RECOGNIZING UNCERTAINTY AND MANAGING APPROPRIATELY:
HOW SHOULD SALES MANAGERS DO IT?

A dissertation submitted to the
Kent State University
College of Business Administration
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy

By
Rebecca Dingus

March 2014
Dissertation written by
Rebecca Dingus
B.A., Ohio University, 2007
M.B.A., Ohio University, 2009
Ph.D., Kent State University, 2014

Approved by:

Michael Y. Hu
Co-Chair, Doctoral Dissertation Committee

Murali Shanker
Co-Chair, Doctoral Dissertation Committee

Pamela E. Grimm
Members, Doctoral Dissertation Committee

Tuo Wang

Raj Agnihotri

Accepted by:

PhD Director, Graduate School of Management

Dean, College of Business Administration
TABLE OF CONTENTS

CHAPTER 1: MANAGEMENT OF A SALES FORCE ................................................................. 1
Management Behaviors ................................................................................................. 6
  Control Systems ............................................................................................................ 7
  Outcome-Based Control ............................................................................................... 9
  Behavior-Based Control .............................................................................................. 9
  Level of Control .......................................................................................................... 11
Trust ............................................................................................................................. 11
  Trust in Buyer-Seller Relationships ......................................................................... 13
  Trust Between Sales Managers and Their Sales Forces ............................................. 14
Adaptability .................................................................................................................. 15
Contribution of Dissertation ......................................................................................... 19
Research Objectives ..................................................................................................... 20
Chapter One References .............................................................................................. 22

CHAPTER 2: CONCEPTUAL FRAMEWORK ................................................................. 29
The Structure-Conduct-Performance Paradigm ............................................................ 30
  Linking Sales Manager Conduct to Sales Force Performance ................................... 33
    Control to Performance .............................................................................................. 34
    Trust to Performance ................................................................................................ 34
  Adaptability to Performance ...................................................................................... 35
Overview ....................................................................................................................... 36
Linking Structure to Sales Manager Conduct ............................................................... 37
  The Role of Uncertainty on Managerial Conduct ..................................................... 40
    External Uncertainty ................................................................................................ 41
    Internal Uncertainty ................................................................................................ 42
    Economic Network Theory ....................................................................................... 42
  Transaction Specific Assets Affecting Managerial Conduct .................................... 46
  Network Size Influencing Managerial Conduct ....................................................... 49
Overview ....................................................................................................................... 50
Moderating Role of Structural Variables ..................................................................... 51
Conclusion ..................................................................................................................... 52
Chapter Two References .............................................................................................. 53
Sales Manager Performance CFA ........................................................................ 167
Full Model CFA with Sales Manager Performance ............................................. 167
Structural Equation Modeling ........................................................................... 168
  Model B1: Conduct-to-Sales Manager Performance Model ............................. 168
  Model B2: Structure-to-Sales Manager Performance Model ......................... 169
  Model B3: Structure-to-Conduct-to-Sales Manager Performance Model ......... 169
LIST OF TABLES

Table 1-1 ................................................................................................................................. 28
Table 3-1 ................................................................................................................................. 88
Table 3-2 ................................................................................................................................. 89
Table 3-3 ................................................................................................................................. 90
Table 3-4 ................................................................................................................................ 91
Table 3-5 ................................................................................................................................ 92
Table 3-6 ................................................................................................................................ 93
Table 3-7 ................................................................................................................................ 94
Table 3-8 ................................................................................................................................ 95
Table 3-9 ................................................................................................................................ 96
Table 3-10 ............................................................................................................................... 97
Table 3-11 .............................................................................................................................. 98
Table 3-12 .............................................................................................................................. 99
Table 3-13 ............................................................................................................................... 100
Table 4-1 ................................................................................................................................ 120
Table 4-2 ................................................................................................................................ 121
Table 4-3 ................................................................................................................................ 122
Table 4-4 ................................................................................................................................ 123
Table 4-5 ................................................................................................................................ 124
Table 4-6 ................................................................................................................................ 125
Table 4-7 ................................................................................................................................ 126
Table 4-8 ................................................................................................................................ 128
Table 4-9 ................................................................................................................................ 129
Table 4-10 ............................................................................................................................. 130
Table 4-11 ............................................................................................................................. 131
Table 4-12 ............................................................................................................................. 132
Table 4-13 ............................................................................................................................. 133
Table B-1 ................................................................................................................................ 171
Table B-2 ................................................................................................................................ 172
Table B-3 ................................................................................................................................ 173
Table B-4 ................................................................................................................................ 175
Table B-5 ................................................................................................................................ 176
Table B-6 ................................................................................................................................ 177

vii
Table B-7 ................................................................................................................................. 178
Table B-8 ................................................................................................................................. 179
LIST OF FIGURES

Figure 2-1. Conceptual Model .......................................................... 59
Figure 4-1. Control Systems CFA .......................................................... 134
Figure 4-2. Trust CFA ..................................................................... 135
Figure 4-3. Adaptability CFA .............................................................. 136
Figure 4-4. Sales Force Performance CFA Model ..................................... 137
Figure 4-5. Transaction Specific Assets CFA ........................................... 138
Figure 4-6. Uncertainty CFA ............................................................... 139
Figure 4-7. Full Model CFA ................................................................. 140
Figure 4-8. Original Conduct-to-Performance Model ............................... 141
Figure 4-9. Improved Conduct-to-Performance Model ............................ 142
Figure 4-10. Structure to Performance SEM Model ................................. 143
Figure 4-11. Structure to Conduct to Performance SEM Model .................. 144
Figure B-1. Sales Manager Performance ............................................. 180
Figure B-2. Structure, Conduct, and Performance CFA with Sales Manager Performance .............................. 181
Figure B-3. Original Conduct-to-Sales Manager Performance SEM ............. 182
Figure B-4. Improved Conduct-to-Sales Manager Performance SEM ............. 183
Figure B-5. Structure-to-Sales Manager Performance SEM ........................ 184
Figure B-6. Structure-to-Conduct-to-Sales Manager Performance SEM ........... 185
ACKNOWLEDGEMENTS

This dissertation would not have been started, and certainly would not have been completed, without the influence, encouragement, and help from so many people. I have been humbled by the incredible love, support, and care shown by all those around me.

First and foremost, I want to express sincere gratitude to my family for their unending support as I have ventured through the PhD program. To my parents, Bill and Donna, thank you for always encouraging me and reminding me to believe in myself. To Cara and Dominick, thanks for sharing this process with me through fun activities and wonderful breaks. Finally, to Granny, thank you for your kind words and, more importantly, for your never-ceasing prayers. Whenever the dissertation process overwhelmed me, you five were always available to help me refocus.

While my family was constantly encouraging me, my dissertation would not be one-tenth of what it is without the insight and inspiration of my advisor, Michael Y. Hu. Thank you, Dr. Hu, for sharing with me your passion for research as well as your zest for a balanced life. I have learned so much from you, and I will forever be grateful. Thank you for postponing your (second) retirement and allowing me to be your “last marketing student.” I wish you all the best, knowing that you will continue to inspire others, as you ride off into the sunset.

My dissertation received assistance from so many. To my chairs and committee—Dr. Hu, Dr. Shanker, Dr. Grimm, Dr. Wang, and Dr. Agnihotri—thank you for helping me create and complete this dissertation. From the network of Dr. Hu's past students (Annie, Claudia, Kevin, Mike, Raj, and Terri) to members of the Sales SIG, thank you for reviewing my survey, pre-testing, and helping me to find respondents. Additionally, thank you to the friends, family members, and horse show pals who extended their own networks to me for data collection.

To my best friends (Callie & Nate, Megan, and Katy): THANK YOU! For every call, text, visit, card, meal, drink, and reminder of life outside of grad school...thank you for helping me maintain some sort of life balance and to not lose track of life's bigger focus. You all are the best! For the breaks from grad school life, I also wish to express gratitude to my entire horse show family: Team Thyfault, the Kohls and boarders at Rockin K Ranch, and the OAQHA. Thank you for encouraging and challenging Lucas and I to continue chasing our dreams. To my students, who always provided a fresh perspective and renewed my energy, I also must say "thank you!"

Through riding and teaching, my mind was continually refreshed during this dissertation process.

To my KSU favorites who have provided support during the last four years (Alison, Lisa, Ollie, Chan Ho, and so many more), thanks for making this experience supportive and enjoyable. To Beth, thank you for your friendship and for "saving my life" multiple times! Your kindness will never be forgotten. Also, to the greater network of doctoral students I've met through DocSIG, NCSM, and other conferences—thanks for sharing my experiences and for allowing me to join in your own journeys.

The last four years have been a huge learning process for me, both personally and professionally, with a wonderful ending. Thank you to everyone who has shared a smile, a kind word, and a giggle—here's to many, many more!
CHAPTER 1: MANAGEMENT OF A SALES FORCE

The academic sales literature focuses on a multitude of topics that contribute to building a better sales force, improving sales practices, and strengthening buyer-seller relationships. A smaller, yet very important, body of literature considers the question “What makes a sales manager effective?” Research identifies three roles of managers (communicating, motivating, and coaching) to link the associated attributes valued by sales managers and salespeople (Deeter-Schmelz, Goebel, and Kennedy, 2008). Focusing on specific managerial behaviors, popular topics in sales management research include the relationship, control, and trust exercised by managers, as well as the impact managers have on salespeople, from technology use to ethics.

Sales relationships are full of uncertainty, as limited information is available and unique personalities are at play. Sales managers are expected to implement appropriate control strategies, adapt to selling situations, and trust their sales force. They are expected to exhibit these behaviors while making their best attempt to manage a sales force that may be unfamiliar to them in an uncertain selling environment. While these expectations are high, they remain difficult to achieve. The added pressure, that sales managers are often evaluated based on the performance of the sales forces they manage, creates an avenue for research exploring relevant contingencies that sales managers regularly experience.

The problem setting of this dissertation is two-fold. First, I examine how a sales manager employs the three elements of control, trust, and adaptability and how these behaviors influence performance of the sales force. Then, I examine how these sales manager conduct variables influence sales force performance in the presence of situational factors such as varying levels of external and internal uncertainty. Exploring situations that sales managers face regularly and
managerial behaviors they are likely to engage in, this dissertation aims to identify the most appropriate employment of these three managerial mechanisms (control, trust, and adaptability) in order to attain the best performance.

This research introduces a unique unit of analysis—a sales force—to investigate management practices. While academic research typically examines relationships from the sales manager to each salesperson, sales managers (in practice) are generally evaluated with respect to their entire sales force’s accomplishments. Therefore, analyses in this project are made based on a sales force—looking at a manager’s behavior toward the group of salespeople that is managed.

**Sales Management Practices**

The area of sales management research parallels the professional selling research that generally focuses on business-to-business buyer-seller relationships in marketing. While the work in professional selling examines relationships between buyers and sellers, the literature in sales management considers how sales managers interact with and react to their salespeople. While the two streams are considered to be very different, the ideas studied in them can be complementary, as the constructs sometimes overlap. This dissertation’s focus is on sales management processes, although the management constructs being studied can also be found in some professional selling literature. As the constructs studied have originated in management, a brief overview of the literature introducing control, trust, and adaptability into the sales management area is provided.

The sales management literature’s main focus is on the primary role of the sales manager—ensuring that the sales force meets the firm’s goals for the current period and developing the group of salespeople reporting to him or her. Such a task is not straightforward
because sales managers are responsible for hiring, training, assigning, motivating, compensating, evaluating, coaching, and leading their sales force (Dubinsky, Mehta, and Anderson, 2001). The sales management model is complex, as sales managers have an ever-changing role in dealing with their salespeople. Ambiguities arise as sales managers attempt to plan, implement, and control activities in order to achieve the organization’s goals (Honeycutt, Ford, and Simintiras, 2003).

The complexities that sales managers focus on when overseeing their sales force are continually increasing. Salespeople fill a rather independent role by generally working away from a company’s main location. In addition to a sales force often being widespread geographically, salespeople have become empowered through the use of virtual offices (Anderson, 1996; Spiro, Stanton, and Rich, 2003).

However, the one-on-one time that members of a sales force spend with their sales manager is beneficial when that sales manager is a good role model (Rich, 1997). However, because a sales force is typically spread out geographically, sales managers are unable to provide in-person, direct supervision to their salespeople on a regular basis. When such interaction is impractical, mentoring and coaching can be more difficult. Additionally, when a sales manager does not seem readily available, as is sometimes miscommunicated with geographic distances, it can lead to decreased motivation of the sales force. Accurate evaluations of sales force performance are especially challenging, as physical separation can limit the monitoring and feedback that a sales manager would ideally provide to encourage high performance. Because of these difficulties, the sales management issues of compensating, evaluating, and monitoring sales forces have continually been a focal area of research in sales management.
In the sales management literature, a continuously-explored topic is the compensation and incentive structures that sales managers use. Compensation is considered to be a driver of salesperson performance (Zoltners, Sinha, and Zoltners, 2001), and various compensation approaches exist. The two primary compensation methods are salary and commission. Salary involves a fixed component, while commissions entail a variable component based on units sold or sales goals. Given a selling situation, the best motivator for getting the sale is for the salesperson to receive a commission, since Basu, Lal, Srinivasan, and Staelin (1985) have shown that sales performance and financial rewards are directly linked. However, in a recent industry survey, researchers find evidence suggesting that approximately 50 percent of salespeople fail to reach their annual targets (Ahearne, Boichuk, Chapman, and Steenburgh, 2012, p. 39), demonstrating that a perfect plan for motivation through compensation is difficult to produce. Additionally, if a sales manager wants to shift a salesperson’s focus away from short-term sales volume and to, instead, focus on sales inputs (planning, customer service, needs assessment), straight salary may be the more viable compensation strategy (Basu, et al., 1985). Firms and sales managers try to find the optimal compensation strategy to attain the best performance of their sales forces.

The extreme differences between salary and commission, as well as the focus that each method encourages a salesperson to have, are clear. However, when a particular compensation plan is set up by the firm, it must be accepted and enforced by the sales manager. Enforcing particular compensation plans affects how salespeople set their goals and go through the selling process (Hansen and Riggle, 2009). Additionally, set plans will influence how a sales manager works to motivate and manage the sales force.
Traditionally, salespeople have had a strict sales-orientation, which encouraged them to work on commissions. More recently, though, the desired efforts of salespeople have shifted away from the traditional, strict emphasis on selling to a more modern, broader focus on serving customers. When salespeople limit themselves to sales-oriented behaviors, their customers’ trust in them is lower (Hansen and Riggle, 2009) than when salespeople have a customer orientation. It is suggested that these sales-focused behaviors, which have long been associated with salespeople, have contributed to the poor reputation of sales professionals (Gallup, 2012). Because of this evolution toward customer relationships, sales managers have been required to monitor their own focus and how they reward their salespeople (Anderson, 1996). In modern days, salespeople typically are compensated by a combination of salary plus commissions (Küster and Canales, 2011).

Building on the shift from a sales-orientation to a customer-orientation, Somjit (2012) addresses the shift in sales responsibilities and the common perceptions (which he acknowledges are often misperceptions) of salespeople. Because of the shift toward a customer-focused orientation, modern salespeople are more educated, specialized, and professional than in the past. Because of this development in the sales profession, today’s sales manager may actually play an even larger role in managing (Somjit, 2012) and face increased responsibility. As Anderson (1996) points out, “sales managers in the 21st century will not succeed by merely carrying out parochially defined roles and duties. They will need global perspectives and world-class skills to handle an increasingly eclectic array of sales and marketing functions” (p. 21). Perhaps this explains why research has found that sales managers perceive themselves to have a role of “participant,” rather than that of “supporter” (Deeter-Schmelz, Goebel, and Kennedy, 2008).
Management Behaviors

Sales managers must carefully monitor their own behaviors in order to attain peak performances from their sales forces. Some of the options that go into managers’ decisions are pre-determined by the firm, but others are entirely up to the sales manager. For example, while choosing an appropriate compensation method seems to be essential for a sales force to be successful, compensation methods are usually identified and defined at the organizational level. The particular responsibilities that lie at the sales manager’s discretion are quite different. On a daily basis, sales managers must decide how closely they need to monitor and interact with their sales forces. The primary focus of this dissertation is how sales managers’ behaviors impact the performance of their sales forces.

Historically, as selling processes emphasized a sales-orientation, sales managers’ emphasis was placed on measuring outputs rather than inputs of the selling process. For example, Jackson, Keith, and Schlacter (1983) found that sales volume figures were the most heavily stressed by sales managers. Among the lesser-used input variables, “calls per period” was the most widely used—yet this measure entails only a count and no interactive monitoring on the part of the sales manager. As the sales orientation has shifted to a customer focus, the variables on which sales managers focus must also shift accordingly.

The choices sales managers make regarding how to manage and interact with their sales forces in the most beneficial way will likely be impacted by the market, by the selling environment, and by how the sales managers feel about their sales forces. Dixon and Tanner (2012) claim that “today’s salesperson does not need the sales manger to know how well or how poorly he or she is doing. Rather, coaching takes precedence over communicating statistics” (p.
Three managerial behavior variables that can be incorporated into coaching and that are frequently studied in the sales literature are control, trust, and adaptability.

While no extant research has considered the sales manager conduct variables of control, trust, and adaptability in a single study, these behavioral constructs are not strangers to the sales literature. The topic of managerial control systems is found most predominantly within the sales management literature, while trust is a popular subject in both sales management and professional selling literature. Adaptability in sales, on the other hand, is almost exclusively found in the personal selling literature in the sense of adaptive selling behaviors for salespeople. This dissertation extends adaptive selling from a tool for salespeople relating to their customers to a conduct that sales managers use when interacting with their sales forces and when dealing with various situations that may present themselves. A brief overview of these constructs and the relevant academic literature follows.

**Control Systems**

A control system is defined as “an organization's set of procedures for monitoring, directing, evaluating, and compensating its employees” (Anderson and Oliver 1987, p. 76). Across multiple disciplines, the literature on control explores the governance of relationships while focusing on aligning goals and minimizing opportunism (Auklakh and Gencturk, 2000; Bergen, Dutta, and Walker, 1992; Eisenhardt, 1985; Williamson, 1985). Given organizational sales goals that vary, control systems can assist managers with increasing the chances that their own sales forces will perform the appropriate functions to successfully meet the corporate goals. Managers utilize control systems in order to attain desired corporate objectives (Challagalla and
Shervani, 1996). In management, the three key considerations with control are generic factors such as the level of control, amount of control, and span of control.

Specifically in sales management, control strategies encompass the ways that sales managers train, motivate, monitor, evaluate, and compensate their sales forces. These components form interrelated decisions that, together, describe the “control” used by management (Jaworski, 1988). The type of control utilized is influential to a salesperson’s behavior, which ideally will increase the welfare of the selling firm and salespeople alike (Anderson and Oliver, 1987). Accordingly, control systems have traditionally been studied in the literature with respect to how a sales manager perceives his or her company’s static, prescribed control. This dissertation, however, takes on a much more individualized perspective, examining how the sales manager as an individual adapts to “control” his or her sales force appropriately.

There is an expansive literature base on control strategies (Anderson and Oliver, 1987; Cravens, Ingram, LaForge, and Young, 1993; Krafft, 1999; Oliver and Anderson, 1994), identifying how a firm governs its own employees by utilizing outcome- or behavior-based controls. As the strategies that sales managers choose to enforce involve varying levels of commitment to, evaluation of, and compensation of salespeople at different points in the selling process, they range from behavior-based to outcome-based control. Existing literature portrays these control systems along a continuum of these two focuses (Oliver and Anderson, 1994), which are detailed in the following sections.

The primary differentiator between these two control systems is the timing and nature of management intervention. When sales managers interact with the members of their sales force before a sale, this pre-sale intervention is indicative of a behavior-based control system. On the
other hand, sales managers who intervene after the sale to monitor, direct, or evaluate employees would be enforcing an outcome-based control system (Anderson and Oliver, 1987; Jaworski and MacInnis, 1989; Oliver and Anderson, 1994).

**Outcome-Based Control**

The outcome-based control strategy places little emphasis on monitoring or direction and fully emphasizes managing by evaluating the salesperson’s performance via objective outcomes. Anderson and Oliver (1987) provide an overview of this strategy. While the outcome-based control system is considered objective because of the direct measures of output (e.g., total sales volume) that are considered by the sales manager, it can be a risky venture for the salesperson. The salesperson is provided with minimal monitoring, training, or preparation for selling. This limited involvement with the sales manager and selling firm provides the salesperson with little reason to be committed to the firm, resulting in a sales force that focuses on goals in the short-run (to meet quotas and the objective performance measures) rather than long-term advantages and partnerships with buyers. With an outcome-based control system, the firm shows less commitment to the employee and the salesperson is compensated with commission pay, which is directly related to the salesperson’s output and objective performance measures.

**Behavior-Based Control**

On the other end of the continuum, the behavior-based control strategy assumes a larger investment in the sales force from the selling firm, which encourages a long-term focus for the firm’s interest. Considerable monitoring and direction from management are provided, and complex methods are used to evaluate and compensate the sales force. While this causes the
firm to assume additional risk, it changes the perspective of the salesperson in such a way that the salesperson will consider the firm’s goals before personal goals (Anderson and Oliver, 1987).

To accomplish this behavior based control system, the sales manager focuses on non-selling goals and provides guidance and directives such as training. Importance is placed on prospecting, building relationships, and after-sale follow-ups. Salespeople are evaluated much more subjectively than with outcome based control systems and earn a salary, which encourages them to be influenced more strongly by management (Anderson and Oliver, 1987). Essentially, Challagalla and Shervani (1997) suggest that behavioral controls can be split into two categories—activity and capability. The activity category focuses on the everyday undertakings of salespeople, such as their call reports. The capability category considers how salespeople are developing skills and abilities that will improve their performance, such as negotiation training.

Sales managers can include behavioral measures or subjective evaluations of motivation, involvement, and relationship building in performance evaluations. Because of the emphasis placed on activities other than pure sales, these behavior based control systems can intrinsically motivate employees to constantly strive for improvement in all areas of their relationships with buyers and potential buyers. Employees under this control strategy are often dedicated to the firm, content with their jobs, and striving for the best results for all involved (Anderson and Oliver, 1987).

To be effective, sales managers must maintain a delicate balance with each member of their sales force and with their sales force as a whole. They must carefully plan how they want to manage their salespeople and, to an extent, sales managers will want to adapt to their salespeople in order to manage them and motivate them in the most effective manner. Each of these intentional decisions impacts the nature of control used. Specific examples of management
practices for both behavior-based control systems and outcome-based control systems are summarized in Table 1-1.

**Level of Control**

Whether a sales manager tends to manage using either a behavior- or an outcome-based system, the amount of control is noteworthy. Much of the control literature emphasizes the management style that stems down throughout the organization, but this study focuses on the management enforced at the sales manager level. Accordingly, the degree of control that the sales manager exudes is examined rather than the type of control. The measures used in the study address both behavior- and outcome-based control systems, but the emphasis is on how sales managers are helping salespeople and moving them toward the goals of profitability and sales volume, as well as becoming better salespeople. With that emphasis, a sales manager can rate high with relation to behavior-based control systems and also exhibit high tendencies of outcome-based control systems, which would be indicative of an overall high level of control.

**Trust**

In the management literature, trust is defined in a multidisciplinary way as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another” (Rousseau, Sitkin, Burt, and Camerer 1998, p. 395). Although many researchers have treated trust as static, Rousseau et al. (1998) point out that, because trust includes necessary conditions of risk and interdependence, it is actually dynamic. Given the dynamic nature of trust—how it can be impacted by people as well as situations that arise—the study of trust in both interpersonal relationships and industrial
relationships is both popular and relevant. However, while over 60 constructs have been studied as antecedents to trust within the context of marketing channel relationships, this research area has found little empirical agreement or attempt at generalizability (Geyskens, Steenkamp, and Kumar, 1996).

Success in sales is built on relationships (Dwyer, Schurr, and Oh, 1987), and the success of these relationships is often linked to the presence of trust (Doney and Cannon, 1997) and relationship commitment (Morgan and Hunt, 1994) in buyer-seller relationships. Morgan and Hunt conceptualize trust as “existing when one party has confidence in an exchange partner’s reliability and integrity” (1994, p. 23), and their KMV model of relationship marketing finds antecedents of trust to be communication and shared values. Building on Morgan and Hunt’s approach to relationship marketing, much recent research has investigated the nature of trust in buyer-seller relationships with respect to mutual trust and unilateral trust.

In this dissertation, the focus is a type of unilateral trust. Specifically, trust is explored as it extends from the sales manager to his or her sales force. Essentially, this study explores how the trust that a sales manager has in his or her sales force influences the sales force’s performance level. Additionally, since trust is a dynamic construct, several situational variables that may impact trust are also examined. This perspective of trust, from the sales manager to the sales force, has received little attention in the literature. In order to provide related background information, a brief review is provided of the literature related to the trust buyers have in their salespeople and to the trust that salespeople have in their sales manager.
Trust in Buyer-Seller Relationships

Speaking specifically to the nature of trust in buyer-seller relationships, Doney and Cannon (1997) define trust as “the perceived credibility and benevolence of a target of trust” (p. 36), finding trust to influence anticipated future interactions. In these relationships with suppliers, trust is found to reduce conflict while enhancing the satisfaction of channel members (Anderson and Narus, 1990). In this buyer-seller context, trust in the salesperson is evaluated by buyers based on items such as whether the salesperson is frank, does not make false claims, is open in dealings, is concerned about buyer’s needs, and is trusted by others at the firm (Doney and Cannon, 1997).

