emphasizes team sharing process behaviors. I emphasize sharing because it is widely known that TMT executives are fragmented because they do not often share of themselves when performing executive team- related tasks opting instead to focus on their own functional area (e.g. Hambrick, 1994; Katzenbach & Smith, 2003; Wageman, Nunes, Burruss, & Hackman, 2008). Executive teams that engage in sharing processes are less fragmented because they share

information, share in decisions, share time, share priorities, and share in the preemptive management of affect, conflict, and motivation on executive team-related tasks – all of which integrate TMT executives' collective attributes.

These sharing process behaviors were then categorized into two dimensions or categories, which are (1) instrumental and (2) interpersonal processes. The instrumental facet is defined as, "those aspects of interaction that relate directly to a group's work on its task" (McGrath, 1987: 321). Interpersonal processes are defined as the preemptive or proactive (versus reactive) processes of regulating affect, managing conflict, and building confidence and motivation (Marks et al., 2001). Combined, these "teamwork" processes encourage individual executives to pull proactively together and to quash petty conflicts. Alternatively, breakdowns in these "teamwork" processes undermine the efficacy of team-related tasks (Carmeli & Schaubroeck, 2006).

Although a composite measure of TMT processes will be utilized, I will briefly define each of the sharing processes in the TMT process construct. As previously noted, "teamwork" instrumental processes include the sharing of information, decisions, time, and team priorities. The sharing of information is the willingness of top executives to share information that may affect the "teamwork" processes of the TMT (Hambrick, 1995). The second "teamwork" instrumental process is the sharing of decisions, which refers to the degree to which TMT members inform members when their actions affect another team member's work, re clear on the joint problems and needs of other team members, and talk about their expectations of each other (Hambrick, 1994; Simsek, Veiga, Lubatkin, & Dino, 2005). The third "teamwork" instrumental process is the

sharing of time, which refers to the frequency of meetings related to organization-wide objectives (Hambrick, 1995). The final “teamwork” instrumental process is the sharing of priorities, which deals with sharing in the priority of the activities that are important to the executive team (Kozlowski & Bell, 2003). Now that I have explained the instrumental processes of my overall TMT process construct, I will now turn my attention toward defining the interpersonal-focused processes.

The first “teamwork” interpersonal process is the sharing of affect management, which refers to executive team members regulating one another’s emotions and includes proactively regulating executive team frustration and excitement. The second “teamwork” interpersonal process, conflict management, refers to those processes that enable executives to pull proactively together to quash petty conflicts. The final “teamwork” interpersonal process is the sharing of motivating and confidence building, in which each executive team member collectively encourages fellow executive members to perform better or to maintain high levels of performance. Breakdowns in these “teamwork” processes cause the executive team to be fragmented; eventually undermining the various team-related tasks an executive team performs (Hambrick, 1994).

**TMT process on TMT strategy implementation.** Taken together, I argue these instrumental and interpersonal TMT sharing processes of TMT process are positively related to TMT strategy implementation. I assert this because strategy implementation requires TMTs not only to specify the goals of the implementation, but also, be able to track, monitor, and adapt implementation goal (Schendel & Hofer, 1979). In order to

better accomplish this, TMTs need not only to perform task-related strategy implementation behaviors but also instrumental and interpersonal sharing behaviors (Katzenbach & Smith, 1993), which enables them to be more cooperative. Doing so also enables TMTs to be more integrated, and above all, less fragmented (O'Toole, Galbraith, & Lawler, 2002; Wageman et al., 2008), which increase participation (Nutt, 1986) and the likelihood that the TMT will be able to pursue the steps needed to implement goals and track its subsequent progress (Finkelstein et al., 2009). In the next section, I will focus on a key TMT structural construct (i.e. TMT interdependence) that I assert both directly influence TMT process and moderate the TMT strategy implementation and organizational performance relationship.

*TMT interdependence.* Whereas TMT process behaviors reflect the degree of sharing, TMT interdependence reflects the degree of relying on each other (Gully et al., 2002; Guzzo & Shea, 1992; Wageman, 1995). Sharing is defined as “giving a portion of (something) to another or others” and relying is defined as “depending on with full trust or confidence” (Oxford English Dictionary, 2013). Thus, the construct of TMT interdependence is conceptually distinct from TMT process. Because of this independence, a TMT can have a high amount of TMT interdependence and a low amount TMT process and vice versa. This is true because although TMT executives may rely on one another, it does not necessarily mean that they will share their instrumental or interpersonal behaviors with the rest of the TMT executives.

My rationale for using TMT interdependence as both an input and moderating construct stems from two sources. The first source is extant macro-organizational

research. More specifically, when studying various types of strategy implementation outcomes, scholars have suggested that an organization's structure influences an organization's processes. Macro scholars have also suggested that the same organizational structures moderate the organizational processes-strategic choice relationships. For example, scholars have proposed that an organization's size, a proxy measure for an organization's hierarchical structure, not only impacts an organization's processes, but also could moderate the organization's processes and strategic choice relationships (Finkelstein et al., 2009; Hambrick, 1994). Drawing a parallel from this logic, I assert the same for TMT interdependence, a critical component of team structure (Kozlowski & Bell, 2003), in which this team structure not only influences TMT processes, but also can moderate the TMT strategy implementation and organizational performance relationship. The second source is the small group literature, and more recently, team literature, which includes a study on TMTs. Within these literatures, studies have not only found that team interdependence drives processes (e.g. Mathieu, Maynard, Taylor, Gilson, & Ruddy, 2007; Stewart & Barrick, 2000), but recent small groups meta-analytic results (e.g. Beal, Cohen, Burke, & McLendon, 2003; Gully, Incalcaterra, Joshi, & Beaubien, 2002) and one primary study on TMTs (Barrick et al., 2007) have also found it to moderate or change the magnitude of various team process and performance relationships. In fact, one study found significant effects for both (e.g. Kirkman, Mathieu, Cordery, Rosen, & Kukenberger 2011). Following this line of logic, I assert that TMT interdependence will both directly affect TMT process and moderate the TMT process and TMT strategy implementation relationships. In the paragraphs that

follow, I will briefly define the TMT interdependence construct. Thereafter, I will explain my proposed relationships.

The team structure or design feature of team interdependence refers to the mutual reliance to affect or be affected by other TMT members to complete one's work and accomplish one's objective's (Barrick, et al., 2007). Initial conceptions often characterized interdependence according to its task (e.g. the degree of task-driven contact among members (Shea & Guzzo, 1987)). However, more recent work suggests that interdependence commences with the task, but then continues to include goals (i.e. the degree to which individual or team goals guides team members' performance and efforts; Saavedra et al., 1993) and outcomes (i.e. the degree to which team members' goals and rewards are linked to the goals and rewards of fellow team members; Wageman, 1995). Whereas these types of interdependence are often advanced as distinct constructs, several studies have chosen to use a composite measure of team interdependence (Barrick et al., 2007; Stewart & Barrick, 2000). For this study, I too will utilize a composite measure of TMT interdependence as it more broadly assesses the mutually reinforcing effects of each type of interdependence.

**TMT interdependence on TMT process.** Structuring a team to rely on each other can encourage sharing process behaviors. The main question I answer by proposing this relationship is how an organization or its investors encourage TMT executives to engage in behaviors where they share more of themselves with fellow executives. My contention is based on extant theory (e.g. Gladstein, 1984; Hackman, 1987; Sundstrom, De Meuse, & Futrell, 1990) and research that suggests when team

members are more reliant on each other to accomplish tasks, goals, and obtain rewards, they will engage in team-oriented behavior (e.g. Campion, Medsker, & Higgs, 1993; Johnson, Hollenbeck, Humphrey, Ilgen, Jundt, & Meyer, 2006). This point is especially relevant for organizations that want to encourage TMT executives to operate more like a sharing, unfragmented team (Hambrick, 2007). Accordingly, I argue that greater TMT interdependence should facilitate greater amounts of “teamwork” process sharing in terms of interaction among team members.

**The moderating effect of TMT interdependence on the TMT strategy implementation and organizational performance relationship.** I also assert that the more TMT executives rely on each other to achieve collective tasks, goals, and rewards, the more that organizational performance should be influenced by TMT strategy implementation. In other words, if TMT executives have to rely on one another, they would more likely be involved in and perform these “taskwork” processes because so much is at stake (Barrick et al., 2007; Beal et al., 2003; Gully et al., 1995). Conversely, because TMTs with lower amounts of interdependence require less coordination among members, these “taskwork” TMT strategy implementation processes should be less important for organizational performance.

*Organizational performance.* The final construct in my model is organizational performance. Although defined in many ways, organizational performance generally includes some or all of the following: (1) organization’s sales level, (2) sales growth rate, (3) cash flow, (4) return on shareholder equity, (5) gross profit margin, (6) net profit from operations, (7) profit to sales ratio, (8) return on investment, or (9) the

organization's ability to fund business growth from profits (Covin, Prescott, & Slevin, 1990; Gupta & Govindarajan, 1984). An aggregated view of this construct and measurement will be used because, as Kaplan and Norton (1992: 71) explain, "Senior executives do not rely on one set of measures to the exclusion of the other. They realize that no single measure can provide a clear performance target or focus attention on the critical areas of the business." In doing so, this aggregated approach relies on the supposition that each of dimensions of organizational performance contains shared and unshared variance (Miller, Washburn, & Glick, 2013).

Within the strategic management literature, strategy implementation is generally perceived to be a significant determinant of performance (Andrews, Loyne, Boyle, & Walker, 2011) because the successful implementation of a strategy provides an organization with the means to achieve more revenue or to decrease costs (Hrebiniak, 2005). Even so, studies that link the two are extremely rare with most linking strategy implementation "methods or tactics" to some measure of organization performance (e.g. Andrews et al., 2009; Nutt, 1999). Parsa (1999), for example, found that "rational" implementation style achieved higher profits in private companies. Similarly, Hickson et al. (2003) examined the link between implementation and performance in a sample of smaller organizations and concluded that approaches that combined both planning and what they described as "prioritizing" were associated with higher performance.

**Partial mediation of TMT strategy implementation on the TMT process and organizational performance relationship.** In addition to arguing that TMT process is positively related to TMT strategy implementation, which, in turn, is positively related to

organizational performance, I propose that TMT process has a direct, albeit distal, relationship with organizational performance. That is, I assert that TMT strategy implementation partially mediates the relationship between TMT process and organizational performance. I assert partial (versus full) mediation based on previous research that has proposed that sharing processes are likely to also be directly beneficial for organizational performance because it also aids executive teams to formulate a better strategy (Finkelstein et al., 2009). Indeed, Carmeli and Schaubroeck (2006) found that certain “teamwork” process sharing behaviors and organizational performance to be positively related, and the effect was partially mediated by the perceived quality of strategic decisions.

*Summary.* The relationships described above lead to a model on TMT strategy implementation. First, TMTs are a proximal (versus the distal) determinant of strategy implementation. In addition, I propose a theoretical model that depicts TMT process (e.g. instrumental and interpersonal) that affects TMT strategy implementation. Also, the model shows that the TMT structural construct of TMT interdependence influences TMT process and moderates the TMT strategy implementation and organizational performance relationship. Last, I propose that TMT strategy implementation influences the organizational performance and partially mediates the TMT process and organizational performance relationship.

### **Contributions of this research**

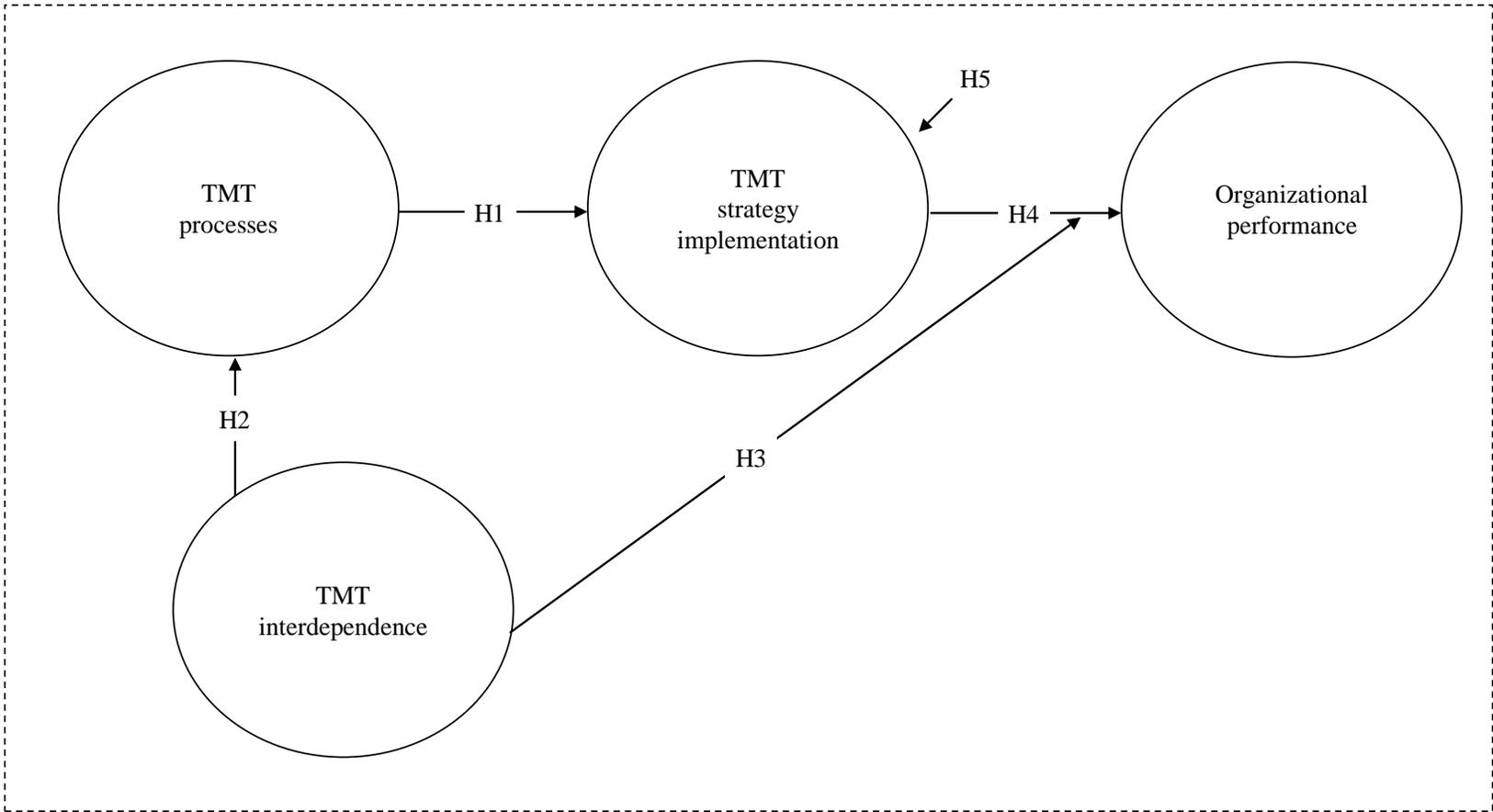
This research makes several theoretical, empirical, and practical contributions to strategy implementation, TMT upper echelons, and team literatures. First, by creating a

new theoretical framework that emphasizes TMTs as being an influential proximal determinant of strategy implementation, this treatise moves beyond extant conceptions that the distal organization influences strategy implementation. This is important because, to my knowledge, no research exists that examines why a proximal, team-level determinant – namely, an organization’s inner circle of top executives, impacts strategy implementation. Moreover, it will shift current scholarly conversations off of how the organization influences strategy implementation and more to how an organization’s TMT influences strategy implementation. Furthermore, although this treatise utilizes a “macro-organizational” theory to explain the link between the TMT and strategy implementation, it relies on “micro-organizational” constructs to articulate the processes and structures that affect strategy implementation and organizational performance. By doing this, this dissertation fuses “micro-organizational” and “macro-organizational” conversations, thereby bridging the prevalent micro-macro divide that exists in the literature today (Ployhart, 2004; Roberts, Hulin, & Rousseau, 1978).

Second, this treatise provides a valuable empirical contribution by not only submitting the proposed factors in the framework to an empirical test, but also developing comprehensive TMT process and TMT strategy implementation constructs, hence offering two new means by which future research can test theory. This first empirical contribution is important since existing research have used either qualitative research designs or have merely argued or posited various antecedents of strategy implementation (e.g. Bower, 1970; Mintzberg, Raisinghani, & Theoret, 1976; Raes et al., 2012). The second empirical contribution is important because scholars have

consistently criticized TMT–related concepts, constructs, and measures (e.g. Barrick, et al., 2007; Kozlowski & Bell, 2013). To offset these misappropriations, this dissertation develops a broad TMT process construct that not only depicts the salient processes that occur in top management teams, but one that, using “micro-organizational” process constructs, is applicable, precise, and comprehensive. Hence, by using “micro-organizational” principles (Jackson, 1970) to develop two seemingly strategy-oriented constructs of TMT process and TMT strategy implementation, I hope to offset this prevailing deficiency and connect the micro and macro subfields of management research (e.g., Aguinis, Boyd, Pierce, & Short, 2011; Kozlowski & Bell, 2013; Ployhart, 2004; Roberts, et al., 1978). Last, a practical implication of this treatise is to help organizational owners and top executives realize that optimizing TMT structures can enable TMT processes. This is important because it can potentially stem the tide of strategy implementation failures and poor levels of organizational performance that plague organizations today.

Having introduced in Chapter I the theoretical model and the contributions of this research, Chapter II will offer a review of the literatures relevant to this study and an explanation of my hypotheses. Finally, in Chapter III, I will provide a description of the sample, and methods that will be used to test the hypotheses.



**Figure 1** Theoretical model

## CHAPTER II

### LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The objectives of this chapter are to review literatures relevant to my research question, list the proximal factors that influence strategy implementation in TMTs, and develop the hypotheses specified in my theoretical model (Figure 1). These efforts will culminate in an integrated model wherein TMT process are predicted to influence TMT strategy implementation, TMT interdependence predicts TMT process, TMT interdependence moderates the TMT strategy implementation and organizational performance relationship, and TMT strategy implementation impacts organizational performance.

#### **Current antecedents of strategy implementation**

Strategy implementation has been a topic of research for many years, though much of the knowledge that has been generated is conceptual in nature. In this section, I will only provide a literature review of these articles. As previously mentioned, it is important to note that most of these assertions have not been scientifically tested, but rather, conceptually posited.

The study of strategy implementation has been influenced by a number of different perspectives. Scholars have essentially organized strategy implementation research in one of two categories –the organizational member’s interpersonal (or behavioral) *processes* perspective and the organizational *structural* perspective – both of which are distally related to strategy implementation (Noble, 1999; Raes et al, 2011;

Skivington & Daft, 1991). Within the processes perspective, strategy implementation is subject to organizational member interpretation and responses. In contrast, within the structural perspective, scholars either argue that strategy implementation is (1) guided by an organization's internal structure (i.e. structure drives strategy) or (2) requires changes to an organization's existing structure (strategy drives structure). These two views of the structural perspective are rooted in an ongoing scholarly debate about whether an organization's internal structure drives the strategy implementation or whether a strategy implementation requires changes to an organization's existing structure (Mintzberg & Waters, 1985). Put differently, the former is focused on the distal antecedents of strategy implementation and the latter is focused on the distal consequences of strategy implementation. Since my research question does not examine whether a strategy implementation requires changes to an organization's existing structure, I will only review the relevant literature on former. In the next section, I will highlight articles that fall under the organizational process perspective.

*The organizational process perspective*. The process perspective argues that strategy implementation is subject to organizational member interpretation and subsequent response behaviors. Based on this rationale, in this section, I will highlight pertinent strategy implementation conceptions, theories, and findings related to *strategic consensus, commitment, autonomous strategy behaviors, communication or dispersion processes, and the effects of leadership and implementation styles*.

**Strategic consensus.** The first behavioral process I will review is strategic consensus. Consensus has various definitions, but most scholars tend to define consensus

as a shared understanding of strategic directives (e.g. ends, means, and priorities) between individuals or groups within an organization (Noble, 1999; Floyd & Woodridge, 1992). Current views regarding consensus have mostly been conceptually expressed. For example, it was Nielsen (1983), who expressed that organizations must attain consensus within and outside the organization to effectively execute a strategy. Floyd and Wooldridge (1992), in their ongoing interest in strategic consensus, illustrated how consensus mapping, on four categories (i.e. strong consensus, blind devotion, informed skepticism, and weak consensus) of strategic consensus, can be a useful technique for identifying implementation gaps.

In addition to these conceptual or theoretical articles, only two studies have been conducted that links strategic consensus to strategy implementation. In Dooley et al.'s (2000) study of hospitals, a sample comprised of department heads, doctors and nurses, researchers found that commitment is positively associated with successful decision implementation, which was assessed as a yes/no answer to the following question, "whether the strategic decision had been fully integrated into the organization's operations." On a sample of 28 Northern Nevada plumbing executives, Schaap (2012) found that strategic consensus plays a role in the strategy implementation process, especially when the respondent has previously received training. Hence, strategic consensus is related to successful decision implementation through decision commitment by non-TMT organizational members.

**Strategic commitment.** Whereas strategic consensus is the belief that the selected strategy is the suitable one to pursue, strategic commitment is the willingness to

exert effort and resources toward the pursuit of implementing the strategy (Wooldridge & Floyd, 1990). In this regard, only two studies have examined commitment. In their study of hospital employees, Dooley et al.'s (2000) informative findings suggest that decision consensus leads to higher levels of commitment to the strategic decision, commitment is positively related to effective decision implementation, strongly committed decision teams are more successful implementation than less committed groups, and (4) decision commitment does not accelerate implementation. In a study of mid-level marketing managers in two organizations, Noble and Mokwa (1999) found that strategy commitment and role commitment are related role performance, which in turn influenced implementation success. As such, commitment appears to be an important element both directly and indirectly (through role performance) on strategy or marketing implementation, respectively.

**Autonomous strategic behaviors.** The next area that has received some scholarly attention is autonomous strategic behaviors, defined as a deviation from the implementation of a strategy for self-serving purposes such as turf issues or power bases. In an empirical study, Guth and MacMillan (1986) found that managers who believe their self-interest is being compromised take certain actions to slow or sabotage the strategy implementation effort. In their qualitative study of middle and lower level managers obstructing total quality management (TQM) implementations in a manufacturer with 600 employees, Connors and Romberg (1991) found that desire to maintain power and authority caused middle managers to be slow to transfer implementation decision-making authority to lower level workers. In sum, autonomous

behaviors appear to be important in strategy implementation. Even so, no research to date has examined these behaviors.

**Communication or dispersion processes.** Another area that has received some attention is the communication or dispersion processes that occur during strategy implementation. Few scholars have investigated the relationship between corporate communication and strategy, and, those who have - have done so without submitting their assertions to a scientific test. Some conceptual work has been conducted on the effects of communication on strategy implementation. For example, scholars have suggested that vertical communication patterns are important predictors of strategy implementation (Fidler & Johnson, 1984; Robertson & Gatignon, 1986). Although limited in number, some studies in this regard have been conducted. For example, Alexander's (1985) interviews with 21 corporate presidents and 25 governmental agency heads found that communication was stated more frequently than any other single item to promote successful strategy implementation. Peng and Litteljohn (2001) found effective communication to be key requirement for effective strategy implementation because such communication is important for training and learning as well as the dissemination of knowledge during the process of strategy implementation. On a sample of 28 Northern Nevada plumbing executives, Schaap (2012) found that frequent upward and downward communication within organizations enhances strategic consensus by enhancing shared attitudes and values, and strategic consensus plays a role in the strategy implementation process. Last, in their case analysis of Scandinavian companies, Heide, Grønhaug and Johannessen's (2002) found that a communication variety is a key

barrier to the implementation of planned strategic activities. Taken together, these suggest vertical communication of the strategy implementation by all levels of management is important. However, more work is needed as Forman and Argenti (2005:246) rightly stated, "...although an entire discipline is devoted to the study of organizational strategy, including strategy implementation, little attention has been given to the links between communication and strategy."

**Leadership and implementation styles.** The next area of strategy implementation research that has received some attention is the effects of *CEO's* implementation styles on organizational members. Several scholars have researched the effects of implementation tactics on strategy implementation, relying mostly on case analysis as a basis for their assertions. The most prolific among these is Paul C. Nutt. It was Nutt (1983) that first explained that top leaders are "strategy champions", who can be key figures in marshaling resources for successful implementation efforts. For example, by profiling CEOs in 91 case studies, Nutt (1986, 1987) found that four types of implementation tactics (e.g. intervention, participation, persuasion, and edict) used by these CEOs. He concluded that implementation success was most associated with the CEOs' use of the intervention tactic, but found this tactic was used in less than one-fifth of the cases. In another study using case studies, Nutt (1989) developed a contingency framework, in which freedom to act and need for consultation were situational constraints. He found that implementation tactics (e.g. participation, persuasion, and edict) can be profitably used in certain situations.

Another frequently cited study also used the case analysis technique, in which its authors examine five approaches used by CEOs to implement strategy (commander model, change model, collaborative model, cultural model, crecive model; Bourgeois & Brodwin, 1984). The commander model treats implementation as an issue of strategic “position” only, in which a CEO uses analyses to implement strategy. The change model treats implementation as an issue of how an organization’s structure, compensation, and systems can be used to facilitate the execution of a strategy. The participative or collaborative model emphasizes gaining commitment through coalitional decision-making. The cultural model emphasizes total organizational involvement through a strong corporate culture. And, the crecive model treats implementation as an issue of drawing on managers' natural inclinations to develop new opportunities as they see (i.e. 'growing' strategy from within the firm). Extending this line of inquiry, Lehner (2004) proposed that the five implementation tactics can be parsimoniously subsumed under three higher-order groups: (1) “tell/sell” includes command and change (i.e. similar to charismatic leadership); (2) participation, which includes collaboration, and crecive, and finally (3) culture (which only includes culture).

Embedded within this leadership category are a few studies that conceptually assert the effects that top executives have on strategy implementation (Hrebiniak & Snow, 1982; Smith & Kofron, 1996; Schaap, 2006; Raes et al., 2012). However, most of them focus only on the figurative or symbolic role of top management in the process of strategy implementation. For example, Smith and Kofron (1996) assert that top executives play an integral, albeit figurehead role, in the execution of a strategy. Raes et

al. (2012) similarly contend that top executives play a critical role in strategy implementation by interfacing with middle managers. As far as studies that have been submitted to a scientific test, only one published article emerges. On a sample of 28 Northern Nevada plumbing executives, Schaap (2012) found that CEOs who have been received an education on strategy planning and implementation were more likely to meet the performance implementation goals compared to those without training.

*The organizational structure perspective.* In contrast to the process perspective, the structural perspective states that strategy implementation is determined by an organization's internal structure (Noble, 1999; Skivington & Daft, 1991). The basis of this view of implementation is guided by the work of Hall and Saias (1980). In their view, strategy formulation, and its implementation, follows the structure and the processes of the organization. Their assertion is based on the premise that the rise of conglomerate and multinational organizations in the late 1970s and early 1980s, was linked to the multidivisional structures of organizations in the late 1960s and 1970s. Nutt (1983) too takes this position by articulating that an organization's implementation approach should be tailored to fit its internal structure.

**Organizational structure on organizational processes.** Since then, scholars have produced some research on the effects of *organizational* structures on these *organizational* processes, and the contingency effects of *organizational* structures on the *organizational* processes- and organizational outcomes relationships. As far as the effects of *organizational* structures on these *organizational* processes, Gupta (1987) found that more decentralized organizational structures produced higher levels of SBU

(strategic business units) effectiveness, regardless of environmental factors. Alexander (1985), Harrington (2006), and Wernham (1985), found that firm size and material resources determine an organization's ability to implement a strategy, suggesting that large organizational structures through their processes form the basis of the strategy and its implementation.

**Contingent effects of organizational structure.** Regarding the contingency effects of *organizational* structures on the *organizational* processes and outcomes relationships, scholars identified the effects of organization-wide systems, such as administrative systems on the organizational processes and organizational performance relationships (Govindarajan, 1988; Govindarajan & Fisher, 1990; Heide, Grønhaug & Johannessen, 2002; Heracleous, 2000; Schaap, 2006). For example, Govindarajan (1988) examined whether various administrative systems enable the implementation in an array of strategic business unit (SBU) strategies pursued by diversified corporations. As far as work on implementation training, one scholar found that the organizational process of training implementation moderates the strategy implementation and organizational performance relationship (Schaap, 2012). In sum, it appears that, despite most work on this perspective being conceptual in nature, organizational structures moderate many organizational processes and organizational performance relationships.

### **Summary and future directions**

*Summary.* Although somewhat blighted by a lack of empirical evidence, extant work is guided by these streams of research relating to strategy implementation: the organizational processes, or organizational structures. Within the organizational

processes perspective, scholars argue that strategy implementation is subject to organizational member interpretation and responses. The scarcity of evidence and conceptual work suggests that the organizational member processes are distal factors that directly influence an organization's strategy implementation. In contrast, within the structural perspective, scholars argue that strategy implementation is molded by the organization's internal structure (i.e. structure drives strategy). Here, too, the accumulated evidence, albeit scarce and conceptual in nature, points to the organization's structure either affecting the organization's processes or affecting the strategy implementation and organization's performance relationships. Although noteworthy, the extant work described above currently explains that strategy implementation is a function of distal organizational factors. However, each of these perspectives fails to account for more proximal influences – namely the TMT. In particular, in the same manner that the organization has been linked to strategy implementation, TMTs should, too, be included because they are, after all, the strategists who not only formulate the strategy but also guide its implementation. In this regard, to date, few studies have examined the role that top executives have in strategy implementation.

*Future directions.* The literature review above suggests a need for organizational researchers to (a) perform more empirical studies and (b) direct attention toward understanding the more proximal effects that top executives have on strategy implementation. With the literature review of distal organizational-level factors that influence now complete, I turn my attention toward offering a more full explanation of

why the TMT is a more proximal antecedent (than the previously used distal factors) of TMT strategy implementation. Hence, the next section will be devoted to more fully explaining the TMT as an antecedent of strategy implementation.

