Spring 2003

Antecedents of salesperson effectiveness and efficiency performance: A data envelopment analysis

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ANTECEDENTS OF SALESPERSON EFFECTIVENESS AND EFFICIENCY PERFORMANCE: A DATA ENVELOPMENT ANALYSIS

by

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A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Business Administration

COLLEGE OF ADMINSTRATION AND BUSINESS
LOUISIANA TECH UNIVERSITY

February, 2003

LOUISIANA TECH UNIVERSITY

THE GRADUATE SCHOOL

February 14, 2003
Date

We hereby recommend that the dissertation prepared under our supervision by Xueming Luo entitled Antecedents of Salesperson Effectiveness and Efficiency Performance: A Data Envelopment Analysis be accepted in partial fulfillment of the requirements for the Degree of **Doctor of Business Administration**

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GS Form 13
(1/00)

ABSTRACT

The objective of this dissertation was to (1) measure salesperson efficiency; (2) investigate both personal and organizational factors that determine salesperson efficiency; and (3) investigate both personal and organizational factors that determine salesperson effectiveness. Salesperson efficiency was assessed by data envelopment analysis (DEA). Two different DEA models were employed in order to increase the reliability of the efficiency results. Antecedents of salesperson efficiency and effectiveness were tested using Tobit regression analysis and ordinary least square regression analysis, respectively. These antecedents include not only personal level variables such as working smart, working hard, learning goal orientation, and performance goal orientation, but also organizational variables such as organizational culture, sales force control systems, and training.

The sample frame consisted of a national sample of insurance agents who subscribed to Life Insurance Selling magazine. A self-report questionnaire was mailed to a stratified random sample of 1,000 potential respondents. The life insurance professionals were sent the study questionnaire three times. The resulting response rate was 23.00% in the present study.

At the individual level of analysis, this study provides evidence that engaging in working smart behaviors enhances salesperson efficiency. While

working hard was found to positively influence salesperson effectiveness, working smart was found to make salespeople more efficient and effective in selling. These results are a distinct contribution to the personal selling research literature.

The results also indicate that a learning goal orientation enhances salesperson efficiency and effectiveness. In addition, the relationship between performance goal orientation and effectiveness was found to be moderated by salesperson self-efficacy.

At the organizational level, this study found that the clan organizational culture type negatively influences salesperson effectiveness, while the market culture type positively influences efficiency. While past studies have found that organizational culture directly influenced organizational performance, the current study was the first to find a direct influence on individual performance. Additionally, behavior control systems were found to enhance salesperson efficiency and positively influence, although marginally, salesperson effectiveness.

Finally, the application of data envelopment analysis in sales research was extended. This study showed how DEA can be used to measure individual salesperson efficiency and subsequently identify those variables that influence this important measure of salesperson performance.

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ACKNOWLEDGEMENTS

I would like to sincerely thank my wife, Bihua, and our lovely children Greta and Lan. Their understanding and support kept me going when I was facing tough situations. I especially appreciate the sacrifices they made when I was not able to be with them. I owe them a great deal and love them dearly with all my heart.

I would like to thank my dissertation committee, Dr. Sean Dwyer, Dr. Hani Mesak, and Dr. Shahid Bhuian for their expertise, support, and motivation throughout this dissertation process. Dr. Dwyer, as chair of my dissertation committee, deserves special recognition and thanks for all his hard work, constructive guidance, and hearty encouragement during such a challenging but exciting process.

Finally, I would like to thank all of the business faculty, College of Administration and Business staff, and fellow doctoral students for their invaluable assistance. Without their efforts my accomplishments would not have been possible.

CHAPTER 1

INTRODUCTION

Salesperson performance has been a primary focus in personal selling research for over half a century (e.g. Babakus et al. 1996; Challagalla and Shervani 1996; Cravens et al. 1993; Churchill et al. 1985; Darmon 1998; Krafft 1999; Drucker 1974; Dubinsky 1980, 1981, 1996, 1998; Keillor, Parker, and Pettijohn 2000; Leong, Randall, and Cote 1994; Oliver and Anderson 1994, 1995; Spiro and Weitz 1990; Sujan 1986; Sujan, Weitz, and Sujan 1990; Sujan, Weitz, and Kumar 1994; Weitz 1981; Weitz, Sujan, and Sujan 1986). Salesperson performance has two key dimensions: effectiveness and efficiency (Boles, Donthu, and Lohtia 1995; Mahajan 1991; Pilling, Donthu, and Henson 1999). Salesperson effectiveness has been defined as the degree to which salespersons make contributions to valued organizational outcomes (Churchill, Ford, and Walker 1976). In contrast, salesperson efficiency has been defined as the ratio of outputs of some activity to the inputs required by that activity (Boles, Donthu, and Lohtia 1995). Past sales performance research has focused primarily on effectiveness (Churchill et al. 1985).

While salesperson effectiveness remains a critical performance variable, the current business environment's emphasis on cost-cutting and maximizing productivity requires, in addition to effectiveness, a high level of efficiency from salespeople (Boles, Donthu, and Lohtia 1995; Mahajan 1991; Pilling, Donthu, and Henson 1999). However, salesperson efficiency has not been extensively explored by sales researchers. Thus, this study seeks to fill this void in the sales literature by investigating efficiency as a key performance measure in personal selling. Figure 1.1 presents the theoretical model tested in the present study.

The Importance of Personal Selling

For many firms, the sales force is the most important aspect of the marketing mix (Krafft 1999). The salesperson is a key reflection of the firm and its relationship with the customer (Weitz 1981) and, to many customers, the salesperson is the firm (Sujan 1986). In particular, Weitz and Bradford (1999) suggested that salespeople play a key role in the formation of buyer-seller relationships. As the primary link between buyers and the selling firm, salespeople have considerable influence on the buyer's perception of the firm and, consequently, the buyer's interest in continuing the relationship. In fact, buyers often have greater loyalty to salespeople than to the selling firms (Weitz and Bradford 1999).

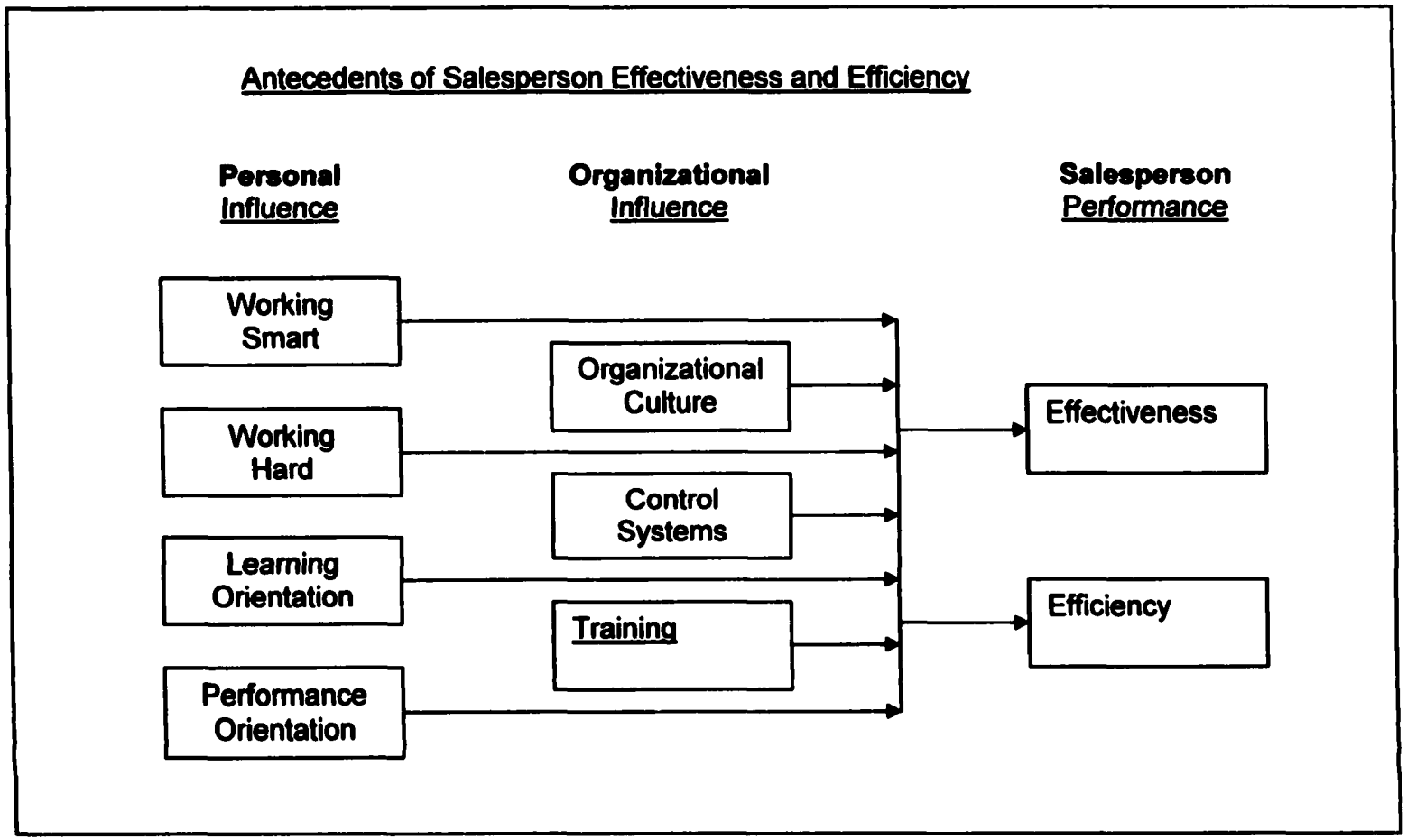


Figure 1. Model

Salesperson Performance

In an extensive review of salesperson performance evaluation methods, Boles, Donthu, and Lohtia (1995) noted that salesperson performance has two key dimensions: effectiveness and efficiency (Boles, Donthu, and Lohtia 1995). Unfortunately, salesperson efficiency issues have been addressed to a much smaller extent in the sales literature (Luo and Dwyer 2000; Pilling, Donthu, and Henson 1999). Ironically, marketing researchers have long shown interest in measuring efficiency performance (e.g., Sevin 1965).

Much of the reason for the lack of attention that efficiency has received relates to the fact that past methods of measuring efficiency were inadequate and, as such, much criticized (Golany and Roll 1988; Mahajan 1991). Recent advances in management science methodology and computing technology have provided researchers with the capability to measure efficiency more accurately. For example, recent empirical studies (Boles, Donthu, and Lohtia 1995; Horsky and Nelson 1996; Pilling, Donthu, and Henson 1999) have applied an advanced management science tool—data envelopment analysis—to measure efficiency in a personal selling context.

Data envelopment analysis (DEA) originated from microeconomics theory (Koopmans 1951; Farrell 1957). Essentially, DEA is a linear programming formulation for constructing an efficient frontier that defines a non-parametric association between multiple inputs and multiple outputs. The frontier, or "envelope," is defined by the most efficient units in the sample—salespersons in this study. Efficient salespersons are those for which no other

salespersons or linear combination of salespersons generate (1) as much or more of every output (given the fixed level of inputs) or (2) uses as little or less of every input (given the fixed level outputs) (e.g., Farrell 1957). DEA is developed to measure relative efficiency performance of sampled units. Unlike traditional regression approaches, it does not require statistical transactions or manipulations through an a priori framed production function. DEA has been recognized as a promising alternative for measuring efficiency (Charnes et al. 1994). DEA provides a single, real number for each case in multiple-input and multiple-output circumstances to indicate relative efficiency. In a sales context, DEA can be used to assist in the decision-making process by jointly considering all of these attributes and presenting a single composite efficiency score for each salesperson under consideration.

This study will apply and extend data envelopment analysis in the context of personal selling. More specifically, the present study will (1) determine salesperson relative efficiency using multiple DEA models and (2) test the association of key personal and organizational variables with salesperson efficiency. In addition, the association of these variables with salesperson effectiveness will be examined. The following sections present a brief review of the hypothesized personal and organizational antecedents of both effectiveness and efficiency.

Personal Influences on Salesperson Performance

Working Smart

A major advantage of personal selling over other promotional methods is the ability of the salesperson to adapt selling methods to the individual customer's needs and wants. The construct of "working smart" behaviors on the part of salespeople recognizes the importance of this advantage and has been an area of considerable interest to sales researchers and sales managers in recent years (Spiro and Weitz 1990; Sujan 1986; Sujan, Weitz, and Sujan 1990; Sujan, Weitz, and Kumar 1994; Weitz 1981; Weitz, Sujan, and Sujan 1986). Based largely upon the adaptive selling framework (Weitz, Sujan, and Sujan 1986), working smart has been defined as:

> [a] manifestation of (1) engaging in planning to determine the suitability of sales behaviors and activities, (2) possessing the confidence and capacity to engage in a wide range of selling behaviors and activities, and (3) altering sales behaviors and activities on the basis of situational considerations (Sujan, Weitz, and Kumar 1994, p. 41).

Working smart thus involves behaviors directed toward developing knowledge about individual sales situations and utilizing this knowledge in pursuit of selling success. The adaptive selling framework developed by Weitz, Sujan, and Sujan (1986) proposes that salespeople have the opportunity to gather customer information and subsequently develop and implement a sales presentation tailored to each customer's needs. In addition, the salesperson can observe the customer's reaction to his or her sales strategy and make rapid adjustments as necessary. Importantly, Weitz and his colleagues (Spiro and Weitz 1990; Weitz, Sujan, and Sujan 1986) stress that a salesperson's

skills and capabilities will moderate one's ability to adapt selling strategy during a sales interaction. In short, adaptive selling theory suggests that in a sales presentation the ability of a salesperson to adapt to cues from the customer is predictive of sales performance and of sales success in general when aggregated across buyer-seller interactions.

Working Hard

Sujan, Weitz, and Kumar (1994) defined working hard as the length of time devoted to work and continuing to work in the face of failure. Working hard has also been viewed as the total amount of effort salespeople devoted to their work (Brown and Peterson 1994). Sales force and organizational behavior researchers have consistently recognized the importance of effort in conceptual models of salesperson performance (e.g., Brown and Peterson 1994; Naylor, Pritchard, and Ilgen 1980; Walker, Churchill, and Ford 1977). These models have typically considered effort to directly influence salespeople performance and also mediate the relationship between motivation and performance.

Learning Goal Orientation

Psychologists Dweck and her colleagues (Dweck and Leggett 1988; Elliott and Dweck 1988; Nicholls and Dweck 1979) have identified two types of underlying goal orientations that individuals pursue in task-oriented achievement settings. A learning goal orientation directs people to improve their abilities and master the tasks they perform. In addition, a learning goal

orientation stems from an intrinsic interest in one's work—a preference for challenging work, a view of oneself as being curious, and a search for opportunities in which one can attempt to master material (Dweck and Leggett 1988; VandeWalle and Cummings 1997). Most notably, salespersons with a learning orientation are not unduly concerned with making mistakes and meeting rejection and failure. Instead, their intrinsic motivation drives them to search for opportunities to develop their skills to further enhance their knowledge and ability even in the face of failure (Dweck and Leggett 1988).

Performance Goal Orientation

A performance goal orientation stems from an extrinsic interest in one's work, that is, the desire to use one's work to achieve valued external ends and ambitions (Meece, Blumenfeld, and Hoyle 1988). A person is performance oriented when he or she feels the need to demonstrate ability and comparative self-worth in front of his or her peers or supervisors (Dweck 1990). Central to a performance orientation is the belief that effort and ability are negatively correlated. If one has high ability, he or she does not necessarily need to expend much effort. In other words, exerting much effort to succeed at a task indicates a lack of ability to performance-oriented individuals (Elliott and Dweck 1988; Nicholls and Dweck 1979). In addition, because people with a performance orientation wish to demonstrate their ability in comparison to others, they will avoid those challenging and complex tasks in which they may lack the required skills and capabilities; that is, they will avoid tasks in which

there is a reasonable chance of failure (Dweck and Leggett 1988; Elliott and Dweck 1988; Nicholls and Dweck 1979).

The relationship between performance goal orientation and salesperson performance is moderated by a person's self-efficacy (Dweck and Leggett 1988). Self-efficacy is a person's belief about his or her ability to successfully perform a specific task (Bandura 1990). Sujan, Weitz, and Kumar (1994) found that a performance orientation motivates hard work only for high self-efficacious salespeople. In contrast, salespeople low in self-efficacy appear to feel "helpless" about their goals. The lack of confidence of low self-efficacious salespeople is likely to cause them to question their ability to achieve successful sales outcomes through hard work (Sujan, Weitz, and Kumar 1994).

Organizational Influences on Salesperson Performance

Several key organizational variables will be explored as potential antecedent influences on salesperson effectiveness and efficiency. These variables include organizational culture, sales force control systems, and salesperson training. A discussion of each of these variables follows.

Organizational Culture

Deshpandé and Webster (1989, p. 4) defined organizational culture as a pattern of shared values and beliefs that help its members understand organizational functioning and thus provide them norms for behavior in the organization.

One widely-accepted typology of organizational culture developed by Quinn and his colleagues, and introduced to the marketing literature by Deshpandé, Farley, and Webster (1993), is the Competing Values Framework of organizational culture (Cameron and Quinn 1999). The typology is operationalized across two dimensions. The first dimension focuses on the degree to which organizations are internally or externally focused, reflecting the conflicting demands created by the external environment and the internal organization. The second dimension focuses on the competing demands of formal and informal organizational processes. The resulting four culture types—adhocracy, hierarchy, market, and clan—represent firms' different underlying assumptions and emphases with regard to motivation, leadership, and effectiveness (Cameron and Quinn 1999).

The market culture has an external orientation and a formal governance structure. This culture type is permeated with assumptions of achievement and an emphasis on performance, goal fulfillment, and efficiency. Primary objectives are productivity, planning, and the attainment of well-defined goals.

The market culture's "competing value" is the clan culture. The clan culture is internally-oriented and emphasizes informal governance. Its norms and values are associated with affiliation. Group maintenance is achieved through individual compliance to organizational mandates based on tradition, trust, and the members' long-term commitment to the organization.

The adhocracy culture assumes an external orientation combined with an informal governance system. Dominant attributes are values related to creativity, adaptability, entrepreneurship, and change.

In contrast to the adhocracy culture, the hierarchy culture reflects an internal orientation and the norms and values associated with bureaucracy, emphasizing mechanistic, formal governance. This culture type focuses primarily on order, stability, and uniformity through internal efficiency, regulations, and evaluation.

Personal selling research examining the consequences of organizational culture on salesperson behaviors and performance has been identified as a pivotal and fruitful area for future research (Bush and Grant 1994; Deshpandé and Webster 1989; Dwyer 1997; Ingram, Day, and Lucas 1992). However, sales research on the effects of organizational culture on salesperson performance has been limited (Jackson, Tax, and Barnes 1994).

Sales Force Control Systems

Several recent studies on sales force control systems document renewed management interest in designing the proper motivational process (Challagalla and Shervani 1996; Cravens et al. 1993; Krafft 1999; Oliver and Anderson 1994, 1995). A control system has been defined as "an organization's set of procedures for monitoring, directing, evaluating, and compensating its employees" (Anderson and Oliver 1987, p. 76).

Two types of control systems have been recognized in the sales literature (Anderson and Oliver 1987). A behavior-based control system

monitors intermediate states in the sales process such as sales activities. It requires close salesperson supervision, supervisors' involvement with salespeople's activities, and more complex and subjective evaluation of salesperson performance. In contrast, outcome-based control systems monitor the salesperson's final outputs (e.g., sales per month) and require minimal salesperson supervision, straight-forward performance measures, and commission-based compensation plans. Outcome-based control is a more "hands-off" management style where salespersons may act more as independent entrepreneurs responsible for their own activities and performance. Thus, relatively little direction is provided as to how salespersons are expected to carry out their duties (Krafft 1999).

Building on Anderson and Oliver's (1987) conceptualization of control systems, Kohli, Shervani, and Challagalla (1998) theorized that the behavior-based control system has two sub-dimensions: activity and capability supervisory orientations. Using this conceptualization, Challagalla and Shervani (1996) hypothesized both direct and indirect influences of outcome and behavior control systems on salesperson performance. In another study, Kohli, Shervani, and Challagalla (1998) found that the impact of sales control systems on sales performance is mediated by salesperson goal orientation.

According to control systems theory, behavior control systems such as activity and capability supervisory orientations should foster greater acceptance of company procedures; increased attention to company and product knowledge; higher levels of intrinsic motivation; greater focus on

customer-oriented behaviors; and stronger buyer-seller relationships (Anderson and Oliver 1987; Challagalla and Shervani 1996). On the other hand, Oliver and Anderson (1994) found a positive relationship between outcome control systems and salesperson effectiveness. Jaworski, Stathakopoulos, and Krishnan (1993) also reported a significant and positive relationship between outcome control systems and salesperson end-performance.

Training

Training is a vital component for both initial and ongoing development of the sales representative. In fact, a key task of sales managers is to provide salesperson training and, in particular, on-the-job training. The rapid change in the selling environment has led researchers to suggest that training has become a key element in the long-term success of the salesperson (Dubinsky 1996).

Salesperson training has been found to be a determinant of salesperson job performance. Research has supported the fact that training may elevate the salesperson's knowledge base and skill levels and, in turn, increase effectiveness (Sujan, Sujan, and Bettman 1988; Weitz 1981) and overall job performance (Churchill et al. 1985). A meta-analysis conducted by Churchill et al. (1985) found that salesperson skill level, along with salesperson motivation, were among the variables most highly correlated with performance. Organizational training programs thus serve as a primary influence on salesperson skill levels.

Statement of the Problem

Salesperson efficiency has become an important issue in sales organizations. Although salesperson efficiency research has been initiated in recent years, no study has investigated the antecedent influences on salesperson efficiency. This study proposes to fill the gap in the current literature by exploring various personal and organizational factors that may influence salesperson efficiency, as well as effectiveness. In particular, individual-level variables of working smart, working hard, learning orientation, and performance orientation will be tested as antecedents of salesperson efficiency and effectiveness. In addition, the organizational-level variables of organizational culture, sales force control systems, and training will be similarly explored. Furthermore, the relative influence that each of these personal and organizational variables has on efficiency and effectiveness will be examined. These relationships are depicted in Figure 1.1.

Objectives of the Study

The objective of the present study is mainly two-fold: (1) to investigate key personal and organizational factors that influence salesperson efficiency; and (2) to investigate key personal and organizational factors that influence the salesperson effectiveness.

Theoretical Contributions

Previous salesperson performance research has primarily focused on one dimension of performance: salesperson effectiveness (e.g., Anderson and

Oliver 1994; Churchill, Ford, and Walker 1993; Ford et al. 1987). Although recent studies by Donthu and his colleagues (Boles, Donthu, and Lohtia 1995; Pilling, Donthu, and Henson 1999) introduced data envelopment analysis to measure salesperson efficiency, no study has investigated the antecedents of salesperson efficiency. This study seeks, first, to fill this gap in the sales literature by introducing a set of personal and organizational variables that theoretically should impact salesperson efficiency. The personal-level variables that will be explored are working smart, working hard, learning orientation, and performance orientation. Organizational variables that will be examined are organizational culture, sales force control systems, and organizational training.

Secondly, this study introduces an econometric Tobit regression methodology to the sales research literature to test the antecedent influences on salesperson efficiency. In addition, two models of data envelopment analysis will be used to test the robustness of the results.