Doney and Cannon (1997) describe trust as having these two dimensions of credibility and benevolence because, when they are present in an exchange relationship, there is less risk and uncertainty. They emphasize the importance of these dimensions of trust in industrial buying situations, such that both parties can yield positive results. Related to uncertainty in this study, it should be noted that trust may be culturally driven, such that diverse relationships may not foster trust in the same way as in transactions across similar cultures.

Doney and Cannon (1997) also find that firm size plays a large role in how trustworthy a supplier is viewed, especially with respect to possible opportunistic behavior, so they encourage selling firms to engage in image-enhancing techniques. It is apparent that the presence of trust in interpersonal relationships extends in a very similar manner to business relationships (Geyskens, Steenkamp, and Kumar, 1998).
Trust Between Sales Managers and Their Sales Forces

Trust is a key component of all relationships, and this is especially true in the case of sales manager–sales force relationships (Rich, 1997). Trust levels within organizations vary by the way people perceive the “psychological climate” of the organization. In this respect, trust hinges on perceptions of autonomy, fairness, innovativeness, recognition, ethicality, and cohesiveness (Strutton, Pelton, and Lumpkin, 1993).

The primary focus of trust in this dissertation is in a less-explored relationship—while continuing to focus on the relationship between sales managers and their sales forces, this dissertation assesses the role of a sales manager’s trust in his or her sales force. While this is a little-studied area, Flaherty and Pappas (2000) find that this relationship is a very important one. In relationships between sales managers and salespeople, building trust can help salespeople to cope with uncertainty and increase their commitment. Uncertainty occurs in the relationship between sales managers and salespeople through the variability of salesperson performance and the unknown distribution of potential outcomes, and market uncertainty also can lead to uncontrollable outcomes. This trust-building process occurs as sales managers get to know their salespeople, to reduce their uncertainty, and to learn about each salesperson’s motivations, past performance, and goals. This can be helpful as sales managers set quotas, assign territories, or make other important decisions. The resulting trust can often play a mediating role in how the sales manager chooses a control strategy and how to effectively manage each salesperson.

Trust in leadership is important, as salespeople must trust their sales managers to have their best interests at heart, rather than fear that managers will act opportunistically (Dirks and Ferrin, 2002). The trust that salespeople have in their sales manager has a direct effect on job satisfaction and is indirectly related to both organizational commitment and turnover intention.
(Brashear, Boles, Bellenger, and Brooks, 2003). As such, trustworthiness can influence affective commitment to improve job performance and can foster risk taking or vulnerability (Colquitt, Scott, and LePine, 2007). With such a level of trust, sales managers will likely cope better with uncertainties to maintain their management style because they have faith in their sales force.

Along this line, Mallin, Asree, Koh, and Hu (2010) consider the roles of different variables in the sales manager’s trust and control of a salesperson. Their study relates directly to this dissertation, as it considers how uncertainty is a basis for managerial governance decisions (i.e., whether to adopt a behavior-based or outcome-based control system). They identify a salesperson’s past behavioral performance as the single most important variable in the relationship between trust and the chosen control system, as uncertainty needs to be reduced for trust to be developed. The work of Mallin and colleagues implies there may be some interplay between control and trust, as the amount of trust will affect the choice of control system—and likely the level of control—that sales managers choose to exercise over their sales force.

Adaptability

A 2011 HBR article refers to adaptability as “the new competitive advantage.” In this article, Reeves and Deimler discuss how globalization, improved technologies, and increased transparency have changed the traditional business environment. As a result, business leaders face much uncertainty to which they must quickly react. Thus, the ability to adapt is becoming increasingly important. Reeves and Deimler suggest four organizational capabilities for business to attain what they refer to as an adaptive advantage:

(1) the ability to read and act on signals of change; (2) the ability to experiment rapidly, frequently, and economically—not only with products and services but also with business
models, processes, and strategies; (3) the ability to manage complex multi-stakeholder systems in an increasingly interconnected world; and (4) the ability to mobilize and unlock their greatest resource—the people who work for them.

Reeves and Deimler (2011) end their article by challenging managers to be adaptive in five ways. Business managers are encouraged to look at the mavericks, identify and address the uncertainties, put an initiative on every risk, examine multiple alternatives, and increase the clock speed. The authors acknowledge that these tactics may not be as necessary in a static business environment but, realistically, increasing uncertainties in all aspects of the business workplace and marketplace will soon require businesses to adapt in order to succeed.

Also advocating for adaptability, Rud (2010) encourages organizations to find a process that allows for structure within chaos. She acknowledges that, as the business environment is changing, organizational structures are changing from the traditional hierarchical structure to “an organizational chart that is very nonlinear…bear[ing] more resemblance to a network of relationships or groups of overlapping circles” (p. 86). Along with these new structures will be shared visions, team learning, mental models, personal mastery, and systems learning—all occurring as an ensemble rather than as individual, separate components. Such a model allows for a better flow of information and leads to increased resiliency and innovation.

While a push for organizational adaptability is clearly present, the literature also acknowledges how an adaptive leadership style is also important for individuals. Adaptability has been addressed in the management literature for some time through the Situational Leadership Model (Hersey and Blanchard, 1969, 1977, 1982, and 1988). As a managerial philosophy, the Situational Leadership® Model has been widely adopted by practitioners
(Butler and Reese, 1991) to encourage leaders to choose the appropriate behaviors from four leadership styles. The four styles are found in a two-dimensional space with axes labeled “task behavior” and relationship behavior.” The appropriate style is chosen according to the “readiness” of subordinates being managed (Hersey and Blanchard, 1988).

Hersey and Blanchard, the creators of the Situational Leadership Model, suggest that the extent to which a manager chooses and uses the appropriate management style that matches his or her subordinates is “adaptability” (1988). They created a measure for manager’s adaptability called the “Leader Effectiveness and Adaptability Description” (LEAD) (Hersey and Blanchard, 1977), which was a start at bringing the focus of adaptability into the literature. However, the LEAD measure’s validity has been questioned (Butler and Reese, 1991) and has received controversial empirical support in the literature for the “high-high” method that it recommends (Larson, Hunt, and Osborn, 1976; Nystrom, 1978; Schriesheim, 1980).

In practice, Hersey and Blanchard’s Situational Leadership Model, now revised to Situational Leadership II, continues to be “the world’s most taught leadership model for more than 30 years” (Blanchard, 2014). The model’s focus on “developing leaders who excel at goal setting, coaching, performance evaluating, active listening, and proactive problem solving” (Blanchard, 2014) is indicative of a strong emphasis for managers to be adaptable.

Calarco and Gurvis (2013) suggest that, “adaptability is no longer a nicety or a coping mechanism. Adaptability is a leadership imperative” (p. 10). Considering antecedents to adaptability, they parallel adaptability to flexibility and say that the three elements of adaptability are cognitive flexibility, emotional flexibility, and dispositional (or personality-based) flexibility. Cognitive flexibility encourages the use of a variety of mental frameworks and thinking strategies. Emotional flexibility enables managers to vary their approach when dealing with their
own emotions, as well as with the emotions of others. Finally, dispositional flexibility allows managers to simultaneously remain optimistic and realistic. They argue that adaptability can be learned and developed, but that at least two of these three elements must be present for a manager to be perceived as adaptable.

Within the sales management literature, sales manager adaptability has not been examined directly; however, the related field of personal selling has extensive research on what has been established as “adaptive selling” in buyer-seller relationships. Thus, this dissertation makes a reasonable extension to explore a sales manager’s adaptability in the sales manager-sales force relationship. Adaptability can occur in the way that sales managers make plans, garner motivation, set quotas, establish trust, provide training or support, evaluate, and structure compensation for the members of their sales force. The key to adaptability here is the sales manager’s ability to self-monitor interactions with his or her sales force and to make adjustments as needed.

The seminal work on salesperson adaptability is that of Weitz, Sujan, and Sujan (1986), in which they create an adaptive selling framework. Adaptive selling is defined as “the altering of sales behaviors during a customer interaction or across customer interactions based on perceived information about the nature of the selling situation” (Weitz, Sujan, and Sujan, 1986, p. 175). Their framework shows that salespeople can take the opportunity to gather information so that they can develop and deliver a sales presentation that is tailored specifically to each customer. During the sales presentation, customer reactions may be observed and, if deemed necessary by the salesperson, strategies can be quickly adjusted to better suit the customer. Adaptability behaviors have been established in the sales literature as important for buyer-seller relationships to allow not only products, but also salespeople, to be presented in the most

Bridging aspects of adaptive selling into the context of the sales management is another focus of this dissertation on managerial behaviors. While control strategies and trust in the sales force seemed to be intermingled, adaptability plays a slightly different role, as it is much more dependent on the sales manager’s perspectives, behavioral tendencies, and skills. This study considers how sales manager demonstrate awareness and flexibility in ever-changing environments to assess their adaptive management style.

**Contribution of Dissertation**

The contributions of this dissertation are relevant to both theory and practice, providing a more complete picture of how managers behave and how this conduct impacts the performance of their sales forces. The impacts of situations that arise in the selling environment are also studied by relating uncertainty stemming from a variety of sources to managerial behaviors. Of the three conduct variables identified, control and trust are key components of the existing sales management literature, and this dissertation’s findings should contribute to how we consider these behaviors. Bridging adaptive selling from the salesperson perspective to the sales manager perspective is also something that managers in the pre-study claim to do; yet the academic literature has not explored this. Additionally, assessing sales manager conduct at the level of a sales force unit adds complexity and realness to this academic study.

Additional significance of this research comes from the complexity of the study’s design—not only linking the behaviors of sales managers (i.e., conduct variables of control, trust, and adaptability) to performance of the sales force, but also by considering the influence of
situations that sales managers and their sales force face. Without considering the structural variables, it may seem reasonable to conclude that one particular managerial behavior will always lead to better performance when, in fact, recognition of the uncertainty that impacts managerial behaviors may help managers to react more appropriately. If reactions and behaviors should be changed—contingent on varied situations—this knowledge can help managers and their sales forces to attain higher performance.

**Research Objectives**

This dissertation’s specific research objective is to create and then empirically test a conceptual framework for how a sales manager should most-appropriately control, trust, or adapt to his or her sales force in response the situations and structural conditions that are faced. The “best” behaviors, which will be the dissertation’s recommendations to managers, are determined by considering sales manager performance levels with the assumption that optimal sales manager conduct will result in higher performance levels. In order to test this, control, trust, and adaptability will be integrated as potential conduct variables. The situations that a sales manager and his or her sales force face are based largely on the uncertainty that they must deal with, which is modeled through transaction cost analysis.

This dissertation is organized into five chapters that, together, provide the full details of this research study. Chapter 1 serves as a foundation for the remainder of the dissertation, introducing the research question and objectives while also providing background information of the extant academic literature relevant to the problem setting. Chapter 2 provides an in-depth discussion of how, theoretically, uncertainty serves to provide a framework for classifying antecedent variables (of the sales network’s structural setup and the external environment) to the
sales manager’s conduct (control, trust, and adaptability). Additionally, sales manager performance will be integrated into the conceptual framework as an end consequence to the sales manager’s chosen behaviors, in the face of the given uncertainty. Broad hypotheses will be presented relating the antecedents to the behavioral conduct variables, as well as relating the conduct variables to sales manager performance. Then, a discussion of a contingency-based approach will be provided, examining how the theoretically prescribed behaviors should link to performance, given the structural setups and uncertainties faced.

After the problem setting has been established and a conceptual model has been created, the last three chapters provide details on how the framework is operationalized into a study and tested. The third chapter discusses the research methodology that is used to empirically test the conceptual framework and hypotheses identified in Chapter 2. Details of data analysis and results of the empirical study will be provided in Chapter 4. Finally, the contributions and limitations of this dissertation, along with opportunities for future research, will be identified and discussed in Chapter 5. Two appendices accompany this dissertation. Appendix A contains survey measures used to empirically test the dissertation’s hypotheses. Appendix B relays results and findings from additional analyses that were conducted alongside this study, which are related to the dissertation’s model but are not directly included in it.
Chapter One References


Table 1-1

*Overview of Control Strategies*

<table>
<thead>
<tr>
<th>Behavior-Based Control Strategy (BBCS)</th>
<th>Outcome-Based Control Strategy (OBCS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- In-depth monitoring, training, and preparation for selling</td>
<td>- Little monitoring, training, and preparation for selling</td>
</tr>
<tr>
<td>- Long-term focus</td>
<td>- Short-term focus</td>
</tr>
<tr>
<td>- Emphasis on non-selling goals and building relationships</td>
<td>- Emphasis on immediate sales</td>
</tr>
<tr>
<td>- Firm shows commitment to salesperson; firm assumes risk</td>
<td>- Firm shows little commitment to salesperson; seller assumes risk</td>
</tr>
<tr>
<td>- Firm goals prioritized over personal goals</td>
<td>- Personal goals prioritized over firm goals</td>
</tr>
<tr>
<td>- Salespeople are intrinsically motivated</td>
<td>- Salespeople are extrinsically motivated</td>
</tr>
<tr>
<td>- Subjective evaluations</td>
<td>- Objective evaluations</td>
</tr>
<tr>
<td>- Salaried compensation</td>
<td>- Commission compensation</td>
</tr>
</tbody>
</table>

(Anderson and Oliver, 1987; Krafft, 1999; Oliver and Anderson, 1994)
CHAPTER 2: CONCEPTUAL FRAMEWORK

Using multiple frameworks that are unique to sales management, primarily borrowed from economics, this project brings a unique conceptual model to the sales management literature. The conceptual elegance through how these are integrated comes from utilizing both transaction cost economics and economic network theory within an overarching paradigm of structure-conduct-performance. The three managerial behaviors of control, trust, and adaptability will be the focus of this dissertation, making up the “conduct” aspect of structure-conduct-performance.

Antecedents and consequences of these conduct variables will also be specifically examined. For antecedents, the situational, structural makeup of the selling environment will be explored. The goods or services being sold will be identified, as well as the associated proprietary concerns or technology needs. Additionally, the uncertainty that exists in the selling environment will be examined. Focus on the external environment’s uncertainty stemming from competition, technology changes, or market conditions will be taken into consideration. Additionally, internal uncertainty arising from sales force characteristics such as sales force size and sales force diversity will be examined. The consequences to be examined will be the performances that result from the sales manager’s specific conduct. The main performance focus for this dissertation is of sales force performance. A lesser focus is given to the sales manager performance, which is overviewed in Appendix B.

The remainder of this chapter develops the conceptual arguments formed and tested in this dissertation. First, the conceptual frameworks to be used are explained. An overview of their existence of the literature is provided, followed by an explanation of how they are used to
fit this study appropriately. Then, the study’s constructs are linked together in theory building. Finally, formal hypotheses, based on extant theory, are proposed.

The Structure-Conduct-Performance Paradigm

In this dissertation, a paradigm of structure-conduct-performance is utilized at the sales force level rather than at the more traditional industry level. With an original focus at the industry level, the structure-conduct-performance paradigm’s basic assumption is that the industry’s economic performance is a function of the conduct of buyers and sellers in the industry, which, in itself, operates as a function of that industry’s respective (Mason, 1939; Bain, 1956). As acknowledged by Porter (1981), “the essence of this paradigm is that a firm’s performance in the marketplace depends critically on the characteristics of the industry environment in which it competes” (p. 610).

Within this framework, economic performance is assessed with respect to welfare maximization, or the optimization of resources to yield the highest value (McWilliams and Smart, 1993). Buyers and sellers’ conduct includes all of their sales-related activities, from research and development to pricing policies and inter-firm cooperation. The component of structure, which is the basis for conduct, entails the number of buyers and sellers, the size of firms, technology, barriers to entry, and the extent of vertical integration (Scherer, 1980, p. 4). These structural factors can be further influenced by concentration of buyers and sellers, market conditions and elasticity of demand, and barriers to entry (McWilliams and Smart, 1993).

Bain (1956) recognizes that firm size, competition, and market conditions can be influential to price policy, as well as forming a structure influential of the conduct of those participating in the market (buyers and sellers). The structure-conduct-performance is a static
model, viewing competition in equilibrium conditions (McWilliams and Smart, 1993) within a perfectly competitive market (McGee, 1988). One critical view of the structure-conduct-performance paradigm is that—because structure determines conduct (or the chosen strategy), which determines performance—conduct may be ignored and an industry’s structure should be able to explain its performance (Porter, 1981). McWilliams and Smart (1993) argue that because of the great focus on industry structure, especially with emphasis on entry and mobility barriers, the true potential for strategy research using the structure-conduct-performance paradigm is limited.

Scherer (1980) acknowledges that feedback effects can occur, such that market conditions are influenced by industry structure or conduct, and that an industry’s structure may be affected by strategy or conduct variables. Additionally, Panagiotou (2006) acknowledges the essential positions of conduct by discussing the “central role that managers have in creating, and changing, such industry dynamics” (p. 426). Accordingly, the current dissertation utilizes the structure-conduct-performance paradigm but transfers it to another dimension, such that structure, conduct, and performance are measured at the level of a sales force. Extending the structure-conduct-performance paradigm to the sales force level seems to be appropriate in order to adequately recognize and assess the conduct exhibited by sales managers when they are managing their sales forces, making adjustments for the structure and situations that their sales forces face, as well as acknowledging and measuring the resulting performance of their sales forces.

Following the essence of Bain (1956) and Mason’s (1939) structure-conduct-performance paradigm, this dissertation investigates how structure impacts conduct, how conduct affects performance, and also how conduct affects performance in the face of structural changes. The
use of structure-conduct-performance in this dissertation is more specific than referring to
generic “antecedent” and “consequences” as much of the literature does. While structure can be
viewed as an antecedent, it carries a more specific meaning. Similarly, utilizing performance as
an outcome or consequence factor is relevant because of its prevalence in business and
economics.

The remainder of this chapter will describe the conceptual model being proposed, as well
as the different conceptual frameworks that contribute to the overall model. Specific hypotheses
of relationships between structure and conduct variables and between conduct and performance
variables will be prescribed from theory. As a guide to accompany this chapter, Figure 2-1
shows an overview of the full conceptual model.

While the model displayed in Figure 2-1 aligns in a linear fashion with the paradigm of
structure-conduct-performance, it is essential to note that the primary focus of this dissertation is
on how sales managers behave—their conduct—and how the sales force performs as a result of
such conduct. Comparisons are made to determine the ideal, or most appropriate, behaviors for
sales managers to engage in when managing their sales force. The structural conditions that
sales managers and their sales forces face are also considered, but this consideration serves to
add clarity to the role of sales manager conduct impacting sales force performance. Accordingly,
the main link of the model, from conduct to performance, and its related hypotheses will be
discussed first. Then, the role of structure as an influencer of conduct will be considered.
**Linking Sales Manager Conduct to Sales Force Performance**

One of the most frequently identified measures in business research is performance. Performance measures may be made at the firm level, at a segment level, or at an individual level. Traditionally, evaluations of salespeople and sales managers have been based on sales-based ratios such as sales growth or sales to quota (Cron and Levy, 1987). However, this objective information is not easily accessible, and a shift from focusing entirely on sales volume has occurred during the transition from a sales orientation to a customer-focused orientation.

Throughout the literature (Churchill, Ford, Hartley, and Walker, 1985), performance levels for those in sales are often ranked relative to their competitors, how they compare to others working for their company, and with respect to how they meet expectations set by their superiors. For high performance, sales managers must be effectively managing their sales force (Weeks, Roberts, Chonko, and Jones, 2004). Thus, the conduct in which sales managers are engaging as they manage their sales force is of relevant study.

The first set of hypotheses in this dissertation proposes three hypotheses to assess the link from the sales manager conducts of control, trust, and adaptability to sales force performance. The study of performance in this dissertation is focused on measuring the sales force’s performance. This is unique to the literature, as the unit of analysis is generally individualized to the level of salesperson performance. In this study, the sales manager’s performance is also assessed; while no formal hypotheses are provided to this effect, findings linking sales manager conduct to sales manager performance may be found in Appendix B.
Control to Performance

Considering the effect that control utilized by a sales manager has on his or her performance, this project takes on an approach that is unique to the literature. Considering control strategies at an organizational level, Oliver and Anderson (1994) do not find any direct effects of control philosophies on performance outcomes of salespeople. Similarly, Lusch and Jaworski (1991) did not find any direct effects between control systems and performance of retail store managers. Instead, Lusch and Jaworski found that effects of control on performance are mediated by intervening states such as job tension. In this study, it is important to note that level of control is the consideration rather than the traditional type of control system. Behavioral- and outcome-based control strategies are generally viewed at a more corporate level, whereas this study links sales managers’ emphasis on control (no matter whether it is of a behavior-based or outcome-based strategy) to the sales force’s performance. While further study may investigate whether effects stem from a behavior-based or outcome-based focus, this dissertation proposes that a sales manager’s level of control affects performance in this way:

\[ H_{1A}: \text{A sales manager’s level of control will positively influence sales force performance.} \]

Trust to Performance

Considering the relationship between a sales manager’s trust in his or her sales force and the outcome performance measure of that sales force, this dissertation builds on extant literature. Salespeople’s trust in sales managers leads to performance indicators of commitment to the job, job satisfaction (Flaherty and Pappas, 2000), as well as less salesperson turnover (Brashear, Manolis, and Brooks, 2005). While the effects of trust in the other direction—from the sales manager to the sales force—has not been the primary focus of trust in the sales literature, it is
well established that trust can create cohesion in the workplace (Bass, 1985) and within the sales manager-salesperson dyad. Specifically, Martin and Bush (2006) find that these salespeople who feel empowered do perform better, especially when a customer-orientation is emphasized. Of a similar nature, this dissertation proposes that a sales manager’s trust in the sales force can impact their outcomes, such that:

\[ H_{1B}: \text{A sales manager’s level of trust in the sales force will positively influence sales force performance.} \]

**Adaptability to Performance**

As the 2011 Harvard Business Review article (Reeves and Deimler, 2011) suggests, adaptability can become a competitive advantage that helps firms to survive and prosper in challenging business environments. However, the utilization of adaptability as a corporate strategy must be enacted by individuals in decision-making roles. Throughout an organization, though, multiple players should be able to benefit by increasing their adaptability. Building on the adaptive selling literature, where salespeople are encouraged to be flexible when scenarios change in the selling process, this study examines sales managers’ tendencies to adapt their behaviors according to the situations they face and the diverse sales force with which they interact.

Expansive literature in personal selling encourages salespeople to adopt these adaptive selling behaviors (Brown, Mowen, Donavan, and Licata, 2002; Franke and Park, 2006; McFarland, Challagalla, and Shervani, 2006; Park, 2003) in order to secure repeat purchases (Grewal and Sharma, 1991), meet sales quotas (Ko and Dennis, 2004), and improve both customer-service satisfaction and sales performance (Ahearne, Mathieu, and Rapp, 2005).
Accordingly, it seems that sales managers must be able to adapt to optimize not only their own performance, but also the performance of those whom they manage. The adaptability of the sales manager is a new focus introduced by this dissertation to the sales management literature. This study investigates whether or not managers adapt, as well as under what conditions managers adapt. Additionally, the impact that adaptability has on sales force performance is assessed.

\[ H_{1C}: \text{A sales manager’s level of adaptability will positively influence sales force performance.} \]

Overview

The hypotheses linking the sales manager behavioral variables of control, trust, and adaptability to sales force performance form the foundation of this dissertation. Assessing performance based on the sales manager’s level of control is a unique view that extends beyond which type of control system (i.e., behavior-based or outcome-based) the sales manager’s firm might enforce. The link from a sales manager’s trust in his or her sales force to that sales force’s performance is also a new assessment, as trust is typically portrayed in the literature from the salespeople toward the sales manager. Finally, measuring the impact of a sales manager’s adaptability on sales force performance is a nice extension from the personal selling literature to sales management. While management literature has emphasized flexibility and adaptability, this study operationalizes sales manager adaptability in a way that nearly reflects the related adaptive selling behavior for salespeople by considering adaptability relative to other people as well as changing situational factors. These three hypotheses each provide a unique contribution
to the sales management literature but, even more importantly for this dissertation, they also form a foundation for additional analyses.

**Linking Structure to Sales Manager Conduct**

Studying the impact that structural variables have on sales manager conduct helps to explore the conditions under which sales managers behave in certain ways. Structural variables entail situations or conditions that the sales manager or the sales force face during the selling processes. In particular, the situational variables studied in this model are the investments related to the product being sold, uncertainty faced within the greater selling environment, uncertainty stemming from diversity of the sales force, and size of the sales force. All of these variables differ among sales forces, so it is important to establish their impact on how sales managers react—what their chosen conduct is. These structural (or situational) variables are modeled in this dissertation by the use of theory from transaction cost economics.

Williamson’s (1975; 1985; 1986) transaction cost economics forms a foundation for the consideration of many managerial governance decisions. Transaction cost economics has two behavioral assumptions, bounded rationality and opportunistic behavior, which are operationalized as three sources of transaction cost. Within the sales literature, much of the transaction cost analysis (TCA) focus has been related to buyer-seller relationships and examined from the buyer’s point of view and considers the buyer’s control over the seller more than characteristics of the actual relationship as a whole. In this project, the uncertainty that is present in TCA is the focus, but this is considered in sales manager’s relationships with the sales force.

One of the most-cited TCA articles in marketing, and also one of the first papers to empirically look at TCA and confirm its basic premises, is Anderson’s (1985) exploration of
whether a firm should employ a direct sales force or hire outside agents. Focusing on the uncertainty with internationalization linked to market conditions, Anderson examines sales force characteristics and their relationship with the sales manager to consider actual organization and management of the sales force. Anderson (1985) used TCA to determine deciding factors of whether salespeople should be direct employees or outside agents.