### **TMTs as an antecedent of strategy implementation**

During the past seventy years, theorists have suggested that executives perform the essential function of influencing the direction of an organization (Barnard, 1938, Selznick, 1957; Chandler, 1962). For example, Chester Barnard, a telephone company executive, who is best known by organizational scholars for his influential text, *The Functions of the Executive* (1938:273) simply stated the job of the executive was to put “organization into the operation.” Similarly, Selznick (1957:66) asserted the prominent role of the executive, when he stated an executive “...must specify and recast the general aims of his organization so as to adapt them, without serious corruption, to the requirements of institutional survival.” These authors thus reflected the view that an executive’s actions have a direct impact on an organization.

As time passed, however, scholars also began to realize that executive teams rather than sole executives (or other factors) collectively enable (or conversely disable) and perform organizationally relevant functions that impact the entire organization (Cyert & March, 1963; Andrews, 1971). This idea originated from the preliminary work by Cyert and March (1963), who sought to offer a new theory on what, or rather who, determines the goals of the organization. More specifically, they sought to dispel two prominent organizational theories that dominated the field at the time. One previously noted dominant theory suggested that *a key executive* determines an organization’s goals

and guides its behavior (Barnard, 1938; Selznick, 1957). Another dominant theory suggested that organization's highly distal environment sets its goals and guides its behavior (Lawrence & Lorsch, 1969; Thompson, 1967).

In contrast to both of these views, Cyert and March (1963) suggested that an organization's goals are determined by an organization's "dominant coalition". They defined the dominant coalition as a group of individuals within the organization with the power to determine its missions and goals. Moreover, they suggested this unspecified group of powerful individuals determines goals based on their own values, goals, and perspectives. And, this dominant coalition is able to dictate organizational action to a far greater degree than can an organization's environment (Alan, 1979). In essence, Cyert and March (1963) suggested that how an organization behaves is determined by the values of its dominant coalition rather than by a sole executive or the organization's environment (Robbins, 1990). Put differently, the concept of "dominant coalition" was useful as it moved theory beyond "an individual" or "the environment" making an organization's goals, but rather, placed a dominant group as a key influencer over organizational actions. Moreover, the members of this powerful group willingly use their discretion to attain their own goals (Mintzberg, 1983).

In his now famous article, Child (1972) extended the "dominant coalition" notion by suggesting that this coalition (1) is in fact the organization's top executive team who (2) makes "strategic choices" on behalf of the organization, ultimately guiding the organization's strategy. According to Child (1972:3), "strategic choice" extends to the context within which the organization is operating, to the standards of performance, and

to the design of the organization's structure itself". Guided by his specific dissatisfaction with the current theory that suggested environmental factors determine an organization's strategy and structure, Child began to formalize a theory which incorporated Cyert and March's (1963) concept of an organization's "dominant coalition".

More specifically, Child was not content with organization theorists' current conceptions of environmental, institutions, or industry factors being the key determinants of organizational forms as well as the determinant of its strategies. Child believed that influential decision makers-which, following Cyert and March (1963), he refers to as the "dominant coalition," - instead have the power to make choices that are only partially constrained by environmental and organizational contingencies. Child refuted the notion that executives and non-executive managers are forced to adopt a specific organizational structure. According to him, ideology, goals, and power relations, among a "dominant coalition", plays as important a role as issues of organizational fit in determining the choices made. In essence, he argued that contributions to a theory of organizational structure did not incorporate a more direct source of variation, which is the executives who make strategic choices on behalf of the organization (Child, 1972). As such, he invoked the term, "strategic choice" to refer to any deliberate act made by an executive that is of major significance to the organization (Finkelstein et al., 2009). This suggests that an organization's "dominant coalition", which he called the top executives of an organization have a conspicuous role in determining not only an organization's structure, but also, organizational strategies. This is true because these executives are not confined to the constraints of their environment, but that they have the capacity to

influence it. In a similar fashion, Andrews and colleagues at Harvard emphasized the personal role of executives in shaping their organizations (Learned, et al., 1961; Andrews, 1971). Thus, Child (1972) led the way in not only specifying that the “dominant coalition” is made up of the organization’s executives, but also explained the key role these executives collectively have in determining the fate of an organization - through their strategic choice – which ultimately guides their formulation and implementation of the strategy.

The results of the efforts by Cyert and March (1963), Andrews (1971), and Child (1972) culminated in Hambrick and Mason’s (1984) development of a formalized “upper echelons” theory (Finkelstein, et al., 2009). In their highly influential article, Hambrick and Mason (1984) defined, specified its members, and described the differences that exist between executive teams and other types of organizational teams. Hambrick and Mason (1984) led the way for other TMT scholars to define TMTs as a "relatively small group of the most influential executives at the apex of the organization - usually the CEO (or general manager) and those who directly report to him or her..." (Finkelstein et al., 2009:10) whose team size range from as little as two members (Wiersma & Bantel, 1992) to as many as nineteen members (Finkelstein et al., 2009; Klimoski & Koles, 2001; West & Anderson, 1996). Furthermore, Hambrick and Mason stated that this team of executives is unique, and very much distinct from other organizational teams. More specifically, as previously stated these teams are different in terms of their visible prominence in an organization, their functional and expertise differences, and the tasks they perform (Hambrick, 1994). The tasks performed by TMTs are unique because their

collective efforts have a major impact on organizational outcomes (Hambrick & Mason, 1984). More specifically, TMTs uniquely participate in a variety of collective strategic choice tasks that affect organizational outcomes (Hambrick, 1994). Moreover, these organizational decision makers face trying strategic complexities and bear large responsibilities for the organization and its stakeholders. As such, team processes and dynamics at the TMTs differ from other levels of management within the organization (Finkelstein & Hambrick, 1996; Hambrick, 1994; Hambrick & Mason, 1984).

Their “upper echelons” theory itself suggests that top managers’ human limitations (e.g. a restricted field of vision, selective perception, and construal bias) influence executive behaviors and strategic choices (Hambrick & Mason, 1984; Finkelstein & Hambrick, 1996; Finkelstein, et al., 2009). According to the initial theory, these limitations are strongly influenced by the attributes of the TMT members (e.g. background characteristics, cognition, values, and experiences; Child, 1972; Hambrick & Mason, 1984). This is true because executives often make decisions that are consistent with their cognitive base (Hambrick & Mason, 1984) or executive orientation (Finkelstein & Hambrick, 1996) – both of which consist of psychological characteristics (including values, cognitive models, and other personality factors) and observable experiences. These characteristics, in turn influence an executive’s human limitations, which ultimately drive his or her behaviors and strategic choices (Hambrick & Mason, 1984; Finkelstein & Hambrick, 1996). Thus, early upper echelons research usually relied on observable demographic characteristics as proxy measures of an executive’s orientation, which largely operates through a filtering process that results in what

Hambrick and Mason (1984) called managerial perceptions. These managerial perceptions then influence strategic choices and executive actions.

More recent advances to their theory assert that other TMT factors influence strategic choice (Finkelstein & Hambrick, 1996; Hambrick, 2007). Specifically, more recent advances assert that strategic choices are a result of strategic decision making, which includes formulation and implementation (Finkelstein & Hambrick, 1996). Moreover, that formulation and implementation are guided by executive team processes such as team-related task or interpersonal behaviors. Last, they assert that these processes are affected by the composition (i.e. the previous mentioned characteristics of the TMT members) and structure of the team (Hambrick, 2007).

As a whole, the conceptions and theories advanced by Cyert and March (1963), Andrews (1971), Child (1972), and Hambrick and Mason (1984) were intended to serve as a call for research that (a) focuses on the within-TMT factors, and (b) examines the degree to which these TMT factors influence strategic choice. Although such research has been performed on the influence of many of these factors, no research links these factors to strategy implementation, a crucial component of strategic choice. Therefore, an opportunity exists to extend conceptions and theories by Cyert and March (1963), Andrews (1971), Child (1972), and Hambrick and Mason (1984) to strategy implementation.

### **Definition of TMT strategy implementation**

Organizational researchers have virtually ignored theorizing and developing research models on the TMT's role in strategy implementation. In contrast, this research

forges a crucial new path by using a construct-oriented approach to develop the concept of TMT strategy implementation, which specifically describes the strategy implementation tasks or activities that occur within the TMT. To develop this construct, I will use a construct oriented approach (Jackson, 1970). A construct-oriented approach is comprised of four steps, which begins (1) by identifying or developing a theoretically-based definition, (2) making certain it is not prone to socially desirable responses, (3) is relatively generalizable, and (4) has high discriminant validity to existing scales (Jackson, 1970). This section is devoted to explaining the first step of the construct-oriented approach described by Jackson (1970). The remaining steps will be articulated in Chapter III and later be tested in Chapter IV.

Unfortunately, no generally accepted definitions of “strategy implementation” has emerged (Noble, 1999). This is true for two reasons. First, researchers have generally adopted definitions that address their research question (Noble, 1999). Second, organizational researchers generally do not specify “who” is involved in performing the implementation. For example, a review of the implementation literature reveals that out of the 25 articles that define strategy implementation, only five actually specify who performs the implementation. Schaap’s (2006) unpublished manuscript is the only article that specifies the role of executives in strategy implementation by defining implementation as “... those senior-level leadership behaviors and activities that will transform a working plan into a concrete reality”. Unfortunately, he ended up only assessing the CEO or General Manager versus the organization’s TMT. Similarly, Dekluyver and Pearce’s (2003) article is the only article that specifies the role that both

executives and non-executive managers play in implementation by stating it "... is a hands-on operation and action-oriented human behavioral activity that calls for executive leadership and key managerial skills". Next, only two articles on implementation specify in their strategy implementation definitions the role that non-executive managers have in strategy implementation (e.g. Floyd & Wooldridge, 1992; Saunders, Mann, & Smith, 2009). The balance of the 20 articles offers no specifics on who performs the strategy.

In sum, few definitions clearly delineate who performs the implementation. This is disconcerting since both practitioners and scholars have increasingly come to view the importance of TMT executives in strategy implementation (Bossidy & Charan, 2002). What's needed is a definition that not only specifies who is involved in the implementation, but also the essential tasks performed by these individuals. As previously noted, top executive teams are distinct from other organizational teams in terms of their visibility and location in an organization, the types of individuals that are in their teams and the type of tasks they perform (Hambrick, 1994). The types of tasks that TMTs perform are unique because TMTs, as a team, engage in an array of decision-making tasks that have consequential organizational outcomes (Hambrick, 1994).

Early depictions of the tasks performed by executives bordered on the humorous, in which executives were thought of as big people, sitting behind big desks, who formulate big strategies, and make big decisions (Finkelstein, et al., 2009). The implication of these ideas is that executives have a measure of super human concentration and as such, have an analytical and omniscient understanding of their

organizations and the environments, without ever having to be bogged down by organizational crises and minutia involved in the execution of a strategy (Finkelstein, et al., 2009). Indeed, Bossidy and Charan (2002: 24) emphasized the absurdity of this view in their best-selling popular press book: *Execution: The Discipline of Getting Things Done*, "It's a pleasant way to view leadership: you stand on the mountaintop, thinking strategically and attempting to inspire your people with visions, while managers do the grunt work. This idea creates a lot of aspirations for leadership, naturally. Who wouldn't want to have all the fun and glory while keeping their hands clean?"

Mintzberg's (1973) influential minute-by-minute analysis of five CEOs sought to temper these distorted images. His work revealed organizational leaders, were not only unfocused, because of their unrelenting pace of activities and tasks, but were also very much bogged down by organizational crises and daily minutia (Mintzberg, 1973). That is, although top executives may not enact the very specifics of the strategy, they do play a noticeable role in ensuring the strategy is properly implemented. Consequently, scholars began to emphasize that top executives play a role in strategy implementation.

*TMT strategy implementation background.* In one of the first paradigms focused on the central role executives have in fundamental activities of the strategic management process Dan Schendel and Charles Hofer proposed six necessary strategic management tasks performed by executives (Schendel & Hofer, 1979). In particular, Schendel and Hofer (1979) understood that executives occupy a vital role in two distinct aspects of the strategic management process: strategy formulation and strategy implementation. Specifically, they asserted two things with regard to strategy implementation: (1)

strategy implementation occurs after the strategy is formulated and (2) strategy implementation is a process in which executives play a prominent role (Schendel & Hofer, 1979).

*What TMT strategy implementation is not.* Regarding Schendel and Hofer's (1979) first assertion, since strategy implementation is said to occur after the strategy is formulated, strategy implementation is not the same as strategy formulation although both make up a larger strategic management process (Finkelstein et al., 2009). Each has its own separate goals and tasks. For example, one type of formulated strategy is known as defender strategy (Miles & Snow, 1978). A defender strategy wards off competitors by maintaining market share and relying on existing products and service. Merely stating that organizational members should perform a defender strategy is not sufficient because it is far too ambiguous. Instead, executive teams need to first specify goals and action steps on how to implement the defender strategy. In this sense, strategy implementation carries its own implementation goals and hence, is distinct from strategy formulation.

Additionally, strategy implementation is not the same as a set of "teamwork" processes. While Schendel and Hofer (1979) asserted that strategy implementation is a set of "processes" (organizational actions, activities ) in which executives play a prominent role, these processes are "taskwork" processes that executives perform on behalf of an organization (Mathieu et al., 2008; Schendel & Hofer, 1979) and should not be confused with "teamwork" processes that is often found in the team literature. "Taskwork" processes refer to the activities that executives must achieve to complete the team's task (Mathieu et al., 2008). In contrast, "teamwork" processes establish patterns

of interaction among team members that facilitate the accomplishment of the team's work but do not directly involve the accomplishment of a particular task (Mathieu et al., 2008). In this regard, "taskwork" processes describe "what" the executive does, and "teamwork" processes describe "how" they do it.

*What TMT strategy implementation is.* Subsequent work has suggested that in order to enable Schendel and Hofer's (1979) view of "organizational actions" executives must agree on the implementation goals, be mutually committed to pursue those strategic implementation goals, and be able to mobilize resources needed to execute those implementation goals (Finkelstein et al., 2009). This makes sense given that the strategy implementation process in both large and small businesses often requires a substantial coordination of people and resources, a significant investment of time, and is contingent on the cooperation of numerous individuals both in and out of the TMT (Finkelstein et al., 2009). Accordingly, disagreement on the implementation goals and the absence of mutual commitment to pursue these implementation goals will lessen the TMT's ability to amass, coordinate, and monitor resources, ultimately leading to a waste of valuable time (Finkelstein et al., 2009).

To accomplish agreement on the goals of the implementation, the first task that should be pursued is to specify the goals of the implementation. Goal specification is defined as the identification and prioritization of goals and sub goals required to implement a strategy (Dickinson & McIntyre, 1997; Prussia & Kinicki, 1996; Saavedra et al., 1993). When executive members collectively identify and prioritize the goals of

the implementation effort, they are implicitly showing that they agree as a team about the implementation goals (Wagner, Leana, Locke, & Schweiger, 1997).

The collective identification and prioritization of strategy implementation goals also enables mutual commitment among executives toward implementation of the goal (Mitchell, 1973). Mutual commitment can be ensured when executive members perform the vital task of tracking the progress of the implementation goals. Tracking progress is the extent to which TMTs measure and track the progress of the strategic implementation goals (Bourgeois & Brodwin, 1984; Barrick et al., 2014); Mintzberg & Waters, 1985; Noble, 1999; Raes et al., 2011). As executive team members track implementation goal progress, they are essentially holding one another mutually accountable to the goals. Collectively holding one another accountable through tracking progress not only ensures that the executive team as a whole is committed (Katzenbach, 1997), but also the department to which each member is responsible is equally committed (Finkelstein, 2007).

Last, because the implementation process depends on internal and external circumstances and normally requires a substantial mobilization of individuals and resources in- and outside of the TMT that, an executive team would need to constantly monitor and adapt to each of these conditions (e.g. Fleishman & Zaccaro, 1992; West, Garrod, & Carletta, 1997). As such, they are proactively looking for roadblocks that may stifle the implementation effort (Cascio, 2000). In addition, this monitoring shows organizational members, especially in small businesses, that the executive team is actively engaged and committed to the implementation effort (Beer & Eisenstat, 2000).

Furthermore, executive teams that have a pulse of what's happening both internally and externally as it relates to human and asset resource constraints, are better able to mobilize and coordinate resources (Finkelstein, 2007). In the course of mobilizing resources, not only do these executive members monitor circumstances that may impede the implementation goal effort, but also adapt the implementation goals in light of the changing circumstances. Adaptation refers to being proactive as necessary in light of new conditions to alter the current implementation goals and plans to match the challenges presented in these changing circumstances (Kozlowski & Ilgen, 2006; Tjosvold, 1991; West et al., 1997). Executive teams that are able to adapt implementation goals in light of the changing circumstances are better able to coordinate and mobilize resources because they collectively derive and use new goals and tactics for confronting novel elements in their changing environment. Doing so ensures that the right resources are in the right place at the right time to make certain that the implementation of the strategy is effective (Marks et al., 2001).

*Summary.* TMT strategy implementation requires executive team members to agree, be mutually committed to, and mobilize resources (Finkelstein et al., 2009) toward the organizational implementation actions described by Schendel and Hofer (1979). To ensure this, executive team members should collectively participate in the following four tasks: (1) goal specification, (2) track progress of the goals associated with the implementation effort (3) monitor internal and external circumstances, (4) adapt to the circumstances by altering the strategy implementation goals and plans (Schendel & Hofer, 1979; Daft & Macintosh, 1984; Noble 1999). Consequently, I define TMT

strategy implementation as activities that require top executives to first specify the implementation goals, track the progress of the completion of these implementation goals, and monitor and adapt these goals to accommodate for changing internal and external environmental circumstances (Schendel & Hofer, 1979; Noble 1999). I expect these behaviors to make up the overall definition of TMT strategy implementation or load on a higher-order TMT strategy implementation construct representing the overall TMT strategy implementation that TMTs perform. Although these represent a fairly complete set of activities, there could still be additional activities besides the ones outlined above. However, the TMT strategy implementation activities identified for this study represent a parsimonious conceptually viable set compared to activities found in the literature to date (Daft & Macintosh, 1984; Finkelstein et al., 2009; Noble, 1999; Raes, et al., 2011; Schendel & Hofer, 1979). The concept of TMT strategy implementation thus epitomizes a more accurate depiction of the activities TMTs conduct regarding strategy implementation.

### **Theoretical model**

As previously mentioned in Chapter I, the processes within TMTs I argue to be relevant to TMT strategy implementation are a set of TMT sharing instrumental and interpersonal processes. My discussion begins with a review of these sharing process behaviors and a delineation of hypotheses regarding the direct effects of this construct on TMT strategy implementation. In a subsequent section, I will discuss the other constructs in my model. Specifically, I will define and then explain the relationships between the TMT interdependence on TMT process. Then, I will explain the moderating

effects of TMT interdependence on the TMT process and TMT strategy implementation relationship. Last, I will define and then explain the relationship between TMT strategy implementation and organizational performance.

### **Direct effect of TMT process on TMT strategy implementation**

In this section, I will argue that a positive relationship exists between TMT process and TMT strategy implementation. Prior to explaining this relationship, I will provide a team process literature review. Then, I will explain the difference between TMT process and TMT strategy implementation. Thereafter, I will provide my rationale for including TMT process in my model as well as the grounds for including two process constructs (i.e. TMT process and TMT strategy implementation) in my model. Finally, I will explicate the hypothesized relationship between TMT process and TMT strategy implementation.

*Review of team processes in the organizational literature.* As noted above, I will first review the literature on team processes that have been studied in various types of teams as well as constructs that have been tangentially associated with team process (e.g., psychosocial traits and emergent states). Doing so is important since I will develop my TMT process construct by assembling constructs that have previously been used by organizational scholars, with a majority of this work originating from micro scholars. Thus, the purpose of this review is to help the reader to understand why and how I assembled the facets and subdimensions of my multidimensional TMT process construct.

This review will be organized in a manner consistent with previous scholarly reviews, in which the most frequently studied team processes are nested within a team type (e.g., Cohen & Bailey, 1997). After explicating all of these processes by team type, I will explain my rationale for retaining some of these constructs in my broad measure, which will be guided by two conditions: (1) the process is a “true” process (versus a psychosocial trait or an emergent state), and (2) the process is relevant to executive teams. Then, in the following sections, I will introduce my broad multidimensional TMT process construct, and develop arguments concerning the relationships between these processes and TMT strategy implementation. Last, in Chapter III, I will provide the reader with a sample of items I intend to use to measure my broad multidimensional TMT process construct.

As previously noted, a long-lasting divide exist between micro and macro organizational researchers (Ployhart, 2004). That is, within the management field, two distinct subfields exist. The first field is the organizational behavior/human resource or “micro-organizational” research field and the second is the strategy or macro research field. Over the years, scholars have called for more work to connect these two subfields (e.g., Aguinis et al., 2011; Kozlowski & Bell, 2013; Ployhart, 2004; Roberts et al., 1978). Some macro scholars have heeded these calls by utilizing many of the team processes that have been formulated by micro researchers in order to enhance their theories on how executive team demographic characteristics influence organizational outcomes. A good example of this is the social integration construct, which was originally conceived in the small group literature by micro scholars (O’Reilly, et al.,

1989) and later used by macro scholars (Smith et al., 1994). Hence, it is important to note at the outset that some team process work – even by macro scholars - tend to use team processes developed by micro researchers, drawing heavily from the group process literature (Finkelstein et al., 2009; Kozlowski & Bell, 2013). However, in some instances, the manner in which they conceptualized and measure their constructs has been prone to criticism because many of their constructs are not relevant, accurate, and inclusive (Barrick, et al., 2007; Kozlowski & Bell, 2013). Based on my review, this seems to be true for certain top management team constructs used by macro scholars (e.g., social integration, behavioral integration). That is, scholars have at least three issues with these constructs. First, scholars have asserted that both behavioral integration and social integration constructs are not truly “process” constructs, but instead, “emergent state” constructs (Mathieu et al., 2008). Second, these two constructs do not encapsulate all of the salient “teamwork” processes that occur in executive teams (Simsek et al., 2005). Last, some scholars have asserted that some of these constructs lack applicability, precision, and comprehensiveness (Kozlowski & Bell, 2013). As such, an opportunity exists to develop a broad TMT process construct that not only depicts the salient processes that occur in top management teams, but one that, using “micro-organizational” process constructs, is applicable, precise, and comprehensive. In doing so, I hope to develop a broad construct of TMT process that, in itself, provides a contribution to the literature because it bridges the micro-macro divide that exists until today. The iterative result of this effort can be seen in Figure 2.

**Table V**  
Pre- and Post-1997 Team Mediators Review by Team Type

Team Type/Mediator	Process		Emergent State or Psychosocial Trait		
	Behavioral	Affective	Cognitive	Motivational	
Work	CLL,CMM	AFF,CHS,CNF	CGN,TMN	---	---
Parallel	---	---	---	---	---
Project	CMM,TMP	CPR	CGNP	---	---
Management	CMM	CNF,SI	ATTR,CRTY	---	---
General Work	---	---	TL,TMM,TMS	EMP	---
Production	SHRK,FLXB	CMM,CNF	---	EMP,PTY	---
Service	ACT,INT,CRT,TRN	CEN	TL,TMM,TMS	EMP,PTY	---
Action and performing	ACT,BKP,CRT,PLN TRN,INT,AR,CM,MCB	---	TL,TMM,TMS	EMP,PTY	---
Project	IS,PRFS,PLN,TMCH,TWKS,TMRX	ECNF,TCNF	TL,TMM,TMS	---	---
Cross-cultural	CLLVT,CMM,PS	CPR,CNF,SI	CL,TMM	EMP	---
Virtual	CMM,CRD,PS	CNF	CGNC	EFF,EMP,PTY	---
Advisory	---	---	---	---	---
Management	BID,JDM,CM,MM,PS,KS	CNF	SE	EFF	---

*Notes. Italics indicate post-Cohen and Bailey (1997) review processes. Bolded words and abbreviations depict team types and processes deemed relevant for the TMT process construct.*

ACT = Action, AFF = Affect, ATTB = Attribution Biases, BKP = Backup Behaviors, BI = BI = Behavioral Integration (IX=Information Exchange, JDM=Joint Decision Making, CB=Collaborative Behavior), CGNC = Cognitive Convergence, CGNP = Cognitive problem orientation, CHS = Cohesiveness, CL = Climate, CLL = Collaboration, CLLVT = Collaboration via Time, CMM = Communication, CNF = Conflict, CPR = Cooperation, CRD = Coordination, CRT = Team creative behaviors, CRTY = Certainty, ECNF = Emotional Conflict, EFF = Efficacy, EMP = Empowerment, FLXB = Flexibility, INT = Interpersonal (AR= Affect Regulation CM=Conflict Management, MCB=Motivation and Confidence Building), IS = Information Sharing, KS = Knowledge Sharing, M = Motivation, PLN = Planning, PRFS = Performance Strategies, PS = Problem Solving, PTY = Potency, SC = Strategic Consensus, SHRK = Shirking, SI = Social Integration, TCNF = Task Conflict, TL = Team Learning, TMCH = Team Charters, TMM = Team Mental Models, TMP = Team Processes, TMRX = Team reflexivity, TMS = Transactive Memory Systems, TRN = Transition, TWKS = Taskwork strategies

Table 1

**Table W**  
Pre- and Post-1997 team process constructs that should be included in the TMT process construct

Team Type	Process
Parallel	---
Management	CMM
Action and performing	<i>INT(AR, SM, MCB)</i>
Cross-cultural	<b>CLLVT, CMM, PS</b>
Virtual	<b>CMM, CRD, PS</b>
Advisory	---
Management	<i>IX, JDM, CMM, IS, KS</i>

*Notes. Italics indicate the post-Cohen and Bailey (1997) review processes. Bolded words and abbreviations depict team types and processes deemed relevant for the TMT process construct.*

**IX=Information Exchange, JDM=Joint Decision Making, CLLVT = Collaboration via Time, CMM = Communication, CRD = Coordination, INT = Interpersonal (AR= Affect Regulation CM=Conflict Management, MCB=Motivation and Confidence Building), IS = Information Sharing, PS = Problem Solving**

Table 2

**Table X**  
Classification of the Pre- and Post-1997 team process constructs by Instrumental and Interpersonal facets of the TMT process construct

Team Type	Process	Instrumental (INS)	Interpersonal (INT)
Parallel	---	---	---
Management	CMM	CMM	AR
Action and performing	<i>INT(AR, SM, MCB)</i>	<i>INT</i>	<i>CM</i>
Cross-cultural	<b>CLLVT, CMM, PS</b>	<b>CLLVT, CMM, PS</b>	<b>MCB</b>
Virtual	<b>CMM, CRD, PS</b>	<b>CMM, CRD, PS</b>	---
Advisory	---	<i>IX, JDM, CMM, IS, KS</i>	---
Management	<i>IX, JDM, CMM, IS, KS</i>	---	---

*Notes. Italics indicate the post-Cohen and Bailey (1997) review processes. Bolded words and abbreviations depict team types and processes deemed relevant for the TMT process construct.*

**INS= IX=Information Exchange, JDM=Joint Decision Making, CLLVT = Collaboration via Time, CMM = Communication, CRD = Coordination, IS = Information Sharing, KS = Knowledge Sharing, PS = Problem Solving**

**INT = Interpersonal (AR= Affect Regulation CM=Conflict Management, MCB=Motivation and Confidence Building)**

Table 3

**Table Y**  
Classification of Pre- and Post-1997 team process constructs by facets of Instrumental and Interpersonal processes and sub facets of the TMT process construct

Team Type	Process	Instrumental (INS)	Interpersonal (INT)
Parallel	---	---	---
Management	CMM	CMM	AR
Action and performing	<i>INT(AR, SM, MCB)</i>	<i>INT</i>	<i>CM</i>
Cross-cultural	<b>CLLVT, CMM, PS</b>	<b>CLLVT, CMM, PS</b>	<b>MCB</b>
Virtual	<b>CMM, CRD, PS</b>	<b>CMM, CRD, PS</b>	---
Advisory	---	<i>IX, JDM, CMM, IS, KS</i>	---
Management	<i>IX, JDM, CMM, IS, KS</i>	---	---

*Notes. Italics indicate the post-Cohen and Bailey (1997) review processes. Bolded words and abbreviations depict team types and processes deemed relevant for the TMT process construct.*

**INS=Sharing of [I=Information Exchange, CMM = Communication, IS = Information Sharing, KS = Knowledge Sharing), D=Decisions (JDM=Joint Decision Making, PS = Problem Solving), T=Time (CLLVT = Collaboration via Time), TPr=Priority(CRD = Coordination)]**

**INT = Sharing of [AR= Affect Regulation CM=Conflict Management, MCB=Motivation and Confidence Building]**

Table 4

Figure 2 Iterative narrowing used to develop TMT process construct

*What is a team process?* According to McGrath (1964), team processes describes the transformation of team inputs to team outcomes with these inputs being antecedent factors that allow and limit TMT members' interactions (Mathieu, et al., 2008). That is, generally speaking, team processes are those team member interactions that are not specific to a task, but rather, enable the accomplishment of tasks and describe how inputs are converted or transformed into team outputs (McGrath, 1964; Mathieu et al., 2008).

*Confusion between team processes, psychosocial traits, and emergent states.*

Over the years, scholars engaged in team research have distinguished team processes from both team psychosocial traits and emergent states "...to avoid construct confusion and to sharpen the conception of team process..." (Marks et al., 2001:358). A team process describes how team inputs are transformed into outcomes with those inputs being antecedent factors that allow and limit TMT members' interactions (Marks et al., 2001). In contrast, scholars essentially call the cognitive, motivational, and affective (e.g., shared mental models, norms, affect, cohesion, etc.) attributes of a team either a "psychosocial traits" or "emergent states" because it characterizes properties of the team, are fluid, and differ as a function of various team-related factors such as context, inputs, processes, and outcomes (Cohen & Bailey, 1997; Marks et al., 2001). Recent evidence underscores this distinction as scholars have highlighted the independence of each, finding that processes are a mediator variable that links emergent states to outcomes (Mathieu, Gilson, & Ruddy, 2006).