Managerial Contributions

This study demonstrates to sales managers a management science tool—data envelopment analysis—that can be used to benchmark salesperson efficiency performance. Managers using DEA can identify and subsequently reward the most efficient salespeople and, additionally, guide the inefficient salespeople to become more efficient in selling situations. Such efficiency evaluations can in turn be utilized as benchmarks to recruit and select higher performing salespeople; to determine the training needs of new

and existing salespeople; and to better design and administer salesperson compensation systems.

The present study also provides sales managers with an understanding of the personal and organizational factors that influence salesperson performance. With regard to the latter, they can construct the appropriate business environment to improve both the efficiency and effectiveness of their sales force. For example, sales managers can develop the appropriate organizational culture to lead salespeople to achieve greater effectiveness and efficiency, as well. In addition, sales managers will have an increased understanding of the particular sales force control system that can most effectively motivate their salespeople. Furthermore, knowledge of successful salespersons' personal behaviors and orientations can improve recruitment, selection, and management of the sales force. The ultimate result of these contributions is improved sales performance on the part of the salesperson in terms of both effectiveness and efficiency.

Plan of Study

This study was conducted to aid academicians and sales managers in understanding how to measure salesperson efficiency. It will also provide insight as to the personal and organizational influences on efficiency and effectiveness. Literature from psychology, organizational behavior, management, operations research/management science, and personal selling that supports the theorized relationships between the antecedent variables (working smart, working hard, learning orientation, performance orientation,

organizational culture, sales force control system, and training) and the outcome variables of effectiveness and efficiency is presented in Chapter 2, Literature Review. Research hypotheses, data collection and sample selection methodologies, and analytical methodologies are provided in Chapter 3, Research Methodology. The results of the tests of hypotheses are included in Chapter 4, Presentation and Analysis of Data. Finally, discussion and conclusions of the study, as well as managerial and theoretical implications, are presented in Chapter 5, Discussion and Implications.

CHAPTER 2

LITERATURE REVIEW

This study examined the causal antecedents of salesperson effectiveness and efficiency. While past salesperson evaluation research has focused primarily on effectiveness dimensions of performance, the current business environment's emphasis on cost-cutting and maximizing productivity requires salespeople to achieve higher efficiency in addition to being effective. This study explored the antecedent influences on salesperson effectiveness at two levels of analysis. Specifically, individual level influences that were examined were working smart, working hard, and goal orientation, and organizational level influences consisted of organizational culture, sales force control systems, and training. In doing so, this study is the first research effort to explore the determinants of salesperson efficiency.

The review of the literature has three sections. The first section is an overview of the two salesperson performance dimensions—effectiveness and efficiency. The analytical tool used to measure efficiency—data envelopment analysis—is reviewed in the context of management science and marketing fields. In the second section, working smart, working hard, and goal orientation variables are reviewed. The third section presents three organizational factors that potentially influence salesperson effectiveness and efficiency.

Salesperson Performance

In an extensive review of salesperson performance evaluation methods, Boles, Donthu, and Lohtia (1995) noted that salesperson performance has two key dimensions—effectiveness and efficiency. Effectiveness is the contribution of the individual salesperson to positive organizational outcomes such as sales volume (Churchill et al. 1985; Weitz 1981). In contrast, efficiency, also referred to as productivity, refers to using minimum resources to achieve valued outputs. Simply put, effectiveness refers to "doing the right things" whereas efficiency refers to "doing things right" (Drucker 1974).

Effectiveness

Past salesperson evaluation research has focused primarily on the effectiveness dimension of performance (Anderson and Oliver 1994; Churchill, Ford, and Walker 1993; Sujan, Weitz, and Kumar 1994). From the salesperson point of view, effectiveness has been defined as the extent to which "preferred solutions" are realized in the salesperson-customer interaction (Weitz 1981). Churchill, Ford, and Walker (1976), on the other hand, defined effectiveness from the organizational standpoint as the degree to which salespersons make contributions to valued organizational outcomes such as profits, market share, or customer satisfaction.

Insight into the determinants of salesperson effectiveness were provided by two key conceptual models by Walker, Churchill, and Ford (1977) and Weitz (1981), as well as by a number of empirical studies in the sales literature that tested these models (e.g., Leong, Randall, and Cote 1994; Spiro

and Weitz 1990; Swenson and Herche 1994; Sujan, Weitz, and Kumar 1994; VandeWalle et al. 1999). Conceptually, Walker, Churchill, and Ford's (1977) model depicted salesperson effectiveness performance to be determined by salesperson motivation, role perception, and aptitude which, in turn, are influenced by individual, organizational, and environmental factors.

Alternatively, Weitz (1981) provided a contingency approach to salesperson effectiveness. In this approach, salesperson effectiveness is determined by a set of selling behaviors. The relationship between these selling behaviors and effectiveness are moderated by three sets of variables. The three sets of moderators are (1) the characteristics of the salesperson (e.g., knowledge of customer and product, alternative choice, and skills and capabilities); (2) the buyer's task (buyer's knowledge of the product, product alternatives in the market, and buyer's experience with the product), and (3) the salesperson-customer relationship. The selling behaviors include the degree of adaptive selling (the altering of sales activities to fit customer needs and the sales context), influence bases (e.g., legitimacy or credibility), influence techniques (e.g., product-related or emotion-related) and salesperson-customer interaction. Weitz's model is supported by two meta-analysis studies (Churchill et al. 1985; Ford et al. 1988).

Churchill et al. (1985) explored six categories of antecedent variables: aptitude, role perception, motivation, skills, organizational, and environmental factors. The findings of these studies suggest that no single category of variables predicts a sufficiently large amount of performance variance. The

most predictive variables are salesperson role perceptions and skills which, as will be discussed later, can be enhanced by training. Most notably, though, the influence of the antecedent variables is moderated by the sales context: type of customers, type of product sold, and the particular performance measurements used. Overall, Weitz's contingency model was supported.

Ford et al. (1988) completed another meta-analysis in which focus was placed on the influence of personal variables on performance. Two broad categories were evaluated: biographical and psychological variables. Again, the results indicated that no single variable category predicted a large amount of performance variance. Although personal history and family background were found to be significantly associated with performance, the influences were moderated by the type of customers, the type of product sold, and the particular performance measurements used. A key implication for sales managers stemming from this study is that no single personal variable can predict effectiveness sufficiently well.

Given these findings, recent personal selling research has examined other personal and organizational factors that may enhance salesperson effectiveness. Among these personal variables are the notions of "working smart" and "working hard", as well as salesperson goal orientations. Organizational variables that have been explored in this regard include sales force control systems, organizational culture, and sales force training. These variables are reviewed later in this chapter as focal constructs of the current study.

Efficiency

The current business environment's emphasis on cost-minimizing, downsizing, and maximizing productivity requires, in addition to effectiveness, a high level of efficiency from salespeople (Boles, Donthu, and Lohtia 1995). In fact, there are several reasons supporting the importance of efficiency in salesperson performance. First, increased competition in domestic and foreign markets and the rapidly escalating costs of personal selling (Bauer et al 1998; Weitz, Sujan, and Sujan 1986) have heightened the need to not only sell effectively, but to do so in an efficient manner as well. That is, sales management is placing an increasing emphasis on sales force productivity (Weitz, Sujan, and Sujan 1986). Thus, many salespersons are increasingly being charged with the tasks of achieving sales objectives while minimizing the costs associated with those sales (Churchill, Ford, and Walker 1993).

Secondly, at the firm level, Bonoma and Clark (1988) found that the most popular measure of marketing performance is efficiency, that is, productivity. This finding was based on their survey of more than 50 studies spanning 30 years on the topic of assessing management performance. This firm-level emphasis on efficiency achievement may also directly or indirectly influence sales management to require salespeople to work more efficiently.

Conceptually, efficiency has been defined as the ratio of outputs of on activity to the inputs required by that activity (Bucklin 1978; Drucker 1975; Murthi, Srininvasan, and Kalyanaram 1996; Sevin 1965). Although marketing researchers have long been interested in measuring efficiency performance

(e.g., Drucker 1974; Sevin 1965), methods for measuring efficiency were much criticized (a later section will discuss the different methods). Recently, however, empirical studies (e.g., Boles, Donthu, and Lohtia 1995; Horsky and Nelson 1996; Mahajan 1991; Pilling, Donthu, and Henson 1999) have applied an advanced management science tool—data envelopment analysis (DEA)—to measure efficiency more accurately.

Data Envelopment Analysis Literature Review

As previously discussed, past salesperson evaluation research has focused primarily on effectiveness outcomes. In recent years, however, sales management has placed an increasing emphasis on sales force productivity (Boles, Donthu, and Lohtia 1995; Weitz, Sujan, and Sujan 1986). In fact, a small but growing stream of research has recently developed in this area (e.g., Boles, Donthu, and Lohtia 1995; Horsky and Nelson 1996; Mahajan 1991; Pilling, Donthu, and Henson 1999). This emphasis on the performance of salespersons from an efficiency perspective has provided new insights into salesperson performance evaluation. No studies, though, have investigated the antecedents of sales force efficiency. This study seeks to fill this void by building a conceptual framework of personal and organizational variables that influence salesperson efficiency.

Efficiency Measurement Approaches

As previously noted, efficiency/productivity has been defined as the ratio of the output of some activity to the input required by that activity (Bucklin 1978; Drucker 1975; Murthi, Srininvasan, and Kalyanaram 1996; Sevin 1965). A number of studies have examined the issue of measuring marketing efficiency (e.g., Bucklin 1978; Hawkins, Best, and Lillis 1987). However, until recently, little empirical research has explicitly focused on measuring sales efficiency.

Efficiency analysis has been undertaken from various points of views and approaches. The economic approach assumes the existence of specific input-output relationships that can be identified by the analysis of a large body of data. Efficiency based on this approach is evaluated against production functions (e.g., Cobb-Douglas production function) that define the assumed relationship (Nelson 1981). An engineering approach is one where efficiency is measured by comparing performance to appropriately set engineering standards (Roll and Sachish 1981). Other approaches assess efficiency by means of ratio analysis or through variations on accepted accounting techniques. For example, in the marketing literature, efficiency has been assessed by means of a single input-output ratio analysis (e.g., Hawkins, Best, and Lillis 1987).

These approaches to measuring efficiency are laudable but fall methodologically short for one or more of the following reasons: (1) many traditional approaches to efficiency assessment are based on process

measures, with little or no attention to important outcome measures; (2) outcome measures as well as some inputs factors are typically qualitative in nature, rendering it difficult to assign them proper relative weights; (3) it is often difficult to formulate an explicit functional relationship between inputs and outputs; and (4) averaging performance across many units, as is done in statistical regression analysis, fails to fully explain the behavior of individual units (Golany and Roll 1988).

Data Envelopment Analysis

Data envelopment analysis (DEA) originates from microeconomic theory. The first study to develop efficiency measures was completed by the economist Farrell (1957). Interestingly, the first DEA model was formulated by management science and operations research scholars. DEA was introduced by Charnes, Cooper, and Rhodes with what is referred to as the CCR model in 1978. This model was later modified into the BCC, AR-DEA, IDEA, AR-IDEA and other models (Banker et al. 1984; Cooper, Park, and Yu 1999; Kim, Park, and Park 1999; Thanassoulis and Allen 1998).

Essentially, DEA is a linear programming formulation for frontier analysis that defines a relationship between multiple inputs and multiple outputs. This is basically a non-parametric approach that builds an efficiency frontier that is formed by the most efficient, or benchmarking, decision-making units (DMUs). Efficient DMUs are those for which no other DMUs or linear combination of DMUs generate as much as or more outputs, holding the inputs constant (Farrell 1957). DEA is developed to measure relative efficiency

performance of sampled units. Unlike traditional regression approaches, it does not require statistical transactions or manipulations through a priori framed production function. DEA has been recognized as a promising alternative for measuring efficiency (Charnes et al. 1994). DEA provides a single, real number for each case in multiple-input and multiple-output circumstances to indicate relative efficiency. It can assist in the managerial decision-making process by jointly considering all of these attributes and presenting a single composite score for each salesperson under consideration (Charnes et al. 1994).

Comparing and Contrasting DEA with Regression and Ratio Analysis

Three approaches to measuring efficiency have been developed: ratio analysis, regression analysis, and data envelopment analysis. Under the ratio approach, relationships between single outputs and single inputs are examined. Regression techniques such as stochastic regression have been used to determine production relationships that provide a basis for the estimation of the production function and the assessment of efficiency. Data envelopment analysis, on the other hand, uses linear programming concepts to determine the production function's efficient frontier.

The technical and conceptual limitations of ratio analysis and regression techniques with respect to the measurement of efficiency have been well documented (e.g., Seiford and Thrall 1990). Among a number of problems recognized, a key difficulty is their inability to deal with multiple,

nonseparable outputs. A second problem is that regression techniques require parametric specification of the production function. Alternately, data envelopment analysis is preferable to either ratio analysis or regression analysis in determining the efficiency of organizations or other decision-making units that produce multiple outputs (c.f. Banker et al. 1989; Boles, Donthu, and Ritu 1995; Charnes et al. 1989; Seiford and Thrall 1990). The following advantages of the DEA approach are particularly relevant to marketing:

(1) DEA is able to deal with multiple inputs and multiple outputs on a simultaneous basis;

(2) DEA does not require parametric specification of the production function, thereby avoiding assumptions regarding its mathematical form;

(3) Managerial strategies for improvement of inefficient DMUs can be determined. Returns to scale information may also be available; and

(4) DEA can be used to determine either technical or economic efficiency to the extent that appropriate information is available.

Limitations of DEA

Like other techniques, DEA also has limitations. First, the results of DEA are dependent on the variables selected in the analysis (Charnes et al. 1989). That is, different combinations of input and output variables may change DEA results. Also, the efficiency score will be abnormally large unless

the sample size is large enough (Seiford and Thrall 1990). Moreover, DEA may be sensitive to outliers, making the selection of DMUs critical. Outliers may greatly affect the shape of the efficient frontier and alter the efficiency estimates (Dothu and Yoo 1998). In addition, the data set subject to DEA analysis should not include negative numbers. Finally, as with all mathematical programming calculations, DEA calculations can be affected by alternate optima, cycling, and degeneracy problems (Charnes et al. 1989).

DEA Application Procedures

The DEA methodology consists of five main phases: (1) selection of decision-making units (DMUs) to be evaluated; (2) identification of input and output factors and their measures that are relevant to the study; (3) application of the appropriate DEA models; (4) choice of appropriate DEA software programs; and (5) calculation of DEA and analysis of efficiency results (Golany and Roll 1988). These stages are discussed in more detail next.

Stage 1: Selection of DMUs. Researchers or managers should identify the DMUs for which a DEA efficiency evaluation are of interest. In general, a set of DMUs should be homogeneous and comparable (Charnes et al. 1985; Golany and Roll 1988). For example, the units under consideration should perform the same tasks, with similar objectives, and under the same operational conditions. Once DMUs are properly chosen, the next step is to determine the size of the group. It may be preferable to increase the number of DMUs. This is because as the population increases, so does the probability

of capturing truly efficient DMUs which determine the efficiency frontier. A rule of thumb is that the number of units should be at least three times the number of inputs and outputs under consideration (Charnes et al. 1989).

Stage 2: Identification of Inputs and Outputs. The most important consideration in any DEA application is the selection of the input and output variables. Researchers must be careful in this process to ensure that these variables match their study's overall goals. That is, relevant inputs and outputs of DMUs should be used in the DEA calculations. Relevant inputs are the resources/costs required to produce the desired outputs. Relevant outputs are those activities for which the DMU is responsible in achieving its goals. Regression analysis may be used to ensure that the outputs are statistically related to the inputs and to eliminate redundancies and multicolinearity. Qualitative linkage between the inputs and outputs may also be acceptable in the choice of variables (Charnes et al. 1989). The final inputs and outputs should be comprehensive and should appropriately measure the performance of DMUs (Golany and Roll 1988).

DEA provides considerable flexibility in input and output variable selection. The inputs and outputs can be continuous, ordinal, or categorical variables (Banker and Morey 1986). The inputs and outputs also can be measured in different units of analysis (e.g., dollars, test scores, completion rates). The term "output" in DEA can be broadly interpreted to include not only objective output performance measures but also qualitative performance measures. DEA can also accommodate both controllable and uncontrollable factors.

Uncontrollable inputs/outputs are usually environmental or competitive factors that are beyond the control of management. Examples of uncontrollable factors are competitive conditions, the economic environment, customerdemographics, and the like.

Stage 3: Selecting DEA Models. Several forms of DEA exist (c.f. Banker et al. 1989). The choice of DEA model can be made by answering two questions: (1) Does the DEA model justify an assumption of constant returns to scale?; and (2) Is the DEA model oriented toward output maximization or input minimization? It is suggested that multiple models could be used to test the reliability of the DEA results (Charnes et al. 1994). The present study will apply multiple DEA models in the context of personal selling. The model specifications are described in detail in Chapter 3.

Stage 4: DEA Software Programs. DEA can be performed using either standard linear programming software (e.g., LINDO, GAUSS) or special-purpose DEA software such as IDEAS (1 Consulting Corporation) and Warwick Windows DEA (Warwick University). Regardless of the software used, the linear programming equations used in DEA models are derived from the fractional formulation of the weighted output-input values (for a detailed in-depth discussion, see Charnes et al. 1978).

Stage 5: Analysis of DEA Results. The first step in the DEA calculation process is to identify which of the DMUs determine the

envelopment surface. DEA can, subsequently, provide an analysis of relative efficiency by evaluating each DMU and measureing its performance relative to the envelopment surface composed of other DMUs. The results of DEA will divide the DMUs into two broad groups: efficient and inefficient. DEA also provides information about the "slack" (output shortfalls and input surpluses) associated with each respective DMU. The following results can be obtained from the DEA computation:

- An efficiency score (theta) for each DMU relative to the efficient frontier.
- The most efficiently-performing DMUs.
- The slack/inefficiency of input or output variables for each DMU.
- The virtual multipliers (or factor weights) for each DMU. Such virtual multipliers may be used to produce the cross-efficiency of each DMU (Golany and Roll 1988).

The efficiency computed by DEA assumes that 100% efficiency is attained for a DMU only when (1) none of the outputs can be increased without either increasing one or more inputs or decreasing some of its other outputs and (2) none of the inputs can be decreased without decreasing some of its outputs or increasing some of its other inputs (Farrell 1957). This is often referred to as Pareto Optimality (Charnes, Cooper, and Rodes 1978).

In interpreting DEA results, attention should be focused on the differences between the efficiency scores rather than their absolute values. Post hoc analysis can be applied either to validate the results of the DEA by comparing them with other similar methods or to perform further statistical

analysis on the efficiency scores such as sensitivity analysis (Charnes et al. 1994). Seiford and Zhu (1998) provide information about the relative stability of the classification not only for inefficient units but also for those residing on the efficient frontier. Interestingly, cluster analysis may be used to further classify the DMUs into different groups such as efficient stable, efficient unstable, inefficient stable, or inefficient unstable (Charnes et al. 1994) sub-groups.

Caveats of DEA

Some caveats should be noted when applying DEA. First, DEA assumes that at least one DMU is technically efficient so that the efficient frontier can be defined. While DMUs with an efficiency score of less than unity exhibit technical inefficiency, the remaining DMUs are deemed efficient simply on the grounds that no units more efficient than these exist in the sample. This does not preclude the technical feasibility of achieving greater efficiency than that found on the estimated boundary (Charnes et al. 1994).

In addition, a DMU may achieve a high efficiency score in some circumstances merely by being different (in its input or output mix) from other units. This is because, in effect, each DMU chooses the criteria by which it wishes to be judged. Where the number of DMUs under consideration is small, this may lead to some DMUs being deemed technically efficient based solely on the fact that they are unusual relative to the other DMUs.

DEA Use in Marketing and Personal Selling Research

As discussed earlier, DEA is a special application of linear programming. It is becoming an increasingly valuable tool in benchmarking DMUs' performance, particularly in the business fields. For example, DEA has been applied in accounting (Bowlin 1999; Worthington 2000), economics (Ferrier and Lovell 1990; Leibenstein and Maital 1992), finance (Miller and Noulas 1996; Seiford and Zhu 1999; Wheelock and Wilson 1999), management (Fizel and D'Itri 1999; Howard and Miller 1993; Husain, Abdullah, and Kuman 2000; Majumdar 1997, 1998), and marketing (Boles, Donthu, and Ritu 1995; Charnes et al. 1985; Mahajan 1991; Piling, Donthu, and Henson 1999). Extensive reviews of DEA applications can be found in Charnes et al. (1994). A recent survey of the literature (Seiford 1997) identified over 1,000 published studies in this area.

In the marketing literature, a number of scholars have applied DEA in studies focusing on efficiency. A notable example is the study by Charnes et al. (1985a) who first discussed the potential applications of DEA in retailing and sales research. Metzger (1993) used DEA methodology in measuring the effects of appraisal and prevention costs on productivity. Chebat et al. (1994) used DEA to assess the degree to which allocation of marketing resources affects the corporate profits of Canadian firms. Murphy, Pearson, and Siferd (1996) used the DEA model to compare the purchasing efficiency of firms within the petroleum industry. Donthu and Yoo (1998) utilized DEA to assess the productivity of over 200 retail stores. Thomas et al. (1998) evaluated the

efficiency of 552 individual stores for a multi-store, multi-market retailer using DEA.

In sales research, four studies have employed DEA in a sales force setting. Horsky and Nelson (1996) evaluated and benchmarked sales force size and efficiency by using DEA. They proposed a "top down" approach to assess sales force design and efficiency at the district level. They developed an efficient frontier methodology to estimate how total district sales respond to sales force size, district potential, and competitive activity in the firm's best-performing districts. Closing the inefficiency gap of each of the lower-performing districts was determined to be the best approach to increase profitability of the firm.

Mahajan (1991) examined a set of 33 insurance companies' sales branches in one state. The study examined aspects of the selling function for these decision-making units. The outputs included average salesperson premiums and expected increase in premiums. The inputs were the number of salespeople, number of product offerings, advertising effort, salesperson incentives, geographic scope of operations, and level of competition. Relatively inefficient sales branches were identified and the requisite changes in controllable inputs/resources and outcomes to increase efficiency were highlighted.

Horsky and Nelson (1996) examined two equipment manufacturers' sales forces comprised of 230 salespeople in 26 districts and 129 salespeople in 27 districts, respectively. The size, allocation, and productivity of the sales

forces were evaluated in terms of their relative efficiency. Data related to the firms' sales output and sales force size, competition, number of customers, and size of prospect base were analyzed using both DEA and regression techniques. Of particular significance was the fact that the regression-based analysis found the firms' resources optimally allocated while the DEA technique identified inefficient districts. The results indicated that for both firms the greatest efficiency gains were evident in the area of prospecting and not in the size or allocation of the sales force.

Boles, Donthu, and Lohtia (1995) conducted a DEA study with a sample of 58 salespersons from a business advertising sales firm. Most notably, while the level of analysis in the two preceding studies was at the district/branch level, in this study the salesperson served as the DMU. Three output measures were employed (percentage of quota, supervisor performance rating, and sales volume) and four inputs were used (sales training, salary, management-to-salesperson concentration, and sales territory potential). Salespeople were ranked using DEA and four other performance evaluation approaches commonly used in the sales industry, including a regression-based approach. Interestingly, salesperson rankings were found to differ considerably among the five approaches. The rank order produced by the DEA approach was most closely similar to the regression approach. However, the advantage of DEA's use of top-performers as benchmarks for efficiency over the regression approach (that compared individuals to the mean rating of the group) was emphasized.