In their 1986 paper, Anderson and Gatignon utilized TCA as a framework for proposing foreign entry mode. In both of these papers, as with most sales research applying TCA, the main emphasis is placed on uncertainty related to the transaction. Since sales managers have such limited knowledge about absoluteness of the environment, uncertainty of conditions and of potential outcomes will be looming on their control decisions (Prater, Biehl, and Smith, 2001). Similar uncertainty results from limited knowledge about differences present in their salespeople. Anderson and Oliver (1987) refer to the TCA framework as one of the “economic theories of control” (p. 77) for sales management and recognize the three components of (1) uncertainty, (2) transaction specific assets, and (3) frequency.

Utilizing a TCA framework, uncertainty can be found anywhere in the sales process and selling network. Uncertainty can be internal, external, or a free-riding issue. Internal uncertainty could arise from the monitoring of salespeople by their sales manager, which may result in uncertainty due to difficulty determining performance simply by observing output. External uncertainty arises from the market and is beyond the control of sales managers, such as political risk, competition, or economic fluctuations. Variability of performance, the unknown distribution of potential outcomes, and the uncontrollability of outcomes contribute to the uncertainty that managers face when making governance decisions such as control strategy orientation. The free-rider issue of uncertainty brings up that salespeople may be able to act
opportunistically and receive benefits at the cost of the selling firm (Anderson and Gatignon, 1986).

When evaluating the component of transaction specific assets, one must consider the transferability of physical assets, human assets, site-specific assets, or dedicated assets to other relationships (Anderson, 1985; Williamson, 1975; 1985; 1996). Whether the investment is high or low technology, as well as the investment required to protect these assets, must also be examined. In the context of sales processes, a firm’s commitment to the product being sold and to the quality of the buyer-seller relationship are important. Also noteworthy, though, are the needs a firm has to protect proprietary information and processes. These precautions increase costs and concern for managing transactions. How a manager advises and guides his or her sales force to optimize transactions, while minimizing potential for loss, is important to consider for the firm’s success as well as for the sales manager’s success.

The component of frequency considers how often a transaction will occur. Estimating the regularity of transactions helps to identify necessary components, expected benefits related to experience gained as transactions are made, and to determine potential longevity of the relationship formed around these transactions. Transactions are relationship builders, and the frequency with which salespeople interact with their buyers will influence the specific relationships. Because it increases familiarity, the frequency of interactions through repeat transactions is likely to influence business relationships. However, frequency does not receive much basis for strategic decision making, likely because the frequency is somewhat assumed in selling organizations (Anderson and Gatignon, 1986; Krafft, 1999).

Utilizing the TCA framework, the current project considers the uncertainty resulting from a sales force’s size and diversity to identify the most fitting management strategies. In this
dissertation, the focus will be shifted to the sales manager’s perspective, focusing primarily on the uncertainty that he or she faces. Additionally, the transaction specific assets will be considered, relevant to what the sales force is selling. Frequency will not be addressed, as it would be a consideration relevant only to a new sales force rather than an existing sales force. Nine formal hypotheses and their theoretical support are explained below, which link TCA’s structural components of transaction-specific assets and uncertainty to the managerial conduct variables of control, trust, and adaptability.

The Role of Uncertainty on Managerial Conduct

The source of transaction cost receiving the most focus in this dissertation is uncertainty. Specifically, this dissertation investigates external and internal uncertainty that occurs throughout the sales network. The external environment plays a noteworthy role in uncertainty when considering the whole sales force and selling processes. While predictions can be made about the market, the environment is still rather uncertain and full of unknown characteristics. This uncertainty also affects the decisions and actions of sales managers because they want to maximize their decisions based on what they do know. Internal uncertainty can be identified when considering attributes such as the diversity of the sales force and the sales force size. When conditions are unknown or unfamiliar, sales managers struggle more to manage. Thus, TCA is suitable to address both the internal and external uncertainty for governance decisions.

The fundamental assumption of the dissertation is that, as the selling environment varies and the sales force becomes more diverse, uncertainty increases, which makes management of the sales force more complex. Aligning with the hypotheses proposed previously in relation to transaction specific assets, propositions will be extended further through the TCA framework to
address uncertainty. First, external uncertainty will be discussed. Then, internal uncertainty will be explained using the theoretical foundation of economic network theory. Finally, three additional hypotheses propose how uncertainty may impact a sales manager’s conduct.

**External Uncertainty**

The external environment that the sales force must face on a regular basis also factors into the type of governance chosen. When dealing with multinational salespeople who may be working in different host countries, market forces that are outside of their control—such as political risk, economic fluctuations, or governmental instability—may also bring more ambiguity into the sales manager’s view and cloud the decision for choosing control strategies (Anderson and Gatignon, 1986). Heavy competition, the ability for new entrants to the market to quickly become competitors, and technological advancements also bring a threat of uncertainty for the future (DeSarbo, Di Beedetto, Song, and Sinha, 2005).

Because of the increased risk related to the costly production of specialized goods (Selladurai, 2004), this effect is likely to be accentuated when the products are customized or viewed as more short-term. When external uncertainty is high, managers will want to maintain their existing sales force, which already possesses the product-specific knowledge, to reduce costs associated with the learning curve of new salespeople. Additionally, sales managers will want to be more involved in the selling process to better monitor their sales force. As these types of external uncertainty arise and the environment becomes more risky, it is probable that sales managers will prefer to have a tighter rein over their sales force to ensure viability of the firm in the long run.
**Internal Uncertainty**

Internal uncertainty can stem from many arrangements made within the firm, such as the delegation of decision-making to salespeople or the extent of monitoring by sales managers. Depending on delegation and supervision, it may be difficult for sales managers to determine performance simply by observing output. This is where the decision of how to choose between or how to blend the two control strategies becomes such an important issue for dealing with internal uncertainty. These factors are likely to have an even larger presence of uncertainty when sales forces are diverse with respect to a variety of variables such as gender, tenure, experience, age, culture, and nationality. In order to acknowledge and relate to their sales force, which will be made up of a diverse group of salespeople, sales managers must address uncertainties that they will face when designing and enforcing management strategies.

To accomplish an adaptive management style, sales managers must adapt to suitable levels of control and must communicate well, setting clear goals with their sales force. Differing sales force sizes and diversity levels of the sales force can lead to varied management approaches. With this in mind, relating causes of internal uncertainty to sales manager actions can be modeled through economic network theory.

**Economic Network Theory**

Relevant in marketing strategy because it identifies product utility at the market level, economic network theory examines how changes in a network influence customers’ benefits of each product. This method of portfolio management advocates that the utility a user gains from the consumption of a good increases with the number of other agents consuming the good. As the network of users increases in size, utility will also increase—resulting in what is called a
positive network externality. If utility decreases as more users join the network, then the externality is negative. These network externalities stem from three sources: customer base size, compatible product availability, and quality of post-purchase service (Katz and Shapiro, 1985).

Observable in many settings, the sources of externalities of size and compatibility can be examined within the context of a firm’s sales relationships. While Katz and Shapiro (1985) assume a network of products forming a portfolio, this dissertation speaks to the network of salespeople, examining the size and compatibility of a sales force that operates as a portfolio in which all salespeople in the sales force are linked together by a single sales manager. The quality of post-purchase service is a brand equity measure, which cannot be operationalized in a straightforward manner for the sales management-sales force context. The size of the sales force portfolio is reflected by how many salespeople are in it. Size will be discussed on its own later in this chapter, as it carries with it some very unique aspects. Concluding the discussion on uncertainty are compatibility and similarity comparisons, which stem from the diversity of the sales force and how well adaptations are made.

Compatibility and Similarity

Again paralleling portfolio theory to the sales manager-sales force context, the compatibility of the sales force is apparent through the feature of the portfolio that links all of the products together or, in this context, the similarities common across the sales force. Similar units of a portfolio reduce risk and search costs and ease decision making (Mitchell, 1995). This dissertation surmises that similarities across the group of salespeople in the sales force portfolio will enhance the clarity of the sales manager’s role. Dissimilarities, on the other hand, will cause the sales manager to incur additional uncertainty. A low diversity rating should indicate
similarities across members of the sales force portfolio, such that the sales manager’s role should become clearer as uncertainty is reduced and, thus, reassure the sales manager’s management decisions.

However, salespeople are different. Their differences should, intuitively, be able to add some value to the sales force. Research suggests that when different but compatible products are bundled, consumers derive higher utility from each product (Balasubramanian, Raghunathan, and Mahajan, 2005). Bundled products are perceived to perform better than non-bundled items, as they are uniquely designed to go together (Lawless, 1991; Wilson, Weiss and John, 1990). A sales force may bundle together diversity with respect to age, gender, tenure, experience, culture, and nationality of each salesperson in the sales force. Adapting this to the sales force portfolio and considering the effect that bundling different salespeople may have, this dissertation proposes that the sales force will attain higher utility from each salesperson, as the sales manager’s likelihood to adapt increases.

The multinational aspect is very interesting because different cultures are known for different types of managements (Jung and Avolio, 1999). There are many perceptions of different cultures that contribute to the uncertainty experienced by sales managers. For example, some cultures are known to be more team-oriented and to place importance on working together, while others pride themselves in being independent leaders and rising to the top. Cultures can also vary by common business practices, which would influence how salespeople are expected to behave in different cultural contexts. Many sales relationships are built especially on bribery in a number of cultures. Because of the wide range of cultural differences, sales managers must be able to adapt to realize and meet the needs of their sales force, no matter diversity—with respect
to culture, nationality, age, gender, tenure, or experience—of their salespeople, similar to how Weitz, Sujan, and Sujan (1986) advocate adaptive selling in the buyer-seller relationship.

Whatever type(s) of diversity is(are) present, the way salespeople desire and expect to be monitored and evaluated does not always align with the way managers may prefer to monitor or evaluate their sales forces (Cravens, et al., 2004). Thus, the sales force diversity will be a determining factor of the control strategy choices that sales managers make. To some extent, these explanations and cultural comparisons can be accentuated with the use of Hofstede’s (1983) cultural dimensions—however, this rationale would only be appropriate at the level each individual salesperson. This dissertation considers the sales force as a unit of analysis, such that many cultures may be represented in a sales force and the sales force’s overall diversity level is considered rather than distinct, individual cultures.

It is clearly evident that size and cultural diversity should affect the sales network and the way a sales manager relates to and reacts to his or her sales force. It is important that the sales manager is able to adapt to the sales force in the face of uncertainty. A sales managers’ ability to adapt to sales force size and cultural differences will be similar to how control strategies are chosen and enacted by sales managers as well as how they are perceived by salespeople.

Taking into consideration the size and diversity of a sales force, which creates internal uncertainty, as well as the external uncertainty throughout the selling environment, these hypotheses suggest how a sales manager may act. While uncertainty can arise internally or come from the external environment, sales managers must react to uncertainty at large. Managers will feel the need to enforce varied levels of control under different situations, since uncertainty they face should lead to a desire for more influence over the sales force and selling processes. Accordingly, the following three hypotheses link uncertainty to expected managerial behaviors:
\( H_{2a}: \) As the level of uncertainty in the selling environment increases, a sales manager’s level of control will also increase.

\( H_{2b}: \) As the level of uncertainty in the selling environment increases, a sales manager’s level of trust in the sales force will also increase.

\( H_{2c}: \) As the level of uncertainty in the selling environment increases, a sales manager’s level of adaptability will also increase.

**Transaction Specific Assets Affecting Managerial Conduct**

The nature of buyer-seller relationships is impacted by the type of good or service being sold and its characteristics. As a result, the transactions in which the sales force is engaging are also likely to influence a sales manager’s behavior. Extant literature considers these “transaction specific assets” with respect to whether the asset is high or low technology and how often or how many times the transaction will be made. When goods or services being sold have a high technical knowledge, the cost of training and time spent preparing the sales force to sell can be high (Anderson and Oliver, 1987).

Since control strategies may be based entirely on end results (outcome-based control) or entirely on behavioral performance that includes non-selling activities (behavior-based), it is essential to consider what the transaction involves. Similarly, because of the costs associated with high-investment sales, the retention of salespeople is important. Extant literature suggests that behavior-based control systems have more firm commitment and less turnover than do
outcome-based control systems (Anderson and Oliver, 1987). Also, Anderson and Oliver suggest that when high technical knowledge is required, relationship-building and non-selling activities will be valued more, as increasing risk can be monitored closely. On the other hand, transactions involving low technical knowledge should not necessitate such a high level of training or monitoring for the sales force and, instead, sales managers may not need to be as detailed in their involvement with the sales force. If the manager expects many future transactions and wants the sales force members to remain active with the selling firm, he or she should demonstrate such a commitment to the sales force through more integrated control, such that:

\[ H_{3A}: \text{As transaction specific assets necessitated by a firm increase, a sales manager's level of control will also increase.} \]

When the sales force’s transactions involve products requiring customization or follow-up activities, the sales force will need to expend a larger investment per transaction. With this, they will benefit from sales managers providing additional support and an extended focus. When the products being sold have high proprietary needs, or when the selling process itself requires much confidentiality, a sales force faces additional risk and needs to be protected. With this imposed risk comes an added responsibility for the sales manager. The nature of transactions will affect the sales manager’s perceptions and actions toward the sales force, as well as the degree of caution with which the manager approaches his or her sales force. Salespeople will have much more responsibility when transaction specific assets are high and much is at stake.
Accordingly, when such risks are high, sales managers must believe in their sales force to handle the uncertainty. Given the increased risk that occurs when transaction specific assets are high:

\[ H_{3b}: \text{As transaction specific assets necessitated by a firm increase, a sales manager’s level of trust in the sales force will also increase.} \]

The transaction duration is also important to consider, with respect to the expected relationship resulting from these transactions and the duration of transactions that are expected to occur over time. When the product life cycle is known to be limited or the good is known to only be available for a short amount of time, fewer special considerations for the long run generally are made and, instead, sales volume may become the salesperson’s main objective. On the other hand, if there is potential for a long-term relationship selling the good and many future transactions, the expectation for after-sale follow-up activities will be valued more by the firm (Oliver and Anderson, 1994).

Similar to how it is essential for the salesperson to determine a time orientation when interacting with buyers (Ganesan, 1994), the focus of a sales manager’s goals—whether long-term or short-term—will impact the way a manager interacts with the sales force. Especially when the nature of the transaction is highly-involved such that there are high stakes of proprietary concerns, the sales managers must make sure that they are working together well with their sales force. They must insure that similar approaches are taken by all members of their sales force. Sales managers must enforce stringent guidelines and expectations to maintain confidentiality within buyer-seller relationships and minimize the vulnerability of their salespeople. In dealing with classified products, sales managers will be less flexible in the
approaches they take in order to maximize their sales force’s success. This suggests that the nature of transactions will affect the sales manager’s adaptability toward the sales force, such that:

\[ H_{3C}: \text{As transaction specific assets necessitated by a firm increase, a sales manager’s level of adaptability will also increase.} \]

**Network Size Influencing Managerial Conduct**

Considering sales management relationships, the network is composed of the sales manager and all members of the sales force. The network size can be operationalized as the number of salespeople in the sales force. Portfolio management assumes that as the size of the sales force increases the benefit derived from each salesperson would increase, and adding a new salesperson to the sales force increases the sales manager’s stake in the sales force portfolio. Following economic network theory, the greater the sales manager’s stake in the portfolio, the more commitment the sales manager will have to the sales force. However, an increase in size also implies that there must be an optimal level to exhibit of managerial behaviors for the sake of efficiency.

In all cases of increasing sales force size, one must acknowledge that, as sales force size increases, uncertainty faced by the sales manager will also grow. Given this, sales managers are likely to choose the type of control strategy they will use to manage the sales force based on its size. With larger sales forces, efficiency may be more maintained by utilizing a control system with identical objective outcome measures, whereas small sales forces may allow for more individualized attention and interactions as would be relevant in behavior-based control systems.
Considering a sales manager’s level of control (rather than type of control), the level of control is likely to vary, such that levels of control will have to decrease with size. Similarly, higher levels of trust are more natural and easier to manage with smaller groups. At some number of salespeople the sales manager cannot adapt to each of the individuals in the sales force and the unique situations they face, so they must instead standardize how the sales force is managed. Based on this rationale, the following three hypotheses are made about the conduct of sales managers, given changes in sales force size:

\[ H_{4A} : \text{As the size of a sales force increases, a sales manager’s level of control will decrease.} \]

\[ H_{4B} : \text{As the size of a sales force increases, a sales manager’s level of trust in the sales force will decrease.} \]

\[ H_{4C} : \text{As the size of a sales force increases, a sales manager’s level of adaptability will decrease.} \]

**Overview**

Building on existing frameworks in transaction cost analysis and economic network theory, nine hypotheses were developed to suggest how sales managers will react to a variety of situations. Transaction cost analysis models uncertainty and transaction specific assets, both which pertain to the products being sold and a larger selling environment, as well as internal uncertainty that can be modeled further through economic network theory to address the
diversity of a sales force as well as the size of a sales force. As relationships are established to determine how sales managers react to the structure they’re given to work with, this conduct can be evaluated relative to sales force performance (as suggested earlier).

**Moderating Role of Structural Variables**

The primary emphasis of this dissertation’s study is on the conduct that sales managers engage in, as well as the impact that their conduct has on their sales forces’ performance level. However, it is beneficial to provide a more realistic and fulfilling model that stretches beyond just the relationships from sales manager conduct to sales force performance and to address why conduct might change. Certainly, even though the four sets of hypotheses proposed in this chapter are expected to be supported, there are always conditions where change occurs. Consideration of structural variables helps to complete the model, transforming it from conduct-to-performance to that of structure-conduct-performance. Extending from this, the emphasis that structural variables have on the relationship from conduct to performance provides another unique investigation. A moderating effect of these structural variables is expected, such that sales managers must change their behaviors to react to situations they face; in doing so, the effects on sales force performance may be altered. The final hypothesis of this dissertation is exploratory in nature, making a comparison of the relationship between conduct and performance when the structural variables are and are not considered.

\[ H_5: \text{ Differing levels of situational factors will have an impact on the influence of the model’s relationships from sales manager conduct to sales force performance.} \]
Conclusion

In this chapter, a full conceptual model was developed to relate sales managers’ behaviors, their sales forces’ performance, and the situations that they face. The structure-conduct-performance paradigm was used as a guiding framework to provide the conceptual skeleton of how the variables would be related. Three primary constructs from the sales literature were used to operationalize sales manager behavior. These conduct variables are the sales manager’s level of control, trust in the sales force, and adaptability. Relative to the conduct, a prime outcome variable to consider is the performance of the sales force being managed. Then, structural variables in the selling process were identified with respect to uncertainty and transaction specific assets through the conceptual framework of transaction cost analysis. In total, 13 hypotheses were formally stated, linking managers’ behavior to sales force performance and then linking structural conditions to managerial conduct. Finally the role of situational factors was discussed, acknowledging that situations will vary a sales manager’s control as well as, possibly, the impact that control has on the sales force’s performance. All constructs are incorporated into a model with hypotheses that can be tested empirically. The following chapter serves to explain how the constructs are measured, how data is collected, and how the hypotheses will be tested.
Chapter Two References


Figure 2-1. Conceptual Model

**STRUCTURE** → **CONDUCT** → **PERFORMANCE**

**Selling Environment**
*Transaction Cost Analysis*
1. Uncertainty
   - External, Internal
2. Transaction Specific Assets
   - Product, Investment

**Sales Manager Behaviors**
1. Control
   - Outcome-Based
   - Behavior-Based
2. Trust
3. Adaptability

**Performance Measures**
1. Sales Force Performance
2. Sales Manager Performance
   *(Appendix B)*

**Sales Force**
*Economic Network Theory*
1. Compatibility/Diversity
   - Age, Gender, Tenure, Experience, Nationality & Culture
2. Size of Sales Force
CHAPTER 3: RESEARCH METHODOLOGY

In this chapter, the sampling procedure and survey methodology used to test the hypothesized relationships identified in Chapter 2 are discussed. As the data used in this survey will be entirely survey-based, this chapter has two major sections. First, the research design and sampling method will be explained. Sampling efforts to collect data from sales managers will be identified, and then the respondent sample will be described. Finally, the survey design and a discussion of selected measures will be provided. The methodology to analyze a sales manager’s use of control, trust, and adaptability—in the face of uncertainty—will be presented, as well as an overview of performance measures and structural characteristics that may impact the relationship between managers’ behaviors and resulting performance. Finally, the level of analysis—the sales force—will also be discussed.

Research Design

In order to test the hypotheses proposed in Chapter 2, a questionnaire survey was administered to sales managers representing a variety of firms and industries. Additionally, the survey was provided to sales managers in seven different countries—primarily in the US, but also in China, Hong Kong, Taiwan, Singapore, Malaysia, and India. All targeted sales managers use English as their primary language for their work. The intent of this widespread distribution was to capture the perceptions of sales managers, without regard to the preferred choice of sales governance for separate and diverse sales organizations. The inclusion of international respondents provides geographic diversity to have variations in regional markets served.
Additionally, international respondents increase the cultural diversity in the sample as well as in the sales forces the respondents manage.

**Pre-Testing**

Before distributing the questionnaire for data collection, pre-testing was conducted. A sample of four people was selected to review and pre-test the survey and measures. Three of the four were marketing academics with past careers in sales, and the fourth person was a practicing sales manager. These subjects were asked to complete the survey and provide comments with respect to length of time to complete, instruction clarity, question clarity, and overall survey flow. Each of them completed the survey and also provided qualitative input about their reactions to the survey.

Feedback from the pre-test participants was valuable, and the survey was adjusted to meet their recommendations. The wording of one block of questions was changed to reduce ambiguity, and the survey format was made more concise. Additionally, some questions requesting sales force demographics were removed due to the amount of time and effort required to provide the requested information for minimal added value. Based on the feedback attained, the revised survey was finalized and made available online through Qualtrics. The survey was expected to take 20 to 25 minutes for each sales manager to fully complete the questionnaire.

**Survey Recruitment and Sampling Procedure**

The appropriate respondents to take the survey were individuals employed as sales managers and actively managing a group of salespeople (i.e., their sales force). Respondents were recruited to participate in this study in three different ways. No matter their recruitment
source, all respondents received a recruitment message from the study’s principal investigator that included a web link to take the survey as well as a reminder email. All respondents completed the survey by utilizing an online questionnaire created in and available through Qualtrics. The use of this study was approved through the Institutional Review Board (IRB), and respondents were made aware of this in the recruitment message. Descriptions of the three variations of survey recruitment follow.

**Recruitment via Employer**

Many sales managers were recruited to participate in this study through cooperation from C-level business leaders at their firms. In these cases, a high-level employee—in particular, the CEO or Senior VP of Sales—agreed to allow their company to participate in the study. Each of these people personally notified their company’s sales managers of the survey. Since the survey was available online, these firm leaders forwarded a recruitment message and survey link to their firms’ sales managers via email. Firm leaders encouraged participation in the study while acknowledging that all responses would be confidential, never linked to the source, and only reported in aggregate. Respondents typically completed the survey within four days. Unless all sales managers completed the survey, a reminder email with the survey link was sent two weeks after the initial recruitment email.

Through this recruitment method, response rates were very high. These participating firms operate primarily in a business-to-business (B2B) context and represent a variety of industries. One firm, of which 100 percent of its US-based sales managers participated in the survey, is a large footwear and apparel manufacturer who sells primarily to retailers. Another participating firm, with an estimated response rate of 70 percent of all sales managers in the
Greater China area, represents the technology industry while maintaining a hold in the top 25 of Fortune 500 rankings (Fortune, 2014a). Additionally, several sales managers were recruited in this manner from a Global 500 company in the healthcare industry (Fortune, 2014b). Both firm leaders and survey respondents were invited to provide their email addresses to the principal investigator if they would like to receive a specialized report of findings from this research study.

**Recruitment via University Sales Centers**

Sales managers were also recruited to complete the survey through faculty involved with two university sales centers (both of which are members of the University Sales Center Alliance). Faculty members from sales programs in the Midwest provided contact from the principal investigator of this study to their network. While the principal investigator was not given the distribution list, contact information, or even number of contacts recruited, the cooperating faculty member forwarded both the recruitment email and web link for the survey to a listserv. At both universities, the listserv members were asked to recruit sales managers at their organizations to complete the survey, although the contacted individuals may not be sales managers themselves. Because of this, the recruitment message requested that they forward the message on to their companies’ sales managers.

Each of the universities followed their initial contact with a reminder email encouraging sales managers’ participation in the survey. All survey respondents were invited to provide their email address, which would not be linked to their responses, if they would like to receive a specialized report of findings from this research study. Given the nature of this distribution procedure, that email recipients could forward the recruitment to any number of sales managers,
a precise response rate is not available. However, a response rate over 50 percent was attained for responses relative to the number of emails distributed.

Recruitment via Personal Network

The third way in which sales managers were recruited to participate in the survey was through the principal investigator’s personal network. By contacting colleagues with sales experience, business contacts who manage companies, and a few company owners, the principal investigator asked her network to extend the survey to sales managers in their companies. Likely due to the social nature of the “ask,” these individuals were willing to forward the recruitment email message and web link, as well as a reminder, to sales managers in their organizations. Sales managers recruited through this effort represented two additional firms on the 2013 Fortune 500 list (Fortune 2014a), as well as two firms on the 2013 Global 500 list (Fortune 2014b). This recruitment method led to responses from sales managers in industries as diverse as nutritional supplements, castings and moldings, and oils and lubricants.