**More confusion on classifying constructs.** Despite the strides that scholars have made to classify constructs as a team **process, psychosocial trait, or emergent state**, some confusion remains. For example, Kozlowski and Bell's (2013) team literature review assembled both team processes (i.e. what they called "behavioral" processes) and emergent states (e.g., what they called affective and motivational states) under one larger heading, which they call team *mediating* processes. This may be somewhat confusing, as a reader may interpret team processes and emergent states to be the same. However, a close examination of their review reveals that Kozlowski and Bell (2013) believe that emergent states *differ* from team processes, and merely classify both under a larger team mediating "process" heading to (1) stay consistent with their original 2003 review, a review that did not include Marks et al.'s 2001 distinction between team processes and team emergent states (Kozlowski & Bell, 2002), (2) use terminology that recognizes the "Mediator" reference in Ilgen, Hollenbeck, Johnson, and Jundt's (2005) Input-Mediator-Output-Input model, which explicitly specifies, "...the range of mediating processes ... of team functioning." (Kozlowski & Bell, 2013: 30). Consequently, Kozlowski and Bell's (2013) classification of team processes and the emergent nature of team processes under one larger heading may be confusing since it may lead the reader to believe that these notable authors consider team processes and emergent states to be the same – which they do not.

**Table 1** Pre- and post-1997 team mediators review by team type

Team Type/Mediator	Process	Emergent State or Psychosocial Trait		
	Behavioral	Affective	Cognitive	Motivational
Work	CLL,CMM	AFF, CHS, CNF	CGN, TMN	—
<b>Parallel</b>	—	—	—	—
Project	CMM, TMP	CPR	CGNP	—
<b>Management</b>	<b>CMM</b>	CNF, SI	ATTB,CRTY	—
<i>General Work</i>	—	—	<i>TL, TMM, TMS</i>	<i>EMP</i>
<i>Production</i>	<i>SHRK, FLXB</i>	<i>CMM,CNF</i>	—	<i>EMP,PTY</i>
<i>Service</i>	<i>ACT, INT,CRT, TRN</i>	<i>CFN</i>	<i>TL, TMM, TMS</i>	<i>EMP,PTY</i>
<i>Action and performing</i>	<i>ACT,BKP,CRD,IS,PLN TRN,INT(AR, CM, MCB)</i>	—	<i>TL, TMM, TMS</i>	<i>EFF</i>
<i>Project</i>	<i>IS,PRFS,PLN,TMCH,TWKS,TMRX</i>	<i>ECNF,TCNF</i>	<i>TL, TMM, TMS</i>	—
<b>Cross-cultural</b>	<b>CLLVT,CMM,PS</b>	<i>CPR,CNF,SI</i>	<i>CL,TMM</i>	<i>EMP</i>
<b>Virtual</b>	<b>CMM,CRD,PS</b>	<i>CNF</i>	<i>CGNC</i>	<i>EFF,EMP,M,PTY</i>
<b>Advisory</b>	—	—	—	—
<b>Management</b>	<b>BI(IX,JDM,CB),CMM,IS,KS</b>	<i>CNF</i>	<i>SC</i>	<i>EFF</i>

Notes. *Italics indicate post-Cohen and Bailey (1997) review processes. Bolded words and abbreviations depict team types and processes deemed relevant for the TMT Process construct.*

ACT = Action, AFF=Affect, ATTB = Attribution Biases, BKP = Backup Behaviors, **BI = BI = Behavioral Integration (IX=Information Exchange, JDM=Joint Decision Making, CB=Collaborative Behavior)**, CGNC = Cognitive Convergence, CGNP = Cognitive problem orientation, CHS = Cohesiveness, CL = Climate, CLL = Collaboration, **CLLVT = Collaboration via Time**, **CMM = Communication**, CNF = Conflict, CPR = Cooperation, **CRD = Coordination**, CRT = Team creative behaviors, CRTY = Certainty, ECNF = Emotional Conflict, EFF = Efficacy, EMP = Empowerment, FLXB = Flexibility, **INT = Interpersonal (AR= Affect Regulation CM=Conflict Management , MCB=Motivation and Confidence Building)**, **IS = Information Sharing**, **KS = Knowledge Sharing**, M = Motivation, PLN = Planning, PRFS = Performance Strategies, **PS = Problem Solving**, PTY = Potency, SC = Strategic Consensus, SHRK = Shirking, SI = Social Integration, TCNF = Task Conflict, TL = Team Learning, TMCH = Team Charters, TMM = Team Mental Models, TMP = Team Processes, TMRX = Team reflexivity, TMS = Transactive Memory Systems, TRN = Transition, TWKS = Taskwork strategies

*Resolving the obfuscation.* In this review, I will distinguish between team processes and psychosocial traits/emergent states to circumvent construct confusion and to hone-in on the concept of team processes. I do this for three important reasons. First, the focus of this study is TMT processes. Second, team scholars have gone to great lengths to explain the distinction between the two (e.g. Kozlowski & Bell, 2012; Ilgen et

al., 2005). Third, extant findings suggest the independence of the two (e.g. Barrick et al., 2007; Mathieu et al., 2006; Srivastava, Bartol, & Locke, 2006).

Accordingly, to conserve space and focus reader attention, rather than summarize all team-related research on either psychosocial traits or emergent states, I will only provide an extensive narrative review team process research. However, to help the reader understand the distinction between team process and psychosocial traits/emergent states, I have assembled the constructs associated with each in Table 1. Within Table 1, the un-shaded area reflects constructs that are team process constructs. In contrast, the shaded area of Table 1 reflects constructs that are with psychosocial traits or emergent states. Further, , these processes and psychosocial traits or emergent states are classified according to team type – since scholars have increasingly concluded that not all processes and psychosocial traits or emergent states are relevant to all types of teams (Kozlowski & Bell, 2012; Marks et al., 2001) – a point on which I will elaborate below.

**Do the same processes occur in all types of teams?** In order to understand which specific processes operate in certain types of teams (e.g., production teams may not engage in the process of strategic consensus), I relied on studies and review articles that link team processes to various types of teams. Understanding which specific processes operate in certain teams is important for several reasons.

First, not all team types have the same processes. Indeed, Kozlowski, Gully, Nason, and Smith (1999) underscored this assertion when stating that teams are distinguished by its process emphasis, in which complex decision-making teams, focus on one set of processes and simple teams focus on other sets of processes. Marks et al.

(2001) emphasized that teams are distinguished by its process emphasis by stating that their popular and highly influential *episodic* framework, which includes transition (i.e., mission analysis, goal specification, strategy formulation, and planning) and action (i.e., monitoring goal progress, systems monitoring, team monitoring and back-up behavior), may not apply to all team types. In particular, they said, "... Sundstrom (1999) suggests that work teams could be categorized into six types: (1) project, (2) production, (3) service, (4) action/performing, (5) management, and (6) parallel... because of the temporal nature of activities performed, our framework pertains best to the first four types of teams listed above and less to management and parallel teams" (Marks et al. (2001:357)). These researchers explain their rationale for this assertion by stating the following, "...at the outset that we noted that team type may operate as an important boundary condition. Whereas the temporal rhythms of project, production, service, and action teams are fairly easy to discern, *those of managerial and parallel teams are less apparent*. Further, project, production, service, and action teams require task work activities that follow from planning, strategy, goal setting, and other preparations. In contrast, the actual task work activities of managerial and many parallel teams involve analyzing situations, formulating strategies, setting goals, and so forth. Although we still believe that one can distinguish between periods when a team decides how it will make decisions and the actual decision-making activities, the lines of demarcation are less clear" Marks et al. (2001: 361). Hence, Marks et al. (2001) highlights the assertion that not all team types have the same processes and that these processes may not occur in stringently demarcated transition and action episodes.

In the context of this dissertation, a good example of processes that may not occur in stringent action and transition episodes is my strategy implementation construct, which is based on Schendel and Hofer's (1979) concept of organizational actions. These organizational actions have been subsequently labeled executive "taskwork" or activities performed by executives (Salas et al, 1995). Subsequent work has narrowed implementation taskwork down to four critical functions, which includes executives concurrently specifying, tracking, monitoring internal and external circumstances, and adapting strategy implementation goals. However, Marks et al.'s (2001) framework would suggest that some of the implementation tasks would occur in different episodes. Specifically, their framework would suggest that goal specification occurs in one "transition" episode (i.e. how it will make decisions), and tracking and monitoring occurs in another "action" episode (i.e. actual decision-making activities). Hence, the strategy implementation construct used in this dissertation's model is a prime example of processes that may not occur in two rigid action and transition episodes, but rather in one episode.

Second, even though the work of Marks et al. (2001) offers an expedient team process framework, not all team processes fall neatly into transition and action processes. For example, team creative processes have been referred to as "members working together in such a manner that they link ideas from multiple sources, delve into unknown areas to find better or unique approaches to a problem, or seek out novel ways of performing a task" (Gilson & Shalley, 2004: 454). Although one can state that creativity is implied in the action process, one cannot state that it is explicitly mentioned

as one of the key action processes of monitoring goal progress, systems monitoring, and team monitoring, and back-up behavior. In this regard, team creativity is one process that does not precisely fit into one of these processes. Another example of this is knowledge sharing in management teams, defined as, "...team members sharing task-relevant ideas, information, and suggestions with each other." (Srinivasta, et al., 2006: 1239). Here again, knowledge sharing is one process that does not neatly fit into one of these processes and knowledge sharing is not explicitly stated. In sum, the Marks et al. (2001) framework, albeit popular, noteworthy, and substantial, should be judiciously used when investigating certain types of teams.

*What are the various team types?* Several general typologies distinguish various types of teams. One of the more frequently cited team typologies was proffered by Cohen and Bailey (1997), which was enhanced by Sundstrom (1999), and has more recently been augmented by Kozlowski and Bell (2013). In the next section, I review relevant team processes by team type based on a review of literature that occurred before and after Cohen & Bailey's (1997) highly-cited team review article. It is important to note, that although I will most often refer to Kozlowski and Bell's (2013) review, I have augmented the post-1997 review of team process with other recent reviews (e.g., Hollenbeck, Beersma, & Schouten, 2012; Kirkman & Mistry, 2013; Marks et al., 2001; Mathieu et al., 2008; Stewart, 2010; Sundstrom, 1999).

**Pre-and-post 1997 studies.** Cohen and Bailey (1997) state the four general types of teams are (1) work teams (i.e. teams responsible for producing both goods and services), (2) parallel teams (i.e. organizational members from different work units that

are brought together to perform activities or tasks that the organization cannot perform well), (3) project teams (i.e. teams brought together to produce one-shot product or service-related outcomes for an organization), and (4) management teams (i.e. a team that coordinates and provides direction to the overall organization or to the business unit under its command).

More recently, scholars have expanded Cohen and Bailey's (1997) general typology of teams (Kozlowski & Bell, 2003; Kozlowski & Bell, 2013; Kozlowski & Ilgen, 2006; Sundstrom, 1999). This updated list includes (1) production (i.e. teams that are either supervisor-directed or semi-autonomous that produce tangible products (e.g., automobile assembly teams), (2) service (i.e. teams that provide intangible products through repeated customer interactions (e.g., call center work teams and airline attendants)), (3) action and performing teams (i.e. experts engaged in episodic complex time-limited tasks and work interdependently (e.g., aircrews, surgical teams, military units, and musicians), (4) project (i.e. teams brought together to produce one-time product or service-related outcomes for an organization (e.g., new product development teams)), (5) cross-cultural (e.g., teams members with different national origin such as cross-cultural, mixed-culture, and transnational teams), (6) virtual (i.e. virtuality in terms of spatial distance and media usage) in which virtual team members are isolated and use technology-based mediums (e.g., computers) to communicate, (7) advisory (similar to parallel teams, in which organizational members from different work units or outside organizations are brought together to perform activities or tasks that the organization cannot perform well – such as providing professional support, expert assistance, or

advice but have no formal authority (Hackman, 1990)), and (8) management (i.e. primarily responsible for directing and coordinating organizations or business units under its command). Please note that research on parallel or advisory teams was not included since, to my knowledge, no research has been conducted on these types of teams.

As the reader might notice, Kozlowski and Bell (2013) have extended Cohen and Bailey's (1997) team types in two ways. First, Kozlowski and Bell (2013) classify teams in terms of how they vary in their virtuality (i.e. virtual teams and cross-cultural teams). Second, instead of using Cohen and Bailey's (1997) broad concept of work teams, they specify certain types of "work teams". This can be seen in their use of production, service, and action and performing teams. Below I capture these distinctions.

In the next several paragraphs I will focus on the team process assembled before and after Cohen and Bailey's (1997) review. Further, I will focus on the process research assembled by Cohen and Bailey (1997), Kozlowski and Bell (2013), and other review articles (e.g., Hollenbeck, et al.; Kirkman & Mistry, 2013; Marks et al., 2001; Mathieu et al., 2008; Mohammed et al., 2010; Stewart, 2010).

***General work teams.*** This section will include team process findings organized around the more general type of work teams (i.e. production, service, and action and performing team types). Team process constructs that have been examined in general work team samples include collaboration and communication behaviors.

Collaboration is said to be the opposite of conflict or divisiveness. In a study on hospital teams, Vinokur-Kaplan (1995) found collaboration to be positively related to

team member perceptions of overall effectiveness and individual well-being, but did not find the same for the task-oriented measure of performance (i.e. hospital standards of quality, quantity, timeliness, and implementation). In addition, this study found that collaboration was positively related to team cohesion. Another study measured collaboration, which is said to be part of coordination, finding that organizational departments with higher levels of collaboration exhibited higher levels of efficiency. Interestingly, the results of Campion et al.'s (1993) study showed that communication did not significantly influence productivity, team member satisfaction, or a manager's ratings of team performance.

***Production teams.*** This section includes a review of the processes associated with production teams and is organized around behavioral processes (shirking and flexibility) viewed as supportive of effective team functioning.

With regard to behavioral processes, Stewart and Barrick (2000), in a sample of 45 production teams, found that shirking was negatively related to team performance and flexibility was positively related to team performance (Stewart & Barrick, 2000). This same study also found that communication positively impacted team performance.

***Service teams.*** With regard to team processes in service teams, only two studies included service team samples. The first study found that both action and transition processes were correlated with customer satisfaction on a sample of 121 Canadian customer service engineer teams (Mathieu, Gilson, & Reddy, 2006). Another study highlighted the importance of team creative processes. In particular, on a study of 11 service technician teams, Gilson and Shalley (2004) found the antecedents of creativity

incorporated high-levels of task interdependence, shared goals, participative problem-solving, and a climate supportive of creativity.

The last team process in service teams is interpersonal process. Interpersonal processes are comprised of three dimensions, which include conflict management (i.e. preemptive conflict management entails instituting management situations to prevent, control, or guide team conflict before it occurs), motivation and confidence building (i.e. initiating and safeguarding a sense of team confidence, motivation, and task-based cohesion with regard to accomplishing goals, and affect management (i.e. regulating member emotions such as cohesion, frustration, and excitement) used to accomplish goals. The term “management” (in the phrases, conflict management and affect management) denotes the proactive (versus reactive) nature of these dimensions – making it different from the from the previously described conflict, motivation, and affect processes, which are labeled psychosocial traits and/or emergent states, previously described because each are more reactive in nature. Moreover, these interpersonal processes are used to *manage* interpersonal relationships in teams. In the one study on interpersonal processes of service teams, Mathieu et al. (2006) found that interpersonal processes were correlated with response time, but not with customer satisfaction.

***Action and performing teams.*** This section reviews several team processes (i.e. coordination, planning and organizing, problem solving, communication, information sharing, backup behaviors, transition-mission analysis, goal specification, strategy formulation and planning and action- monitoring goal progress, systems monitoring, team monitoring and back-up behavior, and coordination, interpersonal - conflict

management, motivating and building confidence, and affect management) associated with action and performing teams.

Several studies have been conducted on the action and performing team behavior processes of coordination, planning and organizing, communication, information sharing, backup behaviors, transition, action, and interpersonal processes. Concerning coordination, on a sample of 88 maintenance and construction road crews, Tesluk and Mathieu (1999) found that team coordination was related to problem management actions. In regards to planning and organizing (i.e. sharing in setting objectives, which includes participation in the decision-making process, goal setting, and determining how to use personnel and other resources in an efficient manner) and problem solving (i.e. sharing in identifying and diagnosing task-related problems, carefully using a team's combined expertise to analyze problems, and arriving at effective solutions), Hiller, Day, and Vance (2006) found that planning and organizing was positively linked to supervisor-rated team performance on a sample of 52 winter road teams (e.g., snow clearing; spreading gravel, salt, and anti-skid; and general road maintenance).

With regard to communication, Waller (1999) found that frequency of information collection was associated with airline crew performance. Information sharing, which is also a form of communication, is also said to be an important behavioral process construct. More specifically, on a sample of 80 undergraduate four-person teams that participated in a Distributed Dynamic Decision-Making (DDD) simulation exercise, Johnson, Hollenbeck, Humphrey, Ilgen, Jundt, and Meyer (2006)

showed that a team's reward system was related their level of information sharing, and subsequently their decision making (shape, speed, and accuracy).

The next important behavioral process is backup behaviors, which refers to voluntarily help that team member obtain the goals when it is obvious that the team member is failing to reach those goals (Porter, 2005). Such behaviors require knowledge of one another's jobs in which team members are not only willing, but also have the ability to provide and seek assistance when needed. In this regard, on a sample of 80 four-person teams using a modified version of the DDD simulation, Porter (2005) found that backup behaviors were positively related with decision-making performance.

The last team process behavior is interpersonal process. In particular, on a sample of 29 student teams working on a simulation over four time points, Mathieu and Schulze (2006) found that interpersonal processes were directly related to team process performance. It worthy to note that the few number of interpersonal process studies is surprising especially since these processes (i.e. affect management, conflict management, and motivating and building confidence) are said to be relevant *across both action and transition phases* (Marks et al., 2001).

***Project teams.*** This section includes a comprehensive review of the processes associated with project teams. Scholars have examined several team processes in project teams (task processes, communication, planning, team charters, task work strategies, performance strategies, information sharing, and team reflexivity). Some research has been conducted on team processes on project teams including research on task processes, communication, planning, team charters, task work strategies, information sharing, and

task reflexivity behavioral processes. Task process is the group's ability to develop plans, define goals, and prioritize work (Ancona & Caldwell, 1992). In their study, Ancona and Caldwell (1994) found that task processes were positively related to both team perceptions of effectiveness to managers' assessments of performance (Ancona & Caldwell, 1992).

With regard to communication, several studies have found communication in project teams, both internally and externally are positively related to their managers' assessments of their performance (Ancona & Caldwell, 1992; Keller, 1994)). Interestingly, these studies found that external communication was negatively related to a teams' assessment of its overall performance and with its assessment of affective cohesion among team members (Ancona & Caldwell, 1992). In other studies, predictors of external team communication included the type of team structure (phased review versus quality function deployment techniques) and team leader probing strategies – in which such strategies provoke team members to communicate externally (i.e. outside the team; Ancona, 1990). Last, a group of studies have been conducted on the types of external communication a project team uses (i.e. ambassador, task coordinator, scout, and guard). The results of these studies indicate that ambassador and task coordinator activities were positively associated to managers' assessments of performance of forty-five new product development teams, and that scouting activities were negatively related to these outcomes (Ancona & Caldwell, 1992).

In regards to planning, Janicik and Bartel (2003) found on a survey study of 48 four-to-five-member organizational consulting project groups that planning was related

to norms associated with how teams manage time (e.g., deadlines). In turn, those episodic norms were found to be significantly related to performance. Along similar lines, Mathieu and Rupp (2009) found that utilizing team charters and performance strategies is related to effective team performance over time, with the use of both producing the highest amount of sustained performance. Last, on a previously referenced study, De Dreu (2007) found that information sharing effectiveness was higher in situations wherein team members perceived higher levels of cooperative outcome interdependence. Moreover, study revealed that the positive effects of cooperative outcome interdependence were only found reflective teams.

*Cross-cultural teams.* Cross-cultural teams' studies on team processes were focused primarily on collaboration via time, communication, and problem solving processes. In regards to collaboration via time, Harrison, Price, Gavin, and Florey (2002) found that time serves as a collaboration mechanism, in which team members are able to exchange personal and task-related information. Consequently, the authors found that increasing the time members spend together enervates the effects of surface-level (demographic) diversity but reinforces those of deep-level (psychological) diversity on team outcomes. With regard to communication processes several studies have been performed. In particular, Dose and Klimoski (1999) found that team member "work values" (shared occupational or functional processes) impact communication, which in turn positively impacted influence within all types of teams. In another study, Ayoko, Hartel, and Callan (2002) found that communication breakdowns can be prevented if the leader of a culturally diverse team helps to prevent such breakdowns. Similarly, in a

study using 75 European-American students and 51 Japanese students from a U.S. community college, Oetzel (1998) performed an experiment and found that communication was hindered in heterogeneous groups. The last cross-cultural process behavior is problem solving. Oetzel (1998), for example, found that Japanese groups had fewer conflicts, used more cooperative conflict tactics and fewer competitive conflict tactics than European American groups. In another study on problem-solving, Phillips, Northcraft, and Neale (2006) found that homogeneous groups (based on demographics) perceived their information to be less unique and spent less time on the task than deep-level diverse groups. In another study, Lam, Chen, and Schaubroeck (2002) found that perceptions of an opportunity for participative decision making had a negative effect on the performance of a team when the team was high on allocentrism (i.e. a focus on oneself) had low participation efficacy. Last, Ng and Van Dyne (2001) found that team members had higher levels of horizontal individualism and lower levels of horizontal collectivism had improved decision quality when they were exposed to a minority perspective.

***Virtual teams.*** This section includes an extensive review of the team processes (i.e. coordination, communication, and problem solving) associated with teams in terms of its virtuality. Scholars have examined coordination, communication, and problem solving processes in virtual teams. With regard to coordination, one study found that sharing situated knowledge (i.e., knowledge embedded in the work practices of a particular organizational site) resolves problems that arise in teams that are in the same location (Sole & Edmondson, 2002). In another field experiment, of 35 five-graduate

student groups in Japan and the United States, Montoya-Weiss, Massey, and Song (2001) found that virtual teams are more able to manage conflict when they incorporate formal coordinating and scheduling processes. In another study, Massey, Montoya-Weiss, and Hung (2003) performed a laboratory experiment with a sample of 36 masters of business administration student teams in Japan and the United States, and found that coordinated pace of effort within and between members was associated with higher team performance and mediated through team interaction behaviors (e.g., informational, decisional, and interpersonal behaviors).

In regards to communication processes, several studies have also been conducted. For example, in an experiment on a sample of 68 undergraduate students in Canada, Aubert and Kelsey (2003) found that information symmetry and good communication distinguished high- performance teams from low- performance virtual teams. In another communication study, McGrath, 1987 (1996) found on a sample of 12 global virtual teams in three United States-based that the most successful teams communicated more often in informal and social ways, utilized more task and affect behaviors, frequently disagreed with one another, critically analyzed issues in meetings and focused on task in a positive manner. The final type of behavioral process is problem solving. In one study, Chen, Liou, Wang, Fan, and Chi (2005) found that giving creative problem-solving training had a positive impact, as evidenced by members being able to design and facilitate virtual meetings by themselves and achieved better team performance than control groups.

*Management teams.* This section includes management team processes (i.e. communication, information sharing, knowledge sharing, two components of behavioral integration (information exchange and joint decision-making), and strategy implementation). In terms of top management team processes, scholars have investigated communication, information sharing, knowledge sharing, and two “behavioral” process of behavioral integration. In terms of communication, Smith et al. (1994) assessed the behavior of communication, finding that communication frequency was negatively associated with ROI and sales growth. Their explanation for this finding is in their sample executive team members may have understood that more frequent communication as being indicative of the negative back-and-forth communication that often transpires when high levels of conflict exist within a team (Smith et al., 1994). This study also revealed that informal communication (i.e. no set times to communicate) was negatively related to ROI and sales growth, implying that formal communication is preferred by executives. Additionally, Barrick et al.’s (2007) study shows that communication was positively correlated to team performance but not firm performance. In terms of information sharing, Bunderson and Sutcliffe (2002) found on a sample of 45 business unit top management teams, that information sharing was positively related to team effectiveness. Srivastava, et al.’s (2006) study found that empowering leadership was positively associated with team knowledge sharing, which, in turn, was positively associated with performance. The final behavioral process is behavioral integration, a construct introduced by Hambrick (1994, 1995). Hambrick did so after realizing that many top management teams did not partake in sharing behaviors. That is, he introduced

the concept of behavioral integration, which includes the two salient team “process” major sharing behaviors of information exchange, and joint decision making and one affective or collaborative behavior. While some view the behavioral integration construct as a team process (Finkelstein et al., 2009), others view it as an emergent state, in which the three sharing behaviors are the processes that lead to the emergent state of behavioral integration (Mathieu et al, 2008). Several studies that have used behavioral integration have appeared in top journals. For example, Simsek et al. (2005) found that TMT goal preference diversity, educational diversity, and organizational size were negatively associated with behavioral integration. In another study, Lubatkin, Simsek, Ling, and Veiga (2006) found that behavioral integration was positively related to firm performance, as well as mediated by TMT ambidextrous orientation. Similarly, Carmeli and Schaubroeck (2006) found that behavioral integration was positively related to decision quality and negatively related to organizational decline.

The final type of behavioral process is strategy implementation. On a sample of 83 small to medium-sized credit unions (CU) located throughout the United States, Barrick et al. (2014), found that strategy implementation interacted with their three organizational-level motivational practices of job design characteristics, specific high-performance work practices, and transformational leadership and organizational -level engagement. More specifically, they found that when the senior management team willingly implements the firm’s strategic vision, the use of job characteristics, high-performance work practices, and CEO transformational leadership was more positively associated to aggregated company-wide levels of employee engagement. Consequently,

this study was the first step toward illustrating that TMT strategy implementation is important for ensuring the effects of leader and organizational practices on organizational member engagement.

*Summary: Which constructs should be included?* To answer this question, one must first accept, based on the rationale given in this literature review, that only those that are (1) true processes (versus an emergent state or a psychosocial trait), and (2) relevant to the team type should be included in my TMT process construct.

First, only those processes that adhere to recent scholarly definitions of a team process should remain versus those that describe psychosocial traits or emergent states. Doing so avoids construct confusion (Marks et al., 2001). Team processes differ from emergent states, because “team processes are the means by which members work,” and deal with the nature of their member interaction but emergent states are the “cognitive, motivational and affective states of teams” (Marks et al., 2001:357). In essence, whereas team processes determine the execution of task work, emergent states (which include other psychosocial team traits) are inputs that influence the performance of teamwork processes and task work, which are likely to modify ensuing emergent states. Based on this logic, only the *process* constructs that deal with executive team member interactions that guide the execution of task work should be included, which in this case is behavioral processes of teams.

Second, the team types emphasized above that are similar to executive teams are cross-cultural, virtual, and of course management teams (Marks et al., 2001; Kozlowski & Bell, 2013). This is true because parallel, cross-cultural, virtual, and management

teams are similar in a number of ways in regards to fragmentation. Specifically, this is asserted because of the nature of management, cross-cultural, and virtual teams. Much like executive teams, management, cross-cultural, and virtual teams are a constellation of individuals that operate somewhat distinctly from each other (Gibson & Cohen, 2003; Hambrick, 1994) As such, these team types do not behave as teams in the traditional sense and have very few team properties (Kirkman & Shapiro, 2001). Instead, executives on these teams are frequently a loosely coupled, fragmented collection of individuals (Cohen & Bailey, 1997) who rarely follow a set episodic of rhythm of meeting, rarely come together either live or virtually, rarely work together on a daily basis, and focus almost entirely on their own pieces of organizational and team tasks (i.e. with their functional responsibilities; Bartlett, & Ghoshal, 1998; Earley & Gibson, 2002; Gibson & Cohen, 2003; Hambrick, 2007; Kirkman & Mathieu, 2005; Marquardt & Horvath, 2001). Put differently, the image that executives frequently meet to discuss problems, exchange perspectives, and solve problems is often inaccurate because they are highly fragmented (Harrison et al., 2002). This fragmentation leads to the inability of individuals in these teams to share information and knowledge, share in decision-making and problem solving tasks, share time in meeting with one another (in-person or virtually), share in coordinating their priorities, and share in the proactive efforts to manage affect, conflict, and even the confidence and motivation of team members. Fragmentation has been shown to be a key obstacle to group performance and contributes to a lack of “teamness” among its members (Cohen & Bailey, 1997; Hambrick, 1995; Katzenbach & Smith, 1993). Moreover, when teams are highly

fragmented, then their individual member attributes matter very little to organizational or team outcomes. As such, the processes that exist in these teams should be included in my broad TMT process construct. Table 2 emphasizes these processes.

**Table 2** Constructs that should be included in the TMT process construct

<b>Team Type</b>	<b>Process</b>
<b>Parallel</b>	—
<b>Management</b>	<b>CMM</b>
<i>Action and performing</i>	<i>INT(AR, SM, MCB)</i>
<b>Cross-cultural</b>	<b>CLLVT, CMM, PS</b>
<b>Virtual</b>	<b>CMM, CRD, PS</b>
<b>Advisory</b>	—
<b>Management</b>	<b>IX, JDM, CMM, IS, KS</b>

*Notes. Italics indicate the post-Cohen and Bailey (1997) review processes. Bolded words and abbreviations depict team types and processes deemed relevant for the TMT process construct.*

**IX=Information Exchange, JDM=Joint Decision Making, CLLVT = Collaboration via Time, CMM = Communication, CRD = Coordination, INT = Interpersonal (AR= Affect Regulation CM=Conflict Management , MCB=Motivation and Confidence Building), IS = Information Sharing, KS = Knowledge Sharing, PS = Problem Solving**

To conclude, I assert that processes included in my TMT process construct should have the following attributes, (1) be true processes (versus emergent states or psychosocial traits) and (2) be relevant to executive teams. Process constructs that meet these criteria can be found in the cross-cultural, virtual, and of course management teams' research. Specifically, the only process that should be included from the cross-cultural research is the collaboration via time (Harrison et al., 2002), communication (Ayoko et al., 2002; Dose & Klimoski, 1999; Oetzel, 1998), and problem solving (Lam et al., 2002; Ng & Van Dyne, 2001; Oetzel, 1998; Phillips et al., 2006). Additionally, from virtual team research, the key processes of coordination (Sole & Edmondson,

2002), communication (Aubert & Kelsey, 2003; Hofner-Saphiere, 1996; Massey et al., 2003; Montoya-Weiss et al., 2001), and problem solving (Chen et al., 2005) should be included. In terms of research on management teams, the processes that should be included are information exchange and joint decision-making (i.e. relevant parts of behavioral integration; Simsek et al., 2005), communication (Barrick et al., 2007; Smith et al., 1994), information sharing (Bunderson & Sutcliffe, 2002), and knowledge sharing (Srivastava et al., 2006).