More recently, Pilling, Donthu, and Henson (1999) employed DEA to adjust salesperson performance for territory characteristics that were found to vary across salesperson districts. DEA was used in this manner so as to more fairly compare salespeople performance across territories.

Working Smart and Working Hard

Academic and practitioner interest has focused considerable attention on understanding the merits of salesperson adaptation during the personal selling process (Leong, Randall, and Cote 1994; Spiro and Weitz 1990; Sujan, Weitz, and Kumar 1994). This interest is due in part to the proposition that, to a large extent, sales success stems from a salesperson's ability to create and modify sales strategy during the selling interaction. In fact, a major contribution of the sales performance literature to recent marketing theory and practice arises from the formulation and empirical study of salesperson adaptiveness and other aspects of "working smart" (Keillor, Parker, and Pettijohn 2000; Leong, Randall, and Cote 1994; Spiro and Weitz 1990; Sujan 1986, 1999; Sujan, Weitz, and Kumar 1994; Sujan, Weitz, and Sujan 1990; Weitz 1978, 1981; Weitz, Sujan, and Sujan 1986), a discussion of which follows.

Working Smart and Adaptive Selling

In a noteworthy study, Sujan, Weitz, and Kumar (1994, p. 41) defined working smart as

> "[a] manifestation of (1) engaging in planning to determine the suitability of sales behaviors and activities, (2) possessing the confidence and

> capacity to engage in a wide range of selling behaviors and activities, and (3) altering sales behaviors and activities on the basis of situational considerations."

This definition draws heavily on recent research on intelligence (Sujan, Weitz, and Kumar 1994). In particular, contextual intelligence requires planning or mental preparation, being confident in one's ability to alter behavior, and making situationally appropriate adjustments in behavior. Thus, working smart involves behaviors directed toward developing knowledge about sales situations and utilizing this knowledge in a sales setting (Sujan, Weitz, and Kumar 1994).

An essential dimension of working smart is the construct of adaptive selling (Sujan 1986). The adaptive selling framework developed by Weitz, Sujan, and Sujan (1986) proposes that salespeople have the opportunity to gather information and then develop and implement a sales presentation tailored to each customer. In addition, the salespeople can observe their customer's reaction to their sales strategy and make rapid behavioral adjustments. Importantly, Weitz and his colleagues (Spiro and Weitz 1990; Weitz, Sujan, and Sujan 1986) stress that a salesperson's skills and capabilities will moderate their ability to adapt their selling strategy during a sales interaction. This "adaptive selling" or "contingency approach" to selling underscores the major advantage of personal selling over other promotional methods, that is, the ability of the salesperson to adapt selling methods to the individual customer's needs and wants.

Weitz (1981) provided a notable conceptual framework to support and guide the adaptive selling concept. This conceptual framework initiated a consideratble number of investigations around this subject. For example, research has focused on the knowledge structure of salespeople that allows salespeople to be adaptive during their conversations with the customer (Leigh and Rethans 1984; Sujan, Sujan, and Bettman 1988; Szymansky and Churchill 1990). Other studies have focused on the behaviors salespeople display during the conversation (Schuster and Danes 1986). Additionally, adaptive selling has been examined from the context of the quality of the salesperson-manager relationship (DelVecchio 1998); the communication styles and exchange relationship between the buyer and seller (Miles, Arnold, and Nash 1990); salesperson learning optimism (Sujan 1999); organizational commitment as a mediator between adaptive selling and salesperson performance (Leong, Randall, and Cote 1994); the comparative impact of customer orientation and adaptive selling on individual salesperson performance (Keillor, Parker, and Pettijohn 2000); and customers' decision-making styles and their preference for sales strategies (Sharma and Pillai 1996).

More formally, adaptive selling is defined as

> "[the] change and 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).

Salespeople thus engage in adaptive selling when they use different sales presentations to match various sales encounters and when they make

adjustments during these encounters. In contrast, a lack of adaptive selling manifests itself in the use of the same sales presentation during all sales encounters (i.e., a "canned" approach). Adaptive selling, therefore, involves understanding the buyer's wants and needs and altering the sales message in response to those needs. At its essence, these researchers suggest that adaptive selling can boost the performance of the salesperson. However, the benefits of an adaptive approach must exceed the costs involved in learning and applying it (Weitz and Spiro 1990).

In its early stage in the 1980s, adaptive selling was conceptualized as "working smarter" (as opposed to working smart) in that salespeople must recognize the need to customize presentations to better satisfy buyer needs rather than "working harder," that is, exerting more effort in a standard presentation (Sujan 1986). To practice adaptive selling, salespeople must (1) acknowledge that different approaches are needed for different customers, (2) have conviction that they can effectively use different approaches, (3) possess knowledge about a variety of customer behaviors and the corresponding presentation strategies judged to be effective in dealing with a specific customer behavior, and (4) possess effective skill in gathering information about customer situations (Spiro and Weitz 1990). Salespeople with higher levels of these adaptive skills should execute presentations that are more persuasive and effective. To the salespeople, then, working smarter means the practice of using information that is acquired through observing the outcomes of selling strategies to enrich the knowledge structure which then

allows salespeople to develop more sales situation categories with associated declarative knowledge and selling heuristics (Sujan, Weitz, and Kumar 1994, p. 128).

Spiro and Weitz (1990) constructed a 16-item scale to measure the degree to which salespeople practice adaptive selling, that is, the degree to which their sales presentations are altered across and during customer interactions in response to the perceived nature of the sales situation. The scale, known as the ADAPTS scale, assesses self-reports of five aspects of adaptive selling: (1) recognition that different sales approaches are required for different customers, (2) confidence in one's ability to use a variety of selling approaches, (3) confidence in one's ability to alter approaches during an interaction, (4) collection of information to facilitate adaptation, and (5) actual use of different approaches.

The use of the adaptive selling scale is not without debate in the sales literature, though. For example, Marks et al. (1996) outlined a method for improving the psychometric properties of the ADAPTS scale for measuring adaptive selling. As originally presented, the ADAPTS scale suffered from a lack of unidimensionality. Subsequent research has demonstrated mixed results when using ADAPTS as a predictor of salesperson performance (Keillor, Parker, DelVecchio 1998, and Pettijohn 2000).

Acknowledging the importance of adaptive selling, a number of articles empirically examined the antecedents and consequences of adaptive selling. Antecedent influences studies are summarized next.

Morgan and Stoltman (1990) suggest that there are many basic perception and information use problems surfacing during a sales interaction that can influence adaptive selling behaviors. They found that these problems basically stem from the manner in which the prior expectations that customers hold affect reactions to salesperson adaptive selling practice.

Knowles, Grove, and Keck (1994) explored the potential contribution that Signal Detection Theory (SDT) offers for adaptive selling and sales management. They found that salespeople engaged in adaptive selling efforts often find themselves in complex circumstances wrought with uncertainty.

Levy and Sharma (1994) examined several antecedents to adaptive selling: gender, age, sales experience, and education. They noted that there is increasing evidence that the degree to which salespeople practice adaptive selling positively affects performance. The results suggest that gender and education interact with age to affect the degree to which salespeople practice adaptive selling. Additionally, with increased age and tenure, salespeople demonstrated plateauing in the use of adaptability, that is, an S-shaped relationship with the practice of adaptive selling was observed over time.

In an empirical study, Predmore and Bonnice (1994) proposed the use of a process measure of adaptability to determine whether observed adaptability behaviors could predict sales success. Their results show that salespeople who had more adaptive behaviors were also more likely to be successful. In addition, the more adaptability a salespeople exhibited, the greater the number of successful sales calls were produced.

Siguaw and Honeycutt (1995) investigated gender influences on adaptive selling, as well as perceptions of market- and customer-orientation. They found that there was no significant difference between males and females in adaptive selling behaviors.

Comstock and Higgins (1997) noted that buyers are more interested in the task, rather than the social aspects of the buyer-seller relationship. They prefer sellers who are trustworthy, composed, and task-oriented. Buyer preferences did not vary across communicator style profiles which suggests that adaptive selling advice may be potentially misguided. However, for buyers, the profiles revealed that apprehensive, social, or competitive sellers may need more communication skill training than cooperative sellers in the context of adaptive selling.

Dion, Easterling, and Javalgi (1997) examined purchasing managers' perceptions of salespeople who called upon them on adaptive selling ability, as well as overall sales performance, buyer trust of the salesperson, and sales presentation ability. Interestingly, they found that men and women performed significantly different on adaptive selling behaviors. that is, women are more apt to use adaptive selling approach.

In Boorom, Goolsby, and Ramsey's (1998) study, two relational communication traits, communication apprehension and interaction involvement, were investigated to assess their impact on salesperson adaptiveness and sales performance. Using a sample of 239 insurance salespeople, results demonstrate that salespeople exhibiting lower levels of

communication apprehension are more highly involved in communication interactions, and that higher involvement facilitates increased adaptiveness and sales performance.

Finally, Porter and Inks (2000) examined salesperson knowledge structure as an antecedent of salesperson's predisposition to practice adaptive selling. This study investigated a conceptualization of cognitive complexity—attributional complexity—within the adaptive selling framework. One fundamental capability hypothesized to influence a salesperson's use of adaptive selling is an "elaborate knowledge structure of sales situations, sales behaviors, and contingencies that links specific behaviors to situations" (Weitz, Sujan, and Sujan 1986, p. 176). The "cognitive" component of the adaptive selling framework suggests that an elaborate and complex knowledge structure allows a salesperson to skillfully collect cues from a sales interaction, categorize the information, and then develop a richer understanding of the sales situation. The research findings suggest that such a knowledge structure will have an influence on a salesperson's predisposition to practice adaptive selling.

In addition, several studies have examined the associated consequences of adaptive selling. For example, Anglin and Stolman (1990) noted that the relationship between adaptive selling capability and sales performance exists largely on a conceptual rather than an empirical basis. As such, the relationship between adaptive selling capability reflected in script-based knowledge structures and sales performance was examined using both

subjective and objective sales performance measures. Cognitive sales scripts were elicited based on a simulated selling task in which the prospective buyer deviated from expected behavior. The results indicated that higher performers are more likely to be adaptive. It was concluded that adaptive selling is a potentially powerful concept both in theory and practice. In the appropriate context, it appears to offer benefits to the salesperson, the organization, and the buyer.

Grewal and Sharma (1991) theoretically investigated the relationship between adaptive selling and customer satisfaction. Results showed that salesforce behavior can have a significant influence on customer satisfaction. It was suggested that salespeople and sales managers can increase customer satisfaction through adaptive selling behavior and by developing customer feedback systems. Negative feedback can be used as input in changing sales management systems, sales presentations, training, control, and evaluation procedures.

In another study of adaptive selling behavior, Blackshear (1992) examined task-specific skills that occur outside the sales interview. Behaviors such as call preparation and reporting call outcomes to the firm, as well as other administrative tasks, were found to be associated with adaptive selling behaviors. Using a self-generated scale of adaptive selling (rather than the ADAPTS scale) and various task-specific behaviors, Blackshear and Plank (1993) found that both adaptive selling and task-specific behavior were related

to performance, but that task-specific behavior contributed more to explaining variance in sales performance than did adaptive selling behaviors.

Goolsby, Lagace, and Boorom (1992) investigated the relationship between salesperson performance and three psychological adaptiveness traits: self-monitoring, androgyny, and intrinsic reward orientation. Overall findings suggest that adaptive selling behavior does a poor job of predicting sales performance when performance measurement is restricted to meeting sales objectives.

Bunn (1993) constructed a classification scheme of buying patterns and situations consisting of six prototypical buying decision approaches. She found that the resulting framework is useful to marketing managers by being able to characterize their customer segments in terms of the categories in the taxonomy. This taxonomy also was determined to be a tool by which sales representatives can develop adaptive selling approaches based on a small set of buying situations and corresponding buying decision approaches.

Vink and Verbeke (1993) examined this stream of investigation by studying the relationship between organizational characteristics and adaptive selling. They determined that adaptive selling behavior is a "multifaceted concept" that is not linearly related to organizational characteristics.

Blackshear and Plank (1994) studied a large international pharmaceutical firm to assess the impact of sales behaviors on performance. Both district sales managers and representatives participated in the study. Results indicated that salespersons' adaptive behaviors do have a positive

effect on sales performance. The study found that successful salespersons to be good planners and to have a working knowledge of their products, customers, and the competition.

Goff, Bellenger, and Stojack (1994) examined consumers' susceptibility to salesperson influence. Their study empirically supported the concept of adaptive selling. However, they also found that a standard sales communication approach, that is, a fairly rigid "canned" presentation was likely to be equally effective across different consumer segments (Goff, Bellenger, and Stojack 1994).

Tanner (1994) conducted a study in which trade show salespeople were presented with three types of buyers: active, curious, and passive. He intended to determine if, and how, salespeople adapt to different customer types in this specific selling environment. The results indicated that trade show salespeople adapt the content of their presentation to the type of visitor to their trade show booth. Depending on the type of buyer, more product statements, qualifying questions, or closes will be offered.

Swenson and Herche (1994) explored the incremental ability of personal values, operationlized with the List of Values (LOV), to predict salesperson performance beyond that predicted by adaptive selling and customer orientation. Their findings supported the positive effects of adaptive selling on sales performance.

Gengler, Howard, and Zolner (1995) noted that in personal selling, customer orientation can influence the quality of the customer-salesperson

relationship. Adaptive selling was found to impact the customer-salesperson relationship. They also found that the sales experience was related to the practice of adaptive selling.

Sharma (2001) theoretically noted that adaptive selling may increasingly become critical to retailers' success in today's highly competitive market place. In the context of consumer decision-making and persuasion, he contends that salespeople with consumer knowledge are among retailers' key advantage. That is, adaptive selling strategy may enhance the performance of salespeople and the retail store.

Robinson et al. (2002) propose and validate a shortened scale of the adaptive selling originally developed by Spiro and Weitz (1990). Using a diverse industry sample of 1,042 salespeople, they support the content, convergent, and discriminant validity of the shortened five-item measure. As a result, future research may utilize this shorter scale to assess adaptive selling.

In summary, previous personal selling studies provide substantial support for the positive relationship between adaptive selling and achieving sales effectiveness and/or productivity. Research in adaptive selling has found that salesperson adaptiveness and performance are significantly associated (e.g., Anglin, Stolman, and Gentry 1990; Boorom, Goolsby, and Ramsey 1998; Leong, Randall, and Cote 1994; Spiro and Weitz 1990; Swenson and Herche 1994) and that working smart, operationized as adaptive selling, has a positive effect upon sales performance (Sujan et al. 1994). Additional evidence suggests that flexibility and attention to the selection of appropriate sales

strategies differentiates high- and low-performance salespeople (DeMarco and Maginn 1982; Dwyer, Hill, and Martin 2000).

Working Hard

Whereas working smart is the direction that salespeople choose to channel their effort and time (Sujan 1986), working hard is the total amount of effort salespeople devote to their work (Sujan 1986; Sujan, Weitz, and Kumar 1994; Weiner 1980; Weitz 1978; Weitz, Sujan, and Sujan 1986). Sujan, Weitz, and Kumar (1994) defined working hard as the length of time devoted to work and continuing to try in the face of failure. A construct conceptually similar to working hard is salesperson effort (Brown and Peterson 1994).

Sales force and organizational behavior researchers have consistently recognized the importance of effort in conceptual models of performance (e.g., Churchill, Walker, and Ford 1976). These models typically have considered effort to mediate the relationship between motivation and performance.

Empirically, Sujan, Weitz, and Kumar (1994) found that salespeople with either a performance orientation or learning orientation will work harder. In turn, working hard enhance salesperson performance. Most interestingly, the impact of working hard on performance was stronger than that of the working smart (Sujan, Weitz, and Kumar 1994). This finding was also evident in Leong, Randall, and Cote's (1994) study that explored the impact of organizational commitment on performance in a marketing context. A model is tested in which organizational commitment is associated with performance through higher levels of exertion (working hard) and well-directed effort (working

smart). Surveying a sample of life insurance agents in Singapore, results revealed that the influence of organizational commitment was mediated by working hard and, to a lesser extent, by working smart. A strong, positive relationship between working hard and performance was detected. The correlation between organizational commitment and performance was weak. There is some evidence that organizational commitment does influence effort, albeit marginally. Because effort was found to influence performance, it was concluded that organizational commitment can affect performance indirectly through effort.

Brown and Peterson (1994) noted the effects of effort (working hard) on sales performance and job satisfaction. It is suggested that although it is intuitively logical that the harder salespeople work, the better they will perform, few attempts have been made to empirically document the strength of this relationship. Key findings suggested that effort was significantly associated with salesperson performance. Results also indicated a direct, positive effect of work-related effort on job satisfaction that is not mediated by sales performance. This is inconsistent with commonly accepted theoretical models and suggests that the perspective of work as a terminal value has been underemphasized in models of work behavior. As such, measures of sales performance should be broadened to encompass this terminal-value perspective on the psychological value of work or, alternatively, conceptual models should be revised to reflect the fact that narrowly defined measures of

sales performance do not completely mediate the effect of effort on job satisfaction.

Goal Orientations

Understanding individual firm member learning has taken on greater importance in recent years because it has been accepted as an important source of competitive advantage to the firm. In fact, some scholars suggest that the accumulated knowledge and learning of individual organizational members is an organization's primary, if not only, source of sustainable competitive advantage (Kohli, Shervani, and Challagalla 1998).

Goal theory posits that the act of setting challenging goals will enhance individual performance. Locke and Latham (1990) noted that people with specific task goals perform better at the task than people with vague task goals or no goals at all. This is because people are motivated by the goals that they set. The concept of a goal has been defined as the object or aim of an action (Locke 1982). Since people can expect the outcomes of their actions, they are motivated to engage in certain kinds of behavior that will fulfill unsatisfied personal needs and wants.

Psychologists (e.g., Ames and Archer 1988; Butler 1993; Dweck and Leggett 1988; Elliott and Dweck 1988; VandeWalle and Cummings 1997) have identified two types of underlying goals that individuals pursue in achievement settings. A learning goal orients people to improve their abilities and master the tasks they perform. This goal orientation stems from an intrinsic interest in one's work—a preference for challenging work, a view of oneself as being

curious, and a search for opportunities that permit independent attempts to master material. In contrast, a performance goal orients them to seek to achieve a positive evaluation of their current abilities and performance from important others. This goal orientation stems from an extrinsic interest in one's work—the desire to use one's work to achieve valued external ends (Dweck and Leggett 1988).

Learning and performance orientations are not the opposite ends of a continuum; instead, they represent two distinct dimensions (VandeWalle and Cummings 1997; VandeWalle et al. 1999) and, as such, a salesperson can have both high learning and high performance orientations (Kohli, Shervani, and Challagalla 1998). Although laboratory studies have treated learning and performance goal orientations as polar opposites (Dweck and Leggett 1988), they emerge as two distinct dimensions when independently measured. For example, Ames and Archer (1988) found a correlation of -.03 and Meece, Blumenfeld, and Hoyle (1988) found a correlation of +.13 between the constructs. Sujan, Weitz, and Kumar (1994) found a correlation of +.28, while Kohli, Shervani, and Challagalla (1998) found a correlation of +.40. Salespeople can thus pursue goals of learning how to do their job better and demonstrating their ability to others at the same time.

Learning Goal Orientation

People with a learning orientation feel that they are performing well on a task if they perceive that they are learning something new or are improving their skills and knowledge. The concept of a learning orientation is closely

associated with intrinsic motivation. Intrinsic motivation is the individual satisfaction of engaging in an activity in and of itself. A learning orientation enhances intrinsic motivation because it can encourage challenge, involvement, and persistence (Ames and Archer 1988). In addition, a person with a learning orientation is one who believes that effort and outcomes are correlated. That is, an individual with a learning orientation will continue to pursue a valued goal even if the attainment of the goal becomes difficult. Those that adopt this goal pattern believe that effort will lead either to a certain level of success or to a certain level of improved ability (Ames and Archer 1988).

Under a learning orientation, also referred to as a mastery orientation (Ames and Archer 1988), salespeople enjoy the process of discovering how to sell effectively. They are attracted by challenging sales situations and are not overly bothered by mistakes. They value the feelings of personal growth and mastery that they derive from their job.

Performance Goal Orientation

Unlike a learning goal orientation, a performance goal orientation stems from an extrinsic interest in one's work, or the desire to use one's work to achieve valued external ends and ambitions (Meece, Blumenfeld, and Hoyle 1988). A person is performance oriented when he or she feels the need to demonstrate ability and comparative self-worth to his or her peers or superviors (Dweck 1990). The key difference between a performance orientation and a learning orientation is that with the former, people view

learning only as a means to an end, whereas in the latter the process of learning is the reward and end itself (Ames and Archer 1988).

A key aspect of the performance orientation is the belief that effort and ability are negatively correlated. Thus, if one has high ability, he or she does not necessarily need to invest much effort. In other words, to the performance oriented individual, exerting considerable effort to succeed at a task indicates a lack of ability. In addition, because people with a performance orientation wish to demonstrate their ability in comparison to others, they will avoid complex and challenging tasks in which they may lack the requisite skills and capabilities.

Under a performance orientation, also referred to as an ego orientation (Meece, Blumenfeld, and Hoyle 1988), salespeople seek favorable evaluations of their skills from their managers and colleagues. They are reluctant to experiment with new approaches, fearing these behaviors will result in poor outcomes and, consequently, negative evaluations of their abilities and performance. As such, they would likely avoid challenging sales situations (Ames and Archer 1988).

Performance Goal Orientation and Self-Efficacy

It has been proposed that the relationship between performance goal orientation and behavior is moderated by a person's self-efficacy (Dweck and Leggett 1988; Sujan, Weitz, and Kumar 1994). In particular, salespeople with a performance goal orientation and high self-efficacy will adopt an adaptive

behavior pattern, whereas performance goal-oriented salespeople with low self-efficacy will adopt a maladaptive behavior pattern. In addition, although performance goal-oriented salespeople with high self-efficacy may adopt an adaptive behavior pattern, they still place little emphasis in acquiring new selling knowledge, skills, or capabilities (Sujan, Weitz, and Kumar 1994).

Wood and Bandura (1989, p. 408) defined self-efficacy as "beliefs in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands." They noted that self-efficacy is critical because it affects an individual's ability and willingness to exercise control. People with high self-efficacy, having confidence in their ability to exercise control, should have better behavioral and psychological outcomes in high demand, high-control situations than do people with low self-efficacy.

Sujan, Weitz, and Kumar (1994) found that self-efficacy moderates the relationship between performance goal orientation and working hard behavior. That is, a performance orientation motivates harder work for high self-efficacious salespeople. In contrast, low self-efficacious salespeople who are performance oriented appeared to feel "helpless" about their goals.

Goal Orientation and Personal Selling

In a personal selling context, salespeople with a learning orientation should exhibit a strong desire to improve and master their selling skills and abilities. They will continually view achievement situations as opportunities to

improve their competence (Dweck and Leggett 1988). Alternatively, salespeople with a performance orientation focus on performing well because they see strong performance as a means to obtaining extrinsic rewards from others (e.g., supervisors). Persons with a performance orientation are concerned with being judged and showing evidence of ability by being successful (Ames and Archer 1988).