Overview of Survey Response

In total, 178 sales managers participated in the study, of which 123 (69 percent of those participating) provided complete and usable responses. Most of the incomplete responses did not go beyond the first page of the questionnaire; thus, it appears that they wanted to see what the survey would be like before completing the survey at a later time. These 123 sales managers in the final sample were directly managing a B2B sales force at the time of survey completion. They represent a variety of industries, as well as a wide range of transacted products and services. Most of the sales managers are employed by a top firm, and each was asked to
complete the survey through a personal connection—be it a manager, a friend, or a university they may have attended. Because of this, participant motivation is thought to be higher than motivation levels typical in online survey research (Yun and Trumbo, 2006). This is indicated through the quick response, that most sales managers responded by completing the survey within four days of receiving their recruitment email. The data appears to be of high quality.

**Sample Characteristics**

Descriptive information was asked of the sales managers with respect to demographic characteristics, the sales force they manage, and the firms they represent. These statistics are summarized in Table 3-1 for the sales manager, Table 3-2 for sales force characteristics, Table 3-3 for characteristics of the respondents’ firm, and Table 3-4 for a listing of represented industries. All statistics are discussed below.

Respondents were predominantly male (76 percent) and of Caucasian (72 percent) or Asian (26 percent) ethnicity. Extant research acknowledges a low percentage of minorities in business-to-business selling (Marshall, Stamps, and Moore, 1998; Moncrief, Marshall, and Lassk, 2006), so the participation of sales managers from the Greater China area adds valuable insights to this study. Additionally, this percentage of female respondents is notable, as females are often identified as an underrepresented group in sales (Yang, Hansen, Chartrand, and Fitzsimons, 2013). Eighty-nine percent of respondents had at least an undergraduate degree, and 25 percent of them had a master-level degree. The mean number of years managing their current sales force was six years, with a range from zero full years to 32 years. The demographics of this sample provide evidence that, at the aggregate level, the sales manager respondents are mature, professional, experienced, and more diverse than many samples used in sales research.
The sales forces that the respondents manage have, on average, 32 salespeople. One respondent, however, manages 1,500 salespeople; upon adjusting this measure by removing this outlier, the average sales force size was 20 salespeople per sales manager. On average, three nationalities were represented within a sales force. The mean percentage of domestic sales per sales force was 93 percent, and respondents’ salespeople were responsible for an average of 569 accounts each.

Respondent firms employed, on average, 101,856 employees. These firms had been in business for an average of 67 years, with a range from two years to 180 years. At the firm level, there was an average of 7,151 sales teams per firm with a mean of 384 salespeople per sales team. The average annual firm sales volume was over $28 billion (USD). Firms served an average of 20 markets besides the US domestic market, and 74 percent of company sales were domestic.

The sales practices of these firms were also identified. Considering formal training programs, 77 percent of respondent firms require a program for salespeople and 75 percent require a program for sales managers. Eighty-five percent of the sample’s firms mandate a specific compensation plan for their salespeople. On average, 57 percent of this plan is salary-, 33 percent is commission-based, and 10 percent is bonuses and incentives. Allowing for multiple responses, approximately half of the responding firms sell to resellers (53 percent) and to end users (51 percent), while a large majority sells to other business customers (74 percent).

The firms represented by respondent sales managers were very diverse, especially with respect to the industries in which they were selling. Sales managers were asked to select what industries their firms represented, with an allowance for multiple responses. The most heavily represented industries included firms in business services (33 percent) and telecommunications
(23 percent), but other common industries represented were publishing/printing (17 percent), transportation (17 percent), electronics (16 percent), appliances (16 percent), computer/software (15 percent), financial services (11 percent), and healthcare (11 percent). Additionally, 37 percent of respondents listed “other” industry representation, which were identified multiple times by the sales managers as footwear and apparel, food and beverage, sporting goods, chemicals, oil, entertainment, and automotive.

**Data Collection Questionnaire**

The survey used in this study had a total of 90 scale-item questions and approximately 25 questions related to personal and company demographics. The actual questionnaire, in its totality, is provided in Appendix A. All of the scale item questions asked each sales manager to answer them with respect to his or her management style and with respect to how he or she manages, as a whole, his or her sales force. It should be noted that some measures in the questionnaire do not pertain directly to this dissertation’s study but were included for future study.

Because data collection took place in its entirety within a single source—sales managers—the possibility of common method bias must be addressed. Nearly 90 percent of the respondents (89.4 percent) reported receiving an undergraduate degree or higher, which supports the work of Rindfleisch, Malter, Ganesan, and Moorman (2008) to use highly educated respondents as a method to lessen risks related to common method variance. Due to the nature of the data, resulting from pressures such as a CEO or colleague encouraging participation in the study, the responses from these respondents were expected to be high quality.
Evidence that the survey respondents took the survey seriously is reflected in the average time to complete the questionnaire. The average response time for all 123 sales managers was 31 minutes and 19 seconds spent on the survey. The quickest time to complete the survey was eight minutes, but 40 sales managers completed the survey in less than 15 minutes. Fifty-three respondents completed the survey in 15 to 25 minutes, and 30 respondents took over 25 minutes to complete the survey. Within this sample, four sales managers had the survey open for longer than two hours (in particular, one had it open for over 10 hours). This indicates that they took the survey during their workday but were interrupted by something during completion; however, the interesting demonstration of their sincere intent to take the survey is reflected in the fact that they returned to the questionnaire and completed it. Upon removing these four respondents from the average response time calculation, the mean time to complete the survey is 22 minutes and 45 seconds. This aligns fairly well with the pre-testers’ expectations for the survey to take 15 to 20 minutes of each sales manager’s time.

In the next section of this chapter, a description is provided for each of the variables measured in the survey pertaining to this study. For each construct, an exploratory factor analysis was conducted, internal reliability was assessed, and the discussions below emphasize these analyses as well as how the scale items loaded on their respective latent constructs.

**Survey Measures**

The variables in this model were operationalized primarily using scales that have been established in the academic literature. All scale items were measured using a 7-point Likert-type, graphical rating scale format, where 1 is the least desirable (i.e., “Very Low” or “Strongly Disagree”) and 7 is the most desirable (i.e., “Very High” or “Strongly Agree”). The qualitative
descriptions on scale ends did vary according to which construct was being measured but, generally speaking, the “7” value was high, and the “1” value was low for conduct-, performance-, and structure-related variables.

**Conduct Variables**

**Control of Sales Force**

While the majority of the literature does agree that the two extremes of control systems are behavior-based and outcome-based, there has been a great deal of variability among the measurement of these control strategies. Cravens, Grant, Ingram, LaForge, and Young (1992) established 28 items to measure the type of control system used, but this was later shortened to a 25-item scale by Babakus, Cravens, Grant, Ingram, and LaForge (1996). The 25-item scale has been widely used, but its measurement and operationalization has not been consistent across studies.

To remedy the inconsistencies among scales assessing control strategies, Panagopoulos and Avlonitis (2008) have reviewed relevant scales in the literature and provided recommendations for measurement improvement. Their recommendation is a 13-item scale, adapted from the Babakus, Cravens, Grant, Ingram, and LaForge (1996) scale, which performed well against their evaluation criteria across three studies. The 13 items are broken into the four categories of monitoring, directing, evaluating, and rewarding for the sales manager to answer. Because behavior-based strategies encourage sales managers to have interaction and feedback at every step of the selling process, while outcome-based strategies focus on post-sell interaction and feedback, there are more scale items that are indicative of a behavior-based strategy over an outcome-based strategy.
The present study’s survey borrows from Panagopoulos and Avlontis’ (2008) scale by using, after pre-testing, 10 items from their scale. Four additional questions to measure control have been borrowed from Mallin, Asree, Koh, and Hu (2010), creating a total of 14 control-related items in the questionnaire. From Panagopoulos and Avlontis’ scale, items are included from all components, asking sales managers to what extent they use item measures to evaluate, develop, and reward their salespeople. Specific elements they are questioned about include observing performance in the field, rewarding salespeople based on their sales results, observing the profit contribution achieved by each salesperson, and regularly spending time coaching salespeople. The four measures adapted from Mallin and colleagues’ approach ask to what extent sales managers use number of sales calls, servicing of customers, performance, and qualitative aspects of selling to evaluate their salespeople.

Thus, control-related questions assess both behavior-based and outcome-based control. At a macro level, a second-order, latent construct of control can represent the level of control that a sales manager enforces, regardless of whether the focus utilizes a behavior-based or outcome-based system. At a micro level, the scale items for control are assigned to first-order constructs that represent the behavior-based control strategies and outcome-based control strategies. For all scale items measuring control, a 1 to 7 scale is utilized where “1” is “not at all” and “7” is “a great extent.”

The present measurement of control for this dissertation is exploratory in nature. In the literature, managerial control is often portrayed as two different extremes of one continuum—whether the firm engages in behavior-based control or outcome-based control. In this study, the initial aim is to split control into these two types of control, but with respect to two separate continuums. This difference is noteworthy because the current analysis of control is at the sales
manager level, not the firm level. In addition to assessing behavior-based and outcome-based control as separate continuums, the focus of this dissertation is to assume the level of control that a sales manager exhibits, no matter the type. Because of this, control is ultimately portrayed as a second-order construct with the two components of behavior-based control and outcome-based control.

An initial exploratory factor analysis was conducted to assess the fourteen scale items related to control. Using a varimax rotation, five factors were assigned to control with this technique that, together, explained 66.79 percent of the variance. Together, these 14 items also had high reliability, with alpha equal to .81. However, using theory and considering the items’ face validity, this control construct was split into behavior-based and outcome-based control system constructs. In breaking the control items into behavior-based and outcome-based systems, not all 14 items could be retained.

Two individuals, who are unaffiliated with this project but are academics engaged in sales-based research and are familiar with the control literature, were asked to assess the scale items and assign each of them as either “behavior-based” measures or “outcome-based” measures of control systems. These two experts on control did not confer with each other in their decisions. If they provided differing interpretations of which control system was assessed by an item, that particular item was removed from the study. After incorporating this feedback from the experts, and assessing the assignments for face validity, nine total items were kept in the control measure (α = 0.75). Of those nine, six items were designated as behavior-based control measures (α = 0.75), and three items were assigned to the outcome-based control construct (α = 0.35). Of these scale variations, the outcome-based control construct has items of a low reliability; however, these three items were the only items that the experts designated as
control-based measures. Key statistics for the scales, along with item means and standard deviations, are provided in Table 3-5.

**Trust in Sales Force**

In order for firms to have long-term employees in their sales forces who will prioritize company goals over personal goals, salespeople must be trusted by their sales managers. The concept of trust is well established in the literature, and a 1977 scale by Doney and Cannon is still used to measure trust. In its original format, this scale has eight items. During pre-testing, some of these eight items were viewed as redundant so, in this survey, a sub-scale is being utilized with five of Doney and Cannon’s items.

Sales managers are asked to what extent they agree with statements such as “I trust my sales force” and “My sales force is generally concerned that our business succeeds.” For all five statements, sales managers indicate their agreement where “1” is “strongly disagree” and “7” is “strongly agree.” An exploratory factor analysis was conducted for the five items measuring the sales manager’s trust in his or her sales force. All five items loaded onto one factor, providing explanation for 69.33 percent of the variance. Additionally, the five items exhibited very strong scale reliability, with an alpha value of 0.89. This reliability score is paired with the scale item means and standard deviation statistics in Table 3-6. All five items are retained to form the trust scale.

**Adaptability to Sales Force**

As this is the first time that adaptive selling behavior has been extended to sales management, the author is not aware of an appropriate scale to use without modification. Thus, to measure a sales manager’s adaptability to the sales force, this study uses a modified version of
ADAPTS—the 16-item adaptability scale that was developed by Spiro and Weitz (1990) to measure a salesperson’s adaptability to his or her customers. Extant literature has validated this scale, and it has been used many times throughout the sales literature. In an effort to make the questionnaire more concise (as recommended during pre-testing), this survey includes four items borrowed from the ADAPTS scale.

For this study, the ADAPTS scale’s items have been modified by changing “customer” to “salesperson” and “sales” to “management.” Sales managers are asked to rate their agreement with these four statements: “I vary my management style from situation to situation,” “I try to understand how one salesperson differs from another,” “I am very sensitive to the individual needs of my salespeople,” and “When I feel that my management approach is not working, I can easily change to another approach.” For each item, sales managers are using a scale where “1” is “strongly disagree” and “7” is “strongly agree.”

In an exploratory factor analysis, the four items for sales manager adaptability were found to load onto two separate factors. Using varimax rotation, two items loaded onto each of the two factors. Together, these four items showed a reliability level of .63, which is lower than ideal. The reliability analysis suggested that one item could be removed to improve the scale’s reliability and that one item was removed. Accordingly, the revised reliability scale has three items that load onto one single factor (explaining 61.29 percent of the variance) and show a stronger reliability level of 0.67, which is just below the ideal cutoff point of 0.70. Because these items come from well-established scales and have strong face validity, but with the understanding that they have been adapted to the sales manager context, the final three items will remain the items upon which sales manager adaptability is assessed. These items, their means and standard deviations, and the scale’s reliability are shown in Table 3-7.
Performance Variables

Performance is not only a popular, but also a relevant, consideration for researchers to make when examining appropriate management styles. Most of the literature in sales management and personal selling that measures performance does so at the individual level for either salespeople or sales managers. While performance can be interpreted in a variety of ways, sales managers are often evaluated based on the performance of the sales force they manage. Because these measures are difficult to obtain objectively, job performance measures are often self-assessed. Self-reported measures have been used for many years in sales studies (Behrman and Perreault, 1982; Chonko, Tanner, and Weeks, 1993; Churchill, Ford, and Walker, 1974; Marshall, 2012; Weeks, Roberts, Chonko, and Jones, 2004; Weeks and Stevens, 1997).

In this dissertation, performance implications for both the sales force and the sales manager are used to identify the appropriate employment of the tested three managerial mechanisms (control, trust, and adaptability). Hypotheses developed in Chapter 2 are all relevant to sales force performance. However, sales manager performance is also assessed, and these findings are reported in Appendix B.

Sales Force Performance

To assess the primary performance measure of this study, sales force performance, a three-item scale was created specifically for this study. Sales managers are asked to assess their sales force by indicating their agreement, where “1” is “strongly disagree” and “7” is “strongly agree,” with the following statements about their sales forces: “The sales force I manage performs better than our competition,” “The sales force I manage meets or exceeds the goals I set for them,” and “The sales force I manage has a better sales force ‘image’ than our competition.”
During pre-testing, participants found these to be suitable and realistic measures for sales managers to assess.

After conducting exploratory factor analysis for sales force performance, all three items loaded onto a single factor, explaining 74.33 percent of the variance in the model. The means and standard deviation statistics for the three items are relatively similar, as can be seen in Table 3-8. Their reliability score (Cronbach’s alpha) was 0.82 at the construct level, which is well above the generally accepted standard of 0.70 for acceptable internal reliability (Nunnally, 1978).

Sales Manager Performance

Sales manager performance, while not a primary consideration for the model’s outcome variable, is also assessed in a secondary set of analyses that are reported in Appendix B. This performance scale is also formed by three items, which were created specifically for this study. This scale was received well during pre-testing, with hesitation expressed only for the fact that sales managers are performing a self-assessment of their performance for this study. Sales managers are asked to what extent they agree with the following statements about their own performance as a sales manager: “I always meet the objectives set by my supervisor,” “I have very positive annual job reviews,” and “I always meet the strategic goals my firm sets for my sales force.”

For all items, “1” indicates that the sales manager “strongly disagree[s],” while “7” indicates that he or she “strongly agree[s].” At the construct level, all three sales manager performance items loaded onto a single factor in an exploratory factor analysis, explaining, 77.98 percent of the variance. Additionally, the three items were found to have strong reliability, such
that alpha = .86. The three items’ means and standard deviation values, as well as the construct reliability statistic (Cronbach’s Alpha), are shown in Table 3-9.

**Structural Variables**

Aligning with the use of transaction cost economics and economic network theory in building the conceptual framework, the questionnaire utilized for this study includes the main components. For TCA, three items measure the transaction-specific assets of a sales force, and two types of uncertainty are investigated. Uncertainty is explored with respect to uncertainty external to the sales force (e.g., in the selling environment) as well as within the sales force (e.g., size and diversity of the sales force itself).

**Transaction Specific Assets**

A component of the transaction cost framework, transaction-specific assets consider the transferability of physical assets, human assets, site-specific assets, or dedicated assets to other business relationships (Anderson, 1985; Williamson, 1975; 1985; 1986). Relevant considerations are whether the investment is high or low technology, as well as the investment required through training, legal issues, or technology to protect these assets.

To understand the conditions that each sales manager’s sales force was facing in this regard, three questions were created for this survey. First, “How technical or complex is the product/service you sell?” was asked, where “1” was “not at all technical/complex,” and “7” was “extremely technical or complex.” Then, sales managers were asked, “How important is it for your firm to establish policies or procedures to safeguard the product/service being sold by your sales force?” was asked to gauge importance, where “1” represented “not at all important” and
“7” represented “extremely important.” Finally, the third question asked, “How much investment goes into technology to protect the product/service being sold by your sales force?” with “1” signifying “none” and “7” signifying “a great deal.”

The three different sets of scale anchors serve to provide assessment through different methodologies and indicate a consistent level of investment that goes into each transaction. The mean and standard deviation values for these items, along with the full scale reliability, are shown in Table 3-10. In an exploratory factor analysis, these three items loaded onto a single factor to explain 63.44 percent of the variance. At the construct level, the three items exhibited strong reliability, with an acceptable Cronbach’s alpha value of 0.70.

**Uncertainty**

In the present model, uncertainty serves as a third-order construct made up of the two constructs of external uncertainty and internal uncertainty. Internal uncertainty serves as a second-order construct. Both external uncertainty and internal uncertainty factors are multi-item measures that, together, form the overall uncertainty variable. The overall reliability value for all 15 items related to uncertainty is 0.73, indicating acceptable measures. However, the construct is divided into external uncertainty and internal uncertainty assessments, as described below. As the uncertainty measures are fine-tuned, the number of items included in the model is reduced. The final model includes 12 items across both internal and external uncertainty, which maintain an acceptable reliability value for the third-order uncertainty construct of 0.75.
**External Uncertainty**

To measure external uncertainty, the uncertainty that is perceived in the environment and market place will be captured by all respondents. Borrowing from the management literature, Miles and Snow’s (1978) have created a scale to assess perceived environmental uncertainty, determined by “the predictability of conditions in the organization’s environment” (p. 195). The scale, which traditionally was strongly accepted in the literature, contains a total of 25 items, split into six subscales that correspond to six identified parts of an organization’s external environment—suppliers, competitors, financial markets, government and regulatory agencies, and unions. However, more recent research has found the Miles and Snow scale to be limited, context dependent, and not mindful of firm diversification (Buchko, 1994; DeSarbo, Benedetto, Song, and Sinha, 2005). Thus, an 18-item external uncertainty scale with three subscales (market environment, technological environment, and competitive environment) developed by DeSarbo and colleagues and based on the Miles and Snow scale, is accepted in more modern times.

The scale by DeSarbo, *et al.* (2005) is the basis of the external uncertainty measures in this study. Their 18-item scale has been reduced to nine items for this study’s questionnaire, such that there are three items each for subscales of market, technology, and competitive uncertainty. For example, sales managers are asked how they agree with statements like, “It is very difficult to predict any changes in this marketplace,” to help determine market uncertainty. Two items that help assess technology uncertainty are, “The technology in our industry is changing rapidly” and “It is very difficult to forecast where the technology in our industry will be in the next two to three years.” Competitive uncertainty is measured by statements such as, “Competition in our industry is cutthroat” and “Anything that one competitor can offer, others
can match readily.”

For all nine items, the scale utilizes sales managers’ agreement to the statements with “1” as “strongly disagree” and “7” as “strongly agree.” The nine items together have acceptable reliability, with an alpha value of 0.75. However, an exploratory factor analysis finds that these items load onto three factors but incur multiple cross-loadings and some very low loadings (below the ideal level of 0.60). Taking cross-loadings and face validity into consideration, three items were removed from the external uncertainty measure, resulting in a final external uncertainty scale of six items with acceptable reliability ($\alpha = 0.77$). Table 3-11 shows the reliability score, as well as the mean and standard deviation statistics for all of the items that assess external uncertainty.

**Internal Uncertainty**

Additional sources of uncertainty assessed in this study are internal to the sales force, stemming from network descriptives such as size and compatibility, which is modeled through diversity. Sales force diversity examines diversity through six different items that, together, demonstrate an acceptable level of inter-item reliability with alpha equal to 0.76.

**Sales Force Diversity**

Diversity among salespeople within a sales manager’s sales force also is indicative of uncertainty, as greater diversity leads to increased uncertainty. This study considers sales force diversity with respect to age, gender, culture, nationality, years of total sales experience, and tenure (number of years in this sales manager’s sales team). Sales managers are asked to answer, “How diverse is your sales force with respect to…” for each of the six elements, where “1” is
“not at all diverse” and “7” is “extremely diverse.” These six items, together, demonstrated an acceptable measure of scale reliability ($\alpha = 0.76$).

An exploratory factor analysis of the six diversity items found that they loaded onto two factors (explaining a total of 66.66 percent of the variance), each of which had reasonable face validity. After varimax rotation, the first factor consisted of age, gender, tenure, and experience. This measure would have had high face validity, except for the inclusion of gender. However, gender’s factor loading was very low (.45), so this item was removed from this factor and placed as its own single item measure to go into the diversity construct. The three remaining items—age, tenure, and experience—then loaded onto a single factor and exhibited a high inter-item reliability score ($\alpha = .79$). The other factor held the items of nationality and culture, which had high face validity and demonstrated acceptable reliability ($\alpha = .72$, although this is with only two items). The means and standard deviations of these items are displayed in Table 3-12.

**Sales Force Size**

Sales Force size is a crucial measure for comparisons to be made, as this dissertation expects that uncertainty increases as the size of the sales force increases. Thus, comparisons made based on sales force size are essential to test the hypotheses proposed in Chapter 2. Sales force size is simply determined by a count of the total number of salespeople managed by each sales manager. The sales force size measure is attained by asking sales managers, “How many salespeople make up your sales force?”

In order to make the sales force size more comparable and relative to the other measures, the log of sales force size is used to convey a reasonable range. Taking the log of sales force size pulls in the outliers and linearizes the size to match the assumed functional relationship of linear
modeling. Because it is a single-item measure, neither an exploratory factor analysis nor a reliability assessment can be made. However, descriptives of the sales force size measure are found in Table 3-13- The mean sales force size for all 123 sales managers was 32.20 salespeople. However, one outlier (with a sales force of 1500) was present in this calculation. After removing this sales manager from the mean calculation, the average sales force size is 20.17 salespeople per sales force.

**Analysis Techniques**

**Level of Analysis**

This research introduces a unique unit of analysis—a sales force—to investigate management practices. While academic research typically examines relationships from the sales manager to each salesperson, sales managers (in practice) are generally evaluated with respect to a sales manager’s perception of his or her sales force, uncertainty, performance, and the like. In this study, each sales manager is asked to answer the items with respect to their sales force as a whole, which provides a unique unit of analysis. Therefore, analyses in this project are made based on a sales force—looking at a manager’s behavior toward the group of salespeople that is managed.

**Analysis Details**

Analyses are performed at the sales force level for each of the 123 sales managers who returned a complete survey to test the relationships hypothesized between structural variables (transaction-specific assets and uncertainty) and conduct variables (control, trust, and adaptability). Both uncertainty and control were operationalized as second-order constructs,
with two measurement models feeding into each of them. Additional analyses consider a more complex model, allowing for contingencies, to test a comparison of theory and practice. For all analyses, IBM SPSS Statistics (Version 21) and IBM SPSS Amos (Version 21) are used to analyze the data. Structural equation modeling procedures were used to produce models that fit the proposed structure-conduct-performance model. Chi-square tests were used for comparisons between theory and practices to link the structure, conduct, and performance variables.

**Chapter Conclusion**

This chapter discusses the steps required to empirically test the proposed framework. A good, valid sample of sales managers responded to a questionnaire to provide high quality data for this project. In order to accomplish this, a scale from the literature (DeSarbo et al., 2005) was combined with items created specifically for this study to measure the structure variables. To assess the conduct variables of control, trust, and adaptability, scales were borrowed and adapted from the literature (Doney and Cannon, 1977; Mallin, 2005; Panagopoulos and Avlontis, 2008; Spiro and Weitz, 1990). For the final outcome variable of performance, both performance of the sales manager and performance of the sales force were measured using scales created especially for this study.