Incidentally, as previously noted, rather than use the behavioral integration construct, I have chosen to focus on its processes instead. The primary reason is that some construct ambiguity seems to exist in regards to the behavioral integration construct. For example, some scholars assert that it is the same as team interdependence (e.g., Barrick et al., 2007), while others call it an “emergent state” (Mathieu et al., 2008), and some measure it altogether differently than how it was originally conceptually presented in the literature (e.g., Simsek, et al., 2005). This lack of clarity obscures the conceptualization and operationalization of its behaviors. For example, Simsek et al., (2005) state that behavioral integration includes “...one social dimension ... and two task dimensions.” (Simsek, et al., 2005:70). However, Hambrick (1994: 189) asserted that his conceptualization of behavioral integration should not include a social dimension since such behaviors are more affective (i.e. a psychosocial group trait or an emergent state) rather than instrumental, because each are “...conceptually separable”. As such, in an effort to comprehensively examine the “correct” “process” behaviors that enable TMTs to be less fragmented, I will rely on the substantive processes Hambrick (1994,

1995, 2007) conceived. That is, in an effort to comprehensively examine the “correct” behaviors that enable TMTs to be less fragmented, I will rely on the substantive processes Hambrick (1994, 1995, 2007) conceived because it is more consistent with Hambrick’s (1994:189) “substantive” versus “social” conceptualization of behavioral integration.

Last, since proactive interpersonal processes (Mathieu & Schulze, 2006) are also relevant to team functioning, I contend the interpersonal processes of proactive affect regulation, conflict management, and motivation and confidence building (i.e. interpersonal processes of action and performing teams) should be included. It is worth noting that the interpersonal process construct comes from Marks et al.’s (2001) episodic framework, which includes action, transition, and interpersonal processes. The reader may recall my reference to scholars’ reservations of utilizing Marks et al.’s (2001) action and transition process constructs to depict the processes that occur in executive teams. However, in my analysis of these reservations, it became clear that their contentions do not apply to interpersonal process. Marks et al. (2001:368) stated interpersonal processes “...typically lay the foundation for the effectiveness of other processes.” Since these interpersonal processes are foundational to other processes, one can infer that it would be applicable to various team-types and not dependent on or sensitive to following time-based routines or episodes. Stated differently, what makes these interpersonal processes relevant is its episodic neutrality (i.e. time neutral) and applicability to all team types. As such, I contend that interpersonal process can be a dimension in my TMT process construct.

One, however, may question my “borrowing” of one dimension (i.e. interpersonal process) from Marks et al.’s, episodic framework given that (1) several of the Marks et al.’s (2001) narrower “action” (i.e. goal specification) and “transition” (i.e. tracking, monitoring) dimensions appear in my TMT strategy implementation construct, and (2) LePine et al.’s (2008) meta-analysis suggested that action, transition, and interpersonal process load on one factor. Combined, one may be concerned that either my TMT process construct or the interpersonal dimension of it may strongly covary with my TMT strategy implementation construct. My response to such an inquiry is my “borrowing” is justified based on two reasons. First, the study samples used by LePine et al.’s (2008) meta-analysis were not executives teams but rather the previously mentioned “action and transition” or “service” teams. In this regard, the lumping of action, transition, and interpersonal processes into one higher order factor may actually be true for “action and transition” and “service” teams but not executive teams (and for that matter, other team types) since this team type was not included in their study. Second, Crawford and Lepine’s (2013) recent article stated that even though Lepine et al.’s (2013) meta suggested that all these processes load onto a higher-order construct, each process has unique functions and recommended that they can/should be "unpacked" and examined. In particular, Crawford and LePine (2013:44) stated, “...the underlying process dimensions represent conceptually distinct content, and when considered in an "unpacked" fashion, they may yield predictions that vary.” (Crawford & LePine, 2013:44).

Based on these rationales, I assert that one can remove the interpersonal dimension from the taxonomy and that it should relate but not strongly covary with my TMT strategy implementation construct. Additionally, I contend that the processes of affect regulation, conflict management, motivation and confidence building should comprise the interpersonal process dimension of my TMT process construct. Table 3 highlights this assembly.

**Table 3** Classification of constructs by instrumental and interpersonal facets of the TMT process construct

Instrumental (INS)	Interpersonal (INT)
<b>CMM</b>	<b>AR</b>
<i>INT</i>	<b>CM</b>
<b>CLLVT,CMM,PS</b>	<b>MCB</b>
<b>CMM,CRD,PS</b>	
<b>IX,JDM,CMM,IS,KS</b>	
Instrumental (INS)	Interpersonal (INT)
<b>CMM</b>	<b>AR</b>

*Notes. Italics indicate the post-Cohen and Bailey (1997) review processes. Bolded words and abbreviations depict team types and processes deemed relevant for the TMT process construct.*

**INS= IX=Information Exchange, JDM=Joint Decision Making, CLLVT = Collaboration via Time, CMM = Communication, CRD = Coordination, IS = Information Sharing, KS = Knowledge Sharing, PS = Problem Solving]**

**INT = Interpersonal [ AR= Affect Regulation CM=Conflict Management , MCB=Motivation and Confidence Building ]**

Moreover, to facilitate parsimony, these constructs should be organized under two broad dimensions or facets, which include an instrumental dimension and an interpersonal dimension. A similar organizing framework has been previously used by leading scholars (e.g. McGrath, 1984). The instrumental facet is defined as, "those aspects of interaction that relate directly to a group's work on its task" (McGrath, 1984: 321). Interpersonal processes are defined as the preemptive or proactive (versus reactive)

processes of regulating affect, managing conflict management, and building confidence and motivation (Marks et al., 2001). Stated differently, whereas instrumental processes refer to task-focused processes that are not specific to a particular task, interpersonal processes refer to the preemptive management of conflict, affect, and confidence in a team. It is important to note that these processes focus on “sharing” behaviors. As previously noted, these are necessary behaviors that should occur because members of an executive team are a weakly tied together, fragmented collection of executives, that rarely follow a set episodic rhythm of meeting, rarely come together live, rarely work together on a daily basis, and focus almost entirely on their own pieces of their organizational and team tasks (Finkelstein, et al., 2009). Table 4 highlights this classification.

**Table 4** Classification of constructs by facets of instrumental and interpersonal processes and subdimensions

Instrumental (INS)	Interpersonal (INT)
<b>I</b> ( IX, CMM, IS, KS)	<b>AR</b>
<b>D</b> (JDM, PS)	<b>CM</b>
<b>T</b> (CLLVT)	<b>MCB</b>
<b>TPr</b> (CRD)	
Instrumental (INS)	Interpersonal (INT)
<b>I</b> ( IX, CMM, IS, KS)	<b>AR</b>
<b>D</b> (JDM, PS)	<b>CM</b>
INS=Sharing of [ <b>I=Information</b> ( IX=Information Exchange, CMM = Communication, IS = Information Sharing, KS = Knowledge Sharing), <b>D=Decisions</b> (JDM=Joint Decision Making, PS = Problem Solving), <b>T=Time</b> (CLLVT = Collaboration via Time), <b>TPr=Priority</b> (CRD = Coordination)]	
INT = Sharing of [ <b>AR= Affect Regulation</b> <b>CM=Conflict Management</b> , <b>MCB=Motivation and Confidence Building</b> ]	

*Final assembly of construct.* In sum, based on this review of processes deemed relevant for executive teams (i.e. the processes that exist in cross-cultural teams, virtual teams, and of course management teams), the instrumental processes that should be included as subdimensions are information exchange of innovative ideas and solutions, joint decision making, collaboration via time, communication, coordination, information sharing, knowledge sharing, and problem solving. Classifying these process reveals each can be placed under four subdimensions of instrumental behaviors that includes, the sharing of **information** (information exchange of innovative ideas and solutions, information sharing, knowledge sharing, communication), **decisions** (joint decision making, problem solving), time (collaboration via time), and **team priorities** (coordination). Table 4 highlights this classification.

Now that I have explained which processes are subsumed within my broad TMT process construct, in the next section, I will discuss why TMT process and TMT strategy implementation are distinct constructs. Thereafter, I will reiterate the conceptual origin of strategy implementation. Then, I will discuss the basis for examining TMT process as a predictor of TMT strategy implementation as well as explain why it is appropriate to examine multiple distinct processes (i.e. TMT process and TMT strategy implementation) within the same model. Finally, I will develop arguments about the relationship between TMT process and TMT strategy implementation.

*Why TMT process is distinct from TMT strategy implementation.* In this section, I will explicitly state the difference between the TMT process and TMT strategy implementation constructs. As previously noted, TMT process is a set of “sharing”

processes (i.e. sharing of information, decisions, time, team priorities, affect management, conflict management, and motivation and confidence building), and TMT strategy implementation is a set of tasks performed by executives (i.e. specifying, tracking, monitoring internal and external circumstances, and adapting the strategy implementation). TMT process and TMT strategy implementation are distinct from one another not only based on whom the process impacts, but also its distinct component processes. In this sense, although both are processes, they are mutually exclusive – an assertion that was recently found in an empirical study. I more fully discuss each below.

First, TMT process and TMT strategy implementation are distinct based on whom the process impacts. As previously noted, TMT process is a set of within-executive team sharing processes. In other words, the target of whom the process impact is the executive team members. As such, one reason that TMT strategy implementation differs from TMT process is it involves a process that is extended to managers and employees outside the executive team. Specifically, TMT strategy implementation processes involve executives making certain that implementation goals are aligned with the formulated strategy, tracking the progress of these implementation goals, monitoring the internal and external environment for changing circumstances, and adapting the implementation strategy accordingly. Although the TMT is involved in this process, the persons for whom they are conducting these processes may be external to the TMT. In this regard, rather than only impacting executive team members, this strategic implementation process impact non-executive team organizational members. Accordingly, agreement about what the implementation goals or objectives are and

mechanisms to monitor, the tracking of progress towards the attainment of those goals and objectives, adapting accordingly are directly performed by these executive for organizational members to have a clear direction, accountability, and knowledge that the implementation effort is agile to changing circumstances and needs. This is true since oftentimes organizational members carry out the implementation efforts (Wooldridge & Floyd, 1992), but TMT members still need to be involved (Beer & Eisenstat, 2000; Bossidy & Charan, 2002). Thus, one reason that TMT strategy implementation is distinct from TMT process is it involves a process that is extended to managers and employees outside the executive team.

Second, TMT process and TMT strategy implementation are mutually exclusive. Each can exist apart from and are independent of one another because TMT strategy implementation is a process that captures the effectiveness of the steps the executives take to successfully implement an organization's strategy. However, it differs in the sense that it does not exclusively depend on whether or not TMT members can, for example, share information or manage the affect of the team. Rather, in order to fulfill the efforts of TMT strategy implementation, the point or the matter at hand is whether the TMT can effectively agree on and establish the strategy implementation goals, decide how to distribute responsibility for achieving the strategy implementation goals, track progress, and monitor and adapt to internal and external changing circumstances.

This is true because the focus of each is different as each has its own unique activities or functions. For example, the focus of the instrumental portion of the TMT process is "sharing" of information, time, decisions, and priorities. The sharing of these

processes in this construct establishes the pattern of interactions among executive team members. Furthermore, the more frequently TMT executives engage in these unique team-level sharing processes, the more likely it would be for the team to accomplish their executive “teamwork”-related sharing processes.

In contrast, TMT strategy implementation is distinct from TMT process because it does not exclusively depend on whether or not TMT members can, for example, share information, time, affect management, etc. Rather, to ensure the effective fulfillment of TMT strategy implementation, the primary focus is whether they can agree on the strategy implementation goals, establish the strategy implementation goals, decide how to distribute responsibility for achieving the strategy implementation goals, track progress, and monitor and adapt the implementation goals in light of the internal and external changing circumstances. In this sense, these are “taskwork” activities or processes that TMT executive members must perform to accomplish strategy implementation. Hence, TMT process and TMT strategy implementation differ because TMT process deals with “teamwork” processes and TMT strategy implementation deals with “taskwork” processes. Stated differently, TMT process and TMT strategy implementation are mutually exclusive because these “taskwork” processes do not solely depend on whether or not TMT members can have “teamwork” process such as sharing information or managing the affect of the team.

Indeed recent evidence suggests “teamwork” sharing processes are distinct from “taskwork” processes. Carmeli and Schaubroeck’s (2006) study, for example, measured a set of “teamwork” sharing processes (i.e. behavioral integration) and a set of

“taskwork” processes (i.e. perceived quality of decisions). Among other things, on this sample of 116 executive teams (two members in each TMT) in small-to-medium size Israeli executive teams in a variety of industries, this study reported **0.27** correlation between the “teamwork” processes and “task work” processes. This evidence shows that TMT process and TMT strategy implementation are distinct because the “taskwork” perceived quality of strategic decisions processes do not solely depend on whether or not TMT members can have sharing “teamwork” behavioral integration processes such as sharing information or manage the affect of the team.

**Distinct but can be related.** Although the “teamwork” processes of TMT process do not directly focus on accomplishing a particular task, they are the processes or activities that enable the completion of several “taskwork” processes of an executive team – one of which includes the “taskwork” process of TMT strategy implementation (Finkelstein et al., 2009; Kozlowski et al., 2000). In this regard, these two types of team processes are distinct, but can be related. Put differently, “teamwork” processes do not directly center on accomplishing a particular task. However, they are the processes or activities that *can enable* the carrying out of “taskwork” processes (Kozlowski, Brown, Weissbein, Cannon-Bowers, & Salas, 2000). This can occur because while “taskwork” TMT strategy implementation processes describe “what” the executive team is doing, “teamwork” TMT process represents “how” they are doing it with each other (Marks et al., 2001). A more developed explanation of this relationship will be offered in the hypothesized relationship section.

**Appropriateness of using two processes in a model.** With regard to the appropriateness of including both TMT process and TMT strategy implementation processes in my model, I rely on extant OB/HR scholarly rationale. OB/HR scholars often utilize two process constructs within the same model. For example, Cannon-Bowers and Salas (e.g., 1998) in a series of studies explicitly examine “teamwork” and “taskwork” processes in the same model. As the reader might recall, these processes respectively serve as the basis of my TMT process and TMT strategy implementation constructs. Others too have followed suit, examining a host of other team processes. For example, the previously mentioned episodic model by Marks et al. (2001), utilizes at least two distinct processes in their model. Subsequent studies grounded in Marks et al.’s episodic framework have done the same (e.g., Mathieu, et al., 2006). Even non-team studies have introduced several processes into the same model. For example, when considering motivational factors, Kanfer and Ackerman (1989) distinguished between distal and proximal motivational processes in the same model. Similarly, cognitive social psychologists often simultaneously examine the two processes of intuition and reasoning, in their studies of judgment and decision-making (Kahneman, 2003). Hence, based on a spate of extant theory, I contend that using two process constructs in the same model is appropriate. Now that I have explained why TMT process and TMT strategy implementation are distinct, I will explicate the hypothesized relationship in the next section.

*Hypothesized relationship.* I argue “teamwork” process of TMT process, which is comprised of instrumental and interpersonal TMT sharing processes, is positively

related to the “taskwork” processes of TMT strategy implementation. Extant theory suggests that being instrumentally and interpersonally integrated are reciprocally related preconditions of positive team outcomes (McGrath, 1984; Stogdill, 1959). This is true because such “teamwork” processes are necessary elements to lessen team fragmentation, which in turn increase its effectiveness.

In regards to fragmentation, TMT scholars acknowledge that TMTs are “a constellation of executives that operate somewhat distinctly from each other” (Hambrick, 1994:188). In essence, TMTs do not behave as teams because many have very few team processes (Simsek et al., 2005) – making them a highly fragmented group of loosely coupled executive team members. However, some TMTs are not fragmented because they have certain team processes that serve to integrate TMT executives’ collective attributes. This type of team has a higher degree of shared interactive processes that help them to operate as a team (Hambrick, 1994, 1998) because they share (1) information (2) decisions, (3) time, (4) team priorities, (5) affect regulation or management (6) conflict management, and (7) motivation and confidence building (Katzenbach & Smith, 1993; Hambrick, 1994, 1998, 2007).

Despite my intention to utilize a composite measure of TMT process, below I will first define and describe each of the major dimensions of my TMT process construct (define and describe instrumental processes and interpersonal processes). Thereafter, I will explicate why these processes are related to TMT strategy implementation.

As previously noted, substantive “teamwork” processes in executive teams are instrumental (i.e. sharing of information, decisions, time, and team priorities) and

interpersonal (i.e. sharing in managing affect, conflict, and motivation and confidence building processes). Also as previously noted, “teamwork” instrumental processes include the sharing of information, decisions, time, and team priorities. The sharing of information is the willingness of top executives to share information that may affect the “teamwork” processes of the TMT (Hambrick, 1995). A top executive is privy to information not only in the domain for which he or she is responsible, but also may know information, through his or her intra-organizational contacts, about an area that may not be under his or her control. However, just because the executive knows information does not necessarily mean that the executive will willingly share this information (Morrison, 2011). That is, an executive may know information but choose not to share it for a variety of reasons, including embarrassing him- or herself or another executive team member (Ashforth, Kreiner, Clark, & Fugate, 2007; Duffy, Ganster, & Pagon, 2002; Katzenbach, 1998; Morrison, 2011) – often causing these executives to be fragmented. In contrast, executive teams that share information are less fragmented because such “teamwork” process expose their quality ideas and solutions and fend off politically motivated behaviors (Eisenhardt, 1999).

The second instrumental “teamwork” process is the sharing of decisions. The sharing of decisions is defined as the extent to which the executive team jointly makes decisions (Hambrick, 1994; Lubatkin, Simsek, Ling, & Veiga, 2009; Simsek et al., 2005). This type of shared decision-making is not only important in guiding the development of a strategy, but also the execution of the chosen strategy. This is true because when TMT members jointly share in the decision-making process, each become

joint owners of the decision. In such situations, executives are then able to carry out the necessary tasks needed to perform the joint decision (Finkelstein et al., 2009; Wageman et al., 2008). As such, the “teamwork” process of the sharing of decisions enables the accomplishment of a variety of tasks.

The third instrumental “teamwork” process is the sharing of time. The sharing of time refers to the frequency of meetings related to organization-wide objectives (Hambrick, 1995). It has been noted that executives often operate in relatively independent domains, with marginal contact, sometimes even infrequently seeing each other (Hambrick, 1995). As a result, TMTs become fragmented because members tend to focus on tasks relevant to their own domains (Katzenbach & Smith, 1993). In fact, Eisenhardt (1999) found that ineffective TMTs rarely meet. To offset this deficiency, increasing the frequency of interaction should cause these executives to have the opportunity to meet, discuss, and perform TMT-related work or organization-wide work (Hambrick, 2005).

The final instrumental “teamwork” process is the sharing of priorities. This process deals with sharing in the priority of the activities that are important to the executive team. This is true because executives’ “teamwork” processes typically require a considerable coordination of people and resources, takes considerable time, and depends on numerous individuals both in and out of the executive team (Finkelstein et al., 2008). As such, not only is understanding the priority of the team’s activities important, but also sharing in the fulfillment of these team priorities (Argote & McGrath, 1993). Scores of empirical research have established that the priority of these

coordinated processes and actions is important to team performance because it propels team cooperation (Mathieu et al., 2008). In this sense, the coordinated sharing in the priorities of a team enables effective “teamwork” process.

Now that I have explained the instrumental processes of my overall TMT process construct, I will now turn my attention toward describing the interpersonal-focused processes. As previously noted, “teamwork” interpersonal processes are the sharing of affect management, conflict management, and motivation and confidence building processes.

The first “teamwork” interpersonal process is the sharing of affect management. The sharing process of affect management involves executive team members regulating one another’s emotions. These include the proactive regulation of frustration, and excitement. Managing affect is important in the course of executive “teamwork” because not doing so can lead to a lack of consensus (Priem, 1990). Accordingly, it becomes the shared process of each member of the executive team to adjust team member emotional levels (George, 1990). Managing emotions may involve attempts to manage frustration levels, calm members down, increase team confidence and cohesiveness among members, and provide empathy (Marks et al., 2001). Here again, it becomes the job of each member of the executive team to collectively share in these affect regulation or management processes to decrease strain, “air-out” frustrations, or reduce the stressfulness of situations.

The second “teamwork” interpersonal process is the sharing of conflict management processes. In the course of an executive team’s work, conflict may arise.

This is true because aspects executive work is demanding especially when executives may be sensitive to certain types of changes or because differences between TMT members may cause debate (Bandak 1977; Guth & McMillan, 1986; Hitt & Tyler, 1991). Engaging in the sharing processes of conflict management may help to counteract the deleterious effects of conflict (Jehn, 1995). Marks et al (2001) offered two types of conflict management processes that can be shared, in which executives can resolve or minimize conflict. These include preemptive and reactive conflict management. Preemptive conflict management entails executive team members proactively instituting circumstances to avert, manage, or direct team conflict. In contrast, reactive conflict management involves working out disagreements when they occur. Doing so requires that each member collectively shares in conflict management. Preemptive conflict management is focused on minimizing the nature of team conflict before it occurs. To perform this, executive team member should share in the establishment of norms for cooperative conflict resolution and, among other things, develop contracts with team members that spell out how team members agree to handle difficult situations. Reactive efforts for reducing or managing conflict include recognition of the parameters of conflict between executive team members, problem solving, compromising, openness and flexibility, and willingness to accept differences of opinions.

The final “teamwork” interpersonal process is the sharing of motivating and confidence building. These processes involve engendering and safeguarding collective confidence, motivation, and task-based cohesion with regard to executive teamwork. Processes in this regard include each executive team member collectively encouraging

fellow executive members to keep performing well. More specifically, executive team members can encourage members through “pep” talks and highlighting particular team competencies and successes. Similarly, executives can enhance working relationships and performance by heightening each other’s confidence level. One way executive members can accomplish this by refraining from making negative comments about the team's abilities (Lindsley, Brass, & Thomas, 1994). In addition, executive team members can abstain from social loafing (Campion, et al., 1993; Latane, Williams, & Harkins, 1979) and shirking (Campion, et al., 1993; Jones, 1984), since both have been shown to reduce collective motivation.

Combined these instrumental and interpersonal TMT *sharing processes* of TMT process are positively related to TMT strategy implementation. Strategy implementation requires TMTs specify the goals of the implementation and also be able to track goal progress (Schendel & Hofer, 1979). To more potently accomplish this, the executive team should to be instrumentally and interpersonally integrated. .

What this means is that, in order to be successful, TMTs should work as a team and engage in these seven “teamwork” processes (Hambrick, 1994, Kozlowski et al., 2000). In essence, these top executive teams need to embody the “teamness” properties of a successful team, making them tightly coupled and causing them to operate indistinctly from each other (Katzenbach, 1998). Thus, the process of sharing instrumentally and interpersonally enhances “teamness” qualities in TMTs. Although these “teamwork” sharing processes are not task-specific, subsequent work suggests that a lack of “sharing” is problematic because it inhibits the influence of the executive team

characteristics on organizational performance outcomes and executive team-related *tasks* (Carmeli, 2008; Finkelstein et al., 2009).

Such executive team related tasks include strategy formulation and strategy implementation, which in turn lead to organizational outcomes. Whereas much work has been performed on how these behaviors influence strategy formulation, with very few exceptions, only theoretical arguments have been advanced on how these sharing behaviors influence strategy implementation (e.g., Finkelstein, et al., 2008; Dooley et al., 1999; Wooldridge, et al., 2008). In this regard, almost all work on how sharing behaviors influence strategy formulation has found that a positive significant relationship exists between these sharing behaviors and strategy formulation (e.g., Carmeli & Scheigman, 2010; Ling & Hambrick, 2005; Ling, Simsek, Lubatkin, & Veiga, 2008). Likewise, scholars have found that these sharing behaviors are positively and significantly related to organizational performance either directly or indirectly through strategy formulation processes (e.g., Carmeli, 2008). If, however, these “sharing” processes are related to strategy formulation processes, one can safely state that same for strategy implementation. As such, I assert that these “sharing” processes ultimately impact the *implementation of the strategy* as well (e.g., Finkelstein, et al., 2008; Finkelstein et al., 2009; Marks et al., 2001; McGrath, 1984; Wooldridge, et al., 2008).

Strategy implementation involves assembling the resources needed to make certain that the strategy initiatives selected are appropriately executed. In this regard, the implementation process typically requires considerable integration of people and

resources, takes considerable time, and depends on numerous individuals both in and out of the executive team (Galbraith & Kazanjian, 1986).

To accomplish all of this, executive members need to specify the goals of the strategy implementation and also track, monitor, and adapt these strategy implementation goals (Schendel & Hofer, 1979). Specifying, tracking, monitoring, and adapting implementation goals require agreement on the goals needed to accomplish strategy implementation (Priem, 1990). In addition, it requires the TMT to be on the same page on not only “what” to do, but also “how” to do it (Wooldridge & Floyd, 1992). Toward this end, top executive teams need to be both instrumentally and interpersonally integrated. This is true because in the absence of these “teamwork” processes executive teams would make it more difficult time to perform the specification, tracking, monitoring, and adaptation “taskwork” processes needed for the successful execution of a strategy.

For example, executives would need to share their time, information, team priorities, and engage in joint decision making in order to better be able to specify the goals of the implementation. The same can be true of tracking progress, internal and external monitoring, and adapting the goals of the implementation. Likewise, the sharing process of affect management involves executive team members regulating member emotions during the implementation process. Properly regulating this behavior is important in the course of strategy implementation because not doing so can lead to dissensus (Priem, 1990). As such, it becomes the shared responsibility of each member of the executive team to actively and collectively regulate team member affect (George,

1990), which can be stoked because of implementation conditions (e.g., failure, temporal stress; within team hostility; situational concerns, etc.). In addition, conflict may arise in executive teams during the implementation process. This is true because some executives may find particular changes threatening or objectionable (Bandak 1977; Guth & McMillan, 1986) or because heterogeneous executive teams may provoke a debate of perspectives, in which confrontation and conflict may ensue (Amason 1996; Amason & Sapienza, 1997; Hitt & Tyler, 1991). As such, executives should engage in the sharing processes of conflict management to offset the debilitating side effects that may occur during the course of the strategy implementation.

Conversely, TMTs that lack these “teamwork” processes are less able to resolve its internal problems because they lack sharing properties. As a result, such teams are less likely to perform or function efficiently causing a delay in the necessary decision making of strategy implementation because such teams end up consuming valuable time and resources on relationship conflicts. In sum, the combined instrumental and interpersonal processes cause top executives to act more as a team rather than a group of individuals that are concerned with their own respective domains (Katzenbach & Smith, 1993). Doing so instills sharing as a key process, which enables strategy implementation by lessening decisional and power issues that may arise in the course of strategy implementation (Finkelstein et al., 2009).

To my knowledge, no empirical evidence specifically links TMT process to strategy or TMT strategy implementation. However, one study on task-focused processes found a relationship between sharing processes and decision-making quality.

As noted above, making quality decisions is a key component of strategy formulation and implementation. In their study of privately held small-to-medium sized organizations in Israel, Carmeli and Schaubroeck (2006) found a moderately positive relationship between sharing processes and perceived quality of strategic decisions (.27,  $p < 0.01$ ) among 116 two-person TMTs. Similarly, one study on affective-focused processes found a relationship between some interpersonal and decision-making process. Also as noted above decision making processes plays a key role in strategy implementation. In their study of privately held small-to-medium sized high technology organizations, Smith, Smith, Olian, Sims, O'Bannon, and Scully (1994) found that interpersonal processes covary with decision making process of internal communication among 53, 4.5 -person TMTs. Based on the above logic, I posit that:

*Hypothesis 1: TMT process will be positively related to TMT strategy implementation.*

Now that I have introduced the TMT process construct, the next section is focused on TMT structural interdependence, which I posit is a key structural predictor of the TMT process construct. A team's structure or design is, "those features of the task, group, and organization that can be directly manipulated by managers to create the conditions for effective performance. Examples of task design variables include autonomy and interdependence" (Cohen & Bailey, 1997: 244).

### **TMT interdependence on TMT processes**

Before delineating the specific types of team interdependence, I will offer some background on this concept. Scholars have examined interdependence by using structural, psychological, or blended conceptions of interdependence. In this structural

conception, the level of interdependence among a firm's lines of business varies according to the nature of the entity's task and the structure that determines the flow of work and links between team members (Kozlowski & Bell, 2003; McGrath & Hollingshead, 1994). For example, based on Thompson's (1967) structural conception of interdependence, Michel and Hambrick (1992) examined the effects of firms that have structurally interdependent lines of business. Unlike the structural conception, the psychological conception of interdependence asserts, based on social psychology literature, that interdependence is affected by cooperation required to collectively work together to gain and achieve collective rewards and goals (Stewart & Barrick, 2000; Wageman, 1995). Last, the blended conception relies on both the structural and psychological requirements of completing the task. Barrick et al. (2007) examined the moderating effect of this conception of interdependence on the process-performance in TMTs as it more broadly assessed the overall impact of TMT interdependence (Gully et al., 1995; Gully et al., 2002).

For my model, I will use the blended conception because it more completely and comprehensively depicts the effects of team interdependence. Now that I have established the contextual background of team interdependence, I will begin to define and describe the behaviors that reflect the attributes of this construct. The team design feature of team interdependence refers to "the extent to which contextual features outside an individual and his or her behavior (i.e., tasks and outcomes) define a relationship between entities as collective so that one entity should affect and be affected by the other" (Barrick, et al., 2007:546). Rather than characterize teams by their

“evaluative characteristics” (e.g. context, type of task, etc.), Mathieu et al. (2008:443) stated that a more useful way to describe teams is by its degree of interdependence, which is its “underlying substantive nature.” Early conceptions of this underlying structure often characterized interdependence according to its task (e.g. reflects the degree of task-driven contact among members (Shea & Guzzo, 1987)). However, more recent work on interdependence suggests that it begins with the task, but then extends to include goals (i.e. the degree to which individual or team goals guides team members’ performance and efforts; Saavedra et al., 1993) and outcomes (i.e. the degree to which team members’ goals and rewards are linked to the goals and rewards of fellow team members; Wageman, 1995). Whereas these types of interdependence are often advanced as distinct constructs, several studies have chosen to use a composite measure of team interdependence (Barrick et al., 2007; Stewart & Barrick, 2000).