A limited number of sales force studies have examined the consequences and antecedents of goal orientation. Sujan, Weiz, and Kumar (1994) have identified that salespeople are concerned about not only performance goals but also learning goals and that these two goals motivate their work behavior in different ways. The findings suggest that salesperson productivity depends considerably on developing a learning orientation. This orientation, like a performance orientation, motivates salespeople to work hard while also motivating them to work smart. In addition, they found that both positive and negative feedback boost a learning orientation.

A study of the relationship between individual goals and the motivational effects of emotions indicated that emotions significantly motivate salespeople (Brown, Cron, and Slocum 1997). The more important the goal was to the salesperson, the more emotional importance was attached to that goal. Goal attainment in this case created positive emotions while lack of goal attainment resulted in negative emotions. Interestingly, if the salespeople felt that they had been properly engaged in goal directed behavior, the emotions were positive regardless of the outcome. That is, the salespeople had a

positive affect toward their work if they believed that they had employed an effective strategy toward goal attainment.

Kohli, Shervani, and Challagalla (1998) identified supervisory behaviors that nurture both salespeople's learning orientation and the impact of goal orientation on salesperson performance. They found that end-results and capability supervisory orientations tend to impart a learning orientation. The only supervisory orientation that failed to impact a learning orientation was activity orientation. Contrary to the previous results of the positive relationship between a learning orientation and salesperson performance (e.g. Sujan, Weitz, and Kumar 1994), they found that a learning orientation appears to be unrelated to performance.

In another empirical study, Brown, Cron, and Slocum (1998) investigated the interaction of dispositional and organizational factors on goal setting and performance. Sales people who were high in trait competitiveness set high goals for themselves when they also believed that the organizational climate was competitive. Salespeople who were low in trait competitiveness set low goals regardless of their perceptions of the competitiveness of the climate. Additional results indicated that salespeople experienced increased performance when goals were self-imposed and that self-efficacy positively impacted performance.

More recently, VandeWalle et al. (1999) investigated the impact of goal orientation on sales performance in a longitudinal field study. A learning goal orientation was found to be positively related to sales performance. This

positive relationship was fully mediated by three self-regulation tactics: goal setting, effort, and planning. Although goal setting, planning, and effort were conceptualized as self-regulation tactics, this conceptualization is similar to Sujan, Weitz, and Kumar's (1994) selling behaviors of working smart and working hard.

Wang and Netemeyer (2002) applied the social cognitive theory to evaluate the relationship between salesperson learning effort and self-efficacy. They also theorized antecedent influences on learning effort that include trait competitiveness, job autonomy, and customer demandingness. Their findings indicate learning effort is positively associated with efficacy and performance. In addition, learning is found to be determined by the proposed three antecedents as predicted.

In summary, variables such as supervisory feedback (Sujan, Weitz, and Kumar 1994) and supervisory orientations (Kohli, Shervani, and Challagalla 1998) have been identified as antecedents of both learning and performance goal orientations. On the other hand, working smart and working hard behaviors (Sujan, Weitz, and Kumar 1994) and salesperson performance (Kohli, Shervani, and Challagalla 1998; VandeWalle et al. 1999) have been described as consequences of a learning goal orientation and a performance goal orientation.

Organizational Culture

A firm's organizational culture influences its marketing strategies (Beatty 1988; Cameron and Freeman 1991; Narver and Slater 1990; Siguaw,

Brown, and Widing 1994), its selection of organizational goals, and its selection of the means to achieve these goals (Moorman 1995). Organizational culture has been found to significantly influence organizational performance (Cameron and Freeman 1991, 1999; Deshpandé, Farley, and Webster 1993). In addition, if employees perceive particular values to be important to the organization, they are more likely to align their behavior in a manner consistent with their perceptions (Beatty 1988). Thus, the culture of the organization has the potential to influence the salespeople's selling behavior.

The sales management literature has recognized the potential importance of organizational culture in affecting selling effectiveness (Weitz, Sujan, and Sujan 1986) and salespeople's performance (Walker, Churchill, and Ford 1977). Cameron and Quinn (1999) suggest that in addition to organization-level effects, organization culture can impact employee morale, commitment, emotional well-being, and productivity as well. In a conceptal study, Weitz, Sujan, and Sujan (1986) proposed that the culture of an organization significantly affects both the performance of the firm and the productivity of workers within the firm. However, sales research on the effects of organizational culture on salesperson behavior has been limited (Jackson, Tax, and Barnes 1994).

The Concept of Culture

The concept of culture has been examined in the fields of anthropology, sociology, social psychology, and organizational behavior. Kluckhohn (1951, p. 86) defined culture from an anthropological viewpoint:

> [Culture] consists in patterned ways of thinking, feeling, and reacting; acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values.

In contrast, Becker and Geer (1970, p. 134) offered the following definition of culture from the sociological standpoint:

> [Any] social group, to the extent that it is a distinctive unit, will have to some degree a culture differing from that of other groups, a somewhat different set of common understandings around which action is organized, and these differences will find expression in a language whose nuances are particular to that group.

Finally, in organization science, culture has also been defined by Hofstede (1984, p. 25) as:

> [The] collective programming of the mind which distinguishes the members of one human group from another.

Although there is a lack of consensus about the definition of culture, most researchers would agree that culture is seen as holistic and historically determined, and that cultures are socially constructed, soft, and difficult to change (Hofstede et al. 1990). Generally, culture impacts values and guides behaviors, provides ways of dealing with adversity (e.g., disasters, enemies), regulates numerous behaviors such as child-rearing activities, and imparts a

sense of priorities (values) and a sense of worth (religion) to social life (Deshpandé and Webster 1989; Parasuraman and Deshpandé 1984; Terpstra and David 1991).

Organizational Culture Origin

Organizational culture first came to the forefront in the late 1970s and its importance has grown since then (Hofstede et al. 1990). Peters and Waterman (1982) noted that a strong and coherent culture was found to be an essential quality of excellent companies. Organizational culture's research in marketing took place toward the end of the 1980s (Deshpandé, Farley, and Webster 1993; Kale and Barnes 1992). Prior to that time, organizational culture research had been undertaken primarily in the management discipline (Deshpandé and Webster 1989) with the organizational behavior area providing the theoretical base (Deshpandé, Farley, and Webster 1993).

Organizational culture, by providing a framework through which employees internalize expectations about corporate roles and behaviors, to a large extent serves as an organizational control mechanism (Jaeger 1983; Lebas and Weigenstein 1986). Although relatively new to the field of marketing, marketing scholars have recognized the potential explanatory power of organizational culture as a predictor of variables such as performance (Deshpandé and Parasuraman 1984; Deshpandé, Farley, and Webster 1993; Parasuraman and Deshpandé 1984), customer orientation (Jaworski et al. 1993), buyer-seller relationships (Williams and Attaway 1996), customer satisfaction (Conrad, Brown, and Harmon 1997), organizational

innovativeness (Kitchell 1995), and information acquisition and utilization of organizations (Moorman 1995). Berthon, Pitt and Ewing (2001) note that organizational culture and memory are closely related concepts in theory. They explore the impact of culture and memory development in a management decision-making context. Their findings suggest that external type cultures (market and ad-hoc types) tend to be related to higher proportion of unstructured decision-making style than internal type cultures (hierarchy and clan types).

Concepts of Organization Culture

A widely accepted definition of organizational culture in marketing research is offered by Deshpandé and Webster (1989, p. 4):

> [a] pattern of shared values and beliefs that help its members understand organizational functioning and thus provide them norms for behavior in the organization.

Organizational culture shapes employee behavior within the firm (Evans and Blase 1986). It is transmitted to employees through formal and informal communication methods during recruitment and socialization processes, during training and development, and throughout the employee's tenure with the firm (Lebas and Weigenstein 1986). It is distinguished from a similar concept, organizational climate, in that organizational climate refers to "the ways organizations operationalize the themes that pervade everyday behavior—the routines of organizations and the behaviors that get rewarded, supported and expected by organizations" (Deshpandé and Webster 1989, p. 5). The perception of its members about how well the firm is meeting its

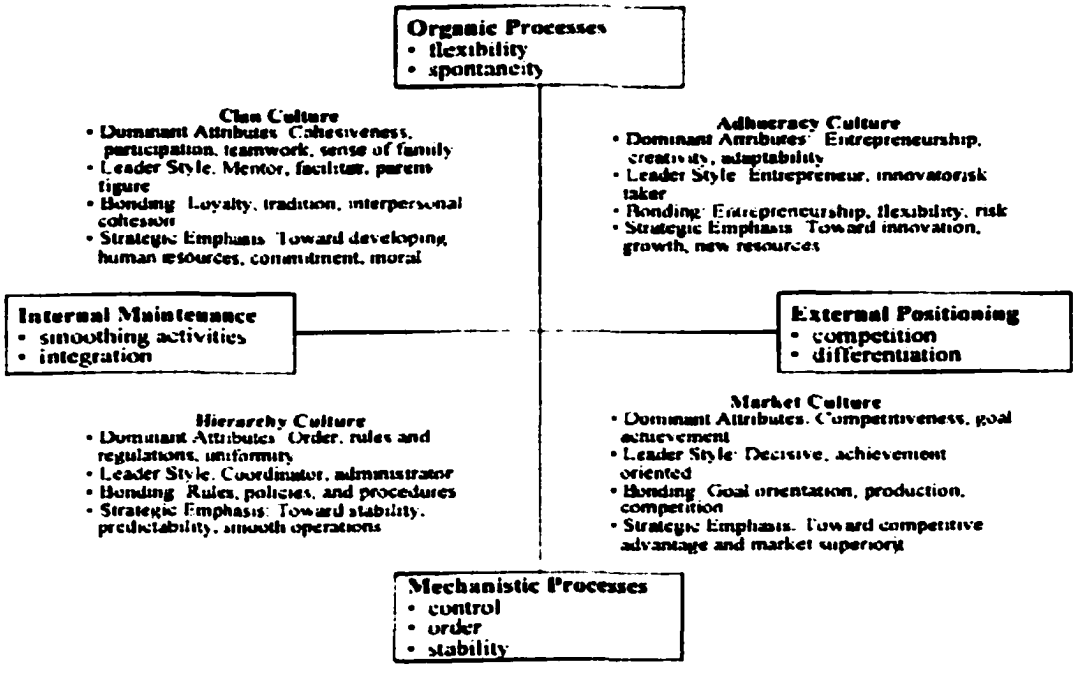
underlying assumptions, values, and understanding is the organization's climate. Organizational climate thus describes what is happening in organizations while organizational culture provides an understanding of why organizations behave the way they do (Deshpandé, Farley, and Webster 1993; Schneider and Rentsch 1983). Deshpandé and Webster (1989) provide a more in-depth discussion of this concept.

Operationalization of Organization Culture. Operationalizing the organizational culture concept involves integrating the various theoretical perspectives with tools that can be used for analysis. Smircich (1983) initially proposed that organizational culture can be viewed as either a variable or as a metaphor. As a variable, organizational culture is viewed as a sociological phenomenon that influences the development of core beliefs and values within the organization. As a metaphor, organizational culture is viewed as something that an organization is, not what an organization has. For example, the organizational cognition perspective focuses on organizations as "knowledge systems" and is reflected in the system of shared values and beliefs that guide behaviors within the organization. This organizational cognition perspective is the one generally taken in the organizational behavior field (Deshpandé, Farley, and Webster 1989) and was the approach used in this study. Webster and Deshpandé (1990) noted that this approach provides more meaningful insights than others into company marketing strategies. For example, it helps in explaining how and why firms develop customer orientations—important facets of most sales organizations.

Competing Values Model. A well founded conceptualization of organizational culture and one advocated by Deshpandé, Farley, and Webster (1993) is the competing values framework based on the works of Quinn and his colleagues (cf. Cameron and Quinn 1999; Quinn 1988; Quinn and Kimberly 1984; Quinn and McGrath 1985; Quinn and Rohrbaugh 1983). Organizational culture types can be differentiated by their dominant organizational attributes, leadership styles, organizational bonding mechanisms, and overall strategic emphases (Cameron and Freeman 1991; Deshpandé, Farley, and Webster 1993). This framework is operationalized across two dimensions, the first of which is formal-informal organizational processes. The extremes of this continuum reflect the competing demands of flexibility and spontaneity versus a focus on stability, control, and order. For example, some organizations place an emphasis on change, flexibility, and adaptation to their environment. On the other hand, some organizations focus on stability, predictability, and mechanistic behavior.

The second dimension focuses on the degree to which organizations are internally or externally focused and reflects the conflicting demands created by the internal organization and the external environment. One end of this continuum represents a focus on internal integration, structural stability and control, and organizational processes (Thompson 1967). The other end of the continuum is anchored by an emphasis on competition, adaptation, interaction with the environment through competitive positioning, and a focus on outcomes (Lawrence and Lorsch 1967). The resulting four culture types—

clan, hierarchy, market, and adhocracy—represent firms' different underlying assumptions about motivation, leadership, and effectiveness. This framework is shown in Figure 2.



Based upon Deshpandé, Farley, and Webster's (1993) model.

Figure 2. The Competing Values Framework

This paradigm is called a "competing values framework" (Cameron and Quinn 1999) in that each quadrant indicates core values that are in contradistinction to the values of the quadrant on the diagonal. For example, the upper left quadrant identifies an internal orientation with a focus on flexibility while the lower right quadrant emphasizes an external orientation with a focus on stability and control. Each quadrant is identified with a label that refers to its most important, core characteristic. The culture types are clan, adhocracy, market, and hierarchy and are positioned as shown in Table 2.1. A discussion of each of the culture types follows.

The market culture has a formal governance structure and an external orientation. In the U.S. in the late 1960s, competitive pressures from Japanese firms forced US firms to build a new organizational structure in order to improve the efficiency of their organizations. The new organizational perspective was developed as a market form of organization based on transaction cost economics (Cameron and Quinn 1999). The term "market" in this context refers neither to the firm's marketing function nor to its customers. Rather, the firm is considered to function as a market itself. The focus is on the organization's transactions with other firms and individuals in the business environment. Firm transactions include those with customers, suppliers, competitors, and unions. Thus, this type of organization is externally oriented. The objective of this culture type is to minimize the total cost of all transactions and to effectively compete with all other providers in their market (Desphandé, Farley, and Webster 1993).

The core values of the market culture are competitiveness and performance. The market culture type firm values aggressive behavior in its dealings with its constituencies because the environment is considered to be hostile. Thus, this culture type is permeated with assumptions of achievement and emphasizes performance, efficiency, and goal fulfillment. Management's focus is on productivity, goal attainment, and bottom-line results (Cameron and Quinn 1999; Deshpandé, Farley, and Webster 1993). Individuals are motivated by competition and the belief that the successful achievement of predetermined ends will be rewarded. Leaders tend to be directive, goal-oriented, and functional (Denison and Spreitzer 1991; Zammuto and Krakower 1991).

In contradiction to the market culture, the clan culture emphasizes informal governance and is internally-oriented. Researchers studied the differences between the American forms of organizational culture and found that many Japanese firms had a family-type structure (Ouchi 1981). The culture of these firms has been labeled a clan culture. The clan culture is internally oriented and is distinguished by shared values, solidarity, and a sense of belonging among its employees. The fundamental emphasis of the clan culture is long term employee development and a shared commitment to the organization. Leaders are expected to manage the development of others in the firm (Desphandé, Farley, and Webster 1993). Clan cultures are high on the flexibility and spontaneity dimension and are internally oriented. This positions clan cultures in the upper left quadrant of Figure 2.1.

The adhocracy culture combines informal governance with an external orientation. This type of culture is particularly appropriate for the information age where firms in some industries compete in a turbulent environment (Quinn and Cameron 1983). This type of firm is labeled an adhocracy because it is characterized by entrepreneurship and the ability to easily adapt to a rapidly changing environment. Firms that have an adhocracy culture are flexible, are able to bring new products to market quickly, and are able to deal with ambiguity in the marketplace. The managerial perspective of the adhocracy culture is one of risk-taking. Employees are encouraged to be innovative and creative and to seek new knowledge. The entire firm is committed to experimentation and the development of unique products and services (Cameron and Quinn 1999).

Finally, the hierarchy culture reflects the norms and values associated with bureaucracy, emphasizing mechanistic, formal governance, and an internal orientation. Before the 1950s, business organizations were faced with the task of producing and delivering goods and services in an increasingly complex society. Social scientists began to develop organizational structures that would enable firms to efficiently and effectively produce goods for the mass market. This form of enterprise was superior to previous organizational structures because it led to highly consistent products and services that were efficiently distributed.

The hierarchy culture type emphasizes smooth and efficient operations with an integration of stable tasks. Products are uniform and workers are

closely supervised. There are clear lines of decision-making authority and rules and procedures are written, understood by all employees, and strictly followed. This culture type focuses primarily on stability, order, and regulations through internal efficiency, uniformity, and evaluation. Individual members are motivated by security, rules, regulations, and rewards for accomplishments (Quinn and Kimberly 1984). Effectiveness is defined by permanence and the achievement of clearly defined goals (Denison and Spreitzer 1991; Zammuto and Krakower 1991).

Although the four culture types are distinct in character, organizations often reflect more than one culture type. A firm's organizational culture will typically be composed of a combination of values found in each of the four culture types. Nevertheless, a dominant type will typically emerge and form an identifiable corporate culture (Cameron and Freeman 1999, Deshpandé, Farley, and Webster 1993). Table 1 summarizes the culture types.

TABLE 1. Organizational Culture Profile (Cameron and Quinn 1999)

The Hierarchy Culture	The Market Culture
• Formalized and structured workplace. • Procedures govern. • Leaders are coordinators. • Efficiency minded. • Smooth-running organization is most critical. • Rules and policies hold organization together. • Long-term concern is stability • Success defined as smooth scheduling, and low cost. • Secure employment and predictability.	• Results-oriented organization. • Competitive and goal oriented. • Leaders are tough and demanding. • Winning holds the organization together. • Success is common concern. • Achievement of measurable goals. • Success defined as market share. • Market leadership is important. • Organization style is hard-driving and competitive.
The Clan Culture	**The Adhocracy Culture**
• Friendly place to work • People share a lot of themselves. • An extended family. • Leaders are mentors. • Organization held together by loyalty and tradition. • Commitment is high. • Emphasis on human resource development. • Importance in cohesion and morale. Success defined in terms of concern for people. • Premium placed on teamwork, participation, and consensus.	• A creative place to work. • People take risks. • Leaders are risk takers. • Commitment to experimentation and innovation holds organization together. • On the cutting edge. • Emphasis is on growth • New products or services. • Being a leader is important. • Encourages individual initiative and freedom.

Organizational Culture and Salesperson Behavior and Performance

Organizational culture issues are particularly relevant to the personal selling function. Salespeople play a key role in the formation of buyer-seller relationships. As the primary link between buying and selling firms, they have considerable influence on the buyer's perception of the seller's reliability and the value of the seller's services and, consequently, the buyer's interest in continuing the relationship. Buyers often have greater loyalty to salespeople than to the selling firms (Singh, Verbeke, and Rhoads 1996). While field sales units are often distant physically, organizationally, and psychologically from other company employees (Jackson, Tax, and Barnes 1994; Mahajan and Churchill 1990), they are nevertheless parts of organizations and, as such, are influenced by their firms' characteristics. The sales literature has long recognized the importance of organizational factors such as organization culture in affecting salespeople's performance (Walker, Churchill, and Ford 1977). However, little conceptual or empirical work has been done to connect the personal selling function with organizational issues (Mahajan and Churchill 1990).

Organizational culture has been theoretically linked to the personal selling process (Jackson, Tax, and Barnes 1994; Kale and Barnes 1992; Sheth 1983) as well as to adaptive selling and behaviors of sales management (Weitz, Sujan, and Sujan 1986). Empirically, a few studies have attempted to link personal selling and sales management activities to organizational culture (e.g., Evans and Blase 1986; Hunt and Vasquez-Parraga 1993). Furthermore,

some research has tested organizational culture-sales management associations in cross-national contexts (e.g., Apasu, Ichikawa, and Graham 1987; Dwyer 1997).

In their seminal adaptive selling conceptual framework, Weitz, Sujan, and Sujan (1986) proposed that the culture of an organization significantly affects not only the performance of the firm but also the productivity of employees, including the sales force, within the firm. They hypothesized that organizational culture fostered an intrinsic reward orientation in salespeople. Using the clan type culture (Ouichi 1980, 1981) as an example, they suggested that organizational culture was instrumental in focusing salespersons' attention on the work itself rather than on the extrinsic rewards associated with the work. This notion has not, however, been empirically tested (Weitz, Sujan, and Sujan 1986).

In a theoretical study, Jackson, Tax, and Barnes (1994) linked sales force organizational culture to salespersons' performance, satisfaction, commitment, role conflict and ambiguity, turnover, motivation, socialization, and sales forces' choice of selling techniques. It was hypothesized that well-managed sales force cultures should be positively associated with salesperson performance, satisfaction, motivation, and socialization and negatively related to role conflict, role ambiguity, and turnover. Similarly, to date, these relationships have not been empirically tested.

Evans and Blase (1986), in a qualitative study of life insurance salespersons, found organizational culture not only shaped salesperson behavior but also influenced client behaviors. The cultural norms of the agents' firms were found to profoundly influence what was sold to clients. This finding reinforced Deshpandé and Webster's (1989) notion that sales processes included exchanges of organizational values along with the product or service sold.

From the point of view of sales management, Hunt and Vasquez-Parraga (1993) explored the organizational consequences and ethical issues involved in supervising the sales force. They found that sales managers' decisions to either discipline or reward seller behavior were guided not only by salespeople's behaviors but also by their impact on organizational reputation. The researchers concluded that organizational culture could be effectively used to control salespersons' ethical behavior.

Apasu, Ichikawa, and Graham (1987), in a cross-national study, examined links between salesperson values and management values (where management values served as a proxy for sales organizations' culture). The degree of seller-management similarity was found to be significantly related to performance for American salespersons but was not significant in the Japanese case. Value congruence was also found to be positively related to job satisfaction and inversely related to the propensity to quit for both groups.

Interestingly, several researchers provide conceptual support, though not empirical support, for the direct association between organizational culture and the personal selling process. Sheth (1983) hypothesized that organizational norms and practices should influence selling styles. He suggested that differences in organizational structure, communication, coordination, control, and managerial decision-making processes are likely to impact the seller-customer interaction process.

Similarly, Kale and Barnes (1992) suggested that organizational values adhered to by salespersons should significantly affect their interactions with customers. Focusing on the dimension of adhockery versus planning, it was posited that adhocracy-like cultures would encourage flexibility in the presentation as well as in other aspects of the sales process. Sellers from strict planning cultures would be encouraged to emphasize product benefits in non-ambiguous communications. Organizational cultures with external emphases would be more likely to explore customer needs through problem-solving approaches. Market-focused, task-oriented cultures would strive for efficient buyer-seller interactions, avoiding customized presentations for more standardized versions. The characteristics of clan cultures would encourage building personal rapport and socializing with customers to bind them to the corporation.

Dwyer (1997) examined the indirect impact of organizational culture as well as national culture and personal values on salesperson

performance, mediated by the personal selling process. He found that these three culture levels differentially impact the personal selling process within and across sales forces in six countries. However, the direct impact of organizational culture on salesperson effectiveness or efficiency was not examined.