The explanatory power of each structure variable on each conduct variable should explain when sales managers should use each to manage their sales force. Additionally, the more appropriate sales management behaviors will be shown by the performance relative to conduct utilized by the sales managers. The model will be tested to see if what theory predicts does result in the best outcomes. Together, these findings provide an increased understanding of how managers should manage their sales force in the face of uncertainty. The next chapter, Chapter
4, provides a detailed description of the descriptive statistics and factor analyses for each
construct. Additionally, detailed empirical results and tests of the hypotheses will be presented.
Chapter Three References


### Table 3-1

**Summary Statistics of Sales Manager Characteristics**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percentage of Respondents</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>76.40%</td>
<td>23.60%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>White or Caucasian</th>
<th>Asian</th>
<th>Black or African American</th>
<th>Hispanic or Latino</th>
<th>Native Hawaiian or other Pacific Islander</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Respondents</td>
<td>71.50%</td>
<td>26.00</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Highest Education Level Attained</th>
<th>High School Graduate or GED</th>
<th>Undergraduate Degree</th>
<th>Master-Level Degree</th>
<th>Professional or Terminal Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Respondents</td>
<td>10.60%</td>
<td>62.60</td>
<td>25.20</td>
<td>1.60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years Managing this Sales Force</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years per Respondent</td>
<td>6.01</td>
<td>0.00</td>
<td>32.00</td>
</tr>
</tbody>
</table>
Table 3-2

*Summary Statistics of Sales Force Characteristics*

<table>
<thead>
<tr>
<th>Type of Sales</th>
<th>Domestic</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Sales</td>
<td>93.24%</td>
<td>6.76</td>
</tr>
</tbody>
</table>

*Sales Force Size*

<table>
<thead>
<tr>
<th>Sales Force Size</th>
<th>Mean</th>
<th>Adjusted Mean*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Salespeople</td>
<td>32.20</td>
<td>20.17</td>
</tr>
</tbody>
</table>

*Accounts per Salesperson*

<table>
<thead>
<tr>
<th>Accounts per Salesperson</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Accounts</td>
<td>569.38</td>
<td>1</td>
<td>40,000</td>
</tr>
</tbody>
</table>

*Nationalities in Sales Force*

<table>
<thead>
<tr>
<th>Nationalities in Sales Force</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Nationalities</td>
<td>2.92</td>
<td>1</td>
<td>30</td>
</tr>
</tbody>
</table>

*Adjusted to remove one outlier.*
Table 3-3  

**Characteristics of Sample Firms Represented**

<table>
<thead>
<tr>
<th>Company Sales, by Market</th>
<th>Domestic</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Company Sales</td>
<td>74.37%</td>
<td>25.63%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sales Force Compensation Details</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Firms Mandating Compensation Plan for Salespeople</td>
<td>84.60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Compensation Breakdown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Salary</td>
<td>57.00</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Percent Commission</td>
<td>33.50</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Percent Bonus/Incentives</td>
<td>9.50</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Firms Requiring Formal Training Programs</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Salespeople Training (Percentage Requiring)</td>
<td>77.20%</td>
<td></td>
</tr>
<tr>
<td>Sales Manager Training (Percentage Requiring)</td>
<td>74.80%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Firm Customer Type*</th>
<th>Businesses</th>
<th>Resellers</th>
<th>End Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Firms Selling to Customer Type</td>
<td>74.00%</td>
<td>52.80%</td>
<td>51.20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employees</td>
<td>101,856.14</td>
<td>5</td>
<td>500000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years Firm in Business</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
<td>67.18</td>
<td>2</td>
<td>180</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sales Teams in Firm</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Sales Teams</td>
<td>7,150.82</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Salespeople per Team</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Salespeople</td>
<td>383.87</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Firm Annual Sales Volume</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (USD)</td>
<td>28,369,370,871</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Markets Served, besides US Domestic</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Markets</td>
<td>19.57</td>
<td>0</td>
<td>160</td>
</tr>
</tbody>
</table>

*Total percentage exceeds 100% due to multiple responses.
### Table 3-4

**Industries Represented in Sample**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage of Firms Selling in These Industries*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Services</td>
<td>33.30%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>22.80</td>
</tr>
<tr>
<td>Publishing/Printing</td>
<td>17.10</td>
</tr>
<tr>
<td>Transportation</td>
<td>17.10</td>
</tr>
<tr>
<td>Appliances</td>
<td>16.30</td>
</tr>
<tr>
<td>Electronics</td>
<td>16.30</td>
</tr>
<tr>
<td>Computer/Software</td>
<td>15.40</td>
</tr>
<tr>
<td>Financial Services</td>
<td>10.60</td>
</tr>
<tr>
<td>Healthcare</td>
<td>10.60</td>
</tr>
<tr>
<td>Real Estate</td>
<td>8.90</td>
</tr>
<tr>
<td>Other**</td>
<td>37.40</td>
</tr>
</tbody>
</table>

*Total percentage exceeds 100% due to multiple responses.

**Other was identified to include footwear & apparel, food & beverage, sporting goods, chemicals, oil, entertainment, and automotive industries.
Table 3-5

*Control Scale Descriptives*

<table>
<thead>
<tr>
<th>Control</th>
<th>Reliability</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control, as a Second-Order Construct</td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavior-Based Control</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To what extent do you use the following measures to evaluate your salespeople?*

- Number of sales calls.  
  Mean: 4.53, Standard Deviation: 1.78
- Qualitative aspects of selling (e.g., efforts devoted to achieving customer satisfaction, proposals, presentations).  
  Mean: 5.61, Standard Deviation: 1.30

To what extent do you spend time developing your salespeople in the following ways?*

- Regularly review call reports from salespeople.  
  Mean: 4.58, Standard Deviation: 1.81
- Regularly spend time coaching salespeople.  
  Mean: 5.49, Standard Deviation: 1.18
- Actively participate with training salespeople on the job.  
  Mean: 5.49, Standard Deviation: 1.33
- Evaluate the number of sales calls made by each salesperson.  
  Mean: 4.29, Standard Deviation: 1.75

Outcome-Based Control  
Mean: 0.35

To what extent do you use the following measures to evaluate your salespeople?*

- Performance (e.g., sales volume, quota attainment, number of orders)  
  Mean: 6.35, Standard Deviation: 0.91

To what extent do you spend time developing your salespeople in the following ways?*

- Observe the profit contribution achieved by each salesperson.  
  Mean: 5.08, Standard Deviation: 1.65

To what extent do you reward your salespeople in the following ways?*

- Reward salespeople based on their sales results.  
  Mean: 6.14, Standard Deviation: 1.02

*All items were anchored on a 7-point scale where 1 = "Not At All" and 7 = "A Great Extent."
Table 3-6

Trust Scale Descriptives

<table>
<thead>
<tr>
<th>Trust Scale and Items</th>
<th>Reliability</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent do you, as the sales manager, agree with the following statements?*</td>
<td>0.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I trust my sales force.</td>
<td></td>
<td>5.80</td>
<td>1.09</td>
</tr>
<tr>
<td>My sales force can always be counted on to act as I expect.</td>
<td></td>
<td>5.26</td>
<td>1.16</td>
</tr>
<tr>
<td>I believe the information that my sales force provides me.</td>
<td></td>
<td>5.58</td>
<td>1.06</td>
</tr>
<tr>
<td>My sales force is generally concerned that our business succeeds.</td>
<td></td>
<td>5.81</td>
<td>1.26</td>
</tr>
<tr>
<td>My sales force has trust in me as their sales manager.</td>
<td></td>
<td>5.99</td>
<td>0.81</td>
</tr>
</tbody>
</table>

*All items were anchored on a 7-point scale where 1 = "Strongly Disagree" and 7 = "Strongly Agree."
Table 3-7

*Adaptability Scale Descriptives*

<table>
<thead>
<tr>
<th>Adaptability Scale and Items</th>
<th>Reliability</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent do you, as the sales manager, agree with the following statements?*</td>
<td>0.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I vary my management style from situation to situation.**</td>
<td>5.44</td>
<td>1.40</td>
<td></td>
</tr>
<tr>
<td>I try to understand how one salesperson differs from another.</td>
<td>6.13</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>I am very sensitive to the individual needs of my salespeople.</td>
<td>5.78</td>
<td>1.04</td>
<td></td>
</tr>
<tr>
<td>When I feel that my management approach is not working, I can easily change to another approach.</td>
<td>5.39</td>
<td>1.12</td>
<td></td>
</tr>
</tbody>
</table>

*All items were anchored on a 7-point scale where 1 = "Strongly Disagree" and 7 = "Strongly Agree."*

**This item was removed when the final adaptability scale was formed. Reliability without this item is 0.67.*
Table 3-8

*Sales Force Performance Scale Descriptives*

<table>
<thead>
<tr>
<th>Sales Force Performance Scale and Items</th>
<th>Reliability</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The sales force I manage…*</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...performs better than our competition</td>
<td>5.82</td>
<td>1.07</td>
<td></td>
</tr>
<tr>
<td>...meets or exceeds the goals I set for them</td>
<td>5.56</td>
<td>1.02</td>
<td></td>
</tr>
<tr>
<td>...has a better sales force &quot;image&quot; than our competition</td>
<td>5.87</td>
<td>1.19</td>
<td></td>
</tr>
</tbody>
</table>

*All items were anchored on a 7-point scale where 1 = "Strongly Disagree" and 7 = "Strongly Agree."*
Table 3-9

*Sales Manager Performance Scale Descriptives*

<table>
<thead>
<tr>
<th>Sales Manager Performance Scale and Items</th>
<th>Reliability</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considering my own performance as a sales manager, I…</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>…always meet the objectives set by my supervisor.</td>
<td>5.58</td>
<td>0.98</td>
<td></td>
</tr>
<tr>
<td>…have very positive annual job reviews.</td>
<td>6.14</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>…always meet the strategic goals my firm sets for my sales force.</td>
<td>5.68</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

*All items were anchored on a 7-point scale where 1 = "Strongly Disagree" and 7 = "Strongly Agree."*
Table 3-10

*Transaction Specific Assets Scale Descriptives*

<table>
<thead>
<tr>
<th>Transaction Specific Assets Scale and Items</th>
<th>Reliability</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please provide the following product/service information.</td>
<td>0.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How technical or complex is the product/service you sell?</td>
<td>4.99</td>
<td>1.76</td>
<td></td>
</tr>
<tr>
<td>How important is it for your firm to establish policies or procedures to safeguard the product/service being sold by your sales force?</td>
<td>5.40</td>
<td>1.52</td>
<td></td>
</tr>
<tr>
<td>How much investment goes into technology to protect the product/service being sold by your sales force?</td>
<td>5.02</td>
<td>1.71</td>
<td></td>
</tr>
</tbody>
</table>

*This item was anchored on a 7-point scale where 1 = "Not at all Technical or Complex" and 7 = "Extremely Technical or Complex."

**This item was anchored on a 7-point scale where 1 = "Not at all Important" and 7 = "Extremely Important."

***This item was anchored on a 7-point scale where 1 = "None" and 7 = "A Great Deal."
Table 3-11

*External Uncertainty Scale Descriptives*

<table>
<thead>
<tr>
<th>External Uncertainty Scale and Items</th>
<th>Reliability</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>External Uncertainty (First Order)</em></td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To what extent do you, as a sales manager, agree with the following statements?*

- In our kind of business, customers' product preferences change a lot over time. 4.81 1.59
- The technology in our industry is changing rapidly. 5.47 1.71
- It is very difficult to forecast where the technology in our industry will be in the next two to three years. 4.16 1.62
- The technology changes in this industry are frequent. 4.94 1.75
- Competition in our industry is cutthroat. 5.54 1.41
- My firm operates in a very competitive industry. 6.09 1.09

*All items were anchored on a 7-point scale where 1 = "Strongly Disagree" and 7 = "Strongly Agree."
Table 3-12

*Internal Uncertainty Scale Descriptives*

<table>
<thead>
<tr>
<th>Internal Uncertainty Scale and Items</th>
<th>Reliability</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Uncertainty (Second Order)</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How diverse is your sales force with respect to the following elements?*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (Observed Variable)</td>
<td></td>
<td>3.51</td>
<td>1.85</td>
</tr>
<tr>
<td>Cultural Diversity (First Order)</td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culture</td>
<td></td>
<td>3.79</td>
<td>1.72</td>
</tr>
<tr>
<td>Nationality</td>
<td></td>
<td>2.87</td>
<td>1.77</td>
</tr>
<tr>
<td>Experience-Related Diversity (First Order)</td>
<td>0.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>4.54</td>
<td>1.64</td>
</tr>
<tr>
<td>Years of total sales experience</td>
<td></td>
<td>4.82</td>
<td>1.43</td>
</tr>
<tr>
<td>Number of years in your sales team</td>
<td></td>
<td>4.54</td>
<td>1.56</td>
</tr>
</tbody>
</table>

*All items were anchored on a 7-point scale where 1 = "Not At All Diverse" and 7 = "Extremely Diverse."
Table 3-13

*Sales Force Size Descriptives*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Force Size</td>
<td>32.20</td>
<td>142.83</td>
<td>20398.90</td>
</tr>
<tr>
<td>ln of Sales Force Size</td>
<td>2.25</td>
<td>1.17</td>
<td>1.36</td>
</tr>
</tbody>
</table>
CHAPTER 4: RESULTS

While the data collected for this dissertation was fully described in Chapter 3, this chapter serves to explain how the sample data is analyzed. The data analysis procedures used in this dissertation will be explained, statistical results will be reported, and overall findings will be presented. First, a confirmatory factor analysis is performed for each individual construct in the model. Then, a confirmatory factor analysis is completed for the full model. Finally, structural equation modeling (SEM) is used to analyze the relationships hypothesized in Chapter 2. SEM will first be used to evaluate the impact of managerial behaviors on sales force performance, and then SEM will assess the role that situational or structural conditions play in the link from managerial conduct to performance. All confirmatory factor analyses and SEM analyses are completed using SPSS Amos 21.

Confirmatory Factor Analyses

A type of SEM that deals specifically with measurement modeling, confirmatory factor analysis evaluates the observed measures (e.g., individual scale items) and latent variables (i.e., the unobserved variables, which are constructs representing conduct, performance, or structure variables). While both exploratory factor analysis and confirmatory factor analysis aim to recreate the observed relationships when there are more observed measures than latent variables, the difference is in the presence (or lack) of a priori specifications. The exploratory factor analyses in Chapter 3 are data driven and serve to establish the number of factors reflected by constructs. In the present chapter, confirmatory factor analyses are used to build on the findings of Chapter 3 by specifying the suggested factors and then verifying their underlying dimensions.
and their loadings. These confirmatory factor analyses are essential to establish an appropriate measurement model to be paired with the structural model for SEM analyses to take place later.

**Conduct Variables**

The first set of variables to be analyzed using confirmatory factor analysis is the group of variables reflecting managerial behaviors. First, a confirmatory factor analysis will be conducted for the construct of control. Next, the modeling of the items measuring a sales manager’s trust in his or her sales force will be considered. Finally, a confirmatory factor analysis will be conducted on the latent construct of sales manager adaptability.

**Control**

Following the setup stemming from the exploratory factor analysis in Chapter 3, control is modeled as a second-order construct with two factors—behavior-based control and outcome-based control. Using confirmatory factor analysis in Amos, the model’s fit is tested for the full control construct as shown in Figure 4-1. The full control model joins the measurement models for the two individual control system types with a second-order, latent control variable.

The model for control indicates that a slight discrepancy between the model and the data may exist, which the statistics in Table 4-1 show. This issue is represented by a significant Chi-squared ($\chi^2 = 47.76(24), p = .00$) and a RMSEA value (RMSEA = .09) that exceeds the acceptable limit of .08. However, the comparative fit index (CFI) has a value of .90, which suggests a good fit. The factor loadings of behavior- and outcome-based constructs are also inconsistent, with both control factors having a factor that loads below .30. While this model appears to provide a poor fit to the observed data measuring control, this measurement model
was developed conceptually by sales experts considering face validity and then verified through exploratory factor analysis.

**Trust**

The measurement model representing sales managers’ trust in their sales forces is shown in Figure 4-2. This model represents a very good fit to the observed data, as shown by the CFA statistics reported in Table 4-2. The Chi-squared statistic is a low value and not significant ($\chi^2 = 3.12(6), p = .79$). Additionally, the normed fit index (NFI) and CFI are indicative of very good fit, with NFI = .99 and CFI = 1.00. All five of the factor loadings for this construct have very high loadings, of which the lowest is .70.

**Adaptability**

As shown in Figure 4-3, the measurement model for adaptability includes the three items established in Chapter 3’s exploratory factor analysis. The CFA exhibits a strong fit between the model and the observed data with a low value, non-significant Chi-squared statistic ($\chi^2 = 2.996(2), p = .22$). Additionally, both the NFI (NFI = .96) and the CFI (.99) are indicative of very good fit. The RMSEA value is also acceptable at .06, and the factor loadings are reasonably strong.

**Sales Force Performance**

The measurement model for performance contains three items where each sales manager has assessed the sales force’s performance. CFA statistics, shown in Table 4-4, show the strong fit of the measurement model in Figure 4-4. The fit of this model is indicative of very good fit.
between the observed data and the measurement model. The Chi-squared statistic is a low value and non-significant ($\chi^2 = 1.269(1), p = .26$), while the NFI (.99) and CFI (.99) both demonstrate excellent fit for the model. The RMSEA statistic is also very reasonable, at .047. Finally the loadings of all three sales force performance items are strong, with the lowest value being .75.

Structural Variables

Three structural variables are represented in this model—transaction specific assets, uncertainty, and sales force size. In this section, the CFAs for transaction specific assets and uncertainty are detailed with an assessment of fit. A CFA for sales force size is not conducted, as sales force size (or, in this model, the natural log of sales force size) is an observed variable.

Transaction Specific Assets

The three factors that form the measurement model for transaction specific assets are shown in Figure 4-5. The statistical findings of the CFA for transaction specific assets are available in Table 4-5. These findings demonstrate an extremely good fit between the measurement model and the observed data with a very low and non-significant Chi-squared statistic ($\chi^2 = .144(1), p = .70$). The RMSEA statistic and fit indices are also indicative of excellent fit (NFI = 1.00, CFI = 1.00). While not as high as would be desirable, the three items also have acceptable factor loadings.
Uncertainty

In the measurement model for uncertainty, shown in Figure 4-6, uncertainty is a third-order construct with the components of internal uncertainty (a second order construct) and external uncertainty (a first order latent construct). The results of this model’s CFA are shown in Table 4-6. The CFA of the uncertainty measurement model finds a non-significant Chi-squared statistic \( \chi^2 = 55.13(50), p = .29 \) and is indicative of good fit. Accounting for degrees of freedom, the CMIN/DF has an acceptable value of 1.10. While the NFI is .90, the CFI is .99 to indicate very good fit of the model to the data. In addition to strong fit indices, the RMSEA is acceptable with a value of .03. Considering the factor loadings for this construct, internal uncertainty has consistently appropriate loadings while external uncertainty has some low factor loading values. However, the complexities of this third-order construct are likely at fault. Because of the adequate EFA, the measurement model will remain in this way for SEM analysis.

**Full Model Confirmatory Factor Analysis**

A confirmatory factor analysis is also conducted to assess the full model for this study. In this comprehensive measurement model, 15 covariance arrows serve to link together all pairs of the situational variables (uncertainty and transaction specific assets), the three conduct variables (control, trust, and adaptability), and sales force performance. The full measurement model that will later be used for the comprehensive SEM analysis is shown in Figure 4-7.

The full measurement model, linking all six main constructs, fits reasonably well to the observed data. The statistical results of the CFA are provided in Table 4-7. The chi-square statistic is large and significant \( \chi^2 = 692.369(535), p = .000 \), which is not ideal. However, the CMIN/DF has an appropriately low value of 1.29 after sample size and degrees of freedom are
taken into consideration. Additionally, good fit is indicated by the CFI score of .90 (while poor fit is indicated by the NFI). The RMSEA is also of a reasonable value at .05.

The CFA factor loadings for the full measurement are provided so that all scores may be viewed comprehensively. While most of the items load strongly, 13 loadings are below the threshold of .60. Further investigation finds that 12 of the 13 poor loadings are present in the constructs of uncertainty and control. As was discussed previously with their respective individual measurement model analyses, these are higher-order, complex constructs. Especially with respect to the poor loadings in outcome-based and behavior-based control, the measures used are the best currently available.

The full CFA model’s reliability and validity are also assessed, and relevant statistics are reported in Table 4-8. Reliability assessments duplicate findings in EFA analyses, that all constructs have strong reliability except uncertainty, which is also borderline (CR = .67, just below the generally accepted threshold of .70). Convergent validity is assessed by the average variance extracted (AVE), which should be greater than .50. Two constructs have AVE values below .50, but they both are just below this threshold (AVE for transaction specific assets = .49; AVE for adaptability = .46). Convergent validity is found to be the strongest with respect to the control construct (AVE = .96).

Discriminant validity is examined by comparing the AVE of a construct to its maximum shared variance (MSV), and discriminant validity concerns arise if the AVE is less than the MSV. By this rule, the measurement models for two structural conditions, uncertainty and transaction specific assets, do not demonstrate discriminant validity. For uncertainty, the AVE is .50, which is less than the MSV value of .64. For transaction specific assets, the AVE is .49, while the MSV is .64. Discriminant validity concerns are present with uncertainty and
transaction specific assets, as the variables may be theoretically related. In essence, the nature of transaction specific assets may be relative to uncertainty; in a highly competitive market (i.e., filled with uncertainty), firms will want to protect the proprietary elements of their transactions (i.e., high transaction specific assets). However, an analysis of face validity argues that uncertainty and transaction specific assets are not directly intertwined theoretically.

**Structural Equation Modeling**

The analyses in this dissertation are completed using SEM. SEM is appropriate for this study because it incorporates measurement models to estimate causal relationships between latent constructs. Multivariate effects may be estimated in an integrated manner through SEM. Additionally competing models may be tested and compared to establish the best fit to the data. In this study, three SEM models are analyzed to test the five full hypotheses. First, Model 1 relates conduct variables to sales force performance. Then, Model 2 links structure to performance. Comparisons are then made to see whether structural variables or conduct variables have a bigger influence on performance. Finally, a comprehensive model that links structure to conduct and conduct to performance is assessed. Final model comparisons are made, and conclusions are drawn.

**Model 1: Conduct to Performance**

The structural equation model to assess the relationships from sales manager conduct to sales force performance demonstrated adequate fit ($\chi^2 = 225.360(164), p = .001, \text{CMIN/DF} = 1.374, \text{NFI} = .787, \text{CFI} = .929, \text{RMSEA} = .055$) for the model shown in Figure 4-8. However, modification indices provided evidence that fit could be improved by correlating the conduct
variables of adaptability and trust. With the added covariance arrow (shown in Figure 4-9) between these two latent constructs, model fit was improved ($\chi^2 = 207.243(163)$, $p = .011$, CMIN/DF = 1.271, NFI = .804, CFI = .949, and RMSEA = .047). While the Chi-squared statistic for this model is high, the CMIN/DF value assesses the Chi-squared statistic with respect to sample size and is quite reasonable.

While the direction and significance decisions are the same across the two models, the latter model with the covariance arrow is used to report results that should prove to be best-fitting to the data sample. This correlation between adaptability and trust is indicative of potential interplay between the three conduct variable constructs and, in particular, between adaptability and trust. Further analysis on such interplay may be warranted in future study.

**Tests of Hypotheses**

In this model, linking conduct to performance, the three propositions in Hypothesis 1 are tested. The hypotheses are assessed by examining the coefficients of the respective paths. Specifically, these hypotheses predict the following:

$H_{1A}$: *A sales manager’s level of control will positively influence sales force performance.*

$H_{1B}$: *A sales manager’s level of trust in the sales force will positively influence sales force performance.*

$H_{1C}$: *A sales manager’s level of adaptability will positively influence sales force performance.*
Significant relationships are found to link sales manager conduct to sales force performance in this model. The relationship from control to sales force performance is significant and positive ($\beta = 0.197$, $p < .05$), as are the relationships from trust to sales force performance ($\beta = 0.377$, $p < .001$) and adaptability to sales force performance ($\beta = 0.348$, $p < .01$). Thus, Hypotheses 1A, 1B, and 1C are supported. Table 4-9 displays specific results, standard error values, and $t$-statistics.

Looking at the significant SEM model relating conduct to performance, we see that all three managerial behaviors in the study—level of control, trust in the sales force, and adaptability toward the sales force—are significantly linked to sales force performance. Additionally, each of these relationships is positive, indicating that (1) a sales force performs better when the sales manager exhibits a higher level of control, (2) sales forces perform better when sales managers trust them, and (3) sales forces perform better when the sales managers adapt to them.

**H1A – Control’s Positive Impact on Sales Force Performance**

It seems logical that higher levels of control will lead to improved performance. This measure does not take into account the style of control—whether a sales manager is utilizing behavior-based or outcome-based control strategies in his or her leadership. Instead, this level of control implies that the sales manager has found the most effective type of control and is engaging in it. Thus, the sales manager is very involved in monitoring the progress of the sales force, whether it be through watching sales volumes and quota attainment (outcome-based control system) or through involved on-site training processes (behavior-based control system).
It is probable that as a sales manager is more involved in the process and staying on top of things, the sales force feels (a) additional motivation to do well and (b) increased pressure to perform. Sales forces under tight control will not have room to dilly dally or time to slack off. On the other hand, as sales managers loosen their grip on the sales force, exhibiting less control, sales force performance will deteriorate.

**H1B – Trust’s Positive Impact on Sales Force Performance**

The relationship between trust and performance is also significant and positive. This supports the findings of the trust literature, that trust can lead to good outcomes. Managerial trust in the sales force is an empowering component. Additionally, the antecedents of trust indicate that the outcome should be positive—a sales manager only trusts his or her sales force if the sales force is trustworthy, as in they are dependable, reliable, responsible, predictable; given these qualities of a sales force lead to a sales manager trusting the sales force, it is intuitive that the sales force would perform well. With additional data collection, an interesting component for future study would be the reciprocal of this—seeing how performance impacts trust. It seems reasonable that these two variables are highly correlated.