By using a composite measure, team interdependence is said to increase as members rely on each other to accomplish various types of tasks (Wageman, 1995), goals (Van de Ven & Ferry, 1980), and outcomes (Gully, et al., 2002; Guzzo & Shea, 1992; Wageman, 1995). As previously noted, for this study, I too will utilize a composite measure of team interdependence as it more broadly assesses the mutually reinforcing effects of each type of interdependence. Additionally, using a broad measure of team interdependence adheres to the principle of compatibility, which suggests that one should seek to match predictors and outcomes to compatible levels of generality or aggregation. For example, if my TMT strategy implementation construct is a broad measure of TMT strategy implementation, then my TMT process construct and TMT

team interdependence construct should also be equally broad (Fishbein & Ajzen, 1974).

Highly interdependent teams are considered “real teams” (Katzenbach & Smith, 1993) since their team members “...depend on each other for information, materials, and reciprocal inputs...” (Stewart & Barrick, 2000:137). Conversely, teams that exhibit low levels of interdependence are labeled “working groups” because they may not depend on each other for such resources. Several meta-analyses have shown that interdependence strengthens relationships between various processes and performance (Gully, Devine, & Whitney, 1995; Gully et al., 2002) and more recent research suggest that task and outcome interdependence are significantly related to team processes, with task interdependence being more strongly related to behavioral (versus interpersonal) processes and outcome interdependence being more strongly related to interpersonal (versus behavioral) processes (Courtright et al., 2014). Thus, interdependence is important because it clearly distinguishes work groups and teams from small group literatures (Kozlowski & Bell, 2003), making it a defining characteristic of work teams (Barrick et al., 2007; Campion et al., 1996; Goodman et al., 1987; Saavedra et al., 1993) and may perhaps be the reason why many teams form (Campion et al., 1993).

*Rationale.* My rationale for selecting team interdependence as a construct that drives TMT process is based on the following three reasons. First, as previously mentioned, extant work states that distal organizational structures influence various types’ of organizational processes that in turn affect various forms of strategy implementation (Alexander, 1985; Chandler, 1962; Schendel & Hofer, 1979). However, such an assertion does not consider more proximal team structural and design features

that could affect more proximal, team-level processes. Put differently, previous research has considered the effects of the structure of an organization's environment on the organization's processes, but has yet to consider the effects of more proximal structural characteristics such as team interdependence on more proximal team processes. As such, in this dissertation, I examine a more proximal antecedent to the more proximal TMT process.

Second, scholars suggest that team interdependence serves as a critical input that drives team processes (McGrath, 1964). Moreover, several influential theories have argued that team interdependence serves as a stimulus that affects team processes (Hackman & Morris, 1975; Argote & McGrath, 1993). Many studies, albeit not conducted on TMTs, have examined team interdependence as a feature that drives processes (e.g. Janz et al., 1997; Mathieu et al., 2007; Saavedra, et al., 1993; Shea & Guzzo, 1987; Steiner, 1972; Stewart & Barrick, 2000; Wageman, 1995, 1999). As such, I argue TMT interdependence drives TMT process.

Third, although most work in the realm of TMTs has examined the composition of the TMT as a key input that is related to TMT processes, scholars have more recently asserted researchers need to do a better job of characterizing teams. In other words, rather than characterize teams by their "evaluative characteristics" (e.g. context, type of task, composition of its members, etc.) as many TMT scholars tend to do, Mathieu et al. (2008:443) stated that a more revealing approach to portray teams is according to its level of interdependence. Accordingly, I use team interdependence to capture the TMTs substantive underlying structure.

*Hypothesized relationship.* Guided by these rationales, I contend that structuring a team to rely on each other encourages sharing process behaviors. That is, I argue TMT interdependence is positively related to TMT process. Extant research suggests that team interdependence encourages members of the team to rely on one another (e.g. Wageman, 1995). This assertion is based on the notion that when team interdependence is low, team members act as individuals who pursue their own interests (Stewart & Barrick, 2000). In essence, these individuals do not need to rely on someone else to perform their tasks, achieve their goals, and receive their reward outcomes (Stewart & Barrick, 2000). In contrast, when interdependence is greater, individuals rely on each other not only to perform their tasks, but also attain team goals, as well as obtain rewards based on their collective efforts (Saavedra et al., 1993, 1995; Wageman, 1995).

In regard to the context of my present discussion, Cohen and Bailey (1997:30) contend that top executives, "...may or may not be interdependent with one another, and may or may not have shared goals and mutual accountability for the..." organization's performance. Relying on team members to accomplish tasks, attain team goals, and obtain rewards facilitates team process sharing behaviors (Mathieu et al., 2007). This assertion is guided by several influential theories that suggest team interdependence impels team processes (e.g. Hackman & Morris, 1975). As such, team interdependence describes antecedent factors that enable or enervate team members' processes or interactions (Hackman, 1964).

But, why does reliance lead to sharing behaviors? The answer to this question can be traced to Deutch's (1949) theory of social interdependence. His theory asserts

that when individuals are incentivized to achieve individual goals and rewards, they act in accordance to pro-self-motivations. In contrast, in situations where individuals are incentivized to achieve team goals and rewards, they act on accordance to pro-social motivations. Acting on one's prosocial motivation is in turn characterized by cooperative or helping behaviors (Johnson & Johnson, 1989; Wageman, 1995, 2001; Wageman & Baker, 1997). Moreover, this type of structure increases an individual's willingness to help and share in order to collectively accomplish tasks, attain team goals, and obtain rewards (Stanne, Johnson, & Johnson, 1999). Not only do incentivizing individuals to achieve team goals and rewards encourage prosocial responses, but so does structuring work so that individuals rely on each other to perform tasks (i.e. task interdependence).

This is true because task interdependence requires coordination among team members. Stanne, Johnson, and Johnson (1999) stated that greater levels of task interdependence requires more frequent interaction, in which more team members have the opportunity to either promote or hinder each other's performance. In such instances, members engage in episodes of give-and-take to perform. This give-and-take process encourages sharing and helping behaviors. Based on this logic, in contexts that encourage team interdependence, one can reasonably expect an increase in sharing. Put differently, relying on each other increases sharing or cooperative behaviors (Johnson & Johnson, 1989; Shea & Guzzo, 1989). Thus, relying on each other to *achieve* greater levels of team interdependence should encourage sharing behaviors (De Drue, 2007). Moreover, scholars have articulated that team interdependence may be more directly "controllable" than processes (Campion et al., 1993). Accordingly, I argue when a TMT

is structured to rely on each other to accomplish tasks, goals, and outcomes, they will be more likely to engage in the sharing processes of behavioral and social integration, which in turn, will increase the likelihood of strategy implementation activities.

As far as extant empirical research, many studies, albeit not conducted on TMTs, have examined team interdependence as a team level structural feature that drives processes. More specifically, this research suggests that when team members rely on each other to accomplish tasks and goals and obtain rewards, they are more likely to engage in sharing process behaviors. Empirical research generally supports the view that various types of interdependence enable cooperative or sharing behaviors. For example, early studies on groups and teams demonstrated that high levels of task interdependence were associated with higher levels of communication, information sharing, workload sharing, and cooperation within the group (Campion et al., 1993; Crawford & Haaland, 1972). Ensuing work has largely supported this view, for example, Janz et al. (1997) found that a high level of interdependence is related to greater shared task understanding. For example, Wageman and Baker (1997) showed in a laboratory study that task interdependence fostered greater cooperation. Both studies conducted by Campion et al. (1993, 1996) found positive effects of outcome interdependence on cooperation. Similarly, on a sample of 45 working teams (N=626) in three manufacturing facilities, Stewart and Barrick (2000) found that task interdependence was associated with perceptions of more open communication and decreased conflict. Furthermore, greater task interdependence also increases coordination of team members'

skills, knowledge, and expertise (Zhang, Hempel, Han, & Tjosvold, 2007). Based on the above logic, I posit that:

*Hypothesis 2: TMT interdependence will be positively related to TMT process.*

My model also includes the moderating construct of TMT interdependence, which I contend will strengthen (rather than weaken) the positive TMT strategy implementation-organizational performance relationship.

### **The moderating effect of TMT interdependence on the TMT strategy implementation and organizational performance relationship**

In this section, before explaining the moderating effect of TMT interdependence on the TMT strategy implementation and organizational performance relationship, I will first explain my rationale for selecting TMT interdependence as a construct that moderates this relationship. I intend to use the same TMT interdependence construct that I defined and explained in the previous section.

*Rationale.* Two reasons guided my decision to select TMT interdependence as a construct that moderates the TMT strategy implementation and organizational performance relationship. My first reason for selecting the TMT interdependence construct comes from the OB/HR literatures. Within the OB/HR work group and team literatures, meta-analytic results suggest that a *team-level* structure - called team interdependence - moderates team process and performance relationships (Beal et al., 2003; Gully, Devine, & Whitney, 1995; Gully et al., 2002). More recently, Barrick, et al. (2007) extended these findings to the TMT literature, in which these OB/HR scholars found that a TMT's interdependence moderated their team mechanisms and

organizational performance relationship. These accumulated findings recently led Kozlowski and Bell (2013) to contend that studies that do not consider interdependence are limited in the value have for building knowledge in the work group and team literatures. Hence, based on these findings in both the work group and team literatures, I contend that TMT interdependence will moderate the relationship between the “taskwork” process of TMT strategy implementation and organizational performance.

My second reason for selecting a team-level structural factor for this study is guided by a gap in the strategy literature. In particular, strategy scholars have suggested (e.g. Hambrick, 1994) and also found that organizational structures moderate various organizational process and organizational outcome relationships (Finkelstein, et al., 2009). For example, an organization’s size, which according to these scholars, serves as a substitute measure for an organization’s hierarchical structure, not only impacts an organization’s processes, but also moderates the relationship between an organization’s processes and an organization’s outcomes (Alexander, 1985; Harrington, 2006; Wernham, 1985). In this sense, these strategy scholars examined *distal* organizational-level structures. However, only examining the organization’s structure without considering team-level structural effects may ignore some meaningful variance – especially when the focus of a study is TMTs, which after all is a type of team. Thus, the second reason for selecting a team-level structural factor in this study is guided by a gap in the strategy literature, in which strategy scholars have not examined *proximal team-level* structures in TMT studies. In sum, based on these rationales, I believe that the

selection and inclusion of the contingent effects of TMT interdependence on the TMT strategy implementation and organizational performance relationship is justified.

*Hypothesized relationship.* Drawing on Barrick, et al.'s (2007) findings, I argue the more that the executive team members “rely” on each other to achieve collective tasks, goals, and rewards (i.e. TMT interdependence), the that more organizational performance should be influenced by the executive team’s “taskwork” processes (i.e. TMT strategy implementation). In other words, organizational performance should be influenced more by the “taskwork” processes of TMT strategy implementation when TMT executives rely on each other to achieve collective tasks, goals, and rewards (i.e. TMT interdependence).

In situations where a congruence exists between high levels of “taskwork process” and high levels of “reliance” (i.e. TMT interdependence), one should expect this “fit” to positively affect firm performance. This is true since “relying” on each other to accomplish tasks, goals, and outcomes will result in a number of within-team gains. Moreover, gains in within-team “taskwork” functioning in TMTs should result in better specification, tracking, monitoring, and adapting the goals of the strategy implementation effort since executives have to “rely” on each other to achieve tasks, goals, and outcomes. Hence, a synergistic effect occurs from a fit of high amounts of interdependence and high amounts of strategy implementation “taskwork” processes because the combined effect of both reliance and taskwork process accomplishment will result in higher levels of organizational performance. Accordingly, the effects of these “taskwork” processes should be greater in executive teams characterized by higher levels

of interdependence. In sum, I argue higher levels of TMT interdependence will strengthen the TMT strategy implementation-organizational performance relationship because these executives will expend the energy to perform the necessary “taskwork processes” toward the efforts of the TMT (versus their own individual functional area) which will result in higher levels of organizational performance.

In contrast, because TMTs with lower amounts of interdependence require a smaller amount of reliance among members, these TMT strategy implementation processes should be less important for organizational performance. This is true because these TMTs do not rely on each other to jointly achieve collective tasks, goals, and rewards. That is, such executive teams do not “rely” on another are seldom able to accomplish its task (s), achieve its outcomes, or obtain its rewards, even in situations where high amounts of “taskwork” processes (e.g. strategy implementation) are in place. In this regard, the relationship between these “taskwork” processes and performance is weaker because goals, feedback, reward, and “taskwork” process requirements are incongruent (Saavedra, et al., 1993; Weaver, Bowers, Salas, & Cannon-Bowers, 1997).

Both meta-analytic results and primary studies bolster this assertion. Within the small group literatures, for example, accumulated meta-analytic evidence suggest that the various types of team processes is more important for team performance when team interdependence was higher, rather than lower. Research suggests that team performance is increases in situations where goals, feedback, rewards, and task interdependence requirements are congruent with one another (Saavedra et al., 1993; Weaver, Bowers, Salas, & Cannon-Bowers, 1997). De Dreu (2007), for example, found for teams engaged

in intentional and methodical information processing that various outcomes were higher when team members perceived higher levels of cooperative outcome interdependence. When explicitly examining TMTs, a team that is engaged in the deliberate and systematic information processing Barrick, et al. (2007) found that TMT interdependence moderated the association between TMT mechanisms and organizational performance. This finding persuasively revealed the value of aligning executive team process and executive team interdependence. Based on the theory presented above and the extensive evidence that exists in the small group and team literatures, I posit:

*Hypothesis 3: TMT interdependence will moderate the relationship between TMT strategy implementation and organizational performance such that the positive relationship will be stronger, rather than weaker, for executive teams with higher, rather than lower, amounts of TMT interdependence*

### **TMT strategy implementation on organizational performance**

The final construct in my model is organizational performance, which generally includes some or all of the following: (1) organization's sales level, (2) sales growth rate, (3) cash flow, (4) return on shareholder equity, (5) gross profit margin, (6) net profit from operations, (7) profit to sales ratio, (8) return on investment, or (9) the organization's ability to fund business growth from profits (Covin et al., 1990; Gupta & Govindarajan, 1984).

*Rationale.* Within the strategic management literature, strategy implementation is generally perceived to be a significant determinant of performance (Andrews, et al.,

2011). As such, organizational performance is thought to be an important outcome of strategy implementation. Consequently, I believe that this important outcome should be captured in my model.

Incidentally, the above definition was chosen based on a subjective (versus objective) measure of organizational performance. Several scholars point out that top executives and/or their investors may be unwilling to reveal actual performance data (Covin, et al., 1990; Dess & Robinson, 1984; Fiorito & LaForge, 1986; Gupta & Govindarajan, 1984; Ling et al., 2008). In such instances, subjective measures are frequently used (Ling et al., 2008). Scholars also suggest that subjective measures are more appropriate than objective measures for comparing profit performance in samples containing businesses in multiple industries (Dawes, 1999; Venkatraman & Ramanujam, 1986). This is true because objective organizational performance is noticeably different across industries, thereby obscuring relationships between the independent variables and organizational performance. As such, using a subjective organizational performance measure controls for differences in performance that may be attributed to industry differences (Dess, Ireland, & Hitt, 1990). Based on this line of reasoning, I intend to use a subjective measure of organizational performance, a scale developed by Gupta and Govindarajan (1986) that has been used in later studies (e.g. Covin et al. 1990; Gong, Law, Chang, & Xin, 2009).

*Hypothesized relationship.* The successful implementation of a strategy provides an organization with the means to achieve more revenue or to decrease costs (Hrebiniak, 2005) Conversely, , lower levels of organizational performance can occur when

organizational leaders do not effectively engage in the implementation of a strategy (Dooley, Fryxell, & Judge, 2000; Wooldridge & Floyd, 1990). This makes sense given that the absence of top executives pursuing the implementation of the strategy may cause organizational members to be directionless and confused (Mintzberg, Ahlstrand, & Lampel, 2005). In such instances, organizational members pursue their own interests versus those of the organization (Guth & MacMillan, 1986). The subsequent effect of these actions is lowered organizational performance (Floyd & Wooldridge, 1997). The same results of enhanced organizational performance can also be attributed to TMTs that not only specify and track implementation goals, but also monitor internal (e.g. financial, talent, technology) and external environments enabling them to surface new information that permits them to more adapt to these changing circumstances. Failure to identify and adapt to these changing internal and external conditions leads to poor organizational performance (Weitzel & Jonsson, 1989). Thus, when TMT executives effectively engage in a set of strategy implementation actions increase in organizational performance will likely occur.

Despite the theoretical link between strategy implementation and organizational performance, studies that show a relationship between the two are very uncommon. Some studies have however have found that “strategy implementation methods or tactics” are related to certain measures of organization performance (e.g. Nutt, 1999; Andrews, et al., 2009). For example, it has been shown that private rational implementation style achieved higher profits (Parsa, 1999). Hickson et al. (2003), found that planning and prioritizing implementation approaches were associated with higher

performance as measured by subjective views of stakeholders. Based on these assertions, I content that when TMT's effectively perform strategy implementation organizational performance organization performing well will increase. Thus, I posit:

*Hypothesis 4: TMT strategy implementation will be positively related to organizational performance.*

### **The partial mediation of TMT strategy implementation on the relationship between TMT process and organizational performance**

I argued that TMT process will be positively related to TMT strategy implementation, which, in turn, will be positively related to organizational performance. I also take the position that TMT process has a direct, albeit distal, relationship with organizational performance. Taken together with Hypotheses 1 and 3, TMT strategy implementation partially mediates the relationship between TMT process and organizational performance. Previous scholarship has argued "teamwork" sharing processes are likely be valuable for organizational performance, primarily because of an executive team's "taskwork" processes, which include formulating better a strategy, making better decisions, or reaching strategic consensus (e.g. Finkelstein et al., 2009). For example, the results of Carmeli and Schaubroeck's (2006) study surfaced that certain "taskwork" processes partially mediated their "teamwork" process and organizational performance relationship. Guided by Carmeli and Schaubroeck's (2006) results, I expect the mediation to be partial.

*Hypothesis 5: The positive relationship between TMT process and organizational performance will be partially mediated by TMT strategy implementation.*

### **List of all hypotheses**

To summarize, I posit that TMT process will be positively related to TMT strategy implementation, TMT interdependence will be positively related to TMT process, and that TMT interdependence will moderate the TMT strategy implementation and organizational performance relationship. In addition, I argue TMT strategy implementation will be positively related to organizational performance and that TMT strategy implementation partially mediates the TMT process and organizational performance relationship. Or more formally:

*Hypothesis 1: TMT process will be positively related to TMT strategy implementation.*

*Hypothesis 2: TMT interdependence will be positively related to TMT process.*

*Hypothesis 3: TMT interdependence will moderate the relationship between TMT strategy implementation and organizational performance such that the positive relationship will be stronger, rather than weaker, for teams with higher, rather than lower, amounts of TMT interdependence.*

*Hypothesis 4: TMT strategy implementation will be positively related to organizational performance.*

*Hypothesis 5: The positive relationship between TMT process and organizational performance will be partially mediated by TMT strategy implementation.*

## CHAPTER III

### RESEARCH METHOD

#### **Participants and procedures**

Three United States (U.S.)-based investment groups that have an investment in or are considering an investment in small-to-medium sized business (SMBs) identified 102 U.S.-based organizations to participate in this research (investment group 1 provided 50, investment group 2 provided 22, investment group 3 provided 30). Small-to-medium sized organizations were chosen because access to TMTs is more available in these organizations (Cater & Pucko, 2010) and the effects of TMTs actions are easier to identify in small-to-medium sized businesses (Brouthers, Brouthers, & Werner, 1998; Hart & Banbury, 1994). Each management team consisted of a CEO and can include individuals responsible for leading various functional departments such as, operations, information technology, manufacturing, marketing, sales, and supply chain.

An email to participate in this study was sent to CEOs of the 102 SMBs on August 2013. The email contained a link to an online survey powered by Qualtrics. Upon agreeing to participate, the CEO provided contact information for at least two management team members that report to him or her. CEOs providing contact information for management team members is consistent with previous research (e.g. Carmeli & Scheigman, 2010; Knight et al., 1999; Ling, et al., 2008). For data to be retained, responses from at least three TMT members (CEO + two other team members) were required, which is also in line with previous research (e.g. Barrick et al., 2007).

Based on these criteria, fifteen organizations were removed from the analysis, yielding a sample consisting of members of TMTs from 87 different organizations.

The CEO and top management team leaders responded to a series of questions that measured top management team strategy implementation, process, and interdependence. In addition, each respondent provided his or her own demographic information (e.g. age, gender, education, tenure in the top management team) and the CEO provided organizational demographic information (e.g. organizational age, size, etc.).

Approximately three months after the first survey, a contact within each investment group was asked to respond to questions related to organizational performance. All but four surveys were completed by the three investment groups. The final sample thus consisted of 83 TMTs from different organizations that contained 44 TMTs from investment group 1, 15 TMTs from investment group 2, and 24 TMTs from investment group 3. The size of the TMTs ranged from 3 to 12 members, with an average of 4.70 (s.d. = 2.1) members. The size of the organizations ranged from 8 employees to 2000 employees (four organizations had over 1000 employees), with an average of 154 employees in each firm (s.d. = 363.6). A total of 266 out of a possible 390 team members (an average of 3.21 of the 4.81 members on each team) responded to surveys, yielding a 68 percent response rate on both surveys. Eighty-three percent of the TMTs had three members, 13 percent of the TMTs had four members, and four percent had five members. Details regarding the demographic composition of the organization and participants are displayed in Table 5.

**Table 5** Demographic composition of the organization and participants

Demographic Characteristic	Organization (N=83)	TMT (N=266)		
Industry	<i>Accommodation and food service</i>	15.7%	n/a	
	<i>Agriculture, forestry, fishing</i>	2.4%		
	<i>Arts, entertainment, and recreation</i>	2.4%		
	<i>Construction</i>	12.0%		
	<i>Educational services</i>	2.4%		
	<i>Finance and insurance</i>	8.4%		
	<i>Health care and social assistance</i>	4.8%		
	<i>Information Management/Tech</i>	7.2%		
	<i>Manufacturing</i>	15.7%		
	<i>Other services</i>	9.6%		
	<i>Professional, scientific, and technical</i>	18.1%		
	<i>Transportation and warehousing</i>	1.2%		
Organizational Age (years)	<i>Between 0-5:</i>	9.6%	n/a	
	<i>Between 6-10:</i>	25.3%		
	<i>Between 11-20:</i>	26.5%		
	<i>Between 21-40:</i>	29.0%		
	<i>Between 41-60:</i>	4.8%		
	<i>Over 60:</i>	4.8%		
Size(full-time employees)	<i>Between 0-20:</i>	43.4%	n/a	
	<i>Between 21-100:</i>	34.9%		
	<i>Over 100:</i>	21.7%		
Team size	<i>Between 0-3:</i>	31.3%	n/a	
	<i>Between 4-5</i>	39.8%		
	<i>Over 5:</i>	28.9%		
Team tenure	<i>Less than 6 months:</i>	5.3%	n/a	
	<i>6 months to 1 year:</i>	4.9%		
	<i>1-2 years:</i>	7.5%		
	<i>2-5 years:</i>	24.0%		
	<i>5-10 years:</i>	27.8%		
	<i>Over 10 years:</i>	30.5%		
Age (years)			<i>Between 19-30:</i>	9.8%
			<i>Between 31-40:</i>	21.8%
			<i>Between 41-50:</i>	36.1%
			<i>Between 51-60:</i>	24.8%
			<i>Over 60:</i>	7.5%
Gender			<i>Male:</i>	69.2%
			<i>Female:</i>	31%
Race			<i>White/Anglo</i>	78.6%
			<i>Black/African American</i>	4.9%
			<i>Hispanic</i>	6.3%
			<i>Asian</i>	7.2%
			<i>Native American</i>	0.4%
			<i>Pacific Islander</i>	0.7%
			<i>Other</i>	1.9%
Education			<i>Less than High School</i>	0.4%
			<i>High School / GED</i>	4.5%
			<i>Some College</i>	15.4%
			<i>2-year College Degree</i>	8.3%
			<i>4-year College Degree</i>	51.9%
			<i>Masters Degree</i>	17.5%
			<i>Doctoral Degree</i>	1.6%
		<i>Professional Degree (JD, MD)</i>	0.4%	

## Measures

Investment groups provided ratings of organizational performance. TMT members (CEO+2 TMT Members), provided ratings of TMT strategy implementation, TMT process, and TMT interdependence. A referent-shift composition model (Chan, 1998) was used on all independent variables since the focus of this research is the TMT's overall perception of strategy implementation, process, and interdependence. With the exception of the items used in the organizational performance scale, all items were assessed using five-point Likert-type scales. A complete list of items can be found in Appendix A.

*Aggregation.* To establish the psychometric basis for aggregation,  $r_{wg(j)}$  agreement indices (James, Demaree, & Wolf, 1993) and intraclass correlations (ICCs) were evaluated against generally accepted values (Bliese, 2000; Lance, Butts, & Michels, 2006). For TMT strategy implementation the  $r_{wg(j)}$ , ICC (1), ICC (2) was .84, .38, .66, respectively and  $F_{82, 183} = 2.96, p < .01$ . For TMT process the  $r_{wg(j)}$ , ICC (1), ICC (2) was .89, .49, .75, respectively and  $F_{82, 183} = 4.75, p < .01$ . Last, TMT interdependence the  $r_{wg(j)}$ , ICC (1), ICC (2) was .68, .43, .71, respectively and  $F_{82, 183} = 3.45, p < .01$ . Thus, for each variable, the  $r_{wg(j)}$  met the adequate agreement index threshold and a test of the interclass coefficient revealed the analysis of variance (ANOVA) F values were significant ( $p < .01$ ), meaning that team membership was responsible for significant variance in the measures.

*Organizational performance.* During the second time period, a contact within each investment group rated the organization's performance using a nine-item subjective

performance scale developed by Gupta and Govindarajan (1986). This measure comprehensively assesses the nine most important financial metrics that are frequently used to evaluate an organization's performance (Covin et al., 1990; Gong, Law, Chang, & Xin, 2009). Items were measured on a seven-point Likert scale ranging from much worse (1) to much better (7). A contact within the investment group rated their SMB's organizational performance relative to others in their industry on the following aspects of organizational performance: (1) organization's sales level, (2) sales growth rate, (3) cash flow, (4) return on shareholder equity, (5) gross profit margin, (6) net profit from operations, (7) profit to sales ratio, (8) return on investment, and (9) the organization's ability to fund business growth from profits (Covin, et al., 1990; Gupta & Govindarajan, 1984). Items were averaged to obtain an aggregate rating for organizational performance. The coefficient alpha for this scale was .95.

*TMT strategy implementation.* During the first time period, the CEO and top management team members rated their effectiveness at implementing strategies. This rating was obtained from a 14-item TMT strategy implementation scale. Seven of the items were obtained from Barrick et al.'s (2014) strategy implementation scale, which includes the dimensions of goal specification and tracking implementation goal progress and seven of the items came from existing internal and external systems monitoring and adaptation scales that tap into conceptions of strategy implementation (e.g. Daft & Macintosh, 1984; Finkelstein et al., 2009). This scale was assembled following a four-step procedure which included using well-cited measures grounded in a theoretically-based definition, being similarly worded to not be prone to socially desirable responses,

and generalizable (Jackson, 1970). 11 subject matter experts reviewed the scale the both the length of the measure as well as its dimensions and items tapped into the TMT strategy implementation tasks.

Sample items from Barrick (2014) et al.'s scale included how effective the executive management team is at, "...setting and pursuing implementation goals" (goal specification), and "...regularly monitoring how well we are meeting our implementation goals" (tracking implementation goal progress). The team-level coefficient alpha for specifying the implementation goal dimension was .82 and tracking goal implementation progress was .84. Mathieu et al.'s (2000) three-item systems monitoring scale was used to assess internal and external systems monitoring. A sample item from this scale is, "...examining and managing resources (financial, talent, technology) for our implementation goals." The team-level coefficient alpha for this subscale was .81. The four-item adaptation scale developed by de Jong and Elfring (2010) was used to measure the adapting implementation goal subscale. A sample item includes, "...modify the implementation goals and objectives in light of changing circumstances". The team-level coefficient alpha for this subscale was .82.

To form the overall TMT strategy implementation measure, scores from each of the four dimensions were aggregated into a single composite score. Three steps were followed to assess the construct validity of this measurement approach. First, a composite reliability was computed for the TMT strategy implementation measure to assess the degree of the team-level internal consistency within raters across items. Doing so provides initial evidence of support that each dimension of the TMT strategy

implementation construct loads onto a second-order TMT strategy implementation construct. Second, confirmatory factor analysis (CFA) was conducted to assess the magnitude and significance of the path loadings between the indicator variables and the higher-order factor. Finally, an alternative measurement model was constructed to determine whether the fit of the four factor measurement model was better when the various dimensions of top management team strategy implementation are treated as indicators of a single superordinate higher-order factor or as four distinct factors.

The first step yielded a composite reliability of .94 - indicating that raters were consistent in their ratings of TMT strategy implementation. The latter two tests are explained in Chapter 4 in connection to the discussion about the validity of the measurement model.