In sum, personal selling research examining the consequences of organizational culture on salesperson behavior and performance have been identified as a fruitful area for future research (Bush and Grant 1994; Deshpandé and Webster 1989; Ingram, Day, and Lucas 1992; Dwyer 1997).

Sales Force Control System

The proper design of control systems to motivate and control the sales force is of vital concern to academic scholars and managers. A control system has been defined as "an organization's set of procedures for monitoring, directing, evaluating, and compensating its employees (Anderson and Oliver 1987, p. 76). It helps determine the motivation of the sales force and the long-term profitability of the firm (Coughlan and Sen 1989). As a result, recent studies have focused on designing the proper sales force control system (Baldauf and Cravems 1999; Bartol 1999; Challagalla and Shervani 1996; Chonko, Tanner, and Weeks 1992; Cravens et al. 1993; Darmon 1998; Krafft 1999; Oliver and Anderson 1994; 1995; Ramaswami 1996; Stathakopoulos 1996).

Two types of control systems have been recognized in the sales literature (Anderson and Oliver 1987; Krafft 1999; Oliver and Anderson 1994, 1995). A behavior-based control system monitors intermediate states in the sales process such as sales activities. It requires close salesperson supervision, supervisors' involvement with salespeople's activities, and more complex and subjective evaluation of salespersons' performance. In contrast, outcome-based control systems monitor the salesperson's final outputs (e.g., sales) and require minimal salesperson supervision, straight-forward performance measures, and commission-based compensation plans.

Outcome-based control is thus a more "hands-off" management style where salespersons act more as independent entrepreneurs responsible for their own activities and performance. Thus, relatively little direction is provided as to how salespersons are expected to carry out their duties (Krafft 1999). In addition, an outcome-oriented contract primarily uses incentive compensation systems such as straight commission and bonuses (Krafft 1999). In the outcome-based system, reinforcements or rewards are tied directly to successful sales performance.

Darmon (1998) extended the recent outcome-based versus behavior-based control system research by taking a broader perspective. Through the development of a conceptual framework of sales force control, it was suggested that management should select the most appropriate control devices characterized along three dimensions: centralized-decentralized, outcome-behavior-based, and quantitative-qualitative, depending on

management's selling and control objectives and on the availability and/or costs of relevant information.

In an empirical study, Oliver and Anderson (1994) tested propositions about the influence that control system perceptions have on salespeople. They found that the predicted effects of control orientation on salesperson affective and motivational states were generally supported whereas the effects on sales strategies or performance outcomes were not supported.

Cravens et al. (1993), based on Anderson and Oliver's (1987) theoretical study, tested the relationship between sales force control systems, sales force characteristics, performance, and sales organization effectiveness. The results from a survey of sales firms showed support for the relationship between behavior-based control systems and specific sales force characteristics, different performance measures, and firm effectiveness.

By dividing behavior control into activity control and capability control, Challagalla and Shervani (1996) extended Anderson and Oliver's (1987) dichotomous control system. Using a sample of 270 salespeople in two firms, they found that information and reinforcement effects varied. This suggested the need to differentiate between the information provided to salespeople and the actual reinforcements administered to salespersons. It was also found that activity and capability controls have different consequences, supporting their division of behavior control into activity and capability control systems. However, the effects of output control were largely inconclusive, supporting

the argument that an over-reliance on output control can reduce supervisory effectiveness (Oliver and Anderson 1994; Tyagi 1990).

Kohli, Shervani, and Challagalla (1998) investigated the relationships between supervisory orientation and goal orientation, as well as the associations between goal orientation and salespeople performance. The findings indicated that two of the three supervisory orientations (end-results and capability orientation) produce a learning orientation. However, supervisory activity orientation had a negative impact on the learning orientation of more experience salespeople. In addition, they found that only a performance orientation is positively associated with salesperson performance, but a learning orientation is not related to performance. This contradicted Sujan, Weitz and Kumar's (1994) findings.

Piercy, Cravens, and Lane (2001) investigated behavior control systems in the context of attitudes, job stress, and performance. Importantly, they also explored the potential differences across sales manager gender. Their findings suggest that males are less likely to employ behavior-control than females. In addition, female sales executives tend to have more favorable job attitudes and better performance in their selling team.

Challagalla, Shervani, and Huber (2000) examined the moderating impact of sales location in the control systems-performance relationship. They posited that remote sales location may strengthen or weaken the influence of the three supervisory control systems with regard to satisfaction with

supervisor and performance. Overall, their findings provided support for the moderating role of selling location.

Atuahene-Gima and Li (2002) examined the correlation between sales force control systems and supervisee trust and the influence of trust upon sales performance in both Chinese and American settings. They theorized that sales controls may include output control and process control based upon the output based and behavioral based control typology (Anderson and Oliver 1987; Oliver and Anderson 1994). They found that output control strengthens the impact of trust on sales performance in the Chinese sample but weakens this impact in the American sample. Output control was not related to supervisee trust and had no moderating role in the relationship between supervisee trust and performance.

Previous empirical studies focusing on the impact of compensation systems acting as a means of control have found ambiguous findings. For example, the relationship between output compensation and end-performance has been found to be positive (Jaworski, Stathakopoulos, and Krishnan 1993), negative (Oliver and Anderson 1994), and insignificant (Lusch and Jaworski 1991). In addition, Oliver and Anderson (1994) reported that behavior compensation improves job satisfaction, whereas Jaworski, Stathakopoulos, and Krishnan (1993) found no direct effect.

Salesperson Training

A key task of sales managers is sales training and, in particular, on-the-job training. The rapid change in the selling environment has led researchers

to suggest that training has become a key element in the long-term success of the salesperson (Dubinsky 1980, 1981, 1996; Babakus et al. 1996; Churchill et al. 1985; Christiansen et al. 1996; Weitz 1981; Weitz, Sujan, and Sujan 1986). In fact, training is a vital component for both initial and ongoing development of the sales representative. It has been suggested that a well-designed training program may overcome many of the common causes of failure for new sales recruits (Anderson, Hair, and Bush 1988). Sales training programs typically address a number of content areas (c.f. Dubinsky 1996), many of which have the opportunity to enhance salesperson efficiency: product knowledge, selling skills, market and competitive knowledge, company information, time management, and legal issues (Stanton, Buskirk, and Spiro 1995; Weitz 1981; Weitz, Sujan, and Sujan 1986). Research has suggested that training may increase the salesperson's knowledge base and skill levels, resulting in higher effectiveness (Sujan, Sujan, and Bettman 1988) and job performance (Churchill et al. 1985). If training can help avert the failure of salespeople and increase their performance, this may also lead to higher satisfaction and commitment (Christiansen et al. 1996).

The often-cited meta-analysis conducted by Churchill et al. (1985) found that the two determinants mostly highly correlated with variation in performance were personal factors and skill. Skill levels are generally developed through a combination of experience and training. Churchill et al. (1985) suggested that the most important personal factors are those that are "influenceable" through better training (e.g., role perceptions).

Weitz, Sujan, and Sujan (1986) suggested that more knowledgeable salespeople would be more effective by being able to adapt their selling strategies to fit the sales situation. Salespeople knowledge can be improved through formal or informal training programs in the firm. Sujan, Sujan, and Bettman (1988) found that more effective salespeople had greater knowledge of customer traits as well as selling strategies related to these customer traits. Additional empirical evidence in support of a relationship between salespeople's knowledge structure and higher levels of performance has been found by Szymanski and Churchill (1990).

Christiansen et al. (1996) noted that the impact of training on salesperson performance has frequently been the focus of empirical research. However, whether training's effects extend beyond performance, and whether these effects vary depending upon the type of product being sold, has not been examined. In an exploratory investigation of the relationship between training and performance, satisfaction, and commitment for salesforces whose products were either a good or a service, it was found that the relationship between training and performance is substantially weaker if the product is a service. However, both types of salesforces showed satisfaction to be strongly correlated with training. While the usefulness of training content in the study was generally the same for both sales forces, there were considerable differences in perception of company policies and time management between services and goods salespeople. Commitment, in particular, did not seem to be strongly affected by training for either sales force.

Schulman (1999) suggested that sales force training in "learned optimism" could increase sales productivity. The learned optimism paradigm suggests that teaching salespeople to dispute self-centered attributions for their failures improves their expectancy for success and consequently increases performance and reduces turnover. Furthermore, training salesperson to dispute external attributions for their successes improves salespeople's expectations and performance and reduces turnover (Sujan 1999).

Cognitive evaluation theory suggests that enhancing competencies through coaching and training increases intrinsic motivation which, in turn, leads to greater task interest and improved performance (Deci and Dyan 1985). Because training helps improve competence through better skills and abilities, it is likely to satisfy a person's innate psychological need for competence and increase his or her intrinsic motivation and performance as well (Challagalla and Shervani 1996).

In an empirical study, Chonko, Tanner, and Weeks (1993) noted that firms are increasingly looking for ways to improve the productivity and profitability of their sales forces. The challenge lies in determining how effective these training programs really are. One measure of training effectiveness is satisfaction of the sales force training participants. Overall, sales personnel are not very satisfied with many aspects of sales training. In particular, sales personnel were only marginally satisfied with the relevance of training to problems encountered in the field. Similarly, sales personnel were

dissatisfied with the effectiveness of communications concerning the benefits of sales training programs (Chonko, Tanner, and Weeks 1993).

Honeycutt et al. (2001) note that sales training programs should be financially evaluated. Applying the economic utility theory, they propose and test a sales training evaluation framework. Their findings lend support for the need and importance of financial evaluations of key training program.

Wilson, Strutton, and Farris (2002) note that sales training is an important means of improving salesperson productivity. They evaluated the process of development and transfer of training attitudes as well as the performance implications of training. Using a sample of industrial sales force, they found that the transfer of training is indeed related to salesperson's traits and beliefs. In addition, their results lend some support for the association between training transfer and selling performance.

Additional support for the notion of training improving performance derives from research that has found a lack of training to be a key determinant of salespeople failure (Ingram, Schwepker, and Hutson 1992; Johnston, Hair, and Boles 1989). In contrast, Chonko, Tanner, and Weeks (1993) found that firms could use sales training programs to improve the productivity and profitability of their sales forces.

In sum, both empirical and theoretical studies have found that sales force training can enhance selling techniques and behaviors, enrich sales force morale, reduce selling costs, and increase sales productivity (Churchill, Ford, and Walker 1993). Research has suggested that training may increase

the salesperson's knowledge base and skill levels, resulting in increased effectiveness (Sujan, Sujan, and Bettman 1988) and job performance (Churchill et al. 1985). This stream of research suggests that an important determinant of a salesperson's performance may be the quantity and quality of training that the salesperson receives.

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this chapter is to present the research methodology used to explore the influences of working smart, working hard, goal orientation, organizational culture, sales force control systems, and training on salesperson efficiency and effectiveness. This chapter includes: (1) the research hypothesis development and hypotheses, (2) the research design, including the sampling and data collection procedures, (3) the operationalization of the variables in the study, and (4) the statistical techniques and management science methods used in the data analyses.

It should be noted that the widely-accepted paradigm of salesperson performance by Walker, Churchill, and Ford (WCF) (1977) provides overall support of the model examined in the current study. This framework suggests that salesperson performance is a function of salesperson motivation, role perception, and aptitude that, in turn, are determined by individual factors (including individual knowledge, skill, effort, and goal orientation), organizational factors (including culture, reward systems, and firm support and training), and environmental factors. Personal, organizational, and environmental factors also influence performance indirectly through selling-related activities by salespeople.

The WCF (1977) theoretical model was tested by two meta-analytic studies. First, Churchill et al. (1985) found that the most predictive variables of sales success were individual factors that can be enhanced by organizational training such as role perceptions and skills. The influences of environmental variables were largely not supported and thus were not the focus of subsequent research on salesperson performance. Second, Ford et al. (1988) completed another meta-analysis on two types of personal variables' influence on performance: biographical and psychological variables. Again, the results indicated that no single variable category predicted a large amount of performance variance.

Given these findings, recent personal selling research, guided by the WCF (1977) framework, has examined other personal and organizational factors that may enhance salesperson performance. Among the personal variables are the theoretical constructs of "working smart" and "working hard," as well as salesperson goal orientation. Organizational variables that have been explored in this regard include sales force control systems, organizational culture, and sales force training. As such, based on the WCF paradigm, the present study models four important individual antecedents (working smart, working hard, learning goal orientation, and performance goal orientation) and three organizational antecedents (organizational culture, sales force control systems, and training). Hypotheses relating these variables to key aspects of salesperson performance are discussed next.

Research Hypotheses

Based on the literature review in Chapter 2, formal and testable hypotheses have been developed to investigate the influences of working smart, working hard, goal orientation, organizational culture, sales force control systems, and training on salespeople efficiency and effectiveness. Figure 1 on page 3 in Chapter 1 illustrates the conceptual model that is tested in the current study.

Central to this study is the notion that salesperson performance has two key dimensions: effectiveness and efficiency (Boles, Donthu, and Lohtia 1995). Past sales research has focused primarily on the effectiveness dimension of performance (e.g., Anderson and Oliver 1994; Atuahene-Gima and Li 2002; Churchill, Ford, and Walker 1976; Churchill et al. 1985; Sujan, Weitz, and Kumar 1994; Wang and Netemeyer 2002). Salesperson effectiveness has been defined as the extent to which 'preferred solutions' are realized in the salesperson-customer interaction (Weitz 1981) or, alternatively, the degree to which salespersons make contributions to valued organizational outcomes (Churchill, Ford, and Walker 1976).

While salesperson effectiveness remains a critical performance variable, the current business environment's emphasis on cost-cutting and maximizing productivity requires, in addition to effectiveness, a high level of efficiency from salespeople (Boles, Donthu, and Lohtia 1995; Mahajan 1991; Pilling, Donthu, and Henson 1999). Efficiency has been defined as the ratio of outputs of some activity to the inputs required by that activity (Bucklin 1978;

Drucker 1975; Murthi, Srininvasan, and Kalyanaram 1996; Sevin 1965). Only a few research studies have explored salesperson efficiency. Thus, this study seeks to fill this void in the sales literature by investigating efficiency as a key performance measure along with salesperson effectiveness.

Marketing researchers have long shown interest in measuring efficiency performance (e.g., Drucker 1974; Sevin 1965). However, past methods of measuring efficiency were largely inadequate and, as such, much criticized (Golany and Roll 1988; Mahajan 1991). Recent advances in management science and computing technology have provided researchers with the capability to measure efficiency more accurately. For example, recent empirical studies (e.g., Boles, Donthu, and Lohtia 1995; Horsky and Nelson 1996; Mahajan 1991; Pilling, Donthu, and Henson 1999) have applied an advanced management science tool—data envelopment analysis—to measure efficiency in a sales setting. This tool has its origins in the microeconomic theory of efficiency that depicts efficiency as an important gauge of performance that should be measured as the ratio of inputs to outputs (Farrell 1957). Efficiency has been an important measure of resource utilization and productivity benchmarking at the macro level (e.g., the firm and the economy of a nation). The current study seeks to evaluate efficiency at the micro level by focusing on individual salespersons.

The present study will apply and extend data envelopment analysis in the context of personal selling. More specifically, this study will (1) determine the relative efficiency of a sample of salespersons and (2) test the association of key personal and organizational variables with efficiency. In addition, the

association of these variables with salesperson effectiveness will be examined. The following sections present the development of specific hypotheses related to the personal and organizational influences on both effectiveness and efficiency.

Personal Influences on Effectiveness and Efficiency

Working Smart and Salespeople Performance.

A major contribution of sales performance research to recent marketing theory and practice arises from the formulation and empirical study of the construct of "working smart" and a component of this construct, adaptive selling behavior (Robinson et al. 2002; Spiro and Weitz 1990; Sujan, Weitz, and Kumar 1994; Weitz 1978; Weitz, Sujan, and Sujan 1986). Conceptually, working smart has been defined as:

> [a] manifestation of (1) engaging in planning to determine the suitability of sales behaviors and activities, (2) possessing the confidence and capacity to engage in a wide range of selling behaviors and activities, and (3) altering sales behaviors and activities on the basis of situational considerations (Sujan, Weitz, and Kumar 1994, p. 41).

This definition draws heavily on recent research on human intelligence theory (Sternberg 1985). Human intelligence theory expands the conceptual domain of intelligence by including not only the traditional intelligence of undertaking analytical thinking, but also the contextual intelligence of changing one's behavior in different environmental situations. In particular, this view of intelligence suggests that contextual intelligence manifests itself through acts of strategic planning, mental preparation, self-confidence, and appropriate

adjustments of behaviors in different contexts. The theory predicts that contextual intelligence enhances ones' ability to choose advantageous strategies in different settings and to succeed in a dynamic, ever-changing environment. As such, one should expect that salespeople with contextual intelligence would be more likely to gather and respond to customer needs, deliver a customized and contextually appropriate sales presentation, and build a long-run partnership with their customers. Working smart, by definition, involves behaviors directed toward developing intelligence and knowledge about sales situations and utilizing this knowledge in a sales setting (Robinson et al. 2002; Sujan, Weitz, and Kumar 1994).

The working smart paradigm (Sujan, Weitz, and Kumar 1994; Weitz, Sujan, and Sujan 1986) thus suggests that salespeople have the potential intellectual capacity, as well as opportunity to gather information and develop and implement a sales presentation tailored to each customer. In addition, salespeople can observe their customer's reaction to their sales strategy and make rapid behavioral adjustments that will ultimately lead to higher customer satisfaction and sales success (efficiency and effectiveness performance).

An essential aspect of working smart is adaptive selling. Formally, adaptive selling is defined as

> [the] change and 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).

Based on the extensive theoretical and empirical research of Weitz and his associates (Spiro and Weitz 1990; Sujan, Weitz, and Kumar 1994; Weitz 1978;

Weitz 1981; Weitz, Sujan, and Sujan 1986), adaptive selling theory suggests that the ability of a salesperson to adapt during a sales presentation to cues from the customer is predictive of sales performance and of sales success in general when aggregated across buyer-seller interactions.

A number of other studies provide support for the positive relationship between adaptive selling and achieving sales effectiveness (e.g., Anglin, Stolman, and Gentry 1990; Boorom, Goolsby, and Ramsey 1998; Sharma 2001; Leong, Randall, and Cote 1994; Robinson et al. 2002; Spiro and Weitz 1990; Swenson and Herche 1994; VandeWalle et al. 1999). Furthermore, working smart, in general, has been empirically determined to have a significant and positive effect upon sales effectiveness performance (Sujan, Weitz, and Kumar 1994). Hence, the following hypothesis reflects previous theory and empirical research findings:

Hypothesis 1a: Working smart is positively associated with salesperson effectiveness.

Working smart behavior is also expected to be positively associated with salesperson efficiency. Because working smart involves both planning and adapting sales presentations to the customers' sales process needs, working smart helps salespersons identify and subsequently satisfy customer needs in a productive, time-saving manner. In addition, because customer needs are more fully satisfied with working smart behavior, preferred outputs such as sales volume should also be increased. The net effect should be a decrease in selling inputs and/or an increase in selling outputs. In short, as salespersons

increasingly engage in working smart behavior, they should increase their efficiency. As Sujan, Weitz, and Sujan (1988, p. 46) noted in this regard:

> [Our] research with over 2,000 salespeople working for over 200 companies indicates that a key factor for increasing salesforce productivity is getting salespeople to work smarter during their interactions with customer [italics added].

The following hypothesis reflects this discussion:

Hypothesis 1b: Working smart is positively associated with salesperson efficiency.

Working Hard and Salesperson Performance. While working smart deals with the manner in which salespeople choose to channel their effort and time (Sujan 1986), "working hard" is the total amount of effort salespeople devote to their work—often measured by the amount of time taken to complete an activity (Sujan 1986; Sujan, Weitz, and Kumar 1994; Weiner 1980; Weitz 1978; Weitz, Sujan, and Sujan 1986). For example, Sujan, Weitz, and Kumar (1994, p. 37) defined working hard as "the length of time devoted to work." Sales force and organizational behavior researchers have consistently recognized the importance of effort in conceptual models of salesperson performance (Brown and Peterson 1994; Naylor, Pritchard, and Ilgen 1980; Walker, Churchill, and Ford 1977). These models have typically considered effort to directly influence salesperson performance and also to mediate the relationship between motivation and performance.

According to the WCF framework of salesperson performance (Walker, Churchill, and Ford 1977), the effort salespeople devote to their tasks directly determines their job performance. In addition, the presumed positive

relationship between perceived job effort and performance may explain the motivation for working hard (Churchill et al. 1985).

Empirically, several studies found support for the positive influence of working hard on sales effectiveness. Sujan, Weitz, and Kumar (1994) found that working hard enhances salesperson effectiveness and, most notably, that the impact of working hard on performance was even stronger than that of working smart. Similarly, Leong, Randall, and Cote (1994) found a strong positive relationship between working hard and salesperson effectiveness. In addition, Brown and Peterson (1994) examined the effects of effort, that is, working hard, on sales effectiveness. Their findings indicated that effort was significantly associated with salesperson effectiveness, supporting Walker, Churchill, and Ford's (1977) theoretical framework. The following hypothesis is offered based on this discussion:

Hypothesis 2a: Working hard is positively associated with salesperson effectiveness.

While the positive relationship between working hard and salesperson effectiveness appears intuitive and logical, the linkage between working hard and salesperson efficiency is less obvious. According to the working smart paradigm (Sujan, Weitz, and Kumar 1994), efficient selling requires salespeople to focus their effort on appropriate selling activities (i.e., planning, flexibility, and adaptability). An excessive emphasis on effort, however, at the expense of planning, flexibility, and adaptability, can lead to seller frustration. For example, for a given level of output, salespersons who engage in working hard behavior achieve this output level through persistent but potentially

lengthy and excessive effort relative to salespersons who complete the same objectives in a shorter, more productive manner. For example, in order to close a sale, salespersons taking a working hard approach may invest extra hours over the course of the sales process to ensure the sale. This emphasis on sales effort over planning, flexibility, and adaptability may achieve sales effectiveness at the high price of consuming a considerable amount of time, increasing selling inputs. This increase in inputs may not be commensurately offset by increased outputs. The net effect will be less productive salespersons. As such, the following hypothesis is presented:

Hypothesis 2b: Working hard is negatively associated with salesperson efficiency.

Goal Orientation and Salespeople Performance. The concept of a goal has been referred to the object or aim of an action (Locke 1982). Goal theory posits that the goals people pursue create a framework that they use to interpret and react to occurrences in their lives. Furthermore, the act of setting challenging and specific goals has been found to enhance individual performance (Dweck and Leggett 1988). Since people expect outcomes from their actions, they are motivated to engage in certain kinds of behavior that will fulfill unsatisfied personal needs and wants (Locke 1982). In particular, goal theory predicts that goal level, goal difficulty, and goal specificity, in conjunction with individual differences such as self-efficacy as well as a need for achievement, determine one's motivation and, ultimately, performance.

People with specific task goals perform better at the task than people with vague task goals or no goals at all. That is, goal theory contends that

clear and unambiguous goals help people focus their attention on the task and proactively seek relevant tactics and strategies to achieve the desired goals (Locke and Latham 1990). In general, more difficult and specific goals are believed to bring about higher levels of motivation and performance (Dweck and Leggett 1988; Locke and Latham 1990). In a sales context, we should expect that salespeople with task goals should outperform those without any goals or with ambiguous goals in terms of both effectiveness and efficiency performance.