**H1C – Adaptability’s Positive Impact on Sales Force Performance**

Similar to control and trust, the adaptability of a sales manager is also indicative of better performance levels for the sales force. This study of sales manager adaptability is new to the literature, so there is not much extant theory to build on – beyond a few findings that adaptive selling behaviors for salespeople lead to better performance – but the logic exists. As sales managers are adaptable, they are able to change according to the people they are dealing with
and the situations they are facing. Given that this dissertation makes assessments at the sales force level, individual-level differences are not discussed. However, adaptable managers realize that a single approach will not work for managing an entire sales force, as managing each salesperson in an identical fashion is not effective.

Adaptability links to performance also with respect to how a sales force feels. If a sales manager is not adaptive, then salespeople may feel suffocated, micro-managed, or as if the sales manager does not believe in them or trust them. As adaptability decreases, so might the sales force’s motivation, interest, creativity, and performance.

**Interrelations of Conduct Variables**

There is also some level of correlation between adaptability and trust. The two were found to be correlated in the CFA exploration, and it is sensible that those two constructs may link together in the sense that, managers who are more adaptable will also be more trusting because they will be managing in the most effective style and will trust their sales force to respond accordingly. On the other hand, sales managers who have a rigid management style, are not flexible in varied situations, or do not customize their behavior to individuals in their sales force, will not be as trusting of the sales force. Trust and adaptability both require a manager to rely some on blind faith, which may be dependent on their knowledge of the sales force and the sales force’s past performance records. Adaptability and level of control will be correlated and interrelated, as managers who are adaptable should recognize needs for control and then shift between outcome-based and behavior-based control systems to best suit the needs of the sales force.
**Model Conclusion**

This model clearly indicates that sales managers’ conduct does have an impact on the overall performance of the sales force. The three managerial behaviors studied in this model—conduct, trust, and adaptability—are primary conduct variables for sales managers in the literature and in practice. Thus, the model is managerially relevant as it demonstrates the importance of sales managers’ conduct decisions to influence their sales forces’ performance levels.

**Model 2: Structure to Sales Force Performance**

A second model (Model 2) is analyzed to consider the impact that structural variables have on performance. The situational conditions considered as structural variables in this model are uncertainty (a third-order construct), transaction specific assets, and sales force size. Consistent with Model 1, Model 2 assesses performance with respect to sales force performance. Utilizing the conceptual framework in Chapter 2, supported by the structure-conduct-performance paradigm, this model is able to incorporate the appropriate links to test whether all the factors of structure—as compared to conduct—have as great of a fit on performance. No formal hypotheses were created in Chapter 2 for this model. The sole aim of this model is to examine structure’s role on performance so that, later, structural variables can be compared to conduct variables with respect to which one has a more influencing role on sales force performance.

Model 2, which is shown in Figure 4-10, exhibits adequate fit to the data ($\chi^2 = 216.971(146)$, $p = .000$, CMIN/DF = 1.486, NFI = .760, CFI = .903, RMSEA = .063). However, the fit is sufficient to portray the impact from the structural variables of uncertainty, transaction
specific assets, and sales force size onto sales force performance. These structural variables are indicative of different situations that sales managers frequently face. Uncertainty can arise within the sales force or from an external source, such as the environment, competition or changing technology. Assets specific to the transactions are indicative of situations in which the sales force must operate and proprietary-related provisions they must make. Additionally, the sales force size frequently varies across sales forces.

The findings, at a general level, indicate that structure alone cannot determine performance levels of a sales force. In particular, none of the structural variables of uncertainty, transaction specific assets, or size are found to have a significant impact on performance. Specific results are shown in Table 4-10 and illustrate that, while none are statistically significant, sales force size is negatively related to the performance variable and both uncertainty and transaction-specific assets are positively related to performance.

While this model’s findings indicate that structure alone cannot determine a sales force’s performance, the findings emphasize the importance of sales managers. Sales managers must constantly internalize the structural conditions that sales forces face in order to come up with the most appropriate methods for managing, given whatever situation they face. Variations in structure can occur with respect to external uncertainty in the industry, internal uncertainty related to sales force diversity or size, and transaction specific assets that are firm-specific.

In all of these situations, where the structure varies, sales managers are already actively adjusting to them—and this is likely why the influence of the structural variables on performance is not showing up in this model. For example, sales managers have likely been managing a similar size of sales force for years. Because of their experience, sales managers have already
internalized, learned about, and figured out how to deal with the challenges associated with the size of the sales force that they manage.

**Model Conclusion**

Because of the model results establishing the influence of sales managers on sales force performance, but not the influence of structural conditions on sales force performance, a comparison is made among the two models with respect to model fit. Aggregate model fit statistics for these two competing models are shown in their respective tables (Table 4-9 and Table 4-10). Model 1, linking sales manager conduct to sales force performance, indicates better fit statistics, with a CFI value of .95 (versus .90) that is indicative of a very good fitting model, a lower Chi-squared statistic (207.24 versus 216.97), and a better CMIN/DF value when (1.27 versus 1.49). Thus, the behaviors of sales managers are, accurately, more indicative of performance than are the structural conditions that the sales force faces. This conclusion also aligns conceptually, because in theory behavioral conduct is a lot closer to performance. On the other hand, the structural variables are more macro in nature and, thus, are farther removed from performance.

**Model 3: Structure to Conduct to Performance SEM Analysis**

The most comprehensive model in this analysis, Model 3, links structural variables to conduct variables and conduct variables to the performance variable. This model is portrayed in Figure 4-11. Model 3 builds on the knowledge gained in Models 1 and 2: considering sales force performance, sales manager conduct is an influencer and structural conditions are not. The purpose of this model is to assess the integration of structure, conduct, and performance.
Specifically, the moderating role of structure on the relationship between conduct and performance is tested.

This model provides insight about the impact that structural conditions, often thought of as situational, have on managerial conduct. Additionally, the influence of managerial behavior is again investigated respective to sales force performance. The model demonstrates reasonable fit to the data ($\chi^2 = 817.685(575), p = .000$, CMIN/DF = 1.422, NFI = .636, CFI = .850, RMSEA = .059) but does not show improved fit over the prior model linking conduct to performance.

Several reasons explain why this model does not exhibit as good a fit as the model with only conduct to performance. First, the covariance arrow connecting adaptability and trust in the control-to-performance model (shown in Figure 4-9) could not be presented in the current model since these latent variables are now endogenous. Additionally, because it is now endogenous, the control construct’s variance cannot be constrained to one. These two changes were necessary to run the model using SPSS Amos, but they did reduce the model’s fit and, thus, lower the fit indices. Even given these technical issues, the CFI of .850 is reasonable for preliminary research and the best way to parameterize the model. Without these technical restraints in Amos, we could expect that the fit indices would be higher than .850 but lower than the .949 value found in the conduct-to-performance model. Given the model’s complexity, the results of this comprehensive model pertain to relationships from structural variables to conduct variables, as well as from conduct variables to the sales force performance.

**Tests of Hypotheses 2, 3, 4, and 5**

Model 3 assesses four sets of hypotheses. The first three groups of hypotheses test the relationship of the three structural conditions on conduct. Specifically, Hypothesis 2 considers
uncertainty’s role on sales manager conduct. Hypothesis 3 considers the impact of transaction specific assets on sales manager conduct, and Hypothesis 4 examines the role of sales force size on sales manager conduct. Then, the last hypothesis tests whether situational conditions can influence the relationship between sales managers’ behaviors and their sales forces’ performance. These hypotheses, as explained in Chapter 2, propose the following:

\( H_{2A} \): As the level of uncertainty in the selling environment increases, a sales manager’s level of control will also increase.

\( H_{2B} \): As the level of uncertainty in the selling environment increases, a sales manager’s level of trust in the sales force will also increase.

\( H_{2C} \): As the level of uncertainty in the selling environment increases, a sales manager’s level of adaptability will also increase.

\( H_{3A} \): As transaction specific assets necessitated by a firm increase, a sales manager’s level of control will also increase.

\( H_{3B} \): As transaction specific assets necessitated by a firm increase, a sales manager’s level of trust in the sales force will also increase.

\( H_{3C} \): As transaction specific assets necessitated by a firm increase, a sales manager’s level of adaptability will also increase.
**H4A:** As the size of a sales force increases, a sales manager’s level of control will decrease.

**H4B:** As the size of a sales force increases, a sales manager’s level of trust in the sales force will decrease.

**H4C:** As the size of a sales force increases, a sales manager’s level of adaptability will decrease.

**H5:** Differing levels of situational factors will have an impact on the influence of the model’s relationships from sales manager conduct to sales force performance.

**H2, H3, and H4: Structure’s Influence on Managerial Conduct**

Linking structure to conduct, directional hypotheses were predicted for the impact of uncertainty and transaction specific assets on the conduct variables. Results for the model are reported in Table 4-11. In this model, uncertainty is found to significantly impact control, trust, and adaptability. In all cases, a significant positive relationship is found to link the uncertainty construct to control ($\beta = 0.41, p < .01$), to trust ($\beta = 0.33, p < .01$), and to adaptability ($\beta = 0.28, p < .01$). Thus, Hypotheses 2A, 2B, and 2C are strongly supported. The second situational construct, transaction specific assets, also exhibits positive relationships with respect to sales managers’ control ($\beta = 0.13, p < .10$), trust ($\beta = 0.12, p > .10$), and adaptability ($\beta = 0.03, p > .10$). While these relationships are in the predicted direction (i.e., positive), only marginal
support is found for Hypothesis 3A, while no support is found for Hypothesis 3B or Hypothesis 3C.

The third structural condition studied is sales force size, represented by the natural log of sales force size in this model. I expect that effects of sales force size may be curvilinear such that, while complexity increases as sales force size grows, at some size sales managers must rely on efficient processes. In this model, sales force size is found to be a slightly negative influencer of sales managers’ level of control (\( B = -0.09, p < .10 \)), so Hypothesis 4A is marginally supported. However, statistical significance is found for the relationship from sales force size to both trust (supporting Hypothesis 4B and adaptability (supporting Hypothesis 4C).

**H5: The Moderating Impact of Structural Variables**

Model 3 again tested the links from the three conduct variables to sales force performance, duplicating the analysis of Model 1, but this time accounting for the influence of structural variables. Again, the three managerial conduct variables of control, trust, and adaptability are found to be positively linked to sales force performance. Additionally, all directions remain positive, as shown in a comparison of model results in Table 4-12. However, when these conduct variables are impacted by the structural variables, the relationships from sales manager trust and adaptability maintain their significant impact on sales force performance while the relationship from sales manager control to sales force performance loses its statistical significance. This is supportive of Hypothesis 5’s suggestion that the presence of structural conditions will alter the impact of sales manager conduct on sales force performance.

Further exploration of the differences between the conduct to performance when structural variables are and are not present in the model yields additional findings. Analyzing the
three variables of sales manager conduct, control is the only one that loses significance with respect to performance when structural variables are included. Additionally, only one of the three structural variables is found to be a significant influencer on control—the structural variable of uncertainty. This is indicative that the impact that uncertainty has on control, dilutes the effect that control has on performance. In the current model, a more precise explanation of how uncertainty is diluting the impact of control on performance is not possible. However, future research can identify, specifically, how different levels of uncertainty impact the change from control to performance.

**Conclusion of Findings**

The results of the analyses conducted in this dissertation serve to provide greater insight into how sales manager should manage their sales forces in the most appropriate ways. Thirteen hypotheses were proposed in Chapter 2, survey data from sales managers was collected using the procedure described in Chapter 3, and the data was analyzed using structural equation modeling to find the interesting results reported in the present chapter. A summary of which hypotheses were supported with both statistical significance and directional agreement is available in Table 4-13. The findings of this study have not only theoretical implications, but they also have managerial relevance—both of which are discussed in Chapter 5.
Table 4-1

Control CFA Statistics

Model Fit Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (p-statistic)</td>
<td>47.759 (.003)</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>24</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>1.990</td>
</tr>
<tr>
<td>NFI</td>
<td>.830</td>
</tr>
<tr>
<td>CFI</td>
<td>.903</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.090</td>
</tr>
</tbody>
</table>

CFA Factor Loadings

<table>
<thead>
<tr>
<th>Observed Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBCS $\leftrightarrow$ Control</td>
<td>.766</td>
</tr>
<tr>
<td>OB_1 $\leftrightarrow$ OB_1</td>
<td>.668</td>
</tr>
<tr>
<td>BB_2 $\leftrightarrow$ BB_2</td>
<td>.407</td>
</tr>
<tr>
<td>BB_3 $\leftrightarrow$ BB_3</td>
<td>.757</td>
</tr>
<tr>
<td>BB_4 $\leftrightarrow$ BB_4</td>
<td>.292</td>
</tr>
<tr>
<td>BB_5 $\leftrightarrow$ BB_5</td>
<td>.459</td>
</tr>
<tr>
<td>BB_6 $\leftrightarrow$ BB_6</td>
<td>.763</td>
</tr>
<tr>
<td>OB_1 $\leftrightarrow$ OB_1</td>
<td>.738</td>
</tr>
<tr>
<td>OB_2 $\leftrightarrow$ OB_2</td>
<td>.265</td>
</tr>
<tr>
<td>OB_3 $\leftrightarrow$ OB_3</td>
<td>.432</td>
</tr>
<tr>
<td>OB_4 $\leftrightarrow$ OB_4</td>
<td>.711</td>
</tr>
</tbody>
</table>
Table 4-2

*Trust CFA Statistics*

<table>
<thead>
<tr>
<th>Model Fit Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ ($p$-statistic)</td>
<td>3.119 (.794)</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>6</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>.520</td>
</tr>
<tr>
<td>NFI</td>
<td>.991</td>
</tr>
<tr>
<td>CFI</td>
<td>1.000</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CFA Factor Loadings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed Item</td>
<td>Loading</td>
</tr>
<tr>
<td>T_1 $\leftrightarrow$ TRUST</td>
<td>.876</td>
</tr>
<tr>
<td>T_2 $\leftrightarrow$ TRUST</td>
<td>.827</td>
</tr>
<tr>
<td>T_3 $\leftrightarrow$ TRUST</td>
<td>.820</td>
</tr>
<tr>
<td>T_4 $\leftrightarrow$ TRUST</td>
<td>.775</td>
</tr>
<tr>
<td>T_5 $\leftrightarrow$ TRUST</td>
<td>.696</td>
</tr>
</tbody>
</table>
Table 4-3

*Adaptability CFA Statistics*

**Model Fit Statistics**

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (p-statistic)</td>
<td>2.996 (.224)</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>2</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>1.498</td>
</tr>
<tr>
<td>NFI</td>
<td>.957</td>
</tr>
<tr>
<td>CFI</td>
<td>.985</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.064</td>
</tr>
</tbody>
</table>

**CFA Factor Loadings**

<table>
<thead>
<tr>
<th>Observed Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>A_1 $\leftrightarrow$ ADAPT</td>
<td>1.000</td>
</tr>
<tr>
<td>A_2 $\leftrightarrow$ ADAPT</td>
<td>.616</td>
</tr>
<tr>
<td>A_3 $\leftrightarrow$ ADAPT</td>
<td>.405</td>
</tr>
</tbody>
</table>
Table 4-4

*Sales Force Performance CFA Statistics*

**Model Fit Statistics**

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (p-statistic)</td>
<td>1.269 (.260)</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>1</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>1.269</td>
</tr>
<tr>
<td>NFI</td>
<td>.991</td>
</tr>
<tr>
<td>CFI</td>
<td>.998</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.047</td>
</tr>
</tbody>
</table>

**CFA Factor Loadings**

<table>
<thead>
<tr>
<th>Observed Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFP_1 ← SF_Perf</td>
<td>.871</td>
</tr>
<tr>
<td>SFP_2 ← SF_Perf</td>
<td>.751</td>
</tr>
<tr>
<td>SFP_3 ← SF_Perf</td>
<td>.794</td>
</tr>
</tbody>
</table>
Table 4-5

*Transaction Specific Assets CFA Statistics*

<table>
<thead>
<tr>
<th>Model Fit Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (p-statistic)</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
</tr>
<tr>
<td>CMIN/DF</td>
</tr>
<tr>
<td>NFI</td>
</tr>
<tr>
<td>CFI</td>
</tr>
<tr>
<td>RMSEA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CFA Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed Item</td>
</tr>
<tr>
<td>TSA_1 ← TSA</td>
</tr>
<tr>
<td>TSA_2 ← TSA</td>
</tr>
<tr>
<td>TSA_3 ← TSA</td>
</tr>
</tbody>
</table>
### Table 4-6

**Uncertainty CFA Statistics**

#### Model Fit Statistics

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (p-statistic)</td>
<td>55.133 (.287)</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>50</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>1.103</td>
</tr>
<tr>
<td>NFI</td>
<td>.895</td>
</tr>
<tr>
<td>CFI</td>
<td>.989</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.029</td>
</tr>
</tbody>
</table>

#### CFA Factor Loadings

<table>
<thead>
<tr>
<th>Observed Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>IntUnc</td>
<td>.842</td>
</tr>
<tr>
<td>ExtUnc</td>
<td>.439</td>
</tr>
<tr>
<td>Gender</td>
<td>.644</td>
</tr>
<tr>
<td>Cultural</td>
<td>.595</td>
</tr>
<tr>
<td>Experience</td>
<td>.645</td>
</tr>
<tr>
<td>C_1</td>
<td>.852</td>
</tr>
<tr>
<td>C_2</td>
<td>.655</td>
</tr>
<tr>
<td>E_1</td>
<td>.754</td>
</tr>
<tr>
<td>E_2</td>
<td>.633</td>
</tr>
<tr>
<td>E_3</td>
<td>.874</td>
</tr>
<tr>
<td>EU_1</td>
<td>.304</td>
</tr>
<tr>
<td>EU_2</td>
<td>.416</td>
</tr>
<tr>
<td>EU_3</td>
<td>.922</td>
</tr>
<tr>
<td>EU_4</td>
<td>.883</td>
</tr>
<tr>
<td>EU_5</td>
<td>.397</td>
</tr>
<tr>
<td>EU_6</td>
<td>.527</td>
</tr>
</tbody>
</table>
Table 4-7

Structure, Conduct, and Performance CFA Statistics

Model Fit Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (p-statistic)</td>
<td>692.369 (.000)</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>535</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>1.294</td>
</tr>
<tr>
<td>NFI</td>
<td>.682</td>
</tr>
<tr>
<td>CFI</td>
<td>.901</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.049</td>
</tr>
</tbody>
</table>

CFA Loadings

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal_Uncertainty &lt;-&gt; UNCERTAINTY</td>
<td>.676</td>
</tr>
<tr>
<td>OBCS &lt;-&gt; CONTROL</td>
<td>.957</td>
</tr>
<tr>
<td>BBCS &lt;-&gt; CONTROL</td>
<td>.998</td>
</tr>
<tr>
<td>Age_Exp_Ten &lt;-&gt; Internal_Uncertainty</td>
<td>.570</td>
</tr>
<tr>
<td>External_Uncertainty &lt;-&gt; UNCERTAINTY</td>
<td>.741</td>
</tr>
<tr>
<td>Nat_Cult &lt;-&gt; Internal_Uncertainty</td>
<td>.519</td>
</tr>
<tr>
<td>Q21_7 &lt;-&gt; BBCS</td>
<td>.648</td>
</tr>
<tr>
<td>Q21_9 &lt;-&gt; BBCS</td>
<td>.604</td>
</tr>
<tr>
<td>Q20_4 &lt;-&gt; BBCS</td>
<td>.548</td>
</tr>
<tr>
<td>Q21_10 &lt;-&gt; BBCS</td>
<td>.441</td>
</tr>
<tr>
<td>Q17_13 &lt;-&gt; ADAPTABILITY</td>
<td>.688</td>
</tr>
<tr>
<td>Q20_1 &lt;-&gt; BBCS</td>
<td>.524</td>
</tr>
<tr>
<td>Q21_6 &lt;-&gt; BBCS</td>
<td>.603</td>
</tr>
<tr>
<td>Q20_3 &lt;-&gt; OBCS</td>
<td>.270</td>
</tr>
<tr>
<td>Q22_12 &lt;-&gt; OBCS</td>
<td>.562</td>
</tr>
<tr>
<td>Q21_11 &lt;-&gt; OBCS</td>
<td>.378</td>
</tr>
<tr>
<td>Q17_4 &lt;-&gt; TRUST</td>
<td>.770</td>
</tr>
<tr>
<td>Q17_5 &lt;-&gt; TRUST</td>
<td>.692</td>
</tr>
<tr>
<td>Q17_1 &lt;-&gt; TRUST</td>
<td>.848</td>
</tr>
<tr>
<td>Q17_2 &lt;-&gt; TRUST</td>
<td>.825</td>
</tr>
<tr>
<td>Q17_12 &lt;-&gt; ADAPTABILITY</td>
<td>.829</td>
</tr>
<tr>
<td>Q17_14 &lt;-&gt; ADAPTABILITY</td>
<td>.466</td>
</tr>
<tr>
<td>Q30_2 &lt;-&gt; SF_Perf</td>
<td>.781</td>
</tr>
<tr>
<td>Q30_1 &lt;-&gt; SF_Perf</td>
<td>.830</td>
</tr>
<tr>
<td>Relationship</td>
<td>Loading</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Q30_3 ← SF_Perf</td>
<td>.753</td>
</tr>
<tr>
<td>Q17_3 ← TRUST</td>
<td>.802</td>
</tr>
<tr>
<td>Q16_5 ← Age_Exp_Ten</td>
<td>.867</td>
</tr>
<tr>
<td>Q16_3 ← Nat_Cult</td>
<td>.729</td>
</tr>
<tr>
<td>Q16_6 ← Age_Exp_Ten</td>
<td>.765</td>
</tr>
<tr>
<td>Q16_1 ← Age_Exp_Ten</td>
<td>.646</td>
</tr>
<tr>
<td>Q16_2 ← Internal_Uncertainty</td>
<td>.760</td>
</tr>
<tr>
<td>Q5_9 ← External_Uncertainty</td>
<td>.429</td>
</tr>
<tr>
<td>Q5_6 ← External_Uncertainty</td>
<td>.920</td>
</tr>
<tr>
<td>Q5_4 ← External_Uncertainty</td>
<td>.894</td>
</tr>
<tr>
<td>Q5_1 ← External_Uncertainty</td>
<td>.410</td>
</tr>
<tr>
<td>Q5_5 ← External_Uncertainty</td>
<td>.518</td>
</tr>
<tr>
<td>Q5_7 ← External_Uncertainty</td>
<td>.311</td>
</tr>
<tr>
<td>Q16_4 ← Nat_Cult</td>
<td>.776</td>
</tr>
<tr>
<td>Q7 ← TSA</td>
<td>.615</td>
</tr>
<tr>
<td>Q8 ← TSA</td>
<td>.818</td>
</tr>
<tr>
<td>Q9 ← TSA</td>
<td>.651</td>
</tr>
<tr>
<td></td>
<td>CR</td>
</tr>
<tr>
<td>---------------</td>
<td>-----</td>
</tr>
<tr>
<td>1. Uncertainty</td>
<td>0.669</td>
</tr>
<tr>
<td>2. Control</td>
<td>0.977</td>
</tr>
<tr>
<td>3. Sales Force Performance</td>
<td>0.831</td>
</tr>
<tr>
<td>4. Transaction Specific Assets</td>
<td>0.740</td>
</tr>
<tr>
<td>5. Trust</td>
<td>0.892</td>
</tr>
<tr>
<td>6. Adaptability</td>
<td>0.708</td>
</tr>
</tbody>
</table>
Table 4-9

Results of Conduct-to-Performance SEM Analysis

Coefficients

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Unstandardized Estimate</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control $\rightarrow$ Sales Force Performance</td>
<td>0.197*</td>
<td>0.086</td>
<td>2.286</td>
<td>0.011</td>
</tr>
<tr>
<td>Trust $\rightarrow$ Sales Force Performance</td>
<td>0.377***</td>
<td>0.104</td>
<td>3.616</td>
<td>***</td>
</tr>
<tr>
<td>Adaptability $\rightarrow$ Sales Force Performance</td>
<td>0.348**</td>
<td>0.135</td>
<td>2.568</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Note: The reported $p$-values for directional hypotheses are halved; * $= p < .05$; ** $= p < .01$; *** $= p < .001$

Model Fit Statistics

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2 (df)$, p-value</th>
<th>CMIN/DF</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct to Performance</td>
<td>207.243(163), $p = .011$</td>
<td>1.271</td>
<td>0.804</td>
<td>0.949</td>
<td>0.047</td>
</tr>
</tbody>
</table>
### Results of Structure-to-Performance Model

#### Coefficients

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Unstandardized Estimate</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncertainty → Sales Force Performance</td>
<td>0.040</td>
<td>0.123</td>
<td>0.327</td>
<td>0.372</td>
</tr>
<tr>
<td>TSA → Sales Force Performance</td>
<td>0.067</td>
<td>0.100</td>
<td>0.673</td>
<td>0.251</td>
</tr>
<tr>
<td>Size → Sales Force Performance</td>
<td>-0.066</td>
<td>0.075</td>
<td>-0.873</td>
<td>0.191</td>
</tr>
</tbody>
</table>

Note: The reported p-values for directional hypotheses are halved.