*TMT process.* The CEO and top management team leaders rated their degree of agreement on two dimensions of TMT-related processes, using a 29-item TMT process scale. This scale was assembled following a four-step procedure (i.e. the use of well-cited measures based on a theoretically-based definition, similarly worded to not be prone to socially desirable responses, generalizable, and examined by 11 subject matter experts; Jackson, 1970). This procedure resulted in two dimensions of top management team process, including an instrumental (with four subdimensions: sharing of information, decisions, time, and priority) and interpersonal (i.e. and three subdimensions, which are the sharing of affect regulation, conflict management, and motivation and confidence building) facet. With the exception of the sharing of time

scale, the items were measured on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Four subdimensions of instrumental processes were assembled. These subdimensions are the sharing of information, the sharing of decisions, the sharing of time, and the sharing of priorities. The sharing of information was measured using Lester, Meglino, and Korsgaard's (2002) four-item communication scale. A sample item from the scale "Members of this executive team are willing to share information with other team members about our work." The team-level coefficient alpha for the sharing of information scale was .89.

The sharing of decisions subdimension was measured using a scale that was developed by Hiller, Day, and Vance. (2006). A sample item in the scale is "This executive team decides on the best course of action when problems arise." The team-level coefficient alpha for the sharing of decisions scale was .91.

The sharing of time was measured using Somech and Drach-Zahavy's (2007) four-item scale, which assesses the TMTs extent of interaction and the frequency of the team's meetings. The items were measured on a five- point Likert scale ranging from infrequently (1) to frequently (5). A sample item is, "How frequently did this executive team meet during the last week?" The team-level coefficient alpha for the sharing of time scale was .94.

Hackman's (1983) five-item coordination scale was used to assess the sharing of priorities. A sample item of this scale is, "This executive team works together in a well-coordinated fashion." The resulting team-level coefficient alpha of the sharing of priority

scale was .57. One explanation for this low coefficient alpha, is the reverse scored items (items 18 and 20) confused raters. When eliminated, the coefficient alpha yielded an acceptable value of .91. Hence, the reverse scored items were eliminated. The resulting team-level coefficient alpha was .95. Altogether, the aggregated team-level coefficient alpha of this instrumental process subscale is .95.

Interpersonal processes were measured using Marks et al.'s (2001) nine-item (three items assess each subdimension) interpersonal processes scale, which includes the sharing processes of affect regulation, conflict management, and confidence and motivation building. Sample items are "This executive team keeps each other from getting overly emotional or frustrated," (sharing process of affect regulation), "This executive team deals with personal conflicts in fair and equitable ways," (sharing process of conflict management), and "This executive team develops confidence in our team's ability to perform well," (sharing process of confidence and motivation building). The team-level coefficient alphas for the sharing of affect regulation, sharing of conflict management, and the sharing of motivation and confidence building scales was .86, .88, .89, respectively. The aggregated team-level coefficient alpha of this interpersonal process subscale was .94.

To construct the TMT process measure, the scores from each of the two dimensions were aggregated into a single composite score to construct the TMT process variable. To assess the validity of this measurement approach, the same three steps to assess the validity of the strategy implementation construct was performed. The first step yielded a composite reliability of .97, providing initial evidence for justification of a

higher order construct since raters were consistent in their ratings of TMT process. The latter two steps (i.e. CFA and determining the fit of the measurement model) are explained in Chapter 4.

*TMT interdependence.* Also during the first time period, top management team members rated his/her TMT's interdependence using a 14-item, three dimension team interdependence (task, goal, and outcome) scale developed by Barrick et al. (2007). A sample item for task interdependence was "I cannot accomplish my work without information or materials from other members of the executive management team." A sample item for goal interdependence was "My work goals come directly from the goals of the executive management team." Last, a sample item for outcome (i.e. interdependent feedback and rewards) interdependence was: "Feedback about how well I am doing my job comes primarily from information about how well the entire team is doing." The team-level coefficient alpha for this team-level scale was .83.

*Controls.* Both organizational- and individual-level controls were also gathered from the sample. This research focused only on those controls that have previously been shown to be potential alternative explanations. Drawing on previous TMT research, organizational size, age, TMT size, and industry (e.g. Barrick et al., 2007; Carmeli et al., 2010; Carpenter & Sanders, 2002; Cohen & Bailey, 1997; Gonzalez-Benito et al., 2011; Hambrick, 1994; Homburg et al., 1999; Knight et al, 1999; Michel & Hambrick, 1992; Simsek, et al., 2005) effects were controlled. Organizational size was represented by the number of employees in the organization. The TMT size was represented by the number of TMT members as indicated by the organization's CEO. Age was represented as the

number of years since the establishment of the organization. Industry was represented by the coding procedure that was assigned to a listing of industries (e.g. professional, scientific, and technical services, accommodation and food services, agriculture, forestry, fishing and hunting, utilities, etc.). Following previous TMT research, these industries were then placed into eight categories based on similarity and dummy coded accordingly (Simsek, et al., 2005).

Following Barrick et al.'s (2007) TMT study, the demographic composition of a TMT was also gathered by each TMT rater, including team tenure, age, education, and gender - all of which have been previously shown to be related to various outcomes ( e.g. Smith et al., 1994; Tsui & Gutek, 1999). For team tenure, TMT executives reported their own average length of team members' time on a TMT and gender (Smith et al., 1994). Additionally, consistent with previous research, TMT executive educational attainment (Simsek et al., 2009) effects will also be gathered. Survey participants reported each characteristic using a single item. For team tenure, in line with previous research, the executive team members' average length of time on the team and the variability of team tenure among members were considered (Barrick et al., 2007; Pelled et al., 1999; Smith et al., 1994). Rather than use the coefficient of variation to determine the variability of team tenure and age, the standard deviation since was used since better suited for ratio data (Barrick et al., 2007; Bedeian & Mossholder, 2000; Harrison & Sin, 2006). A bias-corrected (by team size) weighted Teachman's (1980) index was used to measure the variability of race, sex, and education since each is categorical variables (Barrick et al., 2007; Biemann & Kearney, 2010). Last, in addition to the controls listed,

similar to the each firm was dummy coded to reflect which of the three investment firms provided ratings of organizational performance to further rule out any potentially confounding effects. Although raters were asked to provide the above information, only those controls that were significantly related to variables in the hypothesized model were controlled.

### **Data analysis**

Before testing the hypotheses, several steps were performed to detect traces of common method variance (CMV). Doing so ensured that the variance is attributed to the constructs of interest rather than to the measurement method, to minimize Type I and Type II errors; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff & Organ, 1986; Spector, 2006). To detect additional traces of CMV and to show evidence that the constructs in the model are distinct, bivariate correlations were examined and a Harman's test was performed. Thereafter, to ensure the independence of the variables this research followed a two-phase strategy, in which the first phase involved the fit of a confirmatory factor analysis (CFA) measurement model to the observed data. The second phase involves comparing a series of nested structural models. This step produced information on which structural model that best accounts for the covariances observed between the model's constructs (Anderson & Gerbing, 1988).

All hypotheses were tested using IBM® AMOS version 22® structural equation modeling software, wherein each individual hypothesis was represented by different paths in the path model. A comparison of results between AMOS MPLUS, another structural equation modeling software program was conducted because, unlike IBM®

AMOS®, MPlus uses a Huber-White robust standard error estimator (Huber, 1967, White, 1982) to account for dependency issues (TMT members nested within the TMT). Neglecting the dependency among observations generally results in underestimating the standard errors of the fixed effect and leading to inflated Type I error rate (for full discussion, please see: Wu & Kwok, 2012). Since the results between the software packages were not substantially different, IBM ® AMOS ® version 22 was used.

## CHAPTER IV

### RESULTS

#### **Measurement evaluation**

*Bivariate correlation examination: Descriptive statistics and correlations.* Table 6 presents the means, standard deviations, correlations, and scale reliabilities for each of the variables in this study. Providing preliminary support for my hypotheses, I found, the TMT strategy implementation variable displayed a positive and significant correlation with organizational performance ( $r_{\text{TMT strategy implementation}} = .31; p < .01$ ). Similarly, the TMT process variables displayed positive and significant relationships with TMT strategy implementation ( $r_{\text{TMT process}} = .49; p < .01$ ). TMT interdependence showed a positive and significant relationships with TMT process ( $r_{\text{TMT interdependence}} = .26, p < .05$ ). The results of the Harman's test offered further evidence that CMV was minimized since one general factor accounted for 33% of the covariance among the variables (Podsakoff & Organ, 1986).

With the exception of the investment group (Organizational performance rater 2 and 3) dummy coded covariate on TMT interdependence, one of the dummy coded industry covariates (Industry 7) on TMT process and, through subsequent analysis (omnibus model), organizational age (on TMT strategy implementation), none of other the controls showed a significant bivariate correlation with any of the hypothesized variables in my model.

**Table 6** Correlation table

*Means, standard deviations, coefficient alphas, and inter-correlations among variables*

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Organizational performance rater 2	0.18	0.39	-											
2. Organizational performance rater 3	0.29	0.46	.300**	-										
3. Industry 2	0.02	0.15	0.13	0.07	-									
4. Industry 3	0.02	0.15	-0.07	-0.10	-0.02	-								
5. Industry 3	0.12	0.33	0.11	0.01	-0.06	-0.06	-							
6. Industry 4	0.08	0.28	-0.03	0.00	-0.05	-0.05	-0.11	-						
7. Industry 5	0.16	0.37	-0.03	-0.20	-0.07	-0.07	-0.16	-0.13	-					
8. Industry 6	0.42	0.50	-0.02	0.15	-0.13	-0.13	-.316**	.259*	.368**	-				
9. Industry 7	0.01	0.11	-0.05	-0.07	-0.02	-0.02	-0.04	-0.03	-0.05	-0.09	-			
10. Org age (months)	247.08	223.86	-0.13	-0.06	0.02	-0.03	-0.04	0.00	0.20	-0.15	0.08	-		
11. Org size (F/T Employees)	154.14	363.61	-0.05	0.15	-0.06	-0.06	-0.06	0.08	0.04	-0.13	0.00	.339**	-	
12. Team size	4.70	2.06	-0.16	0.03	-0.13	-0.05	-0.05	0.19	0.14	-0.21	0.07	0.01	.552**	-
13. Team tenure	50.82	40.88	0.12	-.267*	0.00	-0.09	0.14	-0.01	-0.10	0.08	-0.01	.294**	-0.13	-0.12
14. Age	6.58	4.54	.338**	0.09	-0.01	0.07	-0.10	0.16	-0.17	-0.05	-0.04	0.04	-0.04	0.03
15. Gender	43.46	45.86	0.13	0.02	.281*	-0.06	-0.09	-0.08	-0.02	0.17	-0.11	-0.05	-0.08	-.230*
16. Race	29.36	43.54	0.02	-0.04	0.17	0.17	0.01	-0.21	0.04	0.07	-0.07	0.04	-0.04	-0.01
17. Education	39.94	43.71	0.02	0.08	0.13	0.04	0.20	-0.16	-0.11	0.06	0.05	-0.07	-0.20	-.268*
18. TMT interdependence	3.66	0.44	.277*	.300**	0.19	0.08	-0.10	0.06	0.12	-0.18	0.06	0.12	0.04	0.06
19. TMT interdependence: Task	3.80	0.51	.226*	-.218*	0.20	0.15	-0.18	0.03	0.07	-0.09	0.00	0.09	-0.01	0.01
20. TMT interdependence: Goal	3.60	0.50	.306**	.326**	0.17	-0.04	-0.09	0.05	0.12	-0.19	0.07	0.06	0.13	0.14
21. TMT interdependence: Outcome	3.60	0.58	0.16	-0.22	0.12	0.09	0.01	0.06	0.12	-0.17	0.08	0.15	-0.04	0.01

Note. N = 83 Teams. Coefficient alphas are provided in parentheses on the diagonal.

\* p < .05, \*\* p < .01

**Table 6 Continued**

<i>Means, Standard Deviations, Coefficient Alphas, and Inter-Correlations among Variables</i>														
	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
22.TMT process	3.76	0.52	0.07	0.08	0.15	0.12	-0.01	-0.07	-0.14	-0.01	.223*	-0.11	-0.06	0.01
23. TMT process: Instrumental	3.74	0.55	0.07	0.03	0.13	0.10	-0.06	-0.06	-0.10	-0.01	.232*	-0.13	-0.04	0.02
24. TMT process: Interpersonal	3.76	0.58	0.06	0.14	0.16	0.17	0.07	-0.09	-0.18	-0.03	0.18	-0.06	-0.08	-0.02
25. TMT process: Instrumental: Sharing info.	3.95	0.55	0.11	-0.02	0.16	0.10	0.00	-0.07	-0.13	-0.03	0.21	-0.10	-0.17	-0.15
26. TMT process: Instrumental: Sharing dec.	3.82	0.53	0.04	0.09	0.14	0.02	-0.01	-0.03	-0.18	0.03	0.20	-0.09	-0.06	0.01
27. TMT process: Instrumental: Sharing time	3.63	0.79	0.07	0.04	0.05	0.12	-0.08	-0.04	-0.01	-0.07	0.18	-.217*	0.10	0.14
28. TMT process: Instrumental: Sharing priorities	3.56	0.74	0.04	-0.01	0.13	0.07	-0.08	-0.08	-0.07	0.05	0.19	-0.01	-0.06	0.03
29. TMT process: Interpersonal: Sharing afft. reg.	3.58	0.63	0.09	0.14	0.08	0.12	0.07	-0.15	-0.16	0.02	0.18	0.03	-0.04	-0.02
30. TMT process: Interpersonal: Sharing cnflt.	3.73	0.64	0.01	0.19	0.20	0.19	0.03	-0.03	-0.18	-0.05	0.15	-0.06	-0.10	-0.04
31. TMT process: Interpersonal: Shrng confdenc.	3.97	0.60	0.07	0.04	0.17	0.17	0.10	-0.07	-0.16	-0.05	0.17	-0.13	-0.10	-0.01
32. TMT strategy implementation	3.68	0.50	0.10	-0.14	0.03	0.12	-0.18	0.05	-0.05	0.13	0.03	0.13	-0.12	-0.02
33. TMT strategy implementation: Goal Spec.	3.85	0.54	0.10	-.280*	0.06	0.09	-0.20	-0.03	0.03	0.11	0.12	0.18	-0.19	-0.10
34. TMT strategy implementation: Tracking	3.51	0.59	0.01	-0.10	-0.10	0.14	-0.15	0.08	-0.05	0.17	0.02	0.14	-0.11	0.04
35. TMT strategy implementation: Monitoring	3.72	0.53	0.13	-0.11	0.07	0.10	-0.13	0.01	-0.08	0.08	0.01	0.04	0.03	0.04
36. TMT strategy implementation: Adapting	3.67	0.54	0.15	-0.06	0.12	0.08	-0.17	0.08	-0.08	0.10	-0.01	0.11	-0.15	-0.07
37. Org performance	4.71	1.19	-0.11	0.07	-0.21	0.08	-0.13	0.02	0.10	0.04	-0.08	0.07	0.10	0.10

Note. N = 83 Teams. Coefficient alphas are provided in parentheses on the diagonal.

\* p < .05, \*\* p < .01

**Table 6 Continued***Means, Standard Deviations, Coefficient Alphas, and Inter-Correlations among Variables*

	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1. Organizational performance rater 2														
2. Organizational performance rater 3														
3. Industry 2														
4. Industry 3														
5. Industry 3														
6. Industry 4														
7. Industry 5														
8. Industry 6														
9. Industry 7														
10. Org age (months)														
11. Org size (F/T Employees)														
12. Team size														
13. Team tenure														
14. Age	0.07													
15. Gender	-0.01	0.04												
16. Race	0.14	0.10	0.14											
17. Education	0.11	0.09	-0.06	0.05										
18. TMT interdependence	-0.03	-0.04	0.09	0.17	-0.04	(0.83)								
19. TMT interdependence: Task	0.02	-0.01	0.10	0.17	-0.08	.883**								
20. TMT interdependence: Goal	-0.13	-0.03	0.06	0.04	-0.07	.793**	.515**							
21. TMT interdependence: Outcome	0.03	-0.07	0.06	.222*	0.04	.859**	.712**	.484**						

Note. N = 83 Teams. Coefficient alphas are provided in parentheses on the diagonal.

\* p &lt; .05, \*\* p &lt; .01

**Table 6 Continued**

	13	14	15	16	17	18	19	20	21	22	23	24	25	26
22. TMT process	-0.09	0.01	0.09	0.09	0.08	.263*	.221*	0.17	.280*	(0.97)				
23. TMT process: Instrumental	-0.09	0.04	0.09	0.09	0.03	.290**	.242*	.225*	.270*	.971**	(0.95)			
24. TMT process: Interpersonal	-0.07	-0.03	0.09	0.09	0.18	0.21	0.18	0.07	.288**	.927**	.818**	(0.94)		
25. TMT process: Instrumental: Sharing info.	-0.06	0.03	0.05	0.05	0.04	0.18	0.18	0.14	0.15	.870**	.830**	.816**	(0.89)	
26. TMT process: Instrumental: Sharing dec.	-0.11	-0.09	0.03	0.06	-0.02	0.18	0.17	0.09	0.21	.902**	.859**	.806**	.802**	(0.91)
27. TMT process: Instrumental: Sharing time	-0.14	0.13	0.09	0.02	0.02	.261*	0.16	.291**	0.21	.665**	.776**	.454**	.430**	.429**
28. TMT process: Instrumental: :Sharing priorities	0.00	0.03	0.12	0.17	0.05	.318**	.297**	0.19	.322**	.894**	.921**	.772**	.699**	.792**
29. TMT process: Interpersonal: Sharing afft. reg.	-0.07	-0.05	0.10	0.14	0.13	.262*	.224*	0.10	.352**	.854**	.753**	.925**	.700**	.751**
30. TMT process: Interpersonal: Sharing cnflt.	-0.04	-0.03	0.05	0.06	0.21	0.14	0.12	0.00	.232*	.846**	.732**	.932**	.747**	.735**
31. TMT process: Interpersonal: Shrng confdenc.	-0.08	0.00	0.09	0.05	0.14	0.19	0.16	0.12	.217*	.884**	.795**	.927**	.828**	.759**
32. TMT strategy implementation	0.08	-0.03	0.14	0.07	0.09	.357**	.288**	.224*	.401**	.490**	.498**	.452**	.265*	.428**
33. TMT strategy implementation: Goal Spec.	0.06	-0.04	0.10	0.03	0.03	.318**	.224*	.227*	.362**	.415**	.447**	.342**	.261*	.356**
34. TMT strategy implementation: Tracking	0.11	0.01	0.09	0.03	0.08	.329**	.297**	0.20	.345**	.403**	.416**	.377**	0.15	.326**
35. TMT strategy implementation: Monitoring	0.00	-0.09	0.16	0.11	0.11	.329**	.251*	0.21	.377**	.563**	.557**	.530**	.350**	.496**
36. TMT strategy implementation: Adapting	0.08	-0.01	0.17	0.11	0.11	.319**	.258*	0.18	.374**	.423**	.415**	.407**	.245*	.400**
37. Org performance	-0.07	0.13	-0.05	-0.07	-0.14	-0.04	0.01	-0.06	-0.06	0.12	0.13	0.11	-0.08	0.08

Note. N = 83 Teams. Coefficient alphas are provided in parentheses on the diagonal.

\* p < .05, \*\* p < .01

**Table 6 Continued**

	27	28	29	30	31	32	33	34	35	36	37
1. Organizational performance rater 2											
2. Organizational performance rater 3											
3. Industry 2											
4. Industry 3											
5. Industry 3											
6. Industry 4											
7. Industry 5											
8. Industry 6											
9. Industry 7											
10. Org age (months)											
11. Org size (F/T Employees)											
12. Team size											
13. Team tenure											
14. Age											
15. Gender											
16. Race											
17. Education											
18. TMT interdependence											
19. TMT interdependence: Task											
20. TMT interdependence: Goal											
21. TMT interdependence: Outcome											
Note. N = 83 Teams. Coefficient alphas are provided in parentheses on the diagonal.											
* p < .05, ** p < .01											

**Table 6 Continued**

	27	28	29	30	31	32	33	34	35	36	37
22. TMT process											
23. TMT process: Instrumental											
24. TMT process: Interpersonal											
25. TMT process: Instrumental: Sharing info.											
26. TMT process: Instrumental: Sharing dec.											
27. TMT process: Instrumental: Sharing time	(0.94)										
28. TMT process: Instrumental: Sharing priorities	.620**	(0.95)									
29. TMT process: Interpersonal: Sharing afft. reg.	.412**	.747**									
30. TMT process: Interpersonal: Sharing cnflt.	.393**	.683**	.788**								
31. TMT process: Interpersonal: Shrng confdenc.	.462**	.720**	.787**	.803**							
32. TMT strategy implementation	.305**	.658**	.459**	.450**	.346**	(0.94)					
33. TMT strategy implementation: Goal Spec.	.306**	.560**	.336**	.340**	.273*	.868**	(0.82)				
34. TMT strategy implementation: Tracking	.284**	.595**	.396**	.387**	.262*	.926**	.749**	(0.84)			
35. TMT strategy implementation: Monitoring	.365**	.657**	.523**	.518**	.431**	.889**	.692**	.760**	(0.81)		
36. TMT strategy implementation: Adapting	0.18	.580**	.417**	.400**	.314**	.925**	.737**	.789**	.794**	(0.82)	
37. Org performance	0.16	.223*	0.15	0.13	0.01	.309**	0.14	.413**	.287**	.232*	(0.95)

Note. N = 83 Teams. Coefficient alphas are provided in parentheses on the diagonal.

\* p < .05, \*\* p < .01

*Fit of hypothesized measurement model.* In addition to Harman's test, one more test was conducted to ensure the independence of the variables based on Anderson and Gerbing's (1988) two-phase strategy, in which the first phase involves the fit of a confirmatory factor analysis (CFA) model to the observed data and the second phase involves comparing a series of nested structural models to determine which structural model best accounts for the covariances observed between the model's exogenous and endogenous constructs (Anderson & Gerbing, 1988).

**Phase 1: CFA model.** Prior to testing the hypotheses, a CFA was conducted to test the overall fit of the hypothesized measurement model to the data. As previously noted, the hypothesized model includes four second-order or higher-order factors variables: organizational performance, TMT strategy implementation, TMT process, and TMT interdependence.

Also as previously noted, because of the limited sample size ( $N = 83$ ) and large number of items, each variable was indicated by parcels. This item parceling technique optimized the measurement structure by reducing the required sample size (Bentler & Chou, 1987). Parcels were formed based on theory, prior research findings, or from extant measurement theory. For the TMT strategy implementation construct, items were formed into four parcels, each one representing a dimension of TMT strategy implementation discussed in Chapter 2 and identified in prior research on TMT strategy implementation (e.g. Barrick et al., 2014; Daft & Macintosh, 1984). These dimensions include specifying the implementation goals, tracking the progress of the implementation

goals, monitoring the implementation goal effort for internal, and external circumstances and adapting the implementation goals in light of the changing circumstances.

A similar parceling approach was followed for TMT process and TMT interdependence. Although the theory presented in Chapter 2 would suggest that two parcels are warranted for TMT process (one instrumental parcel and one interpersonal parcel), a three parcel approach was used instead to alleviate any identification issues by constraining one path to 1.0, leaving two unconstrained paths (Kline, 2011). As such, the 29-items were placed into the following three parcels: Parcel 1: 10 instrumental, parcel 2: 10 instrumental, and parcel 3: 9 interpersonal items. TMT interdependence was formed into three parcels representing task, goal, and outcome interdependence.

With regard to organizational performance, all nine of the observed scores were initially used as indicators of the latent organizational performance construct since no a priori theory exists to justify parcels. Doing so however, caused the model to poorly fit the data due to too many degrees of freedom and far fewer parameters to capture all the information in the data. Given that the purpose of this part of the analysis is to show the parcels/indicators significantly load onto the corresponding latent factor (a measurement model with four latent factors correlated with each other), I created three parcels to not only alleviate identification issues, but also yield a model that better fits the data.

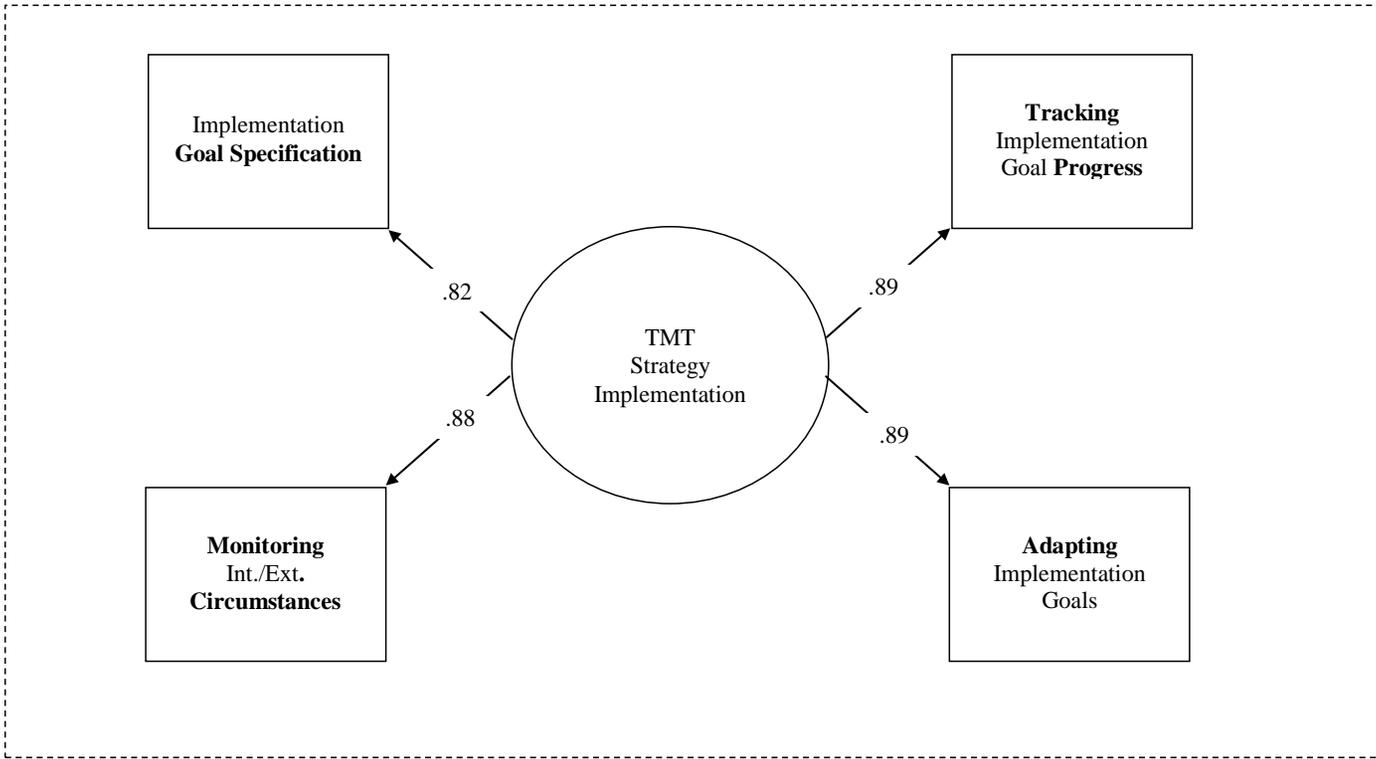
As a first step, a factor analysis (principal components) was conducted with an orthogonal rotation (varimax) to determine whether at least three factors with eigenvalues greater than one (Guttman-Kaiser criterion) would emerge (Conway & Huffcutt, 2003). Unfortunately, three factors did not emerge since the items were highly

correlated. However, the high correlation was expected given the coefficient alpha for this measure was .95. As a next step, the number of factors to extract was fixed to three, which yielded the parcels needed to perform this analysis (Parcel 1: Revenue, sales growth rate, and cash flow; Parcel 2: Net profit from operations, return on investment, and fund business growth; Parcel 3: Return on shareholder equity, gross profit margin, and profit to sales ratio). As previously mentioned, a three parcel approach was used instead of one or two parcels to mitigate identification issues. Moreover, specifying the number of factors to extract is in line with previous management research (Williams & O'Boyle, 2008).

The results from the CFA indicated that the relationship between each indicator variable and its respective variable was significant ( $p < .001$ ). As such, the posited relationships among indicators and constructs were confirmed, suggesting that both discriminant and convergent validity exists (Hair, Anderson, Tatham, & Black, 2010). Thereafter, the multiple indices generated by the program to assess the fit of the model were examined. Results indicate that the hypothesized model provided an acceptable fit to the data ( $\chi^2_{(59, N=83)} = 89.68$ ; RMSEA = .08; SRMR = .06; CFI = .96; IFI = .96).