Psychologist Dweck and her colleagues (Dweck and Leggett 1988; Elliott and Dweck 1988; Nicholls and Dweck 1979; VandeWalle and Cummings 1997) have identified two types of underlying goal orientations that individuals pursue in task-oriented achievement settings such as sales. A learning goal orientation directs people to improve their abilities and master the tasks they perform (Wang and Netemeyer 2002). In contrast, a performance goal orientation leads them to focus on receiving positive evaluations of their current abilities and task performance from their superiors and peers (Dweck and Leggett 1988; VandeWalle and Cummings 1997).

A learning goal orientation stems from an intrinsic interest in one's work—a preference for challenging work, a view of oneself as being curious, and a search for opportunities that permit one to attempt to master a task (Dweck and Leggett 1988). Alternatively, a performance goal orientation stems from an extrinsic interest in one's work—the desire to use one's work to achieve valued external goals such as monetary rewards. Dweck and Leggett (1988) have found that persons with a learning orientation are not unduly

concerned with making mistakes and, as a result, persist in their efforts even in the face of failure.

In addition, according to social cognitive theory, one's learning effort should enhance cognitive self-pride, perceived self-efficacy, and task performance (Bandura 1986). Social cognitive theory predicts that both enactive learning through direct experience, and vicarious learning through observation, comparison, and modeling lead to more felt job competence (Weiss 1990). Similarly, Bandura (1986) identified four routes through which learning efforts may improve competence and performance: enactive mastery, verbal persuasion, vicarious experience, and psychological arousal. This theory predicts that direct learning through enactive mastery may be enhanced when one enjoys a high level of control and job autonomy. In addition, mastery of task difficulty increases one's self-esteem, confidence, and self-perceptions through enactive experience learning. Comparative information about skills, behaviors, and outcome of peers is another major source of active vicarious learning that ultimately influences task performance (Bandura 1977, 1986). According to this theory, perceived job competence produces successful task performance, whereas people lacking in job competence tend to quit prematurely and fail.

In a sales context, one would expect that continuous learning efforts and related goal orientations lead to superior effectiveness and efficiency performance. Wang and Netemeyer (2002), in fact, applied social cognitive theory to evaluate the relationship between salesperson learning effort, self-

efficacy, and performance. Their findings indicate that learning effort is positively associated with competence and performance.

In contrast, persons with a performance orientation will persist only to the degree they possess the requisite skills to successfully complete the task at hand. Thus, salespersons with a performance orientation may not pursue prospective customers with whom they face a reasonable chance of rejection. They will, instead, move on to prospects with whom they may have a higher probability of sales success. Learning-oriented salespeople, on the other hand, will pursue the sale and persist in the face of potential rejection. Even in the event of failure, however, learning-oriented salespeople believe that the learning experience will benefit them in the long-run. That is, they will learn from their failure, enhance their skills and abilities, and increase their probability of future sales success.

Several empirical studies have found support for the influence of salesperson goal orientation on salesperson effectiveness performance. Sujan, Weitz, and Kumar (1994) determined that salespeople are concerned not only about performance goals but also learning goals. Their findings suggest that salesperson effectiveness depends considerably on developing both a learning goal orientation and a performance goal orientation. Kohli, Shervani, and Challagalla (1998), in a study examining the relationship between goal orientation and control systems, found that a performance orientation was positively related to sales effectiveness performance. More recently, VandeWalle et al. (1999) investigated the impact of goal orientation on sales performance in a longitudinal field study. A learning goal orientation

was found to be positively related to sales effectiveness performance, although the positive relationship was mediated by three self-regulation tactics: goal setting, effort, and planning (VandeWalle et al. 1999).

In summary, goal theory and social cognitive theory suggest that people with specific task goals perform better at the task than people with vague task goals or no goals at all (Bandura 1977; Dweck and Leggett 1988; Locke and Latham 1990). Clear and unambiguous goals may motivate morale, help people focus their attention, and proactively seek effective tactics and strategies. In addition, both enactive learning and vicarious learning lead to more felt job competence, which generates higher productivity. As such, it seems likely that salespeople with a learning orientation should have a strong desire to improve and master their selling skills and abilities on continual basis. They should view achievement settings–in their case, selling situations—as opportunities to improve their competence. They thus will, over time, acquire new skills that will enhance their sales success.

Conversely, salespersons with a performance orientation will focus strictly on performing well because they see strong performance as a means to obtaining extrinsic rewards and praise from others (i.e., their supervisors and peers). Thus, a learning orientation is likely to lead to higher effectiveness performance through intrinsic motivation (Kohli, Shervani, and Challagalla 1998) and the acquisition of performance-enhancing skills (Sujan, Weitz, and Kumar 1994). On the other hand, a performance orientation is likely to lead to improved effectiveness through an extrinsically motivated results orientation

(Kohli, Shervani, and Challagalla 1998; Wang and Netemeyer 2002). As such, the following hypotheses are offered:

Hypothesis 3a: Learning orientation is positively associated with salesperson effectiveness.

Hypothesis 3b: Performance orientation is positively associated with salesperson effectiveness.

Goal theory suggests that salespersons with a learning orientation are not unduly concerned with making mistakes and meeting potential rejection and failure (Dweck and Leggett 1988). Instead, they are intrinsically motivated to learn from their mistakes and avoid future mistakes. Intrinsic motivation drives them to search for opportunities to develop their skills to further enhance their knowledge and ability. Thus, over time a learning orientation is likely to enhance salespeople's selling skills and capabilities that will ultimately increase their productivity. In contrast, salespersons with a performance orientation are extrinsically motivated and seek to achieve only valued external goals. Believing that their skills and abilities are fixed (Sujan, Weitz, and Kumar 1994), they are less likely to significantly enhance their selling skills and abilities over time. Thus, performance-oriented salespersons will likely be less productive salespersons. That is, they may increase sales output with a performance orientation, but will do so at the expense of even higher sales inputs. Thus, while a learning orientation should increase salesperson efficiency, a performance orientation is unlikely to do so. This reasoning is reflected in the following hypotheses:

Hypothesis 4a: Learning orientation is positively associated with salesperson efficiency.

Hypothesis 4b: Performance orientation is negatively associated with salesperson efficiency.

The relationship between performance goal orientation and an individual's performance-related behaviors is moderated by his or her self-efficacy (Dweck and Leggett 1988). According to social cognitive theory (Bandura 1977, 1986, 1997; Bandura and Wood 1989), salespeople with high self-efficacy have confidence in their ability to exercise control and achieve better behavioral and psychological outcomes in high demand, high-control selling situations than do people with low self-efficacy. As a result, self-efficacy should be associated with job performance.

In a sales setting, Sujan, Weitz, and Kumar (1994) found some support for the moderating role of self-efficacy. In particular, a performance orientation was found to motivate hard work only for highly self-efficacious salespeople. In contrast, those salespeople low in self-efficacy appear to feel "helpless" about their goals. The lack of confidence of salespeople low in self-efficiency is likely to cause them to question their ability to achieve successful sales outcomes through hard work (Sujan, Weitz, and Kumar 1994). Alternatively, salespeople with a performance goal orientation and high in self-efficacy will adopt an adaptive behavior pattern and work harder (Sujan, Weitz, and Kumar 1994). Both behaviors lead to greater selling effectiveness as discussed earlier.

On the other hand, although performance goal-oriented salespeople with high self-efficacy may be motivated to work even harder, they are expected to place far less emphasis on enhancing their selling knowledge,

skills, or capabilities because, being performance oriented, they believe that their skills and abilities are fixed (Sujan, Weitz, and Kumar 1994). Their high level of self-efficacy should only serve to reinforce their aversion to skill enhancement. Thus, over time, such salespeople are expected to perform in even less productive of a manner. This discussion leads to the following hypotheses:

Hypothesis 5a: The positive relationship between performance goal orientation and salesperson effectiveness is stronger for salespeople with high self-efficacy.

Hypothesis 5b: The negative relationship between performance goal orientation and salesperson efficiency is stronger for salespeople with high self-efficacy.

Organizational Influences on Salesperson Effectiveness and Efficiency

Organizational Culture and Salespeople Performance.

Jaworski's (1988) theory of marketing control identifies organizational culture as a key element of managerial control, particularly for dynamic work settings such as sales organizations. As he noted (p.28),

> [The] cultural control mechanism commonly is thought to be the dominant control mechanism for management positions requiring nonroutine, nonprogrammatic decisions.

The theory of marketing control predicts the general relationship between the environmental, control, and consequence variables (Jaworski 1988). This theory posits two broad classes of control: formal controls with written, management-initiated mechanisms (i.e., input, process, output control

types) and informal controls with unwritten, worker-initiated mechanisms (e.g., self, social, and cultural control types). In addition, the environmental context directly influences the controls and moderates the relationship between controls and consequences, including the macro environment, operating environment, and internal environment. The consequences of controls include individual effects, as well as organizational outcomes such as financial performance and market performance. The theory's focus is on the control of marketing personnel rather than the traditional focus on the control of marketing plans/activities. The theory of marketing control explains how informal control systems such as organizational culture influence the work force.

As discussed in Chapter 2, a widely held definition of organizational culture offered by Deshpandé and Webster (1989, p. 4) views this construct as

> [a] pattern of shared values and beliefs that help its members understand organizational functioning and thus provide them norms for behavior in the organization.

A number of theoretical and conceptual approaches of organizational culture have been offered in the past (cf. Hofstede et al. 1990; Schein 1984, 1990; Reynolds 1986; and Williams 1992). One widely-accepted paradigm of organizational culture developed by Quinn and his colleagues and introduced to the marketing literature by Deshpandé, Farley, and Webster (1993) is the Competing Values Framework of organizational culture (c.f., Cameron and Quinn 1999; Quinn 1988; Quinn and Hall 1983; Quinn and Kimberly 1984; Quinn and McGrath 1985; Quinn and Rohrbaugh 1983).

The Competing Values Framework differentiates organizations' cultures by their dominant organizational attributes, leadership and management styles, organizational bonding mechanisms, success criteria, and overall strategic emphases (Berthon, Pitt and Ewing 2001; Cameron and Quinn 1999; Deshpandé, Farley, and Webster, 1993). The typology is operationalized across two dimensions, the first of which focuses on the degree to which organizations are internally or externally focused, reflecting the conflicting demands created by the external environment and the internal organization. The second dimension focuses on the competing demands of formal and informal organizational processes. The resulting four culture types—adhocracy, hierarchy, market, and clan—represent firms' different underlying assumptions and emphases with regard to motivation, leadership, and effectiveness (Cameron and Quinn 1999). The four culture types, described in detail in Chapter 2, are summarized next.

Adhocracy Culture—The adhocracy culture assumes an external orientation combined with an informal governance system. Dominant attributes are values related to creativity, adaptability, entrepreneurship, and change. Spontaneity and flexibility are also emphasized. Individuals are motivated by the ideological appeal of tasks, growth, stimulation, and variety. Effectiveness criteria revolve around innovation, new market development, resource acquisition, and growth.

Hierarchy Culture—The hierarchy culture reflects an internal orientation and the norms and values associated with bureaucracy. Mechanistic, formal governance is also emphasized. This culture type focuses primarily on order,

stability, and uniformity through internal efficiency, regulations, and evaluation. Individual members are motivated by rules, security, and rewards for accomplishments. Effectiveness is defined by performance and the achievement of clearly defined objectives.

Market Culture—The market culture has an external orientation and a formal governance structure. This culture type is permeated with assumptions of achievement and an emphasis on performance, goal fulfillment, and efficiency. Primary objectives are productivity, planning, and the attainment of well-defined goals. Individuals are motivated by competition and the belief that the successful achievement of predetermined ends will be rewarded. Leaders tend to be goal-oriented, functional, and directive.

Clan Culture—The clan culture is internally-oriented and emphasizes informal governance. Its norms and values are associated with affiliation. Group maintenance is achieved through individual compliance to organizational mandates based on tradition, trust, and the members' long-term commitment to the organization. The development of human resources and member participation in decision-making are emphasized throughout the organization. Organizational commitment is enhanced through teamwork, cohesiveness, and consensus-building.

Although organizations are composed of a combination of values found in each of the four culture types, a dominant culture type will often emerge and form an identifiable corporate culture (Berthon, Pitt and Ewing 2001; Cameron and Freeman, 1991; Cameron and Quinn 1999; Deshpandé, Farley, and Webster 1993). The development of the following hypotheses are based on

the dominant culture type of a firm and its influence on the behavior of salespeople working within it.

The market culture, more so than the other cultures, should positively influence both salesperson efficiency and effectiveness. The market culture is characterized by an external orientation that focuses on market superiority, performance, and the attainment of well-defined goals—key elements of effective operations (Churchill, Ford, and Walker 1993). Individuals are motivated by competition and the belief that the successful achievement of predetermined objectives will be rewarded. Such emphases should also motivate salespeople to seek high levels of effectiveness.

The market culture's mechanistic approach emphasizes order and control. Its primary objectives also include planning and productivity—pivotal aspects of efficiency. Taken together, these characteristics are key elements of efficient operations. As such, the following hypotheses are provided:

Hypothesis 6a:The market culture is positively associated with salesperson effectiveness.

Hypothesis 6b: The market culture is positively associated with salesperson efficiency.

The market culture type's competing value type is the clan. This culture is internally-oriented and emphasizes informal governance. Its emphasis on employee satisfaction, cohesiveness, trust, and teamwork, with less emphasis on competition and achievement, position it to have little influence on salesperson efficiency or effectiveness–at least in the life insurance setting of this study where salespeople in the same organization compete against each

other in the same geographic area. As such, the following hypotheses are offered:

Hypothesis7a: The clan culture is negatively associated with salesperson effectiveness.

Hypothesis 7b: The clan culture is negatively associated with salesperson efficiency.

The ability of the hierarchy and adhocracy culture types to influence salesperson efficiency and effectiveness is less clear. The hierarchy culture's characteristics of smooth operations and internal efficiency should clearly contribute to efficient selling behavior in salespeople. However, its emphasis on rules, regulations, and uniformity are likely to diminish the adaptive selling behaviors needed to efficiently sell to customers and may, to some extent, inspire a more "canned" approach to selling.

The hierarchy culture's long-term approach and focus on rewards for meeting clearly defined goals have the potential to guide salespeople to sell effectively. However, the rigidity of its rule-driven governance procedures may also dampen the salesperson's ability to sell effectively in a "creative selling" context such as insurance sales (Dwyer, Richard, and Shepherd 1998). The countervailing emphases of the hierarchy culture on efficiency and effectiveness suggests that its influence on these constructs is indeterminate.

The adhocracy culture combines an informal governance system with an external orientation. Its external orientation is likely to provide a focus on flexibility and differentiation that may positively impact salesperson adaptiveness and thus efficiency. However, its emphasis on innovation, variety, and acquiring new resources may result in a continuous placement of

new products in the company portfolio. The recurring product knowledge requirements are likely to keep their salespeople "high on the learning curve," reducing their efficiency.

The adhocracy culture also focuses on flexibility, growth, and dynamism. Such an environment should positively influence a salesperson's effectiveness. However, its encouragement of risk-taking and experimentation could, on the other hand, stifle such effectiveness. Like the hierarchy culture, opposing arguments exist for the hierarchy culture's influence on both efficiency and effectiveness.

In summary, the uncertainty involved with the hierarchy and adhocracy cultures' influence on efficiency and effectiveness results from these two cultures' emphasis on various values and ideals that can be expected to both positively and negatively impact efficiency and effectiveness. As such, no hypotheses are offered relating hierarchy and adhocracy cultures to these performance measures.

Sales Force Control System and Salespeople Performance.

A control system has been defined as "an organization's set of procedures for monitoring, directing, evaluating, and compensating its employees" (Anderson and Oliver 1987, p. 76). Several recent studies on sales force control systems document renewed management concern for, and interest in, designing the proper motivational process through control systems (Atuahene-Gima and Li 2002; Challagalla and Shervani 1996; Cravens et al. 1993; Krafft 1999; Oliver and Anderson 1994, 1995). According to recent studies of sales force control

systems (c.f., Challagalla and Shervani 1996), the proper design of compensation and monitoring systems should positively motivate the sales force. Successful and more productive salespeople should in turn be appropriately rewarded. In addition, sales control systems' influence on the motivation of the sales force should positively impact the long-term profitability of the firm (Coughlan and Sen 1989).

The sales force control systems literature has been largely based on agency theory (e.g., Bartol 1999; Basu et al. 1985; Bergen, Dutta, and Walker 1992; Challagalla and Shervani 1996; Challagalla, Shervani, and Huber 2000; Cravens et al. 1993; Krafft 1999; Oliver and Anderson 1994, 1995; Ramaswami, Srinivasan, and Gorton 1997; Stathakopoulos 1996). Agency theory is used to determine the most efficient contract to govern a particular agency relationship between principal and agent (Eisenhardt 1985, 1989)—in a sales setting, between sales manager and salesperson, respectively. According to agency theory, a principal primarily faces two kinds of problems when entering and managing a relationship with an agent (Bergen, Dutta, and Walker 1992). The first kind refers to the precontractual problems of hiring an agent (e.g., recruiting new salespeople). The precontractual problems relate to determining whether a particular agent has the desirable characteristics expected by the principal.

The second agency problem is the postcontractual problem of managing and developing the agency relationship after the principal and agent have agreed to a contract. The postcontractual problems primarily revolve around evaluating and rewarding the agent's performance in order to motivate

the agent to behave in a manner consistent with the principal's objectives (Bergen, Dutta, and Walker 1992). This aspect of the principle-agent relationship is particularly relevant to salesperson controls systems.

Agency theory assumes that high environmental uncertainty and costs of obtaining information make it impossible for the principal to monitor the agent completely. In addition, agency theory presumes that principals and agents pursue divergent interests and goals and that these two parties frequently do not share the same information. As such, the agent may try to "shirk" on costly and arduous actions that the principal would like the agent to undertake (Bergen, Dutta, and Walker 1992; Eisenhardt 1985, 1989). To reduce the likelihood of the agent's shirking, the principal may choose between two types of contracts. First, the principal may select a behavior-based contract that monitors and rewards the agent's behaviors (e.g., call reports, field observations by a sales manager, and periodic review of the salesperson). Second, the principal may choose an outcome-based contract that evaluates and rewards the agent's realized outcomes (e.g., sales volume and profitability). As a result, control and reward systems are regarded as important tools in agency theory to align the incentives of these two parties to pursue the same outcome (Eisenhardt 1985; Krafft 1999).

In a sales setting, to reduce agency problems, a principal may choose between two contract schemes, namely, behavior-based control systems or outcome-based control systems (Atuahene-Gima and Li 2002; Challagalla and Shervani 1996; Cravens et al. 1993; Krafft 1999; Oliver and Anderson 1994, 1995; Piercy, Cravens, and Lane 2001). A behavior-based control system

monitors intermediate states in the sales process such as sales activities. It requires close salesperson supervision, supervisors' involvement with salespeople's activities, and more complex and subjective evaluation of salespersons' performance. In contrast, outcome-based control systems monitor the salesperson's final outputs (e.g., sales) and require minimal salesperson supervision, straight-forward performance measures, and commission-based compensation plans. Anderson and Oliver (1987) proposed that, using agency theory, a behavior-based contract will be more likely to be used than an outcome-based contract when measuring inputs is less expensive than measuring outcomes (Basu et al., 1985; Krafft, 1999) and when uncertainty puts the salesperson at risk (Bartol, 1999; Coughlan and Sen, 1986; Krafft, 1999).

Outcome-based control is a more "hands-off" management style where salespersons act more as independent entrepreneurs responsible for their own activities and performance. Thus, relatively little direction is provided as to how salespersons are expected to carry out their duties (Atuahene-Gima and Li 2002; Krafft 1999; Piercy, Cravens, and Lane 2001). In addition, an outcome-oriented contract primarily uses incentive compensation systems such as straight commission and bonuses (Krafft 1999). Thus, in the outcome-based system, reinforcements or rewards are tied directly to successful sales performance.

Building on Anderson and Oliver's (1987) conceptualization of control systems, Kohli, Shervani, and Challagalla (1998) theorized that sales control systems have three elements: activity supervisory orientation, capability

supervisory orientation, and outcome supervisory orientation. Thus, in this conceptualization, the behavior-based control system has two subdimensions: activity and capability supervisory orientations. Using this framework, Challagalla and Shervani (1996) hypothesized and tested both direct and indirect influences of outcome and behavior control systems on salesperson performance. However, their findings only supported the indirect influences through role conflict and role ambiguity. In another empirical study, Kohli, Shervani, and Challagalla (1998) found that the impact of sales control systems on sales performance is mediated by salesperson goal orientation.

Agency theory predicts that behavior-based control systems may create less tension and conflict between the principle and the agent, raise morale and spirit among the contracting parties, and enhance cooperation and collaboration (Eisenhardt 1985, 1989; Krafft 1999). This is especially the case when the principle is able to clearly specify the desired agent behaviors and when it is not costly to monitor the actual behaviors of the agent. Indeed, recent advances of information technology make it more feasible and cost effective to collect information and monitor sales developments (e.g., via Internet linkages) (Bartol 1999). Thus, one should expect that in a sales context, behavior-based control systems should promote timely communications and feedback; greater acceptance of company procedures; increased attention to company and product knowledge; higher levels of intrinsic motivation; greater focus on customer-oriented behaviors; and stronger buyer-seller relationships, all of which should ultimately lead to superior salesperson effectiveness and efficiency. In fact, Oliver and Anderson

(1994) found that behavior control systems are positively related to controlling selling expenses—one dimension of efficiency (Berman and Perrault 1982).

Furthermore, as supervisory systems move toward increased behavioral control, salespeople put a greater emphasis on "working smarter" (Sujan, Weitz, and Kumar 1994; Sujan 1986). According to the working smart perspective, behavior control systems may induce superior effectiveness and efficiency in that they encourage salespeople to implement strategies and "diagnose" the customer (Anderson and Oliver 1987). This may be because behavior control systems typically use salary rewards that give salespeople the luxury of being able to take the necessary time to strategize, gather information, and make adjustments necessary to satisfy customer needs. Following earlier discussion, such working smart behavior should positively influence both salesperson effectiveness and efficiency. It seems plausible, then, that salespeople working under a behavior-based control system are likely to engage in more effective, as well as efficient, sales practices. Hence, the following hypotheses are offered:

Hypothesis 8a: The behavior control systems of supervisory activity orientation and capability orientation are positively associated with salesperson effectiveness.

Hypothesis 8b: The behavior control systems of supervisory activity orientation and capability orientation are positively associated with salesperson efficiency.

The influence of outcome control systems on salesperson performance may effect salesperson efficiency differently from salesperson effectiveness. With respect to effectiveness, agency theory predicts that outcome-based control systems establish tangible and measurable objectives established

between the principle and the agent (Eisenhardt 1985, 1989) which may reduce the agency ambiguity and associated problems. Also, outcome-based control systems may be more effective when there are few specified outcomes over which the agent has little or no control (Bartol 1999; Stathakopoulos 1996). In other words, salespeople should not be rewarded or penalized for outcomes partially or wholly outside their control.