#### Model Fit Statistics

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2 (df)$, p-value</th>
<th>CMIN/DF</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure to Performance</td>
<td>216.971(146), $p = .000$</td>
<td>1.486</td>
<td>0.76</td>
<td>0.903</td>
<td>0.063</td>
</tr>
</tbody>
</table>
Table 4-11

*Results of Structure to Conduct to Performance Model*

Coefficients

<table>
<thead>
<tr>
<th>Proposed Relationship</th>
<th>Unstandardized Estimate</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STRUCTURE TO CONDUCT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2A Uncertainty → Control</td>
<td>0.407**</td>
<td>0.147</td>
<td>2.768</td>
<td>0.003</td>
</tr>
<tr>
<td>H2B Uncertainty → Trust</td>
<td>0.326**</td>
<td>0.107</td>
<td>3.034</td>
<td>0.001</td>
</tr>
<tr>
<td>H2C Uncertainty → Adaptability</td>
<td>0.275**</td>
<td>0.099</td>
<td>2.782</td>
<td>0.003</td>
</tr>
<tr>
<td>H3A TSA → Control</td>
<td>0.129+</td>
<td>0.079</td>
<td>1.636</td>
<td>0.051</td>
</tr>
<tr>
<td>H3B TSA → Trust</td>
<td>0.118</td>
<td>0.095</td>
<td>1.251</td>
<td>0.106</td>
</tr>
<tr>
<td>H3C TSA → Adaptability</td>
<td>0.026</td>
<td>0.086</td>
<td>0.303</td>
<td>0.381</td>
</tr>
<tr>
<td>H4A Size → Control</td>
<td>-0.089+</td>
<td>0.056</td>
<td>-1.579</td>
<td>0.057</td>
</tr>
<tr>
<td>H4B Size → Trust</td>
<td>-0.294***</td>
<td>0.071</td>
<td>-4.122</td>
<td>***</td>
</tr>
<tr>
<td>H4C Size → Adaptability</td>
<td>-0.181**</td>
<td>0.065</td>
<td>-2.765</td>
<td>0.003</td>
</tr>
</tbody>
</table>

| **CONDUCT TO PERFORMANCE** |                         |                |             |         |
| H1A Control → SF Performance | 0.263+                | 0.185          | 1.421       | 0.078   |
| H1B Trust → SF Performance | 0.372***              | 0.097          | 3.859       | ***     |
| H1C Adaptability → SF Performance | 0.341**              | 0.126          | 2.716       | 0.004   |

Note: Reported p-values for directional hypotheses are halved; + = p < .10; * = p < .05; ** = p < .01; *** = p < .001

Model Fit Statistics

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df), p-value</th>
<th>CMIN/DF</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure to Conduct to Performance</td>
<td>817.685(575), p = .000</td>
<td>1.422</td>
<td>0.636</td>
<td>0.850</td>
<td>0.059</td>
</tr>
</tbody>
</table>
### Table 4-12

*Comparison of Conduct to Performance With (and Without) the Presence of Structural Variables*

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Unstandardized Estimate</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MODEL WITHOUT STRUCTURAL VARIABLES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control → Sales Force Performance</td>
<td>0.197*</td>
<td>0.086</td>
<td>2.286</td>
<td>0.011</td>
</tr>
<tr>
<td>Trust → Sales Force Performance</td>
<td>0.377**</td>
<td>0.104</td>
<td>3.616</td>
<td>***</td>
</tr>
<tr>
<td>Adaptability → Sales Force Performance</td>
<td>0.348*</td>
<td>0.135</td>
<td>2.568</td>
<td>0.005</td>
</tr>
<tr>
<td><strong>MODEL WITH STRUCTURAL VARIABLES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control → Sales Force Performance</td>
<td>0.263</td>
<td>0.185</td>
<td>1.421</td>
<td>0.078</td>
</tr>
<tr>
<td>Trust → Sales Force Performance</td>
<td>0.372***</td>
<td>0.097</td>
<td>3.859</td>
<td>***</td>
</tr>
<tr>
<td>Adaptability → Sales Force Performance</td>
<td>0.341**</td>
<td>0.126</td>
<td>2.716</td>
<td>0.004</td>
</tr>
</tbody>
</table>

Note: Reported p-values for directional hypotheses are halved; + = p < .10; * = p < .05; ** = p < .01; *** = p < .001
Table 4-13

Summary of Support for Hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Empirically Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1A</td>
<td>Yes</td>
</tr>
<tr>
<td>H1B</td>
<td>Yes</td>
</tr>
<tr>
<td>H1C</td>
<td>Yes</td>
</tr>
<tr>
<td>H2A</td>
<td>Yes</td>
</tr>
<tr>
<td>H2B</td>
<td>Yes</td>
</tr>
<tr>
<td>H2C</td>
<td>Yes</td>
</tr>
<tr>
<td>H3A</td>
<td>Marginal</td>
</tr>
<tr>
<td>H3B</td>
<td>No</td>
</tr>
<tr>
<td>H3C</td>
<td>No</td>
</tr>
<tr>
<td>H4A</td>
<td>Marginal</td>
</tr>
<tr>
<td>H4B</td>
<td>Yes</td>
</tr>
<tr>
<td>H4C</td>
<td>Yes</td>
</tr>
<tr>
<td>H5</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Note: “Yes” indicates $p < .05$; “Marginal” indicates $p < .10$; “No” indicates $p > .10$
Figure 4-1. Control Systems CFA

Control

Behavior-Based Control System

BB_1 BB_2 BB_3 BB_4 BB_5 BB_6

Outcome-Based Control System

OB_1 OB_2 OB_3
Figure 4-2. Trust CFA

![Diagram showing Trust CFA with variables T_1 to T_5 connected to Trust]

Trust

T_1 → T_2 → T_3 → T_4 → T_5
Figure 4-3. Adaptability CFA
Figure 4-4. Sales Force Performance CFA Model

Sales Force Performance

SFP_1  SFP_2  SFP_3
Figure 4-5. Transaction Specific Assets CFA

Transaction
Specific Assets

TSA_1  TSA_2  TSA_3
Figure 4-6. Uncertainty CFA
Figure 4-7. Full Model CFA
Figure 4-8. Original Conduct-to-Performance Model
Figure 4-9. Improved Conduct-to-Performance Model
Figure 4-10. Structure to Performance SEM Model
Figure 4-11. Structure to Conduct to Performance SEM Model
CHAPTER 5: CONCLUSION AND IMPLICATIONS

In this final chapter, this dissertation will be summarized, conclusions will be drawn, and implications will be noted. Additionally, existing limitations to the present study will be acknowledged along with their consequences. Finally, ideas for future research that can expand and extend this study will be presented.

Summary

This dissertation examines the impact that sales managers’ behaviors have on sales force performance, given a variety of structural (or situational) factors. Specifically, the sales manager behaviors of interest are level of control, trust in the sales force, and adaptability toward the sales force. The situational factors included in the study are uncertainty, transaction specific assets, and sales force size. Uncertainty is formed by aspects both external to the sales force (e.g., industry uncertainty, competitive uncertainty, and technological uncertainty) and internal to the sales force (i.e., sales force diversity with respect to age, gender, tenure, experience, nationality, and culture).

To assess this problem setting, five main (13 total) hypotheses were created and tested. Data was collected from practicing sales managers (many representing large, global firms) with a final sample size of 123. For all measurement models, both exploratory and confirmatory factor analyses were assessed, and results were very strong. Overall, the measurement models were found to have strong reliability and validity. Casual relationships were analyzed with the sales force as the unit of analysis. To analyze the data, structural equation modeling was used, and two models were compared: (1) a model from sales managers’ behavioral conduct to sales force
performance and (2) a model that presented structural conditions as a moderator on the
relationship from sales manager conduct to sales force performance. Results find that structural
conditions can affect the relationship from conduct to performance. Specifically, results show
that the situational factor of uncertainty is most influential. Uncertainty was significantly related
to the sales manager’s level of control, and the presence of uncertainty diluted the effect of
control on sales force performance.

Contributions and Implications

This study provides insight into the impact that sales managers have on their sales force’s
performance. From a conceptual standpoint, this study provides several contributions to theory.
The problem setting and model are rich with extensions to existing literature in the area of sales
management. Additionally, these conclusions provide practical suggestions of behaviors that are
the most appropriate for sales managers to engage in for better sales force performance. The
contributions of both theory and practice are further described in this section.

Theoretical Implications

This dissertation provides contributions to theory in multiple ways. Theoretically,
attention is given to the structure-conduct-performance paradigm to anchor the dissertation’s
conceptual model. This framework matches the context and positions the findings quite well.
Through Chapter 4’s analyses, empirical evidence has been provided for use of the structure-
conduct-performance model. Comparisons were made between structure-to-conduct-to-
performance, structure-to-performance, and conduct-to-performance models. The structure-to-
performance model was a poor fit and did not provide much explanation to the study’s problem
setting. From an empirical standpoint, the conduct-to-performance model had the best model fit among the three; but, better still, structure-conduct-performance allowed the most insights to be derived with respect to the overall framework. The more comprehensive model allowed the most explanation at the structure, conduct, and performance levels.

In addition to introducing the structure-conduct-performance paradigm to the sales literature, the actual study itself provides a number of twists and extension from the traditional sales research. The utilization of a unique unit of analysis—the sales force—provides a different perspective than the traditional literature, which tends to draw conclusions with respect to the sales manager or a salesperson. Drawing conclusions at the sales force level appears to be an appropriate goal to bring a more realistic view of practice into theory as, in industry, sales managers ultimately are responsible for an entire sales force.

The model in this dissertation is conceptually complex, providing a more integrated approach to combine structural, conduct, and performance variables into a complete picture instead of linking structural variables with conduct variables or conduct variables with performance. While majority of the sales management literature looks at how one relationship link is affected and then includes mediators or moderators on that link, the structural conditions are not frequently considered. This dissertation draws awareness to the environment in which the sales force is selling, as many contingencies can change the influence of management styles on performance.

Additionally, the conduct variables provide a distinct contrast from their traditional considerations. In particular, control is assessed as a sales manager-level construct rather than a firm-level construct, trust is considered with respect to the sales manager’s trust in the sales force
rather than the sales force’s trust in the sales manager, and adaptability is extended from the perspective of a salesperson’s adaptive selling behavior to the context of adaptive management.

Extant sales management literature has established an important focus and a large amount of research on control systems. Generally, existing research assigns a control system as being primarily either behavior-based or outcome-based; then, assessments are made with respect to a firm’s utilization of these two control systems. Items at the firm level are usually considered, such as the implementation of a standardized compensation plan that emphasizes one over the other (e.g., if salespeople are observed, measured, and rewarded solely on their sales volume, an outcome-based control system is assumed). In this dissertation, control is considered at the sales manager level. Thus, behavior-based and outcome-based control systems are joined in the model as factors of an overall degree of control. By doing this, a sales manager’s level of control is assessed and integrated into conclusions related to sales force performance. This new view of control serves as a foundation for new research considering control at the level of sales managers.

The dissertation also extends the extant sales literature by viewing the constructs of trust and adaptability, which are typically studied with respect to salespeople, with respect to the sales manager. For both trust and adaptability, an existing scale from the personal selling literature was borrowed and adapted to assess the construct from the sales manager’s point of view toward the sales force. Rather than seeing how individual salespeople trust their managers, this dissertation assesses sales managers’ trust in their sales force. Similarly, the construct of adaptability in this study measures how well sales managers can adjust to their sales force and the difference situations that arise with respect to their sales force. Adaptability in sales has primarily been in the personal selling literature, where assesses individual salespeople’s adaptive
selling ability. Bringing each of these measures into the sales manager perspective provides a foundation for future research, as well as a strong start for adequate scale formation.

**Managerial Implications**

The findings of this dissertation’s study also have valuable practical insights for sales managers. The importance of sales managers’ control, trust, and adaptability is highlighted through their significant influence on the sales force’s performance. Building on this, the findings become even more intriguing when uncertainty is able to overshadow the impact of control on performance. While many sales managers are likely to try and take a proactive approach to managing their sales force and the situations surrounding it, sales managers must also assess and react to a variety of scenarios in their day to day duties.

Sales force size and transaction specific assets are structural conditions that allow sales managers to be somewhat proactive, rather than reactive to changes. The size of the sales force is generally fairly stable, such that sales managers learn how to appropriately handle special scenarios that arise from size. This is reflected by the non-significant impact that sales force size was found to have on the relationship between sales manager conduct and sales force performance. Similarly, transaction specific assets take place at the firm level and will often be constant. As these requirements—for example, proprietary needs—change, a firm is likely to institute guidance for making necessary adjustments.

Of the structural variables considered in this model, uncertainty is clearly the most difficult to treat with a proactive approach. This is the case both because uncertainty can stem from a variety of sources and because it is unpredictable. As this model demonstrates, uncertainty can occur in the external environment at any time, for any reason, without any
explanation. Sales managers must assess these changing situations and advise their salespeople on how to respond appropriately. Uncertainty can also be found internal to the sales force which appears, at face value, to be somewhat more predictable since sales managers are likely to be involved in the hiring process that would be the source for increased diversity in the sales force. Additionally internal uncertainty is likely to occur in a more incremental manner than external uncertainty.

While additional study is necessary to identify precise mechanisms of uncertainty that affect sales manager control the most, this is a starting point for sales managers to make considerations for better performance. If sales managers can better predict uncertainty, or create an assessment to increase their awareness by using a more proactive approach, it is likely that these scenarios would not play as big of a role in shifting how sales managers’ reactions impact their sales force’s performance levels.

An additional item for sales managers to become more aware of is their level of adaptability. Adaptability was found to play a significant role in sales force performance, both with and without the consideration of situational factors. This study finds that the more adaptable sales managers are, the better their sales forces perform. Sales managers can be adaptive with respect to their interactions with the members of their sales forces and also with respect to situations they face.

Sales managers often encourage their salespeople to engage in adaptive selling behavior, through which salespeople are encouraged to use what they know about the selling situation to adapt their behavior. In doing so, sellers consider the social style, wants, needs, and situations facing their customers. In these business relationships, trust is found to be related to adaptability. Brennan and Turnbull find that trust is required to encourage adaptive behaviors (1991). Then,
this adaptability is found to further increase trust and commitment (Hallén, Johanson, and Seyed-Mohamed, 1991). However, the intensity of the iterative, adaptive behavior must be considered, as Brennan and Turnbull caution that “managers should be aware that there is a healthy limit to the relationship development process, beyond which the costs begin to outweigh the benefits” (1991, p. 493). Managers must consider the effects of adaptability as they interact with their sales force and strive for mutually rewarding benefits.

**Limitations**

As with every research project, some limitations to the study exist. Implications and suggestions for managers are drawn based on the observed sample data. The sample does reasonably represent the population of sales managers, but variations always exist. For example, many respondents in this study come from large—even global—corporations that are likely to have stringent managerial processes in place. Accordingly, some managers may not have as flexible of an approach to shape their behavior in ways that encourage trust and adaptability. Similarly, the culture of represented firms is likely to be an influencing factor. However, since this study makes assessments with the sales force as a unit of analysis, such conditions should be well-integrated into the model.

Another limitation related to the sample data is the number of respondents. While 123 sales managers was a sufficient number to assess the fit and relationships in the SEM models for this study, a larger sample would enable additional information to be acquired. For example, more specific conclusions could be drawn about the particular role of uncertainty in the final model if sample size was large enough to allow for division into “high uncertainty” and “low
uncertainty” groups for analysis. Attempting to complete this analysis in Amos with the current sample size applies too many constraints for the model to run.

Additionally, the findings of this dissertation are limited by the fact that Amos assumes linearity. As such, this study reflects the behaviors that a sales manager exhibits, relative to the sales force’s performance as a linear relationship. While the current model holds everything in a linear fashion that, as discussed earlier, may not be the case. In this regard, control’s positive, linearity-assumed relationship with sales force performance would not make sense—the higher the level of control, the better, would only hold true to some unknown point.

The final limitation of this study lies within the measurement models. Control and uncertainty both include some items with low factor loadings. In particular, control represents the most challenges—which likely stems from its formation of two very different components. In the literature, behavior- and outcome-based control systems are portrayed as a continuum of a firm’s focus for control. In the case of this study, the manager’s focus on control is considered rather than the firm. At the sales manager level, it is possible to operate in a way that engages both behavior- and outcome-based fragments of control. Because of this key difference, this dissertation lifts control to a second-order construct representing the level of control.

The multi-level constructs examined in the model, uncertainty and control, went through only a single phase of scale development using relevant items from established literature. To create a pure scale, several different phases of cleaning and added would be necessary. In that sense, this dissertation’s observance of control and uncertainty are exploratory in nature. While such low loadings are not ideal, the combination of items present in these models represents the most available and appropriate items to fit to the construct. Given the nature of this study using control and uncertainty as higher-order constructs, these loadings are still acceptable for
exploratory analyses. Seemingly, the only way to erase this limitation would be to create, pretest, and refine new measures for a sales manager’s level of control and for the various uncertainties with which a sales manager and/or sales force may be faced.

**Future Research**

An abundance of additional studies can be completed to build on the findings of this dissertation. There are a variety of ways to extend the current study by digging deeper for a more in-depth analysis. Additionally, many related research questions have now arisen and become relevant for study.

With respect to extending the present study and digging deeper, the impact of uncertainty on the relationship between conduct and performance must be further identified. The sample should be split into levels of uncertainty (e.g., a median split can identify respondents into groups of high uncertainty and low uncertainty). Then, group analyses can be made on the present model to zoom in on the location and nature of uncertainty’s influence. Additionally, the type of uncertainty (i.e., internal or external) and its respective effect should also be examined. By addressing uncertainty in this fashion, recommendations can be made to sales managers for the most appropriate and proactive solution to minimize the dilution effects found in the present study.

In addition to further exploring uncertainty, the role of control should continue to be examined. While most of the literature does examine control at the firm level with respect to a behavior- or outcome-based system, this dissertation considers at overall control as a second-order construct. Modeled as a second order construct reflecting sales manager’s overall, the sales manager’s emphasis on outcomes or processes does not directly contribute to the model.
Exploration of these two types of control may bring interesting findings, as well as uncover additional relationships. The literature has established that trust and adaptability are somewhat iterative in their relationship. It seems reasonable that a sales manager’s adaptability would correlate with a behavior-based approach to control, but such a proposition remains to be tested empirically. The current data set of this dissertation would allow for such an exploration.

Honing in on sales force size to see how size impacts sales force performance and a sales manager’s behaviors toward the sales force. In this study, the natural log of sales force size was used in the model to bring in outliers and make the sales force size measure more comparable to the scale item measures. However, in doing so, linearity became assumed for sales force size to be considered in the model. In actuality, it is likely that a non-linear relationship can be further explored. As a sales force grows larger from, for example, five to 10 salespeople, the sales manager may want to be more adaptable. However, if a sales force continues to grow, at some point the sales manager’s adaptability level must decline.

Testing this possibility of nonlinearity in sales force size to find the “sweet spot” for a sales manager’s conduct with respect to control, trust, and adaptability toward the sales force would be an interesting future study with many managerial contributions. To examine the actual nature of nonlinearity, the same model can be used with the addition of sales force size, (sales force size)$^2$, and (sales force size)$^3$ into the model to pick up the nature of nonlinearity. For Models 2 and 3, the statistical assumption of linearity is satisfied, but the current study does not currently take into account the specific role of nonlinearity related to sales force size.

This dissertation tests three types of sales manager conduct with respect to sales force performance, finding positive relationships. The assumption gained is that, if managers employ the conduct variables appropriately, they will be rewarded with improved sales force
performance. While ideal behaviors for sales managers are identified, the impact of how using these behaviors impacts performance is not tested in the model. Instead, this study tests the conduct that sales managers already exhibit—not necessarily the recommended behaviors. Future research should explore and verify whether performance does reward the recommended sales manager behaviors.

As a way of expanding this dissertation’s focus, consideration of the sales manager characteristics (Table 3-1) and firm characteristics (Table 3-2) and could enrich the study’s findings and implications. Comparisons on the impact on the sales manager’s way of managing and the sales force’s performance could be made by controlling for or grouping on these variables. With respect to firm characteristics, grouping data with respect to firm size, industry, primary customer type, markets represented, sales volume, or enforcement of sales training programs may show differences at the sales force level when the model is reexamined. The model can also be assessed by considering different descriptive sales manager variables, such as gender, tenure, experience, education level, required training, and the like. While these proposed comparisons would be made with respect to sales managers’ individual differences, they can still be used to analyze and assess effects at the sales force level.

Sales force variables can also be extended beyond the model to see how they differ under varied management styles. Sales force size can be broken into groups for comparative study. Perhaps even more interesting, markets in which sales forces operate can be compared. Since this data set includes a strong number of responses from sales managers outside of the U.S., cross-cultural management styles, paired with their resulting performances, can be studied.

Extensions to the model can be made to create a fuller idea of how sales manager behaviors vary different outcome variables. While sales force performance is considered the
final outcome variable in the current model, the same model is considered with respect to sales manager performance in Appendix B. Additional outcome variables of interest that would provide a broader view of the effects of these management behaviors, but for which data has not been collected in this dissertation, include sales force motivation, sales force synergy, and sales force esteem. Attaining these measures from the sales force members to create a dyadic approach would be very interesting.

Another extension to this study would be to take a dyadic approach by going up a step in the corporate hierarchy. For example, if the sales managers report to the Vice President of Sales, collecting data from these managers would create an interesting comparison of expectations for sales managers versus actuality. Utilizing data from the sales managers’ superiors would also be a creative way to further validate the current study’s measures, which are self-assessed by the sales managers.
Chapter Five References


APPENDIX A
Sales Manager Survey

This research involves a web-based survey designed to better understand how sales managers interact with their sales force. This study will be conducted entirely online in a single questionnaire. If you decide to participate in this study, you will be asked to complete a questionnaire by answering questions about your sales force and your management style. The survey should take approximately 20 minutes.

Rebecca Dingus of Kent State University is conducting the study as part of her doctoral dissertation, and it has been approved by the Kent State University Institutional Review Board. No deception is involved, and the study involves no physical or mental risks beyond those normally encountered in everyday life. All responses are treated as confidential, and in no case will responses from individual participants be identified. Rather, all data will be pooled and published in aggregate form only. Participants should be aware, however, that the experiment is not being run from a “secure” https server of the kind typically used to handle credit card transactions, so there is a small possibility that responses could be viewed by unauthorized third parties (e.g., computer hackers). Many individuals find participation in this study enjoyable, and no adverse reactions have been reported. Participation is voluntary, refusal to take part in the study involves no penalty or loss of benefits to which participants are otherwise entitled, and participants may withdraw from the study at any time without penalty or loss of benefits to which they are otherwise entitled. If participants have further questions about this study, they may contact the principal investigator, Rebecca Dingus, at (330)672-1839; or the Kent State University IRB, at (330)672-2704. If you would like a copy of this consent form, you may print it at this time.

If you are 18 years of age or older, understand the statements above, and freely consent to participate in the study, click on the “>>” button below to go to the next page and begin the survey.

SECTION I: INDUSTRY INFORMATION

To what extent do you, as the sales manager, agree with the following statements?  

Strongly Disagree  |  Strongly Agree  
--- | ---  
1. In our kind of business, customers’ product preferences change a lot over time.  | 1 2 3 4 5 6 7  
2. It is very difficult to predict any changes in this marketplace.  | 1 2 3 4 5 6 7  
3. It is very important to understand customers’ preferences.  | 1 2 3 4 5 6 7  
4. The technology in our industry is changing rapidly.  | 1 2 3 4 5 6 7  
5. It is very difficult to forecast where the technology in our industry will be in the next two to three years.  | 1 2 3 4 5 6 7  
6. The technological changes in this industry are frequent.  | 1 2 3 4 5 6 7  
7. Competition in our industry is cutthroat.  | 1 2 3 4 5 6 7  
8. Anything that one competitor can offer, others can match readily.  | 1 2 3 4 5 6 7  
9. My firm operates in a very competitive industry.  | 1 2 3 4 5 6 7  

SECTION II: PRODUCT/SERVICE INFORMATION

How technical or complex is the product/service you sell?  

Not at all  |  Extremely  
--- | ---  
Technical/Complex  | Technical/Complex  
1 2 3 4 5 6 7  

How important is it for your firm to establish policies or procedures to safeguard the product/service being sold by your sales force?  

Not at all  |  Extremely  
--- | ---  
Important  | Important  
1 2 3 4 5 6 7  

How much investment goes into technology to protect the product/service being sold by your sales force?  

None  |  A Great Deal  
1 2 3 4 5 6 7  

---
SECTION III: MARKET INFORMATION

How many markets are served by the sales force you manage? Please enter the number below.

_______ markets

Low     High

Overall, how diverse are the markets served by your sales force?

1 2 3 4 5 6 7

How diverse are the markets you serve with respect to the following elements…

- Culture of the markets
  Not at all  Diverse
  1 2 3 4 5 6 7
- Economic conditions
  Not at all  Diverse
  1 2 3 4 5 6 7
- Customers
  Not at all  Diverse
  1 2 3 4 5 6 7
- Competition
  Not at all  Diverse
  1 2 3 4 5 6 7
- Your firm’s presence in these markets
  Not at all  Diverse
  1 2 3 4 5 6 7

SECTION IV: SALES FORCE INFORMATION, Part 1 of 5

Please tell me how well you know your sales force at the following levels…

- How well do you know your sales force as a whole?
  Not at all  Well
  1 2 3 4 5 6 7
- How well do you know members of your sales force at an individual level?
  Not at all  Well
  1 2 3 4 5 6 7

How diverse is your sales force with respect to the following elements…

- Age
  Not at all  Diverse
  1 2 3 4 5 6 7
- Gender
  Not at all  Diverse
  1 2 3 4 5 6 7
- Culture
  Not at all  Diverse
  1 2 3 4 5 6 7
- Nationality
  Not at all  Diverse
  1 2 3 4 5 6 7
- Years of Total Sales Experience
  Not at all  Diverse
  1 2 3 4 5 6 7
- Number of Years in Your Sales Team
  Not at all  Diverse
  1 2 3 4 5 6 7

To what extent do you, as the sales manager, agree with the following statements?