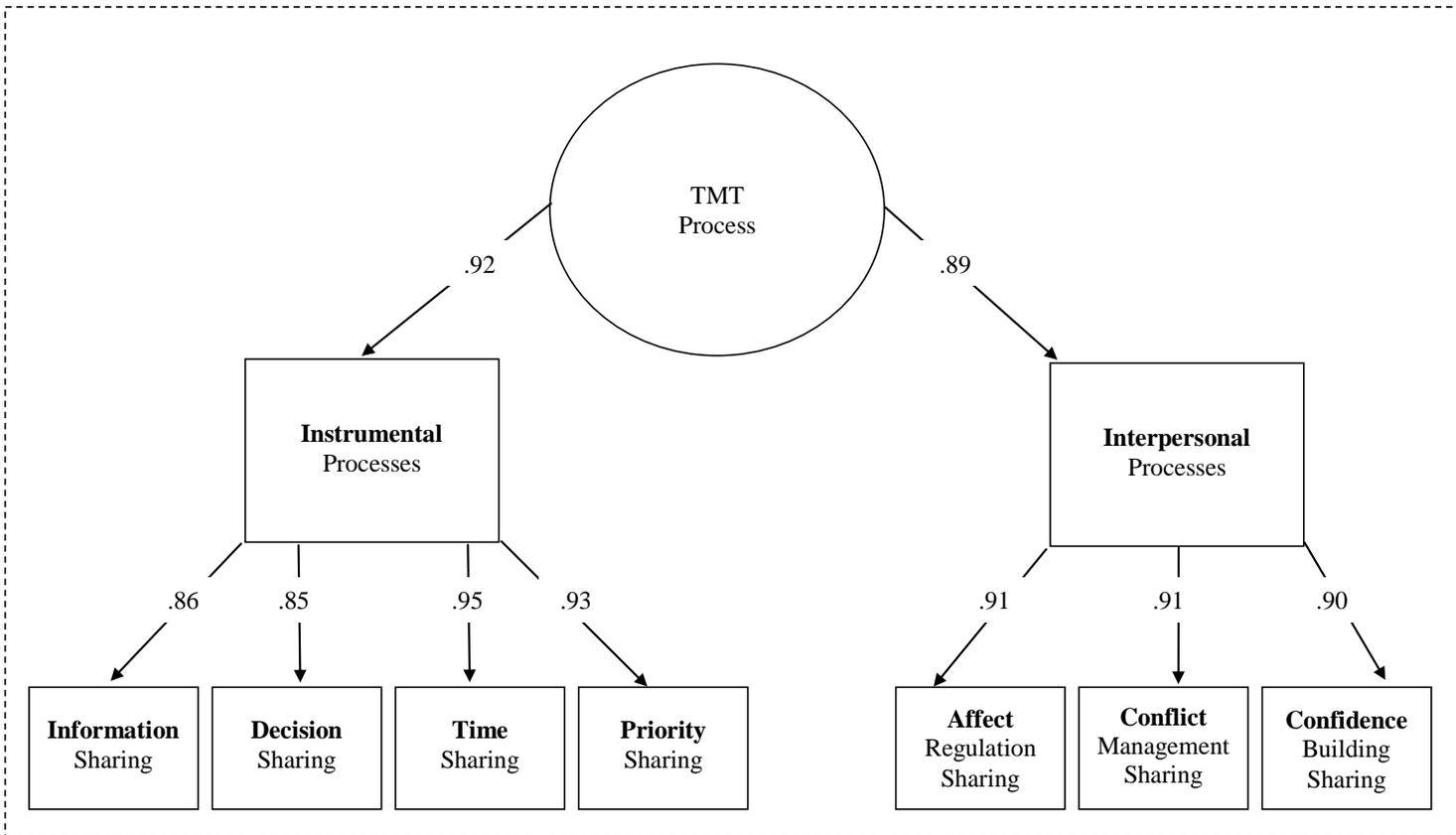
***CFAs for constructs.*** The two additional dimensions of TMT strategy implementation proposed in my study (monitoring internal and external circumstance or and adapting the implementation goals) loaded significantly onto the second-order strategy implementation factor. As depicted in Figure 3, the factor loadings for these two dimensions corresponded to the factor loadings of the other two dimensions identified in

previous research. This analysis not only lends support for viewing TMT strategy implementation as a composite of the scores across the different “taskwork” activities inherent in the construct, but also supports the addition of monitoring internal and external circumstance or roadblocks and adapting the implementation goals in light of the changing circumstances as additional dimensions of the construct. Likewise, as depicted in Figure 4, shows that the seven subdimensions proposed for the TMT process construct demonstrated significant loadings to the instrumental and interpersonal process dimensions, with four subdimensions significantly loading onto the instrumental dimensions and three subdimensions significantly loading onto the interpersonal dimension. Additionally, a comparison of the fit of a two-factor model was made to another theoretically plausible seven-factor measurement model. This analysis lend support for viewing TMT process as a composite of the scores across the two different “teamwork” related activities of this construct.



*Note. All path coefficients are standardized and significant at  $p < .01$ .*

**Figure 3** Confirmatory factor analysis for TMT strategy implementation construct



**Figure 4** Confirmatory factor analysis for TMT process construct

**Phase 2: Series of nested structural models results.** To further confirm the validity of the measurement model, I compared the fit of the hypothesized model to three other theoretically plausible measurement models. The first alternative model treated the “taskwork” processes of the TMT strategy implementation construct and the “teamwork” processes of the TMT process construct as one higher-order factor, since some regard the team processes as not being distinct (e.g. Lepine et al., 2011) or as indicators of a higher-order factor. Although this assumption has received empirical support in the literature, I sought to confirm these findings in my own data. The second alternative model combined TMT strategy implementation, TMT process, and TMT interdependence into a single factor given that some have suggested that TMT interdependence and certain TMT processes (e.g. behavioral integration) are the same (explained in further detail in Barrick et al., 2007 and LePine et al., 2008). The final alternative model combined all of the variables in the model into a single factor.

Results in Table 7 indicate that compared to any of the alternative models, the hypothesized four-factor measurement model fit the data best. Specifically, the hypothesized model was the only measurement model which consistently met generally accepted fit standards. Furthermore, and perhaps more convincingly, the chi-square difference tests revealed that the fit of the four-factor model was significantly better than the fit of each alternative model. Hence, I retained the hypothesized four-factor measurement model and proceeded with testing my hypotheses since the constructs are shown to be distinct. Results showed that the hypothesized four-factor model ( $\chi^2_{(59, N =$

83) = 89.68; RMSEA = .08; SRMR = .06; CFI = .96; IFI = .96) displayed superior fit to the three-factor, two-factor, and one-factor alternative models.

**Organizational performance as a reflective (versus formative) measurement model.** Recent work suggests that at least three conceptual and three empirical criteria be considered to determine whether a reflective or formative model should be specified (Coltman et al., 2008; Kline, 2011; MacKenzie, Podsakoff, & Jarvis, 2005, 2013; Williams, Van den Berg, & Edwards, 2009). The three conceptual considerations, the nature of the construct, the direction of causality, and the characteristics of the items used to represent the construct, may, at first glance, lend support to organizational performance being conceptualized and measured using a formative specification. However, this conclusion may not be valid. For example, the nature of the construct, may, on the one hand, suggest the construct needs to be specified as formative, but, on the other hand suggest that indicators of the organizational performance construct are reflective of the higher-order (latent) construct. Specifically, one may conclude that organizational performance should normally be considered a formative measurement model, since it is normally comprised of a set of indices or are usually of disparate metrics (e.g. return on investment, net income, etc.) taken from various *objective* sources. However, in this study, the ratings for organizational performance were *subjective* ratings of various organizational performance metrics and thus are reflective of organizational performance. Indeed, most previous work that has used this scale has the indicators as being reflective of a higher-order construct (Dess, Hitt, & Ireland, 1990; Gupta & Govindarajan, 1986; Lubatkin et al., 2006), making the formative conclusion

questionable. Even more compelling, the characteristics of the indicators in the organizational performance measure used in this study seem to share a common theme – making it reflective versus formative (Coltman, Devinney, Midgley, & Veniak, 2008; Bollen & Ting, 2000). Specifically, the indicators of how the organization performs are interchangeable; adding or removing an indicator would not change the conceptual domain of the construct. Hence, at first glance the organizational performance construct appears to be formative, however, based on conceptual grounds shown here, the organizational performance construct may be reflective.

To substantiate this claim, a number of empirical tests were performed, including examining indicator intercorrelations, examining whether indicators have a similar relationship with the antecedents of the construct, and examining measurement error. Examining the indicator correlations revealed that positive, strong, and significant intercorrelations exist between the indicators. To lend further support, the indicators appeared to be interchangeable. In fact, the coefficient alpha was still quite high even after randomly dropping three items (.93), implying that dropping one or two did not alter the meaning of the organizational performance construct. Next, examining the relationships between the indicators and construct antecedents revealed that all of the indicators had a similar positive relationship with the TMT strategy implementation antecedent and only two indicators did not reach a level of significance (cash flow and gross profit margin). The last empirical consideration seeks to determine whether a reflective or formative model is more appropriate, since each differently handles measure error (reflective: all error terms exist within the indicators; formative: error

terms do not exist within the indicators). To do this, scholars have turned to the tetrad test, which is a procedure that is said to be superior to other previously used methods (Coltman et al., 2008; Hipp & Bollen, 2005; MacKenzie et al., 2011) because it explicitly tests measurement error, whether intercorrelations between pairs of errors are zero. Using Hipp and Bollen's (2005) confirmatory tetrad analysis macro, the results lend support to the reflective indicator specification ( $\chi^2_{(27, N=83)} = 25.46, ns$ ). Hence, based on these criteria, the organizational performance should be specified as a reflective measurement model.

Despite the preceding rationale, I considered what the implications and results would be if the organizational performance construct were specified as a formative measurement model. Had a formative measurement model been used, I believe it would substantially alter my hypothesized four-factor model. This is true because in order for the formative organizational performance measurement model to be identified, it must be given or have direct effects on at least two other variables (Kline, 2011; MacKenzie, Podsakoff, & Podsakoff, 2011). For this to occur, this study's overall model would change since organizational performance was not hypothesized to affect another set of constructs. Undoubtedly, this is one of the primary problems with using formative constructs (Coltman et al., 2008). Specifically, two direct paths will have to be drawn on two unhypothesized variables. Doing so would cause the study model to change, and a key construct in this study, TMT strategy implementation, would not be able to be interpreted because it would become one of the causal indicators of the higher order organizational performance construct.

To determine the result of using a formative organizational performance measurement model, three paths from each of the parcels were drawn to the organizational performance construct. Thereafter, two direct paths were drawn from the formative organizational performance construct to the organizational age and organizational size constructs (two unhypothesized randomly-chosen variables; Kline, 2011). Additionally, paths were drawn (instead of drawing covariances) between the higher-order constructs, to prevent identification issues. As expected, specifying a formative organizational performance measurement model caused TMT strategy implementation to become non-interpretable. Furthermore, specifying organizational performance as a formative measurement model resulted in a poor fitting model:  $\chi^2_{(84, N = 83)} = 151.92$ ; RMSEA = .10; SRMR = .06; CFI = .92; IFI = .92. The resulting poor fit can be attributed to having more unique elements, but not enough parameters to consider all the information in this data – both of which are evidenced in the model having a higher number of degrees of freedom.

**Table 7** Comparison of measurement models for study variables

Models	Descriptions	$\chi^2$	d.f.	$\Delta \chi^2$	RMSE			
					A	SRMR	CFI	IFI
Null model	All the indicators are independent							
The baseline four-factor	Four Latents: TMT interdependence, TMT process, TMT strategy implementation, Organizational performance	89.68	59		0.08	0.06	0.96	0.96
Model 1	Three Latents: TMT interdependence, TMT process (includes TMT strategy implementation), Organizational performance	214.84	62	125.17**	0.17	0.10	0.81	0.81
Model 2	Two Latents: All independent latents and Organizational performance	288.32	64	73.48**	0.21	0.14	0.72	0.72
Model 3	One latent (All independent and dependent variables)	498.77	65	210.45**	0.29	0.19	0.45	0.46

Notes: \*\*  $p < .01$ , two-tailed tests.

*Testing hypotheses.* As previously noted, structural equation modeling was used to test the hypotheses. The fit of the linear structural equation model was acceptable,  $\chi^2_{(15, N=83)} = 18.98, ns$ ; RMSEA = .06; SRMR = .06; CFI = .92; IFI = .93. A summary of the results of the hypotheses can be seen in Figure 5. Only four controls were included in the model since each showed a significant bivariate correlation or with certain hypothesized variables in my model. Specifically, organizational performance rater 2 and 3 dummy coded covariates (on TMT interdependence), the industry 7 dummy coded industry covariates (on TMT process), and the organization's age (on TMT strategy implementation), were included since they could not be ruled out as having a confounding effect. A linear effects structural model was first fitted to the data to examine the main effects (Hypotheses 1, 2, 4), followed by the indirect effect hypothesis (Hypothesis 5), and then the interaction term was introduced into the model to test its incremental validity in the hypothesized model (Hypothesis 3). Standardized latent variables (versus observed and its latent variables) were imputed into composite latent variables to test the hypotheses in order to maximize the degrees of freedom in the model, which would be at risk if were observed factors were included since this study's sample size is considered "small" (Kline, 2011).

Hypothesis 1 predicted that TMT process will be positively related to TMT strategy implementation. Supporting this expectation TMT process was positively related to TMT strategy implementation ( $\beta = .50, p < .01$ ). Hence, Hypothesis 1 was supported.

Hypothesis 2 posited TMT interdependence will be positively related to TMT process. TMT interdependence was found to be positively related to TMT process ( $\beta = .25, p < .05$ ). Thus, Hypothesis 2 was supported.

Hypothesis 4 predicted that TMT strategy implementation will be positively related to organizational performance. In support of this position, TMT strategy implementation was positively related to organizational performance ( $\beta = .31, p < .05$ ). Hypothesis 4 was thus supported.

Hypothesis 5 posited the positive relationship between TMT process and organizational performance will be partially mediated by TMT strategy implementation. To test the veracity of this claim, extant indirect effects principles were followed to test this relationship (e.g. Edwards & Lambert, 2007; Shrout & Bolger, 2002, MacKinnon, 2013; Preacher, Rucker, & Hayes, 2007). Indirect effects examine the degree of mediation that occurs in the model and are calculated by multiplying the first- stage (TMT process and TMT strategy implementation) and second-stage (TMT strategy implementation and organization performance).

Whereas early mediation theory used direct and total effects to determine whether full or partial mediation exists, recent advances to mediation theory suggest discontinuing the use of both for assessing partial mediation (Edwards & Lambert, 2007). Instead, it has been recommended that a focus be placed on the magnitude of the indirect effects (e.g., Cerin & MacKinnon, 2009; Hayes, 2009; Rucker, Preacher, Tormala, & Petty, 2011). Guided by this rationale, a joint significance test and the product of coefficients test using a maximum likelihood bootstrapping technique

(MacKinnon, Fritz, Williams, & Lockwood, 2007) was performed to examine the significance of the indirect effects. This technique produced asymmetric confidence interval for the indirect effect. Interpreting confidence intervals are said to have more accurate Type I error rates and more power than other commonly-used tests (Edwards & Lambert, 2007; MacKinnon et al., 2007).

The direct effect of TMT process on TMT strategy implementation was significant ( $\beta = .50$ ;  $p < .05$ ) and the direct effect of TMT strategy implementation on organizational performance was significant ( $\beta = .31$ ;  $p < .05$ ). The result of this maximum likelihood bootstrap bias-corrected (because indirect effects have non-normal distributions) method (Edwards & Lambert, 2007; MacKinnon, 2013), revealed the following about the indirect effect of TMT strategy implementation:  $\beta = .157$ ;  $p < .01$ , bootstrapped (2000 samples) at a 95% confidence interval (CI [.049, .285]). Hence, given that the confidence interval did not include zero, the partial mediation hypothesis was supported (Hypothesis 5). This result also held even when using non-bootstrapping non-bias corrected techniques (e.g. Sobel, Aroian, and Goodman tests).

Last, Hypothesis 3 posited TMT interdependence moderates the relationship between TMT strategy implementation and organizational performance such that the positive relationship will be stronger, rather than weaker, for teams with higher, rather than lower, amounts of TMT interdependence. To test the moderating hypothesis, which, in this case, is considered a second-stage moderator, I followed Edwards and Lambert's (2007) second-stage mediation moderation procedure. Specifically, second-stage mediation moderation simply means that the second path of the indirect effect of TMT

process on organizational performance through TMT strategy implementation (TMT strategy → organization performance) is moderated by TMT interdependence. As such, for this model the interaction effect concerns TMT interdependence and TMT strategy implementation.

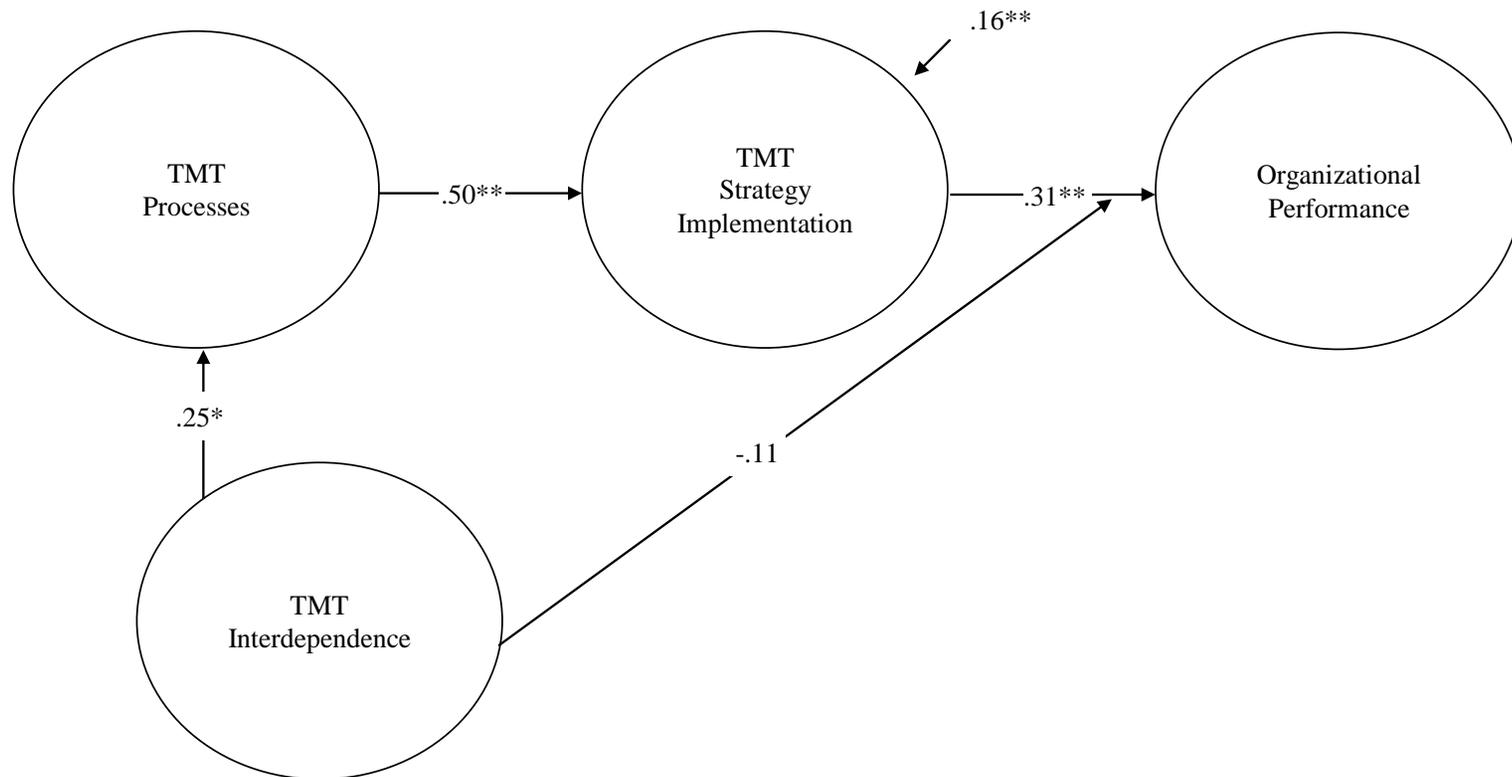
To perform this analysis, I first placed paths from the controls to its relevant predictors (performance rater 2 → TMT interdependence, performance rater 3 → TMT interdependence, Industry 17 → TMT process, and organizational age → organizational performance; step 1). Next, since the model in this study includes a direct relationship between TMT interdependence and TMT process, I placed a path between the two (TMT interdependence → TMT process; step 2). Thereafter, a path was placed from TMT strategy implementation, TMT process, TMT interdependence, and the interaction to organizational performance (step 3). After doing so, the interaction and TMT interdependence were specified to covary with TMT strategy and the error term for TMT strategy implementation and (step 4). The overall results indicated that adding an interaction into the equation did not produce a significant model improvement. Moreover, the interaction was not significant ( $\beta = -.107$ ; *ns*). Therefore, Hypothesis 3 was not supported. A summary of the results of the hypotheses can be seen based on the omnibus analysis can be seen in Table 8.

**Table 8** Summary of the omnibus analysis

	TMT process		TMT strategy implementation		Organizational performance	
	<i>beta</i>	<i>Se</i>	<i>beta</i>	<i>Se</i>	<i>beta</i>	<i>se</i>
Organizational performance rater 2	0.04	0.16	0.08	0.13	-0.03	0.35
Organizational performance rater 3	0.17	0.14	-0.15	0.11	0.13	0.29
Industry 2	0.03	0.40	-0.09	0.31	-0.13	0.87
Industry 3	0.09	0.37	0.06	0.30	0.06	0.82
Industry 3	-0.03	0.21	-0.17	0.17	0.04	0.47
Industry 4	-0.11	0.22	0.12	0.18	-0.04	0.49
Industry 5	-0.17	0.20	-0.07	0.16	0.20	0.45
Industry 6	-0.07	0.17	0.13	0.13	0.07	0.36
Industry 7	0.21**	0.50	-0.13	0.41	-0.06	1.09
Org age (months)	-0.08	0.00	.35**	0.00	-0.08	0.00
Org size (F/T Employees)	-0.09	0.00	-0.27*	0.00	0.16	0.00
Team size	0.09	0.04	0.19†	0.03	-0.08	0.08
Team tenure	-0.03	0.00	-0.03	0.00	0.00	0.00
Age	-0.01	0.01	-0.09	0.01	0.17	0.03
Gender	0.08	0.00	0.14	0.14	-0.10	0.00
Race	0.03	0.00	0.00	0.00	-0.09	0.00
Education	0.04	0.00	0.16†	0.00	-0.19†	0.00
TMT interdependence	0.29**	0.14				
TMT process			0.53**	0.09	0.21**	0.08
TMT strategy implementation					.36**	0.26
TMT interdependence X TMT strategy implementation					0.01	0.09
<i>R</i> <sup>2</sup>		0.22		0.45		0.26

Note. *N* = 83. Variance estimates use standard deviations for age and team tenure and Teachman's team-size corrected index for race, sex, and education

† *p* < .10, \* *p* < .05, \*\* *p* < .01



*Note.*  $N = 83$ . All variables were standardized. Included controls were organizational performance rater 2 and 3 dummy coded covariates (on TMT interdependence), the industry 7 dummy coded industry covariates (on TMT process), and the organization's age (on TMT strategy implementation).

\*  $p < .05$ , \*\*  $p < .01$ , , two-tailed tests.

**Figure 5** Results of hypothesized model

### Post hoc analysis

To further corroborate the findings and obtain additional insight, a series of post hoc analyses were conducted. First, some scholars have suggested that SMBs usually have less than 1000 employees (Simsek, et al., 2005). To determine whether or not the findings were sensitive to the inclusion/exclusion of large organizations, the model depicted in Figure 1 was reestimated on a sample of 79 (versus 83) organizations using the following controls: industry 7 dummy coded industry covariate (on TMT process and organizational performance) and the organization's age (on TMT strategy implementation). Even after doing so, the same pattern of significant results was found. Specifically, TMT process was positively related to TMT strategy implementation ( $\beta = .50, p < .01$ ), TMT interdependence was positively related to TMT process ( $\beta = .24, p < .05$ ), TMT strategy implementation was positively related to organizational performance ( $\beta = .33, p < .05$ ), the indirect relationship was  $\beta = .162, p < .01$ , bootstrapped (2000 samples) at a 95% confidence interval (CI [.049, .285]), and the interaction was not significant ( $\beta = -.11; ns$ ).

Second, the model was reestimated after adding the one organization that had ratings from the CEO and just one TMT member. Doing so, considered whether it was reasonable to exclude the firm with just two raters; and just limit this study to those with three raters (1 CEO + 2 TMT members) since some scholarship has tended to suggest that having at least three raters leads to a higher quality of information (Oh, Wang, Mount, 2011). Specifically, because the reliability index sets the upper limit of validity, research has found that validity estimates may be influenced by the use of multiple raters

because averaging across multiple raters may increase both reliability and validity (Oh et al., 2011). After including the additional team, which moved the sample of TMTs from 83 to 84, I did not see much appreciable gain in quality in terms of examining the coefficient alpha. All but one reliability, TMT strategy implementation (increased from .95 to .96), stayed the same as did the beta weights.

The third post hoc analysis combined the actions taken on the previous two, in which the four large firms was excluded and the TMT with only two raters were added, yielding a sample of 80 TMTs. Here again, this analysis resulted in the same pattern of significant results in the hypothesized model. Specifically, TMT process was positively related to TMT strategy implementation ( $\beta = .49$ ,  $p < .01$ ), TMT interdependence was positively related to TMT process ( $\beta = .24$ ,  $p < .05$ ), TMT strategy implementation was positively related to organizational performance ( $\beta = .31$ ,  $p < .05$ ), the indirect relationship was  $\beta = .153$ ;  $p < .01$ , bootstrapped (2000 samples) at a 95% confidence interval (CI [.049, .285]), and the interaction was not significant ( $\beta = -.11$ , *ns*).

The fourth post hoc analysis used structural equation modeling with all controls along with key hypothesized variables. Since no model differed appreciably; I decided to use the model that was most conservative in terms of staying true to the emphasis of this sample, SMBs with three raters. The results of this omnibus model were quite similar to the previous omnibus test and can be seen can be seen in Table 9.

**Table 9** Summary of the post hoc omnibus analysis

	TMT process		TMT strategy implementation		Organizational performance	
	<i>Beta</i>	<i>Se</i>	<i>beta</i>	<i>Se</i>	<i>beta</i>	<i>se</i>
Organizational performance rater 2	-0.04	0.17	0.11	0.13	0.03	0.38
Organizational performance rater 3	.22 <sup>†</sup>	0.14	-0.16	0.11	0.12	0.31
Industry 2	0.03	0.40	-0.12	0.31	-0.14	0.88
Industry 3	0.07	0.37	0.06	0.29	0.07	0.83
Industry 3	-0.07	0.22	-0.21	0.17	0.07	0.50
Industry 4	-0.14	0.24	0.08	0.19	-0.05	0.54
Industry 5	-0.16	0.21	-0.13	0.17	0.22	0.48
Industry 6	-0.16	0.18	0.11	0.14	0.11	0.40
Industry 7	.21 <sup>†</sup>	0.50	-0.15	0.40	-0.05	1.11
Org age (months)	-0.15	0.00	.34**	0.00	-0.02	0.00
Org size (F/T Employees)	-0.14	0.00	0.05	0.00	0.08	0.00
Team size	0.12	0.04	0.17	0.03	-0.10	0.09
Team tenure	0.05	0.00	-0.06	0.00	-0.04	0.00
Age	-0.08	0.01	-0.10	0.01	.26*	0.03
Gender	0.03	0.00	0.17	0.00	-0.07	0.00
Race	0.06	0.00	-0.01	0.00	-0.12	0.00
Education	0.05	0.00	.20*	0.00	-.21 <sup>†</sup>	0.00
TMT interdependence	0.30**	0.14				
TMT process			0.55**	0.09	0.25**	0.26
TMT strategy implementation					.41**	0.26
TMT interdependence X TMT strategy implementation					-0.01	0.10
<i>R</i> <sup>2</sup>		0.24		0.46		0.27

Note. *N* = 79. Variance estimates use standard deviations for age and team tenure and Teachman's team-size corrected index for race, sex, and education

<sup>†</sup> *p* < .10, \* *p* < .05, \*\* *p* < .01

## CHAPTER V

### DISCUSSION AND CONCLUSION

In addition to theoretically establishing the crucial role an organization's senior management team plays in the implementation of a strategy, this study, drawing from macro- and micro-organizational theories, comprehensively examined three key factors that consider what, how, and why this occurs. First, to understand what TMTs do, this study defined and identified a set of strategy implementation tasks. Establishing a critical set of tasks is important since scholars have suggested that TMTs are distinct from other organizational teams in terms of the tasks they perform, which are, "strategic – complex and of major significance to the organization..." (Hambrick & Mason, 1984: 194). Further, previous researchers have demonstrated that investigating a team's task is important because such activities impact various performance-related outcomes (e.g. Cannon-Bowers & Salas, 1998; Carmeli & Schaubroeck, 2006; Stewart & Barrick, 2000). Second, to understand how TMTs perform these tasks, this research considered a comprehensive set of team processes. Previous researchers have demonstrated that comprehensively examining team process is important because such processes highlight how patterns of interaction among team members can facilitate the accomplishment of the team's tasks (Mathieu et al., 2008). Last, this study examined the structure of the TMT. Specifically, this study examined TMT interdependence, which is the degree to which the individual members of the TMT rely on one another. Doing so was important given that scholars have suggested team interdependence is a critical component of team

structure (Kozlowski & Bell, 2003) that drives processes (e.g. Mathieu et al., 2007; Stewart & Barrick, 2000), and may enhance or enervate the effects of various team process and performance relationships (e.g. Barrick et al., 2007; Beal et al., 2003; Gully et al., 2002). Altogether, this study found that an organization's executive management team influences an organization's performance through a certain set of strategy implementation tasks and partially through a set of team processes, which also affects these strategy implementation tasks, and these processes are influenced by how well the executive management team is structured to rely on one another.

### **Theoretical contributions and implications**

The findings of this study have the potential of contributing to theory in several ways. The first contribution is it theoretically links an organization's top management team to strategy implementation and specifies the strategy implementation tasks that executives perform. Second, it offers a set of "teamwork" TMT processes that positively relates to these "taskwork" strategy implementation tasks and recognizes that "teamwork" processes partially influences an organization's performance through these strategy implementation "taskwork" processes. Third, it empirically isolates the effects of structuring an executive team to rely on one another on both the set of teamwork processes as well as on the relationship between strategy implementation activities and organizational performance. These important contributions are discussed in detail in the next section.

Before explicating each, an overarching contribution that is tangentially related to each of the specific contributions of this study is that it responds to calls of

researchers to integrate micro- and macro-literatures (e.g., Aguinis et al., 2011; Kozlowski & Bell, 2013; Ployhart, 2004; Roberts et al., 1978). This study drew from macro-organizational process, structure, and upper echelons theories (e.g. Barney, 1991; Chandler, 1962; Hambrick & Mason, 1984), as well as from micro-organizational process and structure theories (Cohen & Bailey, 1997; Gully et al., 2002; Guzzo & Shea, 1992; McGrath, 1987; Wageman, 1995) to develop its hypothesized model. In other words, this treatise utilized “macro-organizational” theories to explain the link between the TMT and strategy implementation and relied on “micro-organizational” constructs to articulate the processes and structures that affect strategy implementation and organizational performance. By doing this, this study fulfilled calls for macro research to move beyond relying on archival demographic data. Furthermore, it fulfilled calls for micro research to move toward assessing the impact of mechanism-rich explanations on organizational outcomes (Hiller, DeChurch, Murase, & Doty, 2011). As such, this dissertation makes great strides toward integrating “micro-organizational” and “macro-organizational” conversations, thereby bridging the prevalent micro-macro divide that exists in the literature today (Ployhart, 2004; Roberts et al., 1978). Hence, this study responds to the call of researchers to try to integrate micro and macro by considering how the TMT can assess a key macro construct, strategic implementation.