Consistent with agency theory, control theory suggests that outcome goals may provide a reference standard and the requisite feedback that keeps a person's behavior directed toward the goal (Carver and Scheier 1982). In addition, as discussed previously, goal theory suggests that specific goals trigger a search for more effective task strategies and enhance effectiveness (Locke and Latham 1990). As such, outcome control systems should be positively associated with effective performance. In a sales setting, as previously noted, Oliver and Anderson (1994) found a positive relationship between outcome controls systems and salesperson effectiveness. Jaworski, Stathakopoulos, and Krishnan (1993) also reported a significant and positive relationship between outcome control systems and salesperson end-performance. Therefore, outcome based control systems should lead to higher salesperson effectiveness. The following hypothesis reflects this discussion.

Hypothesis 9a: The outcome control system of supervisory end-result orientation is positively associated with salesperson effectiveness.

In contrast, outcome-based control systems may reduce salesperson efficiency. Salespeople working under an outcome-based control system are more likely to focus on end results with less attention placed on the inputs

required to achieve such results (Klein 1989). In addition, outcome control systems using commission rewards may influence salespeople to move more quickly from sales call to sales call, rather than build product and customer knowledge and selling skills over time (Oliver and Anderson 1995; Sujan, Weitz, and Kumar 1994). In other words, outcome-based control systems are more likely to lead salespeople to work harder, but not necessarily smarter (Anderson and Oliver 1987; Sujan, Weitz, and Kumar 1994). Thus, outcome-based control systems are not expected to result in more productive selling behaviors. These observations lead to the following hypothesis:

Hypothesis 9b: The outcome control system of supervisory end-result orientation is negatively associated with salesperson efficiency.

Salesperson Training and Salesperson Performance. Training is a vital component for both initial and ongoing development of the sales representative. A key task of sales managers is to provide salesperson training and, in particular, on-the-job training. The rapid change in the selling environment has led researchers to suggest that training has become a key element in the long-term success of the salesperson (Babakus et al. 1996; Dubinsky 1996; Erffmeryer, Russ, and Hair 1991; Honeycutt et al. 2001; Wilson, Strutton and Farris 2002). There are two relevant theories supporting the importance of organizational training programs: cognitive evaluation theory and economic utility theory, as discussed in below.

Cognitive evaluation theory suggests that training employees can enhance their competencies and that the elevated competencies should lead

to greater task interest and superior job performance (Deci and Dyan 1985; Tyagi 1985). A major focus of cognitive evaluation theory is to understand the nature, the determinants, and the consequences of intrinsic motivation. This theory predicts that one's feelings of mastery increase intrinsic motivation, while feelings of incompetence diminish intrinsic motivation. In addition, it holds that positive feedback such as subjective interpersonal feedback and objective feedback may enhance intrinsic motivation through feelings of mastery. On the other hand, negative feedback undermines one's intrinsic motivation through feelings of incompetence.

Because organizational training helps improve competence through enhanced skills and abilities, it is likely to satisfy a person's innate psychological need for competence and increase his or her intrinsic motivation, self-esteem, and organizational commitment (Challagalla and Shervani 1996; Tyagi 1985). In turn, this should enhance the willingness to work hard and smart and, ultimately, increase performance. In addition, organizational training may provide supervisory feedback that helps increase one's procedural knowledge and use of different strategies in different contexts when contacting and prospecting customers, leading to superior performance. Therefore, one should expect that salesperson training leads to enhanced salesperson performance.

Economic utility theory suggests that effective training programs should have economic and financial value, enhancing the welfare of all stakeholders of the firm (Boudreau 1983; Brogden 1946; Schmidt, Hunter, and Perlman 1982). To this end, Honeycutt et al. (2001) posit that salesperson training

enhances not only employees' individual performance but also firm financial value. These benefits of salesperson training programs depend upon retention of trained employees, the length of time the training lasts, and the difference between trained and untrained employees. In summary, one should expect that salesperson training leads to desired outcomes such as superior effectiveness and efficiency performance based upon cognitive evaluation and economic utility theories.

Empirically, training has been found to have a significant influence on performance. For example, research has suggested that training may elevate the salesperson's knowledge base and skill levels, increasing their effectiveness (Honeycutt et al. 2001; Sujan, Sujan, and Bettman 1988; Weitz 1981; Wilson, Strutton and Farris 2002) and overall job performance (Churchill et al. 1985; Walker, Churchill, and Ford 1995; Wilson, Strutton and Farris 2002). A meta-analysis conducted by Churchill et al. (1985) found that the two determinants mostly highly correlated with variation in performance were motivation and, most notably, skill level, the latter of which can be enhanced by organizational training programs.

With regard to efficiency, Weitz, Sujan, and Sujan (1986) suggested that more knowledgeable salespeople would be more productive through their ability to adapt their selling strategies to fit the sales situation. In fact, Sujan, Sujan, and Bettman (1988) found that more effective salespeople had greater knowledge of customer traits and the selling strategies matching these traits. This lead salespersons to "work smarter"—conceptually linked in earlier discussion to increased effectiveness and efficiency.

Additional empirical evidence for the relationship between salesperson's knowledge structure and higher levels of performance was reported by Szymanski and Churchill (1990). Also, a lack of training has been found to be a key determinant of salespeople failure (Honeycutt et al. 2001; Ingram, Schwepker, and Hutson 1992; Johnston, Hair, and Boles 1989; Morris, LaForge, and Allen 1994; Wilson, Strutton and Farris 2002). Finally, Chonko, Tanner, and Weeks (1993) found that firms could use sales training programs to improve the productivity and profitability of their sales forces.

In summary, theory and empirical findings suggest that an important determinant of salesperson performance may be the quantity and quality of salesperson training. Considerable empirical evidence indicates that sales training can enhance selling skills, knowledge structures, and selling techniques and behaviors and reduce selling inputs. As such, salesperson training should increase both sales effectiveness and efficiency. The above discussion provides support for the following hypotheses:

Hypothesis 10a: Salesperson training is positively associated with salesperson effectiveness.

Hypothesis 10b: Salesperson training is positively associated with salesperson efficiency.

Research Design

A self-administered mail questionnaire was selected as the survey research method in Appendix A. Questionnaires, including a cover letter (see Appendix B), were mailed to a random national sample of life insurance agents. Second and third wave mailings that included a reminder letter (see

Appendix C) to the same sample took place ten days and seventeen days, respectively, after the initial mailing. In order to test for the possible existence of non-response bias, late respondents, serving as a proxy for non-respondents were compared with earlier respondents across a number of key demographic and background variables. No differences were found between the two groups, indicating that non-response bias was not evident in this study (Armstrong and Overton 1977).

Operationalization of Variables

The following discussion describes the operationalization of variables. All measurement scales were drawn from the research literature and are composed of multiple items. Appendix A presents the scales and their items used in this study, including the working smart, working hard, learning goal orientation, performance goal orientation, organizational culture, sales force control systems, training, and salesperson performance constructs.

Working Smart and Working Hard

Working Smart. Working smart was measured with a total of 44 items developed by Sujan, Weitz, and Kumar (1994). This construct has three dimensions: (1) planning of sales behaviors and activities, (2) functional flexibility, or the ability to engage in a wide range of selling behaviors and activities, and (3) adaptive selling behavior. Engagement in planning was measured with 12 items assessing the importance placed by the salesperson on planning, energy devoted to planning, and the extent to which the

salesperson develops plans. These items are Likert-type, seven-point scales, anchored by "1" (strongly disagree) and "7" (strongly agree). The reliability of the sales planning dimension reported by Sujan, Weitz, and Kumar (1994) was .82, providing evidence of reliability (Nunnally 1978).

Functional flexibility refers to a person's perceived capacity to engage in a range of behaviors that might be required in different interpersonal situations. It is measured with 16 items reflecting one's capabilities (e.g., "warm," "aloof"). Respondents are asked to respond to the statement, "When the sales situation seems to need it, how easy is it for you to be . . . " A seven-point, Likert-type scale anchored by "not easy for me" and "very easy for me" is used to assess this dimension. Since this scale is formative, no reliability estimate is offered.

The adaptive selling scale is drawn directly from Spiro and Weitz' study (1990). It is composed of 12 items with Likert-type, seven-point scales, anchored by "1" (strongly disagree) and "7" (strongly agree). This scale is composed of 16 items and has been found to have a reliability of .88 (Spiro and Weitz 1990), indicating sufficient reliability (Nunnally 1979). This scale was also used in a study by Swenson and Herche (1994). They reported a reliability of .85 and found adaptive selling to be significantly associated with salesperson effectiveness performance. The working smart scale is presented in Appendix E.

Working Hard. Working hard was measured using four items developed by Sujan, Weitz, and Kumar (1994). The scale has three items

assessing the salesperson's persistence in job-related activities plus a report of how many hours a week on average the salesperson worked. The reliability was reported to be .68. The working hard questionnaire is presented in Appendix E.

Learning Goal Orientation and Performance Goal Orientation

Learning goal orientation was measured using six items while performance goal orientation was measured using five items. The 11 items are Likert-type, seven-point scales, anchored by "1" (strongly disagree) and "7" (strongly agree). This scale was drawn from Sujan, Weitz, and Kumar's (1994) study. The reliabilities of learning and performance orientations are .81 and .71, respectively. These measures were used again by Kohli, Shervani, and Challagalla (1998). They also found this scale to exhibit acceptable levels of reliability. The goal orientation scales are presented in Appendix F.

Self-efficacy

Self-efficacy was measured with seven items used by Sujan, Weitz, and Kumar (1994). The seven items are Likert-type, seven-point scales, anchored by "1" (strongly disagree) and "7" (strongly agree). The reliability of the self-efficacy scale was .77 in Sujan, Weitz, and Kumar's (1994) study. The self-efficacy scale is presented in Appendix G.

Organizational Culture

The Competing Values Framework was used to measure organizational culture (Cameron and Quinn 1999). A constant sum scale was used in which respondents were asked to distribute 100 points across each of six groups of four-item statements about their organization. The six areas of assessment differentiate an organization's cultures by its dominant organizational attributes, leadership and management styles, organizational bonding mechanisms, success criteria, and overall strategic emphases (Cameron and Quinn 1999; Deshpandé, Farley, and Webster 1993). The organizational culture scale is presented in Appendix H.

Deshpandé, Farley, and Webster (1993) reported reliability coefficients of .82, .66, .42, and .71 for market, adhocracy, clan, and hierarchy culture types, respectively. Moorman (1995) assessed other psychometric properties of the organizational culture scale such as unidimensionality and construct validity along with the reliability of the scale. Evidence to support unidimensionality and construct validity was found through tests of convergent and discriminant validity.

Sales Force Control Systems

The sales force control system was measured with a 14-item, seven-point scale developed by Challagalla and Shervani (1996). Four items were used to measure end-results orientation, five items were used to measure activity orientation, and five items were used to measure capability orientation. A summated score is calculated for each supervisory orientation and then

divided by the number of items for that orientation. Sufficient reliability of this scale has been reported with coefficients of .87, .89, and .90 for end-results, activity, and capability orientations, respectively (Challagalla and Shervani 1996). This scale was also used by Kohli, Shervani, and Challagalla (1998). The reliabilities were all found to be above .85, indicating evidence of internal consistency (Nunnally 1978). The controls systems scale is presented in Appendix I.

Training

Training was measured with three items assessing the amount of training, measured in days, that the respondents received in pre-contract training (training prior to starting the sales job), career training (training in the first two years of insurance sales), and advanced training (training after the first two yearsof selling). Babacus et al. (1996) used three similar items to measure organizational training. The reliability of their scale was .68. The training scale is presented in Appendix J.

Effectiveness and Efficiency Performance

To measure effectiveness performance, salespeople were asked to evaluate themselves, relative to other salespeople working for their company in similar selling situations, on achieving quantity and quality sales—related objectives. Five of the seven items are taken from the widely-used Behrman and Perreault's (1982) scale. The scale was modified and extended by Sujan, Weitz, and Kumar (1994). The seven items had a reported reliability of .71.

The salesperson effectiveness performance items are presented in Appendix K.

As in all self-rater situations, the potential for biased responses exists. However, the self-rater approach is a well-accepted methodology in sales survey research (e.g., Behrman and Perreault 1982). Additionally, Churchill et al. (1985) found that claims of upward biases in self-reported performance scores were without basis. In addition, Behrman and Perreault (1982) noted that the assurance of respondent anonymity minimized motivations for inflated responses. Sujan, Weitz, and Kumar (1994) supported this notion, suggesting that the theoretical and empirical arguments for the "appropriateness of self-evaluation in assessing the performance of . . . salespeople" are well-founded (Sujan, Weitz, and Kumar 1994, p. 42).

Efficiency was measured through data envelopment analysis using multiple inputs and outputs. The selection of outputs and inputs was based on the guidelines suggested by Churchill, Ford, Walker (1993). Each item used for measuring effectiveness served as an output. The number of sales was also one of the important measures of salesperson performance and, as such, was another separate output. Input variables included the number of prospecting calls, the number of customer contact calls, the percentage of hours worked per week for prospecting, the percentage of hours worked per week for servicing, the percentage of hours worked per week for non-selling activities, the number of customer or prospect meetings per month, and the number of hours per meeting. These items were selected based on Boles, Donthu, and Lohtia's (1995) direction.

Management Science and Statistical Methodologies

Two different data envelopment analysis models were applied to benchmark salesperson relative efficiency. In addition, in order to test the personal and organizational antecedents of salespeople efficiency, both Tobit regression and ordinary least square regression were used.

Data Envelopment Analysis Models

Salesperson efficiency measures the relationship between a salesperson's outputs and inputs. It was measured through an advanced management science methodology known as data envelopment analysis (DEA).

Two DEA models were employed in this study. The first model was the original the constant return to scale model (CCR model) Charnes, Cooper, and Rhodes 1978). The second model wass the variable return to scale model (BCC model) (Banker, Charnes, and Cooper 1984). In order to ensure the reliability of the salesperson efficiency results, both the CCR and BCC models were used in the efficiency analysis.

Model I: CCR (Constant Return to Scale) can be formulated as follows:

$$\min \Theta$$

$$\sum_{j=1}^{n} \lambda_j O_{rj} \geq O_{rj0}$$

$$\sum_{j=1}^{n} \lambda_j I_{ij} \leq \Theta I_{ij0} \qquad (1)$$

$\lambda_j \geq 0$, r = 1 to s, i = 1 to s, and Θ is unrestricted

where

Θ is an intensity value or multiplier of the observed input vector I_{i0}

λ_j are the dual variables associated with the constraints representing DMU_j j = 1 to n, in the primary equation

O_{rj} is the r^{th} output variable value of the j^{th} salesperson

I_{ij} is the i^{th} input variable value of the j^{th} salesperson

O_{rj0} is the observed r^{th} output value of the salesperson being evaluated, and

I_{ij0} is the observed i^{th} input value of the salesperson being evaluated.

Model II: BCC (Variable Return to Scale) was the same linear programming problem with a constraint added to the linear program added in model (1). This constraint takes on the following expression:

$$\sum_{j=1}^{n} \lambda_j = 1 \qquad (2)$$

According to the above constraint, the reference set is changed from the cone in the case of the CCR model to the convex hull in the case of the BCC model. One implication of this change is that the tested unit is compared against a limited number of combinations. As such, the chance to attain a higher efficiency score in the BCC model is greater than that in the case of the CCR model.

With the above formulations in mind, the right hand side values were replaced by each tested unit's values. As a result, there is one linear

programming optimization problem for each unit. The value of Θ^* is part of the optimal solution to the linear programming formulation in equations (1) and (2). It provides a real-valued numerical measure of the radial technical efficiency of the DMU being evaluated. The quantity $(1- \Theta^*)$ represents the proportional reduction in all three inputs for the DMU_o being evaluated if efficiency is to be achieved without changing the level of outputs. An optimal value of $\Theta^* = 1$ means that the DMU_o being evaluated is efficient, whereas $0 < \Theta^* < 1$ would imply that DMU_o is inefficient.

Tobit Regression

Since efficiency scores produced by DEA calculations are greater than zero and less than, or equal to, one, the distribution of the efficiency index is not normally distributed. Thus, traditional ordinal least square regression may bias the estimates (Chang 1998; Zheng, Liu, and Bigsten 1998). Tobit regression was used to overcome this bias. The Tobit model is appropriate when the dependent variable is not normally distributed and the values have an upper bound and/or lower bound (Maddala 1986). To strengthen the support for the analysis results, this study applied both Tobit regression and ordinary least square regression to test the antecedent influences of the proposed personal and organizational variables on salesperson efficiency.

CHAPTER 4

RESULTS

This chapter presents the results of this study. It consists of five sections. The first section reports the data collection process as well as the nonresponse error. The second section describes the demographic and background characteristics of the sample. In the third section, descriptive statistics for each of the study variables are presented. The fourth section offers the results of the data envelopment analysis. Finally, the fifth section examines the results of the hierarchical linear regression and Tobit regression analyses.

Data Collection

The sampling frame for the current study was composed of 30,000 life insurance professionals. These life insurance professionals were located in the United States, Puerto Rico, and Guam and subscribed to Life Insurance Selling magazine. From this sampling frame, one thousand subscribers were randomly selected. These life insurance professionals were sent the study questionnaire three times. The first mailing included the questionnaire (see Appendix A), a postage-paid reply envelope, and a detailed cover letter describing the purpose of the study (see Appendix B). Approximately ten days

later, a follow-up, reminder letter (see Appendix C) with the questionnaire and a reply envelope was sent. Seven days after the second mailing, a third wave mailing was sent that included the cover letter, questionnaire, and reply envelope.

From the three mailings, a total of 230 responses were received. Of these, 155 questionnaires were completed by life insurance sales professionals, 75 respondents were not eligible to participate in the study, and 770 individuals in the sample did not respond. Of the 155 completed questionnaires, 133 were found to be usable for purposes of the study. The response rate was calculated in accordance with the formula recommended by Churchill (1999). The resulting response rate was 23.00% as reported in Table 2.

TABLE 2. Response Rate Calculations

CQ = Completed questionnaires

NC = Not completed or refused
IN = Ineligible

$$\frac{CQ}{CQ + [CQ/(CQ+IN)]\ [NC]} = \text{Response Rate}$$

Completed questionnaires	155
Not completed or refused	770
Ineligible	75

$$\frac{155}{155 + [155 / (155+ 75)]\ [770]} = 23.00\%$$

Nonresponse Error

Nonresponse error refers to "a failure to obtain information from some elements of the population that were selected and designated for the sample" (Churchill 1999, p. 580). The relatively high response rate of 23.00% achieved in this study suggests that the nonresponse error that could potentially bias the results is not a serious issue in the present study. In addition, Armstrong and Overton (1977) argue that there is no reason to extrapolate in order to determine nonresponse bias unless there are a priori expectations that bias exists. No such a priori expectations existed in this study.

Following the process suggested by Armstrong and Overton (1977), a simple means-comparison test was conducted between the means of each study variable for the first quartile of responses and the means of each study variable for the last quartile of responses. A t-test analysis indicated no significant difference between the responses of the two groups (see Table 3). As such, nonresponse bias was not considered to be evident in the present study.

TABLE 3. Early Versus Late Respondents

Variables	Quartile	Mean	Std. Deviation	t-value	p-value
Working Smart	1	5.93	0.51	0.20	0.66
	4	5.84	1.03		
Working Hard	1	4.12	1.19	3.69	0.06
	4	4.65	1.15		
Learning Goal Orientation	1	5.49	0.74	0.41	0.52
	4	5.37	0.89		
Performance Goal Orientation	1	5.00	0.48	0.26	0.61
	4	4.94	0.57		
Self-Efficacy	1	44.31	15.47	0.41	0.52
	4	42.26	11.25		
Organizational Culture - Clan	1	30.72	17.66	0.02	0.90
	4	31.20	14.23		
Organizational Culture - Adhocracy	1	21.78	10.38	0.15	0.70
	4	20.79	10.41		
Organizational Culture - Hierarchy	1	18.37	11.60	1.90	0.17
	4	23.03	15.71		
Organizational Culture - Market	1	30.04	21.65	1.13	0.29
	4	24.75	19.40		
Control Systems - End Results	1	4.68	1.80	0.30	0.59
	4	4.93	1.45		
Control Systems - Activity	1	4.28	1.62	0.43	0.52
	4	4.56	1.55		
Control Systems - Capability	1	3.97	1.50	2.19	0.14
	4	4.50	1.07		
Training - Pretraining	1	23.70	30.16	0.65	0.42
	4	18.06	25.14		
Training - Career	1	36.24	31.01	1.51	0.22
	4	27.15	27.66		
Training - Advanced	1	31.03	37.68	1.48	0.23
	4	20.35	30.21		
Effectiveness Performance	1	4.97	1.26	0.74	0.39
	4	4.73	1.06		

Characteristics of the Sample

Selected demographic characteristics of the participants in this study and their work activities are reported in Table 4 and Table 5. The average age of the respondents was slightly over 46 years with a standard deviation of 10.41 years. The mean educational level of the respondents reflected some exposure to post secondary education (average = 3.73 where 3.0 indicates some college and 4.0 represents a college graduate). Only 8.3% of the respondents had not graduated from high school and 17.4% had one or more advanced degrees. The respondents perceived a high level of competition in the insurance industry (average response of 5.40 on a 1-to-7 scale) and 61.75% reported that the majority of their business came from new customers. Commissions represented 82.95% of the income of the respondents and the average tenure in sales was 15.0 years.

In addition, a large percentage of respondents were male (84.1%). In the sample, 87.1% of the respondents were married. The respondents also reported various work characteristics. Over half of the study participants worked for an independent firm (56.9%). Respondents who work for independent firms are able to contract their services with several insurance companies at the same time. The remainder worked as captive agents, that is, for one insurance company (43.1%).

TABLE 4. Characteristics of the Study Sample

	Age	Education	Level of Competition	Percent of Business from New Customers	Percent of Income that is Commission	Tenure in Sales
N	131	132	133	130	132	133
Mean	46.	3.73	5.40	61.75	82.95	15.0
Median	46	4	6	67.5	100	12
Mode	45	4	6	80	100	10
Standard Deviation	10. 41	0.85	1.55	24.98	29.26	10.49
Minimum	24	2	1	0	0	2
Maximum	77	5	7	100	100	45

TABLE 5. Characteristics of the Study Sample

Variable	Category	Frequency	Valid Percentage
Gender	Male	115	84.1
	Female	21	15.9
Marital Status	Married	115	87.1
	Single	17	12.9
Job Title	Sales Rep	101	76.5
	Sales Manager	5	4.5
	Other	25	19
Type of Firm	Captive	56	43.1
	Independent	74	56.9

Descriptive Statistics of the Study Variables

Descriptive statistics of the study variables are presented in Table 6. Scores for working smart and working hard ranged from "1" (strongly disagree) to "7" (strongly agree). A composite score for working smart was calculated by averaging the scores from the scale's 44 items. Similarly, the score for working

hard was measured by the number of hours worked per week on the part of salespeople. The mean for working smart was 4.95 with a standard deviation of .54, while the mean for working hard was 44.79 hours with a standard deviation of 13.42 hours.