- I trust my sales force.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- My sales force can always be counted on to act as I expect.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- I believe the information that my sales force provides me.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- My sales force is generally concerned that our business succeeds.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- My sales force has trust in me as their sales manager.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- I am good at managing my sales force.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- It is difficult for me to put pressure on my sales force.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- I know the right thing to do in management situations.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- I am good at finding out what my sales force wants.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- It is easy for me to get my sales force to see my point of view.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- I vary my management style from situation to situation.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- I try to understand how one salesperson differs from another.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- I am very sensitive to the individual needs of my salespeople.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
- When I feel that my management approach is not working, I can easily change to
  another approach.
  Strongly Disagree  Strongly Agree
  1 2 3 4 5 6 7
Please rate the strength of your relationships with the following groups of people.

My relationships with customers are

My relationships with distribution channels are

My relationships with key accounts are

My relationships with sales people are

My relationships with upper management at my company are

My relationships with my own department at my company are

My relationships with the other departments at my company are

To what extent do you use the following measures to evaluate your salespeople?

Number of sales calls

Servicing of customers

Performance (e.g., sales volume, quota attainment, number of orders)

Qualitative aspects of selling (e.g., efforts devoted to achieving customer satisfaction, proposals, presentations)

Observe the performance of salespeople in the field

To what extent do you spend time developing your salespeople?

Regularly review call reports from salespeople

Regularly spend time coaching salespeople

Discuss performance evaluations with salespeople

Actively participate with training salespeople on the job

Evaluate the number of sales calls made by each salesperson

Observe the profit contribution achieved by each salesperson

To what extent do you reward your salespeople in the following ways?

Reward salespeople based on their sales results

Compensate salespeople based on the quality of their sales activities

Use nonfinancial incentives to reward salespeople for achievements

Please choose the appropriate responses to complete the following sentences, with respect to your knowledge.

My knowledge of my sales force's value among the customers is

My knowledge of my sales force's image among the customers is

My knowledge of my sales force's relationships with customers is

My knowledge of my sales force's inherent strength is

My knowledge of my sales force's areas for improvement is

My knowledge of my sales force's work ethic is

My knowledge of the sales force management functions in my firm is

My knowledge of how sales force performance is evaluated in my firm is

My knowledge of how sales force management decisions are made in my firm is

Please choose the appropriate responses to complete the following sentences, with respect to your particular skills.

My networking skills are

My verbal communication skills are

My marketing research skills are

My decision-making skills are

My team management skills are
SECTION IV: SALES FORCE INFORMATION, Part 4 of 5

Please choose the appropriate responses to complete the following sentences, with respect to your abilities.

My ability to boost positive morale is _________
My ability to enhance open communication is _________
My ability to set role model is _________
My ability to build confidence and trust among sales reps is _________
My ability to set clear expectations is _________
My ability to develop sales reps' skills is _________
My ability to give effective feedback is _________
My ability to improve sales force efficiency is _________
My ability to enhance sales force performance is _________
My ability to communicate effectively with sales force is _________
My ability to set appropriate goals for my sale force is _________
My ability to help my sale force to meet their goals is _________
My ability to train my sale force is _________
My ability to create a desirable sales force image is _________
My ability to integrate and reconfigure available resources in sales force management is _________
My ability to deliver the sales force's promise to the customers is _________
My ability to create desirable sales force value to my firm _________
My ability to communicate the sales force's image and value efficiently to external parties (customers, promotion agencies, distribution channels) is _________

SECTION IV: SALES FORCE INFORMATION, Part 5 of 5

In rating performance, to what extent do you, as the sales manager, agree with the following statements?

The sales force I manage…
...performs better than our competition. _________
...meets or exceeds the goals I set for them. _________
...has a better sales force “image” than our competition. _________

Considering my own performance as a sales manager, I…
...always meet the objectives set by my supervisor. _________
...have very positive annual job reviews. _________
...always meet the strategic goals my firm sets for my sales force. _________

SECTION V: PERSONAL DEMOGRAPHICS

Are you a sales manager?
Yes          No

What is your current job title?
___________________________________

Do you have any salespeople reporting to you?
Yes          No
If yes, how many? __________

How many years have you worked in your current position?
_____ years
What is your gender?

Male          Female

What is your ethnicity?
American Indian or Alaska Native          Asian          Black or African American
Hispanic or Latino          Native Hawaiian or Other Pacific Islander          White or Caucasian

What is your highest level of education attained?
Some High School          High School Graduate or GED          Associate or Baccalaureate Degree
Master Degree          Professional or Terminal Degree

SECTION VI: SALES FORCE DEMOGRAPHICS

What percentage of sales for the sales force you manage is domestic, and what percentage is international?
Domestic: ________ %          International: ________ %

On average, how many accounts is one salesperson responsible for annually?
_______ accounts

One salesperson is, on average, responsible for a customer base of $______ in annual revenue.

How many nationalities do the members of your sales force represent?
_______ nationalities

SECTION VII: COMPANY AND INDUSTRY DEMOGRAPHICS

The following questions ask you to share a bit about your company.

How many employees does your firm have?
_______ employees

How many years has your firm been in business?
_______ years

How many sales teams does your firm have?
_______ sales teams

On average, how many salespeople make up each sales team?
_______ salespeople

What was the annual sales volume of your firm in 2012?
$__________

Besides the U.S. domestic market, how many other markets does your company serve?
_______ markets

What percentage of your company’s sales is domestic, and what percentage is international?
Domestic: ________ %          International: ________ %

Is a company-mandated compensation plan in place for your firm’s salespeople?
Yes          No

If you answered “yes” above about a company-mandated compensation plan, please indicate the percentage of:
_______ % Salary
_______ % Commission
_______ % Bonus/Incentives
Is there a training program that all salespeople in your company must complete?  
Yes  No  

Is there a specific training program that you and every other sales manager in your company have completed?  
Yes  No  

Does your sales force sell to… (please select all that apply)  
________ Consumers (End Users)  
________ Businesses  
________ Resellers  

In what industry are the products/services that your sales force sells? Please select all that apply.  
________ Appliances  
________ Business Services  
________ Computer/Software  
________ Electronics  
________ Financial Services  
________ Healthcare  
________ Publishing/Printing  
________ Real Estate  
________ Transportation  
________ Telecommunications  
________ Other (please describe: __________________)  

OPTIONAL: If you would like to receive a summary report of this study’s findings, please provide your email address. Your email will remain confidential and will not be linked to your response.  

This concludes the survey, but your response has not yet been submitted. PLEASE CLICK THE “>>” BUTTON TO SEND YOUR RESPONSE. THANK YOU FOR YOUR INPUT! If you have any questions, comments, or concerns, please contact Rebecca Dingus at rdingus@kent.edu.
APPENDIX B
Appendix B provides additional analyses and insight that are related, but not directly connected, to the dissertation study described in Chapter 1-5. The same framework is considered, as well as the same aim to explore appropriate behaviors of sales managers. However, in Appendix B, the performance outcome variable that is assessed is sales manager performance instead of sales force performance. The analyses presented here will mirror those of Chapter 4, only a different outcome variable is used. To make such analyses, the construct of sales manager performance is first assessed through an exploratory factor analysis (EFA) and then through a confirmatory factor analysis (CFA). Then, the effects of structural, conduct, and performance variables are assessed through several structural equation models (SEM). Results and a brief discussion of each model are provided.

**Sales Manager Performance EFA**

Sales manager performance, while not a primary consideration for the model’s outcome variable, is also assessed in a secondary set of analyses that are reported in Appendix B. This performance scale is also formed by three items, which were created specifically for this study. This scale was received well during pre-testing, with hesitation expressed only for the fact that sales managers are performing a self-assessment of their performance for this study. Sales managers are asked to what extent they agree with the following statements about their own performance as a sales manager: “I always meet the objectives set by my supervisor,” “I have very positive annual job reviews,” and “I always meet the strategic goals my firm sets for my sales force.”
For all items, “1” indicates that the sales manager “strongly disagree[s],” while “7” indicates that he or she “strongly agree[s].” At the construct level, all three sales manager performance items loaded onto a single factor in an exploratory factor analysis, explaining 77.98 percent of the variance. Additionally, the three items were found to have strong reliability, such that alpha = .86. The three items’ means and standard deviation values, as well as the construct reliability statistic (Cronbach’s Alpha), are shown in Table B-1.

**Sales Manager Performance CFA**

The additional performance measurement model studied in this dissertation is sales manager performance, which is represented by three items and displayed in Figure B-1. The CFA results, shown in Table B-2, are indicative of an excellent fit between the proposed measurement model and the observed data. This fit is demonstrated by the low and non-significant value of the chi-square statistic ($\chi^2 = 1.197 (1), p = .27$), very high values of fit indices (NFI = .99 and CFI = .99), and a reasonable RMSEA (.04). Additionally, the sales manager performance construct’s factor loadings are strong; two are above .90, and one is at an acceptable level of .65.

**Full Model CFA with Sales Manager Performance**

All latent constructs representing structural variables, sales manager behaviors, and sales manager performance are connected with covariance arrows as shown in Figure B-2. As in the full CFA for the main model of this dissertation, the observed variable of sales force size is not included in the CFA model, as only latent variables are included. Model fit statistics and factor loadings are provided, in detail, in Table B-3. This CFA portray a Chi-squared value of $731.76(539), p = .00$. The CMIN/DF value is 1.36, making the chi-square value seem more
reasonable after taking sample size into account. The CFI value (.88) is indicative of a reasonable fit for exploratory research but not a strong fit of the model to the data.

Validity statistics for the model are shown in Table B-4, with minimal concern. The questionable statistics show that convergent validity may be a concern for transaction specific assets and adaptability, as their average variance extracted (AVE) is less than the desirable .50 level. However, as was noted in the CFA for the full model with sales force performance in Chapter 4, these two constructs have AVE values (.48 and .46, respectively) that are just below the threshold. Additionally, discriminant validity for transaction specific assets is questionable, as the AVE for the transaction specific assets construct is less than the maximum shared variance (MSV). Similarly, this same issue is discussed in Chapter 4.

**Structural Equation Modeling**

Three models are assessed to determine the relationship from sales manager conduct to sales manager performance with and without the presence of structural variables. This appendix includes a figure of each model, as well as tables that provide the resulting coefficients and model fit statistics of each structural equation model.

**Model B1: Conduct-to-Sales Manager Performance Model**

The first model, Model B-1, assesses the relationships between the three conduct variables of control, trust, and adaptability and the outcome variable of sales manager performance. The results of the model shown in Figure B-3 indicate that an improved model exists. Specifically, the modification indices suggest that, in addition to correlating trust and adaptability, the construct pairs of trust and control, as well as control and adaptability, should
also be correlated. Thus, the improved model, with the addition of these two covariance arrows, is shown in Figure B-4. Results of this model, shown in Table B-5, are indicative of very good fit (CFI = .95), although control is the only conduct variable found to be linked to sales manager performance—and it is marginally significant ($p = .07$) at that. To be noted, though, is that a positive relationship is consistently found between the three conduct variables and the sales manager performance.

**Model B2: Structure-to-Sales Manager Performance Model**

As in the analyses conducted in Chapter 4 with respect to sales force performance, this group of SEM analyses also includes a baseline evaluation of the links from structural variables to the sales manager performance. Figure B-5 depicts this particular model, and Table B-6 provides the results. The model exhibits a relatively strong fit to the data, with a CFI of .92 ($\chi^2 = 207.01$ (146), $p = .00$). Assessing the relationship from uncertainty, transaction specific assets, and sales force size to sales manager performance, Model B2 finds that uncertainty is both significantly and positively related to sales manager performance. This is an interesting finding, as none of the structural variables were found to be significantly related to sales force performance in Chapter 4.

**Model B3: Structure-to-Conduct-to-Sales Manager Performance Model**

The third and main analysis, Model B3, connects the three structural variables to the three conduct variables and the three conduct variables to the sales manager performance variable (shown in Figure B-6). While this model may be considered for exploratory analyses, this model does not exhibit an excellent fit to the data ($\chi^2 = 852.67$ (578), $p = .00$, CFI = .84, RMSEA =
The same technical complications arise with respect to fitting this model as for fitting the full model described with sales force performance in Chapter 4. The model’s full results are shown in Table B-7, and the most interesting of these findings are presented in the text below.

In this model, control continues (as in Model B1) to be the only conduct variable that has a significant impact on sales manager performance. Both transaction specific assets and uncertainty (but not sales force size, as in the analysis with sales force performance) are found to be significantly linked to the level of control. Unlike when sales force performance was the performance variable, in this analysis, control continues to be significantly related to sales manager performance at the level of $p < .05$. Given this, the significant impact of uncertainty on control (which is present) does not appear to dilute the effect of a sales manager’s level of control on his or her performance level like it does to his or her sales force’s performance.

An additional, unique finding of this analysis is that the transaction specific assets’ variable shows a significant impact on all three sales manager behaviors whereas before, in the model with sales force performance, the transaction specific assets were only linked to control. This finding invites further study of the impact of transaction specific assets on managerial behaviors.
**Table B-1**

*Sales Manager Performance Scale Descriptives*

<table>
<thead>
<tr>
<th>Sales Manager Performance Scale and Items</th>
<th>Reliability</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considering my own performance as a sales manager, I…</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>…always meet the objectives set by my supervisor.</td>
<td>5.58</td>
<td>0.98</td>
<td></td>
</tr>
<tr>
<td>…have very positive annual job reviews.</td>
<td>6.14</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>…always meet the strategic goals my firm sets for my sales force.</td>
<td>5.68</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

*All items were anchored on a 7-point scale where 1 = "Strongly Disagree" and 7 = "Strongly Agree."*
Table B-2

*Sales Manager Performance CFA Statistics*

Model Fit Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square (p-statistic)</td>
<td>1.197 (.274)</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>1</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>1.197</td>
</tr>
<tr>
<td>NFI</td>
<td>.994</td>
</tr>
<tr>
<td>CFI</td>
<td>.999</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.040</td>
</tr>
</tbody>
</table>

CFA Factor Loadings

<table>
<thead>
<tr>
<th>Observed Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMP_1 ← SM_Perf</td>
<td>.910</td>
</tr>
<tr>
<td>SMP_2 ← SM_Perf</td>
<td>.655</td>
</tr>
<tr>
<td>SMP_3 ← SM_Perf</td>
<td>.938</td>
</tr>
</tbody>
</table>
Table B-3

Structure, Conduct, and Sales Manager Performance CFA Statistics

Model Fit Statistics

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (p-statistic)</td>
<td>731.756 (.000)</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>539</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>1.358</td>
</tr>
<tr>
<td>NFI</td>
<td>.671</td>
</tr>
<tr>
<td>CFI</td>
<td>.882</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.054</td>
</tr>
</tbody>
</table>

CFA Loadings

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal_Uncertainty ← UNCERTAINTY</td>
<td>.998</td>
</tr>
<tr>
<td>OBCS ← CONTROL</td>
<td>.972</td>
</tr>
<tr>
<td>BBCS ← CONTROL</td>
<td>.998</td>
</tr>
<tr>
<td>Age_Exp_Ten ← Internal_Uncertainty</td>
<td>.558</td>
</tr>
<tr>
<td>External_Uncertainty ← UNCERTAINTY</td>
<td>.571</td>
</tr>
<tr>
<td>Nat_Cult ← Internal_Uncertainty</td>
<td>.994</td>
</tr>
<tr>
<td>Q21_7 ← BBCS</td>
<td>.628</td>
</tr>
<tr>
<td>Q21_9 ← BBCS</td>
<td>.560</td>
</tr>
<tr>
<td>Q20_4 ← BBCS</td>
<td>.571</td>
</tr>
<tr>
<td>Q21_10 ← BBCS</td>
<td>.454</td>
</tr>
<tr>
<td>Q17_13 ← ADAPTABILITY</td>
<td>.704</td>
</tr>
<tr>
<td>Q20_1 ← BBCS</td>
<td>.520</td>
</tr>
<tr>
<td>Q21_6 ← BBCS</td>
<td>.591</td>
</tr>
<tr>
<td>Q20_3 ← OBCS</td>
<td>.332</td>
</tr>
<tr>
<td>Q22_12 ← OBCS</td>
<td>.592</td>
</tr>
<tr>
<td>Q21_11 ← OBCS</td>
<td>.367</td>
</tr>
<tr>
<td>Q17_4 ← TRUST</td>
<td>.762</td>
</tr>
<tr>
<td>Q17_5 ← TRUST</td>
<td>.694</td>
</tr>
<tr>
<td>Q17_1 ← TRUST</td>
<td>.852</td>
</tr>
<tr>
<td>Q17_2 ← TRUST</td>
<td>.823</td>
</tr>
<tr>
<td>Q17_12 ← ADAPTABILITY</td>
<td>.812</td>
</tr>
<tr>
<td>Q17_14 ← ADAPTABILITY</td>
<td>.467</td>
</tr>
<tr>
<td>Q31_2 ← SM_Perf</td>
<td>.640</td>
</tr>
<tr>
<td>Q31_1 ← SM_Perf</td>
<td>.912</td>
</tr>
<tr>
<td>Relationship</td>
<td>Loading</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Q31_3 ← SM_Perf</td>
<td>.917</td>
</tr>
<tr>
<td>Q17_3 ← TRUST</td>
<td>.805</td>
</tr>
<tr>
<td>Q16_5 ← Age_Exp_Ten</td>
<td>.907</td>
</tr>
<tr>
<td>Q16_3 ← Nat_Cult</td>
<td>.363</td>
</tr>
<tr>
<td>Q16_6 ← Age_Exp_Ten</td>
<td>.733</td>
</tr>
<tr>
<td>Q16_1 ← Age_Exp_Ten</td>
<td>.610</td>
</tr>
<tr>
<td>Q16_2 ← Internal_Uncertainty</td>
<td>.552</td>
</tr>
<tr>
<td>Q5_9 ← External_Uncertainty</td>
<td>.417</td>
</tr>
<tr>
<td>Q5_6 ← External_Uncertainty</td>
<td>.922</td>
</tr>
<tr>
<td>Q5_4 ← External_Uncertainty</td>
<td>.884</td>
</tr>
<tr>
<td>Q5_1 ← External_Uncertainty</td>
<td>.399</td>
</tr>
<tr>
<td>Q5_5 ← External_Uncertainty</td>
<td>.519</td>
</tr>
<tr>
<td>Q5_7 ← External_Uncertainty</td>
<td>.304</td>
</tr>
<tr>
<td>Q16_4 ← Nat_Cult</td>
<td>.376</td>
</tr>
<tr>
<td>Q7 ← TSA</td>
<td>.605</td>
</tr>
<tr>
<td>Q8 ← TSA</td>
<td>.821</td>
</tr>
<tr>
<td>Q9 ← TSA</td>
<td>.635</td>
</tr>
<tr>
<td></td>
<td>CR</td>
</tr>
<tr>
<td>------------------</td>
<td>------</td>
</tr>
<tr>
<td>1. Uncertainty</td>
<td>0.784</td>
</tr>
<tr>
<td>2. Control</td>
<td>0.985</td>
</tr>
<tr>
<td>3. SM_Perf</td>
<td>0.869</td>
</tr>
<tr>
<td>4. TSA</td>
<td>0.732</td>
</tr>
<tr>
<td>5. Trust</td>
<td>0.891</td>
</tr>
<tr>
<td>6. Adaptability</td>
<td>0.707</td>
</tr>
</tbody>
</table>
Table B-5

Results of Conduct-to-Sales Manager Performance SEM Analysis

Coefficients

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Unstandardized Estimate</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control → SM Performance</td>
<td>.544^</td>
<td>.300</td>
<td>1.813</td>
<td>.070</td>
</tr>
<tr>
<td>Trust → SM Performance</td>
<td>.096</td>
<td>.114</td>
<td>.847</td>
<td>.397</td>
</tr>
<tr>
<td>Adaptability → SM Performance</td>
<td>.155</td>
<td>.163</td>
<td>.953</td>
<td>.341</td>
</tr>
</tbody>
</table>

Note: ^ = p < .10; *= p < .05; ** = p < .01; *** = p < .001

Model Fit Statistics

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df), p-value</th>
<th>CMIN/DF</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct to Performance</td>
<td>209.303 (160), p = .005</td>
<td>1.308</td>
<td>.812</td>
<td>.946</td>
<td>.050</td>
</tr>
</tbody>
</table>
Table B-6

Results of Structure-to-Performance Model

Coefficients

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Unstandardized Estimate</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncertainty → SM Performance</td>
<td>.298*</td>
<td>.126</td>
<td>2.359</td>
<td>.018</td>
</tr>
<tr>
<td>TSA → SM Performance</td>
<td>-.101</td>
<td>.097</td>
<td>-1.040</td>
<td>.298</td>
</tr>
<tr>
<td>Size → SM Performance</td>
<td>.017</td>
<td>.073</td>
<td>.230</td>
<td>.818</td>
</tr>
</tbody>
</table>

Note: † = p < .10; * = p < .05; ** = p < .01; *** = p < .001

Model Fit Statistics

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df), p-value</th>
<th>CMIN/DF</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure to Performance</td>
<td>208.007 (146), p = .001</td>
<td>1.425</td>
<td>.783</td>
<td>.921</td>
<td>.059</td>
</tr>
</tbody>
</table>
Table B-7

Results of Structure to Conduct to Performance Model

Coefficients

<table>
<thead>
<tr>
<th>Proposed Relationship</th>
<th>Unstandardized Estimate</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STRUCTURE TO CONDUCT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertainty → Control</td>
<td>.174</td>
<td>.087</td>
<td>2.002</td>
<td>.045</td>
</tr>
<tr>
<td>Uncertainty → Trust</td>
<td>.111</td>
<td>.093</td>
<td>1.192</td>
<td>.233</td>
</tr>
<tr>
<td>Uncertainty → Adaptability</td>
<td>-.002</td>
<td>.082</td>
<td>-1.023</td>
<td>.307</td>
</tr>
<tr>
<td>TSA → Control</td>
<td>4.680</td>
<td>1.718</td>
<td>2.723</td>
<td>.006</td>
</tr>
<tr>
<td>TSA → Trust</td>
<td>4.479</td>
<td>1.425</td>
<td>3.143</td>
<td>.002</td>
</tr>
<tr>
<td>TSA → Adaptability</td>
<td>3.786</td>
<td>1.282</td>
<td>2.954</td>
<td>.003</td>
</tr>
<tr>
<td>Size → Control</td>
<td>-.084</td>
<td>.058</td>
<td>-1.452</td>
<td>.146</td>
</tr>
<tr>
<td>Size → Trust</td>
<td>-.300</td>
<td>.071</td>
<td>-4.234</td>
<td>***</td>
</tr>
<tr>
<td>Size → Adaptability</td>
<td>-.171</td>
<td>.063</td>
<td>-2.722</td>
<td>.006</td>
</tr>
<tr>
<td><strong>CONDUCT TO PERFORMANCE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control → SM Performance</td>
<td>.414</td>
<td>.207</td>
<td>1.998</td>
<td>.046</td>
</tr>
<tr>
<td>Trust → SM Performance</td>
<td>.112</td>
<td>.098</td>
<td>1.144</td>
<td>.253</td>
</tr>
<tr>
<td>Adaptability → SM Performance</td>
<td>.160</td>
<td>.137</td>
<td>1.170</td>
<td>.242</td>
</tr>
</tbody>
</table>

Note: * = p < .10; ** = p < .05; *** = p < .01; **** = p < .001

Model Fit Statistics

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df), p-value</th>
<th>CMIN/DF</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure to Conduct to SM Performance</td>
<td>852.667 (578), p = .000</td>
<td>1.475</td>
<td>.628</td>
<td>.835</td>
<td>.062</td>
</tr>
</tbody>
</table>
Table B-8

Comparison of Conduct to Performance With (and Without) the Presence of Structural Variables

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Unstandardized Estimate</th>
<th>Standard Error</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MODEL WITHOUT STRUCTURAL VARIABLES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control → SM Performance</td>
<td>.544*</td>
<td>.300</td>
<td>1.813</td>
<td>.070</td>
</tr>
<tr>
<td>Trust → SM Performance</td>
<td>.096</td>
<td>.114</td>
<td>.847</td>
<td>.397</td>
</tr>
<tr>
<td>Adaptability → SM Performance</td>
<td>.155</td>
<td>.163</td>
<td>.953</td>
<td>.341</td>
</tr>
<tr>
<td><strong>MODEL WITH STRUCTURAL VARIABLES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control → SM Performance</td>
<td>.414*</td>
<td>.207</td>
<td>1.998</td>
<td>.046</td>
</tr>
<tr>
<td>Trust → SM Performance</td>
<td>.112</td>
<td>.098</td>
<td>1.144</td>
<td>.253</td>
</tr>
<tr>
<td>Adaptability → SM Performance</td>
<td>.160</td>
<td>.137</td>
<td>1.170</td>
<td>.242</td>
</tr>
</tbody>
</table>

Note: * = p < .10; * = p < .05; ** = p < .01; *** = p < .001
Figure B-1. Sales Manager Performance

Sales Manager Performance

SMP_1  SMP_2  SMP_3
Figure B-2. Structure, Conduct, and Performance CFA with Sales Manager Performance
Figure B-3. Original Conduct-to-Sales Manager Performance SEM
Figure B-4. Improved Conduct-to-Sales Manager Performance SEM
Figure B-5. Structure-to-Sales Manager Performance SEM
Figure B-6. Structure-to-Conduct-to-Sales Manager Performance SEM