*Top management team’s role in strategy implementation.* The first contribution can be categorized into three sub points. First, unlike previous work on strategy implementation, this work considers that the TMT’s intention to implement the organization’s strategy plays a vital role in the execution of the firm’s strategy. Second,

this work delineates a comprehensive set of specific strategy implementation tasks that TMTs perform. Third, the results of this work show that these tasks not only directly affect organizational performance, but also serve as a critical link between TMT process and organizational performance.

The first sub point of this contribution stems from the lack of studies that examine the critical role that an organization's top management team plays on the implementation of a strategy. Despite the overwhelming number of strategy implementation failures (Atkinson, 2006), to date, more research examines the development of a strategy and far less exists exploring the efficacy of the implementation of the strategy. Further, the research that has been advanced is primarily anecdotal and conceptual in nature and almost exclusively is focused on distal, organizational factors being the cause of these failures. In fact, a review of the strategy implementation literature revealed that extant work explained that strategy implementation is a function of distal *organizational* processes (i.e. non-executive organizational member interpretations and responses) or how the *organization* is structured (e.g. hierarchy or administrative systems) - both of which were heavy on anecdotal rhetoric and theory, but light on empirical evidence. These concerns are compounded by the failure to consider that the TMT's intention to implement the organization's strategy plays a vital role in the execution of the firm's strategy. What makes this more troubling is that practitioners and even some scholars have increasingly come to realize the critical role that top executives have in the implementation of a strategy (Beer & Eisenstat, 2000).

By creating a new theoretical framework that emphasizes TMTs as being an influential proximal determinant of strategy implementation, this dissertation will facilitate a new scholarly discussion about strategy implementation – one that moves beyond extant, distally-focused, scholarly work. Establishing the significance of this link is an important contribution since it reveals the impact the organization’s inner circle of top executives can have when implementing the firm’s strategy. Accordingly, shifting the scholarly conversation is a contribution since it will allow scholars to delve further into the antecedents and consequences of a TMT’s role in strategy implementation.

The second sub point of this contribution is it specifies a comprehensive set of tasks that senior managers perform to implement strategy. With the exception of Barrick et al.’s (2014) work, current research does not account for the specific tasks or activities that top managers perform toward the implementation of a strategy and thus fail to assess how these organizational leaders impact strategy implementation. This study was able to both conceive and also operationalize a comprehensive set of TMT strategy implementation “taskwork” activities by drawing from extant strategy implementation theory and building on recent work that operationalized the TMT strategy implementation construct (Barrick et al., 2014). Specifically, Barrick et al.’s construct contained two of the four tasks of strategy implementation, specifying that the implementation goals are aligned to the strategy and then tracking the progress of the implementation goals. Drawing from early conceptual work by Schendel and Hofer (1979), this study added two additional dimensions of monitoring for either internal or

external circumstances that impede the strategy implementation effort and adapting the implementation goals and plans in light of the changing circumstances.

Adding these two crucial dimensions to Barrick et al.'s (2014) dimensions ultimately yielded a more comprehensive construct. As shown in Tables 6 and 7, each of the four strategy implementation tasks loaded well onto a higher-order factor. Although all four tasks coalesce well to form a higher-order strategy implementation construct, the added two dimensions along with tracking strategy implementation progress unite more strongly with each other (more so than with specifying implementation goals). What this means is the adding the two additional dimensions enhanced the current construct. In doing so, this study offers notable contribution to the literature because it developed a comprehensive construct that delineates a set of vital strategy implementation tasks that are specific to top management teams that can be used in future research.

More importantly, the development of this more comprehensive construct enhanced – both directly and indirectly - the prediction of an organization's performance, which is the third sub point of this contribution. The results show that the performance of these strategy implementation tasks directly and positively influence their organization's performance. As shown in Table 6, this prediction is nearly all due to the two additional factors added. What this suggests is that specifying implementation goals is not enough especially with regard to firm performance. Instead, active tracking and monitoring and adapting are more necessary. Together, they become the “execution” component of the strategy implementation construct, wherein, the execution of the specified implementation goals through tracking, monitoring, and adapting the

implementation goals are more salient. This finding bears resemblance to the goal-setting literature which suggests that active tracking and monitoring serves as a feedback mechanism from which goals are regulated or adapted (Latham & Pinder, 2005).

What also makes this notable is, to my knowledge, no other study directly linked a set of strategy implementation tasks to organizational performance. For example, Barrick et al.'s (2014) important study found that their conception (and operationalization) of TMT strategy implementation influenced the relationship between organization-wide policies and procedures and organizational empowerment. This study, however, extends this work, by linking strategy implementation to a crucial organizational outcome, how well the organization performs.

In terms of indirectly enhancing the prediction of firm performance, the results of this research show these “taskwork” strategy implementation process serve as a crucial link between “teamwork” related processes and organizational performance. What makes the noteworthy is previous studies have not consistently shown that TMT “teamwork” processes (e.g. communication) are significantly related to an organization’s performance. (e.g. Barrick et al., 2007). This study may offer a reason why. Specifically, much like previous studies, this study examined a set of “teamwork” TMT processes. Unlike other studies, however, this study also examined a comprehensive set of “taskwork” TMT strategy implementation processes as well. This led to the finding that only one of these significantly predict firm performance (TMT strategy implementation,  $r = .31$ ; TMT process,  $r = .12$ ), despite the bivariate correlation matrix showing that TMT strategic implementation overlaps a lot with TMT process ( $r = .49$ ). In doing so,

this study not only offers further evidence that “teamwork” processes alone is not related to organizational performance, but also shows that TMT strategy implementation “taskwork” can serve as a crucial link between “teamwork” processes and organizational performance. An implication of this result is that TMTs do not necessarily need to “share of themselves”, become less fragmented, or even get along to enjoy higher levels of organizational performance. Instead, TMTs should focus its efforts towards accomplishing strategy implementation tasks, primarily because it causes (or forces) the TMT to focus itself toward actually accomplishing the implementation tasks. And, having this focus may enable the TMT to operate from a certain set of shared priorities. Indeed, previous research bolsters this assertion - having clearly defined tasks often provoke shared priorities that impel future performance (Mathieu & Rapp, 2009). Even more compelling, Table 6 shows that the majority of overlap between strategy implementation tasks and TMT processes is the sharing of priorities. Hence, implementing strategy through these tasks may help the TMT to focus its priorities and reap the benefits of organizational performance.

*The effects of TMT processes and structures.* Two additional notable theoretical contributions of this research is that this study focuses on the processes and structures of one particularly impactful “group”, the upper echelon executives of the firm. Specifically, rather than study *organizational*-level process and structures, this study examined the TMT’s *team*- level processes and structures to determine how this critical group of executives influenced organizational-level performance. Doing so, heeds calls from scholars to better understand the link between “softer mechanisms” and

organizational-level outcomes (Hiller, et al., 2011). Although some work has been conducted on TMT-level processes and structures, to date, no work has linked these team-level factors to the TMT's efforts to implement a strategy. Understanding which factors influence a TMT's ability is important because it offers an explanation on what enables (and in some cases disables) a TMT's ability to perform its strategy implementation tasks and activities. Recognizing this is just one part of implementing the organization's strategy, if the TMT is not attempting to implement this strategy, it is not likely that those lower in the organization will be very effective at doing so either.

**Process.** The second notable contribution of this study can be explained by two sub points. First, this study developed a comprehensive set of "teamwork" processes that are specific to TMTs. Second, this treatise examined an important team structure antecedent and an important direct and indirect outcome of these "teamwork" processes.

This first sub point of this contribution is this study developed an overall TMT "teamwork" process construct that not only more precisely captured many previously utilized TMT processes, but also others that have been examined in teams similar to TMTs. Understanding which processes operate within an executive team is important because scholars have stated that many of the "process" constructs used in the TMT literature lack precision and comprehensiveness (Hiller et al., 2011; Kozlowski & Bell, 2013).

In terms of precision, micro-scholars have been critical of two frequently used "process" constructs in TMT research, social integration and behavioral integration. Specifically, scholars have suggested that the social integration construct is less of a

TMT substantive “process” construct (e.g. sharing of affect *regulation* and conflict *management*) and more of an emergent state construct that is fluid (e.g. affect, cohesion, efficacy) and differ as a function of various team-related factors such as context, inputs, processes, and outcomes (Cohen & Bailey, 1997; Marks et al., 2001). Similarly, scholars have suggested that the TMT “process” construct of behavioral integration (Hambrick, 1994; Simsek et al., 2005), taps into more than TMT process and includes both emergent states and team interdependence (Barrick et al., 2007; Mathieu et al., 2008). Using imprecise constructs is problematic since research has consistently shown both team interdependence and emergent states are unique. Moreover, scholars have cautioned against using these constructs since they do not separate other important within-team factors such as interdependence and emergent states (Kozlowski & Bell, 2013; Barrick, et al., 2007).

With regard to comprehensiveness, TMT scholars have used a variety of process constructs, each of which partly capture some aspect of a top management team’s “teamwork” process, including TMT mechanisms of communication and cohesion (Barrick et al., 2007) and various conceptions of behavioral integration (Li & Hambrick, 2007; Simsek, et al., 2005). This isolated approach, however, has resulted in a plethora of views on what constitutes TMT “teamwork” processes. Moreover, this proliferation has led to scholars not being able to truly understand and clearly articulate the most crucial “teamwork” process factors that occur in the TMT “black box” (Lawrence, 1997; Kozlowski & Bell, 2013). This is especially disconcerting since TMTs occupy a

prominent role in an organization and largely in charge of decisions that guide the short- and long-term trajectory of an organization (Finkelstein et al., 2009).

To offset these misappropriations, this study developed its own top management team process construct that is more precise and comprehensive. Following a construct-oriented approach (Jackson, 1970), this study was not only able to conceive, but also to operationalize a comprehensive, broad set of TMT “teamwork” process activities. To accomplish this, this work extensively reviewed the macro- and micro-literatures for concepts associated with TMT teamwork processes. From the macro-literature, this effort surfaced that TMT processes are largely inhibited because of team fragmentation issues, in which members are not able to devote time on TMT-related work because they are more focused toward accomplishing the goals of their respective functional groups (fragmentation; Hambrick, 1994). A review of the micro literature revealed that team processes is frequently characterized as a function of instrumental and interpersonal processes (McGrath, 1987). These two realizations ultimately led to a search for teams from the team process literature with similar fragmentation issues (e.g. virtual teams). Thereafter, an overall TMT process construct was developed that accounted for relevant instrumental and interpersonal processes that could help ease the debilitating effects of fragmentation.

As shown in Table 8, the results of this study reveal that each of the seven identified “teamwork” processes loaded onto two higher-order factors, instrumental and interpersonal, which in turn loaded onto an even higher TMT process construct. Hence, this study offers an important contribution to the literature because it identified a

comprehensive set of TMT processes that are specific to top management teams that will enable future TMT scholars to more appropriately understand the means by which team inputs are transformed into both short- and longer-term outcomes in top management teams (Kozlowski & Bell, 2013; Marks et al., 2001).

The second sub point part of this contribution is that this study finds that higher amounts of TMT “teamwork” processes such as sharing of information, decisions, time, priorities, the management of affect, conflict, and confidence sharing, positively influences the ability of the TMT to perform the tasks or “taskwork” associated with the implementation of a strategy. This is important given that strategy implementation failures continue to be cited as a primary reason for an organization’s poor performance (Atkinson, 2006). As such, understanding the “teamwork” processes of great executive teams could possibly offset this alarming trend.

Moreover, this study finds that TMT “teamwork” sharing process impacts a firm’s performance partially through the TMT’s “taskwork” strategy implementation tasks. On the one hand, this finding adds to the growing body of research that suggests that the processes that occur within a top management team have organizational consequences. On the other hand, this outcome may explain why results regarding the effects of these TMT process on firm performance have been inconsistent. For example, Smith et al. (1994) found that “teamwork” processes of social integration improved firm performance, but both Barrick et al. (2007) and Glick, Miller, and Huber (1993) did not. Perhaps a reason for these mixed findings is the omission of a potentially necessary task-specific mediator from which their TMT processes has to operate in order to achieve

outcomes. Put differently, the effects of the TMT process may need to operate through concrete specific tasks and/or activities (e.g. TMT strategy implementation) in order to ultimately affect future performance. For example, in prior research macro-organizational scholars examined ambidexterity (Lubatkin et al., 2009), which to a great extent is driven by internal processes that enable TMT members to handle large amounts of information and decision alternatives. They ultimately found that their conception of internal TMT “teamwork” processes affect firm performance through a more concrete process, ambidextrous orientation.

This finding that the effects of the TMT process may need to operate through something concrete such as specific tasks or activities should not be surprising since micro-organizational team scholars have tended to take this type of fine-grained approach to understanding team mediating mechanisms. That is, micro-organizational team scholars often utilize two process constructs within the same model. For example, Cannon-Bowers and Salas (1998) examined “teamwork” and “taskwork” processes in the same model, finding that “teamwork” processes enable various outcomes through “taskwork” processes. The previously mentioned episodic model by Marks et al. (2001), utilizes at least two distinct processes in their model – stating that transition processes affect team outcomes through action processes. Even when explicating motivational processes, the non-team micro-organizational scholars, Kanfer and Ackerman (1989) examined the effects of one motivational process on other motivational processes as did notable social psychologist Kahneman (2003) when examining the dual processes of intuition and reasoning.

Guided by the aforementioned use of dual process theories, this study suggests that the effect of one process (i.e. “taskwork” processes) is partially needed to enhance the effects of another process (i.e. “teamwork” process). Hence, it not only extends the notion of dual process theories, but also should serve as a potential model toward unpacking whether the effects of TMT process on firm performance hinge on a specific set of activities or tasks performed by the TMT. Moreover, this contribution will have an impact since it offers macro-organizational scholars a micro-organizational scholarly norm that will enable macro scholars to study top management process using a fine-grain (versus coarse grain) approach. Doing so is bound to evoke and uncover unforeseen insights on the TMT mechanism “black box”.

**Structure.** In addition to the specific notable contribution of the TMT processes, this work also shows that TMTs structured to rely on one another as a team is related to the aforementioned TMT “teamwork” processes. This is noteworthy as it highlights that when executives on a TMT rely on one another to perform their tasks, to achieve their goals, and to receive their incentives and compensation; they are more likely to share of themselves. That is, by changing the way the team operates, TMT members are more likely to share resources, time, etc., which in turn influences their ability to perform strategy implementation tasks that result in firm performance. This finding is important since much of the theory developed by macro-oriented scholars that study TMTs rarely mentions structuring the TMT as a way to elicit certain behaviors. In those rare instances in which team structure is highlighted, the “separate” influence of interdependence tended to be ignored or worse, rolled into the team process construct, such as occurred in

the behavioral integration construct. This approach is problematic because it fails to account uniquely for the important effect of interdependence. In fact, recent scholarship has demonstrated why team interdependence and team processes or mechanisms should be treated separately (Barrick et al., 2007).

Hence, the macro-oriented literature is largely void of how to influence executive teams through fine-tuning the structure of the team, instead often focusing on CEO ingratiation tactics or compensation (Finkelstein, et al., 2009). This omission is surprising since the idea of structuring teams to rely on one another has steadily received support in the team literature as scholars view structural interdependence among members as a central characteristic of teams (Kozlowski & Bell, 2013; Stewart, 2006) because it establishes the extent to which members need to rely on one another to perform projects and fulfill member needs. In fact, Katzenbach and Smith (1993) called teams with high amounts of interdependence a “real team,” and teams with low amounts of interdependence, “working groups.” Thus, this study shows that TMTs structured to be highly interdependent with one another to achieve tasks, goals, and outcomes are more likely to engage in the team processes that are found to be so crucial to enable a TMT to perform the strategy implementation tasks.

In addition to arguing (and finding) that structuring a TMT has a positive effect on “teamwork” processes; I also argued that structuring a team to rely on one another will also impact the positive relationship between the TMT’s “taskwork” implementation activities and firm performance. Contrary to my expectation, the effect of this interaction did not reach a level of significance. This was especially surprising

given that Barrick et al.'s (2007) study found that the interaction of teamwork mechanisms and team interdependence is positively related to team and firm performance, but in their regressions without the interaction, teamwork processes were not related to either dependent variable. For my study, perhaps a level of significance was not reached simply because this study did not have a large enough sample size to achieve the adequate statistical power needed to test this interaction. As such, future studies may wish to test this relationship on a larger sample. Doing so, may result in a different result. In the end, however, this is merely a point of speculation since it would be impossible to know what would happen if the sample size were to increase from 83 to 100 or 150.

### **Limitations and future directions**

As with any research, there are a few limitations in this study that should be noted. First, guided by the need to move “one level down” from an examination of organization-level factors that influence strategy implementation to team-level factors, I focused on only a few specific variables. Despite the care associated with selecting these variables, there are likely other determinants of strategy implementation or mediators between TMT process, TMT strategy implementation, and firm performance that could be examined in future research. With regard to determinants, it was argued throughout this study that most of the previous literature linked *distal* organizational processes/structure to strategy implementation. Moving beyond this assertion, this research examined more *proximal* factors. A promising future study may be to examine whether *distal* organizational processes and structures operate through *proximal* TMT

structures and processes to then influence TMT strategy implementation and organizational performance. Leveraging both may not only further bridge, but also provide intense scholarly insights to both macro- and micro- literatures. With regard to additional mediators, , the main premise of TMT research to date has been that the TMT affects the strategic choices of the firm, which includes choices in regards to internalization, strategy formulation, and competitive behaviors of the firm. Since this relationship has been repeatedly supported in prior studies, these may provide important additional mediators or predictors between various variables in my model.

A close inspection of Table 6 revealed that TMT process and TMT strategy implementation differ (the most) in terms of sharing of information. To better understand why, future research should be conducted. For example, psychological safety, which is defined as feelings of being comfortable in expressing differing views (Edmondson et al., 2003), is a mediator that could be explored in future research. Psychological safety may be particularly relevant to isolating a factor that is necessary to share information or to perform strategy implementation tasks. In addition to exploring additional mediators, there are likely other boundary conditions that could be examined in future research. For example, scholars have suggested that the CEO wields an immense amount of power on the processes and tasks performed within the team (Finkelstein, et al., 2009). Isolating the effects of a CEOs power on the implementation of the strategy should therefore yield some considerable insights as well.

Another weakness of this study is the causality of the relationships in the model. However, this is somewhat alleviated by the temporal order of my data collection, in

which I collected the independent and dependent variables at two points in time. Even so, one cannot be fully sure that the sequence of my independent variables was in line with the causal order of my hypotheses.

Moreover, because my study was conducted over a period of only three months, an appealing and productive avenue of future research would be to create a longitudinal design for studying the long-term effects of the independent variables in my model. This future direction would be particularly relevant and useful for studies that investigate multiple team processes, especially since several notable team scholars have emphasized the importance of using time-based research designs to demonstrate the utility of narrower or multiple teamwork processes (LePine et al., 2008).

Last, an additional limitation is the generalizability to large publicly held corporations. Although I would expect the hypotheses to hold in these organizations as well, it seems likely that because of the layers of management that are between the top management team and organizational employees that the model would have to account for additional influences. Hence, future scholarship should be devoted to understanding the effects of TMTs on other organizational employees or teams (e.g. middle management). Along similar lines, although I sought to control for covariates that have previously been shown to influence the variables in the model, other controls could have been used. Having said that, the controls used were exhaustive and more importantly, included all variables used as alternative explanations (control variables) in the majority of the TMT-related studies found in premier journals today.

With regard to methodological shortcomings, this study has a few. For example, an additional limitation of this study concerns my measures for TMT strategy implementation and TMT process variables. Specifically, both were only validated on the TMT sample used in this study. Although the items for these scales were carefully chosen based on the existing micro- and macro-oriented literatures and under the guidance of subject matter experts, future research should attempt to empirically validate these scales on a separate sample.

### **Managerial implications**

Organizations often look to TMTs to not only develop, but also to implement their strategy in order to grow and survive in the midst of rapidly changing fast-paced environments. Given this reality, it is surprising that little empirical research clarifies the essential tasks that TMTs perform in implementing these strategies as well as how these teams should function and be designed. This study, thus, offers valuable practical insights for both present and future leaders that are members or will be members of top management teams and have several implications for teams at the top. The results of this study indicate that the accomplishment of specific strategy implementation tasks by teams at the top matters, even more so than activities related to how they function or whether the team is designed to rely on one another, because these specific strategy implementation tasks directly impact organizational performance.

However, this finding is only part of the story. How the TMT functions, and specifically, the extent to which TMT members are more concerned with the department for which they lead rather than the organization of which they are a part (i.e.

fragmentation), impact the TMT's ability to perform these strategy implementation tasks. That is, sharing in such things as time, resources, information, priorities, and confidence building directly impacts the TMTs execution of these strategy implementation tasks. And, as a final note, the results indicate designing or structuring the team to rely on one another or act as one may impel the TMTs ability to resolve such fragmentation issues.

A clear implication of this research is for organizations to take a holistic approach when seeking to increase TMT effectiveness. In particular, the results of this study indicate that designing a team to rely on one another may only impact the TMTs ability to resolve fragmentation issues but not to directly impact the TMT's ability to implement a strategy. As such, based on the findings of the research, it may not lead to gains in the TMT's ability to perform strategy implementation tasks. Further, developing leaders to share of themselves may not only impact the team's ability to perform strategy implementation tasks but not have a direct impact on the organization's performance. If organizations strive to only alter the TMT's design or only improve how the TMT functions, they may waste a considerable amount of resources – in terms of time and money because focusing on only one factor to develop, in actuality may not lead to organizational performance gains. Hence, this research demonstrates the importance of organizations taking a holistic approach when seeking increase the TMT effectiveness.

When taking a holistic approach, organizations struggling to implement strategies need to alter or modify its design of the TMT structure to enable a greater reliance on one another, in order to increase its member's ability to share in “teamwork”

activities and then perform the strategy implementation tasks outlined in this treatise. Furthermore, for teams struggling with being able to increase the effectiveness of how the TMT functions (i.e. TMT process), it is recommended that formal development efforts be designed to enhance these team characteristics. In such instances, this effort would involve participants engaging in a series of team-level learning exercises to develop these team-level attributes. Doing so may offer TMT members a method for increasing interpersonal relations with their team members.

However, if organizations faced with limited time and resource constraints have to choose, the results of this research would indicate that its efforts be directed to develop the TMTs ability to perform strategy implementation tasks, which include properly specifying goals that match the strategic aims of the organization, holding one another accountable on these implementation goals, identifying and properly extinguishing roadblocks that hinder the implementation efforts, and finally adapting the strategy implementation effort in light of the changing circumstances. This research, thus, may offer a solution to organizations struggling to implement strategies, in which TMTs would need to alter its structure to enable a greater reliance on one another, in order to increase its member's ability to share in "teamwork" activities and then perform the strategy implementation tasks outlined in this treatise.

### **Conclusion**

This study represents a first-step toward understanding the TMT's role in implementing strategy. The results of this study indicate that resolving TMT fragmentation issues or structuring TMT tasks and rewards in a way that persuades them

to work in unison does not alone improve an organization's performance. Instead, executive teams efforts should be directed toward making certain they are performing a crucial set of strategy implementation tasks in order to impact organizational performance. However, to ensure the TMT is able to execute on these vital strategic implementation tasks, steps should be taken to resolve fragmentation issues and to structure the team to rely on one another may impel this effort.

These results have important implications for future strategy implementation efforts as it relates to the organization's performance – effective TMTs must concentrate their efforts on specifying implementation goals, tracking and monitoring implementation goal progress, monitoring the internal and external environment for changing circumstances, and adapting the implementation goals in light of the changing circumstances to reap the benefits of organizational performance. Doing so will positively affect organizational members and the organization at large.

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## APPENDIX

### **Organizational performance measure**

Gupta and Govindarajan's (1986) nine-item measure (SMJ). Seven-point Likert scale ranging from much worse (1) to much better (7).

Investment firm contact will be asked to rate *his or her portfolio firm's relative to others in their industry* on the following aspects of organizational performance:

- (1) "...organization's sales level."
- (2) "...sales growth rate."
- (3) "...cash flow."
- (4) "...return on shareholder equity."
- (5) "...gross profit margin."
- (6) "...net profit from operations."
- (7) "...profit to sales ratio."
- (8) "...return on investment."
- (9) "...the organization's ability to fund business growth from profits."

## TMT strategy implementation measure

Three measures used, 14 items. Five-point Likert scale ranging from *low effectiveness* (1) to *high effectiveness* (5).

Barrick et al.'s (2014) six-item measure strategy implementation measure, which includes both goal specification

**Goal specification** measure

- (10) "...setting and pursues <implementation goals>."
- (11) "...ensuring that everyone clearly understands the <implementation goals>."
- (12) "...<implementation goals> with the strategic direction of the organization."

**Tracking implementation goal progress** measure

- (13) "...relying on clearly defined metrics to assess the <implementation goal> progress."
- (14) "...regularly monitoring how well we are meeting our <implementation goals>."
- (15) "...getting timely feedback from stakeholders about how well they are meeting the <implementation goals>."
- (16) "...engaging in shared monitoring and holds one another accountable for the steps needed to accomplish the strategic <implementation goals>."

Mathieu et al.'s (2000) **Internal and external systems monitoring** measure (JAP)

- (17) "...examining and managing resources (financial, talent, technology)."
- (18) "...examining events and conditions that influence our implementation goals."
- (19) "...ensuring that everyone has access to the right information and management support to perform the implementation goals well."

de Jong and Elfring's (2010) **adaption** measure (AMJ)

- (20) "...modify the <implementation goals> and objectives in light of changing circumstances."
- (21) "...review the approach to getting the <implementation goals> done."
- (22) "...change the <implementation goals>."
- (23) "...alter the way decisions are made in regarding the <implementation goals>."

## TMT process measure

Five measures used, 29 items. Likert scale ranging from strongly disagree (1) to strongly agree (5).

“State your agreement to the following...”

### Instrumental processes (21 Items)

Barrick et al.'s (2007; AMJ) *communication* or sharing of information measure:

- (24) “<executive team> Members are willing to share information with other team members about our work.”
- (25) “<executive team> Members of this team enjoy talking to each other.”
- (26) “When <executive team> members talk to each other, there is a great deal of understanding.”
- (27) “<executive team> members are comfortable talking to each other about what needs to be done.”

Hiller et al.'s (2006; LQ). *sharing of decisions* measure

- (28) “<Executive team> decides on best course of action when problems arise.”
- (29) “The <executive team> Diagnoses problems quickly.”
- (30) “The <executive team> uses our team's combined expertise to solve problems.”
- (31) “<Executive team> finds solutions to problems affecting team performance.”
- (32) “The <executive team> identifies problems before they arise.”
- (33) “The <executive team> develops solutions to problems.”
- (34) “The <executive team> solves problems as they arise.”

Somech and Drach-Zahavy (2007; Group Dynamics) *sharing of time* measure. Rated infrequently (1) to frequently (5).

- (35) “How frequently did your <executive> team meet during the last week?”
- (36) “How frequently did your< executive> team meet during the last month?”
- (37) “How much time was a devoted to <executive> team meeting in the last week?”
- (38) “How much time were devoted to <executive> team meetings in the last month?”

Hackman's (1983) *sharing of task priority* measure

- (39) “Our <executive team> works together in a well-coordinated fashion.”
- (40) “Our <executive team> has very few misunderstandings about what to do.”
- (41) “Our <executive team> needs to backtrack and start over a lot.”(reversed)

- (42) “Our <executive team> accomplishes tasks smoothly and efficiently.”
- (43) “Our <executive team> has much confusion about how we should accomplish tasks.” (reversed)

**Interpersonal processes (9 Items) Mathieu et al.’s (2000; JAP) Interpersonal processes measure.**

***sharing of affect regulation***

- (44) “Our <executive team> manages stress effectively.”
- (45) “Our <executive team> shares a sense of togetherness and cohesion.”
- (46) “Our <executive team> keeps each other from getting overly emotional or frustrated.”

***sharing process of conflict management***

- (47) “Our <executive team> deals with personal conflicts in fair and equitable ways.”
- (48) “Our <executive team> works hard to minimize dysfunctional conflict among members.”
- (49) “Our <executive team> encourages healthy debate and exchange of ideas.”

***sharing process of motivation and confidence building***

- (50) “Our <executive team> takes pride in our accomplishments.”
- (51) “Our <executive team> develops confidence in our team’s ability to perform well.”
- (52) “Our <executive team> encourages each other to perform our very best.”

## **TMT interdependence measure**

*One measure used, 14 items.* Barrick et al. (2007; AMJ). Likert scale ranging from strongly disagree (1) to strongly agree (5). TMT executives will be asked to indicate the extent to which they agreed with the following:

### ***Task interdependence:***

- (53) “I cannot accomplish my work without information or materials from other members of the executive management team.”
- (54) “Other members of my executive management team depend on me for information or materials needed to perform their tasks.”
- (55) “Within the executive management team, work performed by other executive management team members is dependent on another’s work.”
- (56) “How other executive management team members do their work has an impact on my performance.”
- (57) “The work of the executive management team relies on or is dependent on executive management team members.”

### ***Goal interdependence:***

- (58) “My work goals come directly from the goals of the executive management team.”
- (59) “My daily work activities are based on the objectives the executive management team believes are critical.”
- (60) “I do very few activities that are not related to goals of the executive management team.”
- (61) “The work I do on most days is not related to the goals of the executive management team (reverse scored)”
- (62) “My work goals are unrelated to the objectives of the executive management team (reverse scored).”

### ***Outcome (i.e. interdependent feedback and rewards) Interdependence:***

- (63) “Feedback about how well I am doing my job comes primarily from information about how well the entire team is doing.”
- (64) “My performance evaluation is strongly influenced by how well my team performs.”
- (65) “Many rewards from my job (e.g., pay, promotion opportunities, etc.) are determined in large part by my contributions as a member of the executive management team.”
- (66) “I am dependent on other executive management team members to obtain goals or obtain rewards linked to the work I do on the executive management team.”