TABLE 6. Descriptive Statistics of the Study Variables

	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
Working Smart	4.95	4.96	4.41	0.54	-0.09	-0.60
Working Hard	44.79	45.00	50.00	13.42	-0.56	0.13
Learning Goal Orientation	5.87	6.13	6.25	0.92	-2.62	9.34
Performance Goal Orientation	4.55	4.67	5.00	1.19	-0.54	-0.20
Self-Efficacy	5.53	5.60	6.00	0.86	-1.01	1.57
Organizational Culture - Clan	30.78	30.00	20.83	15.88	0.30	-0.17
Organizational Culture - Adhocracy	20.82	20.83	21.67	9.99	0.41	0.55
Organizational Culture - Hierarchy	19.84	18.00	18.00	11.23	2.09	7.61
Organizational Culture - Market	28.71	25.50	25.00	18.65	1.04	1.14
Control Systems - End Results	4.97	5.25	7.00	1.62	-0.60	-0.40
Control Systems - Activity	4.70	5.00	6.00	1.65	-0.45	-0.72
Control Systems - Capability	4.33	4.60	4.60	1.48	-0.25	-0.64
Training - Pretraining	22.98	10.00	0.00	28.82	1.72	1.82
Training - Career	38.25	27.50	100.00	33.27	0.72	-0.81
Training - Advanced	28.36	12.00	0.00	34.41	1.16	-0.03
Effectiveness Performance	4.98	5.17	5.67	1.11	-0.65	0.33

In addition, scores for learning goal orientation and performance goal orientation ranged from "1" (strongly disagree) to "7" (strongly agree). A composite score for learning goal orientation was calculated by averaging the scores from the scale's eight items. The score for performance goal orientation was obtained by averaging the six items from that scale. The mean for learning goal orientation was 5.87 with a standard deviation of .92, while the mean for performance goal orientation was 4.55 with a standard deviation of 1.19. Thus, the participants in this study tended to have a higher learning goal orientation than performance goal orientation.

Summated ratings scales were also used to assess self-efficacy ("1" = strongly disagree to "7" = strongly agree). The self-efficacy mean was 5.53 with a standard deviation of .86. This suggests that respondents had a relatively high level of confidence in their sales ability. Some items were deleted from the original self-efficacy scale after a factor analysis was completed for that scale. The results of the factor analysis are reported in a later section.

Organizational culture was assessed using a constant-sum method (Deshpandé, Farley, and Webster 1993). Respondents were asked to allocate 100 points among the four organizational culture types - clan, adhocracy, hierarchy, and market. The organizational culture variables of interest in this study were clan and market. The mean for a clan culture was 30.78, with a standard deviation of 15.88. The mean for the market culture was 28.71, with a standard deviation of 18.65.

The three types of control systems were measured on a summated ratings scale where respondents reported their level of agreement with statements about their supervisors ("1" = strongly disagree and "7" = strongly agree). The summated scale means for control systems-end results, control systems-activity, and control systems-capability were 4.97, 4.70, and 4.33, respectively. The standard deviation for control systems-end results was 1.62, while standard deviations for control systems-activity and control systems-capability were 1.65 and 1.48, respectively.

Training was measured with three different items. Respondents were asked how many days they received of pre-training, career training, and advanced training. The mean scores for pre-training, career training, and advanced training were 23.0, 38.3, and 28.4, respectively.

Summated ratings scales were used to assess salesperson effectiveness performance ("1" = strongly disagree to "7" = strongly agree). The effectiveness performance mean was 4.98 with a standard deviation of 1.11. This suggests that respondents reported a somewhat high level of salesperson effectiveness performance.

None of the scales exhibited unacceptable levels of skewness and kurtosis with the exception of learning goal orientation, hierarchy organizational culture type and pre-training. For the learning goal orientation, over one-half of the respondents scored themselves at six or greater indicating a high level of learning goal orientation. These skewed results may be due to the generally challenging nature of the life insurance industry and the

considerable learning required to compete within it. In addition, the kurtosis of this distribution is also severely peaked due to the large number of high scores. For the hierarchy organizational culture type, the high degree of skewness and kurtosis of the distribution results may be due to the constant sum nature of the organizational culture scale (Deshpandé, Farley, and Webster 1993). For the training variables, only the pre-training skewness is severe. This may be due to the fact that this item is new in the literature and needs further development.

This lack of normality of these three variables has the potential to affect the level of significance and/or the power of analyses. However, Neter et al. (1996) noted that the F test used to measure the change in R^2 is ordinarily robust even when the distribution of the data is not normal.

Measurement of Constructs

Factor Analyses

The psychometric properties of the scales used in this study have been found in past studies to be acceptable as documented in Chapter 3. However, an initial examination of the reliability statistics of the performance goal orientation, self-efficacy, and working smart planning scales warranted further investigation of these scales.

An exploratory factor analysis of performance goal orientation generated two factors, thus violating the theorized unidimensionality of the construct. Further examination of the factor analysis resulted in removing item

#8 from the original scale in order to achieve unidimensionality. The results of the factor analysis after the deletion of item #8 are shown in Table 7. As indicated, all items load on one factor, providing evidence of unidimensionality of the scale.

TABLE 7. Factor Analysis of Performance Goal Orientation Scale After Item Deletions

	Factor 1
GO1L1	0.76
GO2L2	0.85
GO3L3	0.77
GO4L4	0.82
GO5L5	0.86
GO6L6	0.51
GO7L7	0.67
GO9L9	0.64

Extraction Method: Principle component.
a. 1 factors extracted.

A factor analysis of self-efficacy produced two factors. This violated the theorized unidimensionality of the construct. Further examination of the factor analysis resulted in removing items #2 and #4 from the original scale in order to achieve unidimensionality. The results of the factor analysis after the deletion of items #2 and #4 are shown in Table 8. As indicated, all items load on one factor, providing evidence of unidimensionality of the scale.

TABLE 8. Factor Analysis of Self-Efficacy Scale After Item Deletions

	Factor 1
SE1#1	0.81
SE5#3	0.65
SE6#5	0.58
SE9#6	0.77
SE10#7	0.74

Extraction Method: Principle component.
a. 1 factors extracted.

A factor analysis of working smart planning produced two factors. This violated the theorized unidimensionality of the construct. Further examination of the factor analysis resulted in removing items #6, #8, and #9 from the original scale in order to achieve unidimensionality. The results of the factor analysis after the deletion of these items are shown in Table 9. As indicated, all items load on one factor, providing evidence of unidimensionality of the scale.

TABLE 9. Factor Analysis of Working Smart Planning Scale After Item Deletions

	Factor 1
WSPLAN1R	0.44
WSPLAN2	0.58
WSPLAN3	0.60
WSPLAN4	0.53
WSPLAN5R	0.72
WSPLAN7	0.66
WSPLA10R	0.72
WSPLA11R	0.63
WSPLA12R	0.71

Extraction Method: Principle component.
a. 1 factors extracted.

Reliability

The reliability of each of the scales used in this study from past empirical research was reported in Chapter 3. Since reliability is a necessary condition for scale validity, each scale's internal consistency was assessed in this study using coefficient alpha. The results of these scores are reported in Table 10. To be considered reliable, coefficient alpha scores should be .70 or higher according to Nunnally (1978). The internal consistency scores for the variables included in this study ranged from .74 to .94, indicating sufficient evidence of reliability. Self-Efficacy had the lowest coefficient alpha with a score of .74. The original working hard scale consisted of three items assessing the salesperson's persistence in job-related activities plus a report of how many hours per week on average the salesperson worked (Sujan, Weitz, and Kumar 1994). Since the .53 coefficient alpha for the three items was too low to be acceptable, this study only used the averaged number of hours per week the salesperson worked as a measure of working hard. It should be noted that the reliability was reported to be only .68 even in Sujan, Weitz, and Kumar's (1994) initial study. The low scores found in this and the current studies are, at least in part, likely a function of the low number of items (three) in this scale.

TABLE 10. Scale Reliability

Variable	Coefficient Alpha
Working Smart – Adapts	0.87
Working Smart – Planning	0.79
Working Hard	–
Learning Goal Orientation	0.88
Performance Goal Orientation	0.84
Self – Efficacy	0.74
Organizational Culture – Clan	0.86
Organizational Culture – Market	0.91
Control Systems – End-Results Orientation	0.90
Control Systems – Activity Orientation	0.94
Control Systems – Capability Orientation	0.91
Effectiveness Performance	0.90

Correlations Among Study Variables

The correlations among variables in this study are provided in Table 11. The correlations among key variables are discussed next in terms of their nomological validity.

There was a significant, positive correlation between working smart and salesperson effectiveness performance (.38). This relationship supported the theoretical nomological network because the two variables have been reported to have a positive relationship in previous studies (e.g., Sujan, Weitz, and Kumar 1994). In addition, working hard was positively correlated with salesperson effectiveness performance (.35), supported by earlier theory and empirical results (e.g., Brown and Peterson 1994; Sujan, Weitz, and Kumar 1994).

TABLE 11. Correlations Between Variables

	WS	WH	GOLN	GOPF	SE	OCCLA	OCMKT	CSEND	CSACT	CSCAP	TRAPRE	TRACUR	TRAADV	PERF
WS	1.00													
WH	0.13	1.00												
GOL	0.36**	0.27**	1.00											
GOPF	0.29*	0.09	0.43**	1.00										
SE	0.44**	0.27**	0.46**	0.14	1.00									
OCCLA	-0.05	-0.11	0.11	-0.04	-0.08	1.00								
OCMKT	0.02	0.04	-0.13	0.10	0.04	-0.76	1.00							
CSEND	0.25**	0.21**	0.16	0.34**	0.05	-0.07	0.22**	1.00						
CSACT	0.31**	0.10	0.18	0.39**	0.12	0.05	0.10	0.74**	1.00					
CSCAP	0.32**	0.11	0.15	0.36**	0.13	0.19*	-0.11	0.60**	0.77**	1.00				
TRAPRE	0.12	-0.06	-0.04	-0.24**	0.04	-0.01	-0.01	-0.15	-0.13	-0.14	1.00			
TRACUR	0.24**	0.10	-0.09	-0.01	0.21**	-0.16	0.07	0.21**	0.22**	0.18	0.42**	1.00		
TRAADV	0.20**	0.26**	0.03	-0.17	0.27**	-0.08	-0.02	-0.04	-0.10	-0.08	0.35**	0.39**	1.00	
PERF	0.38**	0.35**	0.26**	0.03	0.52**	-0.05	-0.06	0.14	0.15	0.20*	-0.01	0.19*	0.29**	1.00

WS = Working Smart
WH = Working Hard
GOL = Learning Goal Orientation
GOPF = Performance Goal Orientation
SE = Self-Efficacy
OCCLA = Organizational Culture – Clan
OCMKT= Organizational Culture – Market
CSEND = Control Systems – End Results
CSACT = Control Systems – Activity
CSCAP = Control Systems – Capability
TRAPRE = Training Pre-Contract
TRACUR = Training Career
TEAADV = Training Advanced
PERF = Effectiveness Performance

** $p < .01$
* $p < .05$

A learning goal orientation was positively associated with salesperson effectiveness performance (.26) and a performance goal orientation (.43). This positive relationship is supported by previous empirical research (Kohli, Shervani, and Challagalla 1998).

Although a clan culture type was negatively associated with salesperson effectiveness performance, the correlation was not significant at the .05 level of significance. Similarly, a market culture type was not significantly associated with salesperson effectiveness performance. This relationship does not support the theoretical nomological network (Cameron and Quinn 1999; Deshpandé, Farley, and Webster 1993).

The behavior-based control system of supervisory capability orientation was positively associated with salesperson effectiveness performance, the outcome-based control system of supervisory end results orientation, and the behavior-based control system of supervisory activity orientation. These positive relationships are supported by previous empirical research (Kohli, Shervani, and Challagalla 1998; Oliver and Anderson 1994). In addition, the outcome-based control system of supervisory end results orientation was positively associated with the behavior-based control system of supervisory activity orientation. Again, this positive relationship is supported by previous empirical research (Kohli, Shervani, and Challagalla 1998).

Two of the three items—career and advanced training—measuring aspects of salesperson training were positively associated with effectiveness performance. This positive relationship is supported by previous theory and

empirical research (Babakus et al. 1996; Churchill et al. 1985; Dubinsky 1996). In addition, all three training items were positively correlated with each other.

Data Envelopment Analysis Results

Salesperson efficiency was measured using an advanced management science methodology known as data envelopment analysis (DEA). Two DEA models were employed in this study. The first model is the original CCR model, also known as the constant return to scale model (Charnes, Cooper, and Rhodes 1978). The second model is the BCC model, also known as the variable return to scale model (Banker, Charnes, and Cooper 1984). In order to ensure the reliability of the salesperson efficiency results, both the CCR and BCC models were used in the efficiency analysis.

Before running the DEA models, it was found that the seven inputs and seven outputs used in DEA analysis were significantly correlated as discussed in Chapter 3. In addition, seven regression analyses were completed with each of the seven outputs acting as dependent variables and all seven inputs serving as independent variables. Regression analyses results also showed that each output was significantly associated with at least two of the seven inputs. These results supported the selection of inputs and outputs. The summary statistics for the input and output variables are reported in Table 12.

TABLE 12. DEA Input and Output Variables

Variables	Mean	Median	Mode	Std. Deviation
Inputs				
# Customer Contacts	5.01	5	5	1.22
# Prospect Contacts	4.56	5	5	1.44
# Meetings per Month	27.83	24	40	19.38
# Minutes per Meeting	66.98	60	60	27.57
% Hours for Prospecting	40.38	40	30	20.63
% Hours for Servicing	31.48	30	20	16.89
% Hours for Non-selling	27.55	22.5	20	16.7
Outputs				
Commission	5.04	5	5	1.32
Exceed Target	4.88	5	5	1.35
New Customer Sales	4.92	5	5	1.43
Current Customer Sales	4.89	5	6	1.4
Sales of New Products	4.8	5	6	1.39
Global Performance	5.35	6	6	1.34
# Sales per Month	13.82	10	10	15.33

The DEA analysis was run using Ideas software. The mean of the CCR DEA model (D1CCR) efficiency score was .79 with a standard deviation of .13. The mean score and standard deviation of BCC model (D1BCC) were .88 and .14, respectively, as reported in Table 13.

TABLE 13. DEA Efficiency Scores

	Mean	Std. Deviation	Spearman Non-Parametric Correlations			
			D1CCR	D1BCC	D2CCR	D2BCC
D1CCR	0.79	0.13	1			
D1BCC	0.88	0.14	0.71**	1		
D2CCR	0.72	0.13	0.69**	0.44**	1	
D2BCC	0.83	0.15	0.58**	0.84**	0.61**	1

In addition to the seven inputs and seven outputs for DEA models, a different combination of inputs and outputs was also used in order to test the robustness of the DEA results (Charnes et al. 1996). This combination included the following five inputs: the number of customer contact calls, the percentage of hours worked per week prospecting, the percentage of hours worked per week servicing, the percentage of hours worked per week for non-selling activities, and the number of customer or prospect meetings per month. The five outputs were sales commissions earned, generating high levels of new-customer sales, generating high levels current-customer sales (additional sales), quickly generating sales of new company products, and overall performance compared to the typical agent in the firm. Both CCR and BCC models were run using these inputs and outputs (D2CCR and D2BCC as reported in Table 13). A Spearman non-parametric correlation analysis showed that all four DEA efficiency scores were significantly correlated. This supported the robustness of the DEA results in this study. Since all efficiency scores were correlated and robust, the BCC model efficiency score (with seven inputs and seven outputs) (D1BCC) was chosen as the dependent variable in the ensuing Tobit regression analyses. The bivariate Spearman correlations and summary statistics for the four efficiency results are reported in Table 13.

Tests of Hypotheses

Hierarchical and moderated regression analyses as well as Tobit regression analyses were employed to test the hypotheses proposed in Chapter 3. The results of these analyses are discussed below.

Before the results of the hypothesis tests are discussed, it should be noted as to how the variables were entered into the regression equation. First, certain control or concomitant variables were entered to account for variation in the dependent variable that is theoretically unrelated to the independent variables (Neter et al. 1996). In the test of antecedent influences on salesperson effectiveness performance, six control variables were used in each regression analysis. These variables were: (1) the extent to which salespeople rate their performance on product knowledge and understanding (p5prknow) ("1" = far below average and "7" = far above average); (2) the respondents' job title/description (b2title) ("1" = salesperson, "2" = sales manager, and "3" = others); (3) the extent to which the salesperson was compensated on override (as a percent of overall compensation) (b9over); (4) salesperson tenure in the selling profession (measured in years) (b10xall); (5) formal education completed ("1" = less than high school and "7" = advanced college degree) (b16edu); and (6) the average annual income over the last two years ("1" = < $30k and "8" = over 80k) (b18incom).

In the test of antecedent influences on salesperson efficiency performance, five control variables were used in each regression analysis. These variables were: (1) whether the salesperson is a captive agent or not

("1" = yes and "2" = no) (b2captv); (2) the extent to which the salesperson's life insurance business is new business (as a percent of overall business) (b5newbiz); (3) the number of salesperson closing presentations conducted (measured in number of closings per month) (b7closes); (4) formal education completed ("1" = less than high school and "7" = advanced college degree) (b16edu); and (5) the average annual income over the last two years ("1" = <$30k and "8" = over 80k) (b18incom).

For the hypothesized main effects (H1, H2, H3, H4, H6, H7, H8, H9 and H10), hierarchical regression was employed. Control variables were entered in the first model. The predictor variable was then entered in the second model to assess the hypothesized main effect.

For moderated regression models (H5a and H5b), the procedure suggested by Sharma, Durand, and Gur-Arie (1981) was employed. That is, the control variables were entered first, followed by the moderator variables. The third model added the main effect/predictor variable to the previously entered variables. Finally, in the fourth model, the interaction term was entered to test the hypothesized moderator effect.

As each variable or set of variables is entered into the model, the change in R^2 of the model along with the significance of that change is assessed in order to test the variable(s) influence. If the interaction term results in a significant R^2 change, a moderation effect is presumed to exist (Sharma, Durand, and Gur-Arie 1981).

Hypothesis Evaluations

Hierarchical linear regression and moderated regression analysis, as well as Tobit regression, were applied to assess the relationship between the variables. Discussed next are the results of the hypothesis testing.

Hypothesis 1a. Working smart is positively associated with salesperson effectiveness. (Supported)

The results reported in Table 14 support the positive relationship between working smart (WSSUM) and salesperson effectiveness performance (PERFSUM) ($\beta = .210$, $p = .003$).

TABLE 14. Hypothesis 1a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.041	0.579		3.525	0.001
	P5PRKNOW	0.487	0.069	0.486	7.020	0.000
	B2TITLE	-0.048	0.122	-0.033	-0.391	0.696
	B9OVER	0.010	0.004	0.215	2.488	0.014
	B10XALL	0.005	0.008	0.049	0.694	0.489
	B16EDU	-0.190	0.095	-0.142	-1.990	0.049
	B18INCOM	0.147	0.033	0.330	4.409	0.000
2	(Constant)	0.411	0.781		0.526	0.600
	P5PRKNOW	0.422	0.071	0.422	5.983	0.000
	B2TITLE	-0.021	0.118	-0.015	-0.179	0.859
	B9OVER	0.009	0.004	0.179	2.122	0.036
	B10XALL	0.001	0.007	0.014	0.200	0.842
	B16EDU	-0.228	0.093	-0.171	-2.448	0.016
	B18INCOM	0.148	0.032	0.333	4.583	0.000
	WSSUM	0.439	0.146	0.210	3.001	0.003

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .492 (.462)
c. Full Model F Value: 16.718
d. Significance of F change: Model 1 = .000
Model 2 = .003

Hypothesis 1b. Working smart is positively associated with salesperson efficiency. (Supported)

Tobit regression results reported in Table 15 support the positive relationship between working smart (WSSUM) and salesperson efficiency performance (D1BCC) (β = .057, p = .010).

TABLE 15. Hypothesis 1b

Dependent variable: D1BCC

Number of observations = 114 Schwarz B.I.C. = -59.8797
Number of positive obs. = 114 Log likelihood = 76.4564
Fraction of positive obs. = 1.00000

Parameter	Estimate	Standard Error	t-statistic	P-value
C	.456717	.127092	3.59358	[.000]
WSSUM	.057092	.022265	2.56418	[.010]
B2CAPTV	.049635	.023878	2.07871	[.038]
B16EDU	- .014876	.013949	-1.06645	[.286]
B18INCOM	.514164E-02	487900E-02	1.05383	[.292]
B5NEWBIZ	.149257E-02	.485644E-03	3.07339	[.002]
B7CLOSES	- .438924E-03	.106363E-02	-.412666	[.680]
SIGMA	.123736	.819459E-02	15.0997	[.000]

Hypothesis 2a. Working hard is positively associated with salesperson effectiveness. (Supported)

The results reported in Table 16 support the positive relationship between working hard (B11HOURS) and salesperson effectiveness performance (PERFSUM) (β = .210, p = .002).

TABLE 16. Hypothesis 2a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	1.981	0.573		3.455	0.001
	P5PRKNOW	0.499	0.069	0.501	7.216	0.000
	B2TITLE	-0.066	0.118	-0.047	-0.562	0.575
	B9OVER	0.011	0.004	0.225	2.642	0.009
	B10XALL	0.005	0.007	0.043	0.608	0.545
	B16EDU	-0.176	0.094	-0.135	-1.882	0.062
	B18INCOM	0.143	0.033	0.324	4.318	0.000
2	(Constant)	1.253	0.600		2.087	0.039
	P5PRKNOW	0.483	0.067	0.486	7.218	0.000
	B2TITLE	-0.049	0.114	-0.035	-0.431	0.667
	B9OVER	0.009	0.004	0.182	2.185	0.031
	B10XALL	0.006	0.007	0.054	0.801	0.424
	B16EDU	-0.151	0.091	-0.116	-1.665	0.099
	B18INCOM	0.128	0.032	0.290	3.959	0.000
	B11HOURS	0.017	0.006	0.210	3.140	0.002

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .499 (.470)
c. Full Model F Value: 17.219
d. Significance of F change: Model 1 = .000
Model 2 = .002

Hypothesis 2b. Working hard is negatively associated with salesperson efficiency. (Not Supported)

The Tobit regression results reported in Table 17 do not support the proposed negative relationship between working hard (B11HOURS) and salesperson efficiency performance (D1BCC). The p-value is .560, although the sign is negative as hypothesized.

TABLE 17. Hypothesis 2b

Dependent variable: D1BCC
Number of observations = 113 Schwarz B.I.C. = -56.7572
Number of positive obs. = 113 Log likelihood = 73.3031
Fraction of positive obs. = 1.00000

Parameter	Estimate	Standard Error	t-statistic	P-value
C	.735719	.094149	7.81442	[.000]
B11HOURS	-.549785E-03	.943021E-03	-.583004	[.560]
B2CAPTV	.055139	.024611	2.24046	[.025]
B16EDU	-.013885	.014356	-.967200	[.333]
B18INCOM	.685398E-02	.508458E-02	1.34799	[.178]
B5NEWBIZ	.140744E-02	.505941E-03	2.78184	[.005]
B7CLOSES	.279100E-03	.107818E-02	.258861	[.796]
SIGMA	.126484	.841360E-02	15.0333	[.000]

Hypothesis 3a. Learning goal orientation is positively associated with salesperson effectiveness. (Supported)

The results reported in Table 18 support the positive relationship between learning goal orientation (GOLNSUM) and salesperson effectiveness performance (PERFSUM) (β = .199, p = .004).

Hypothesis 3b. Performance goal orientation is positively associated with salesperson effectiveness. (Not Supported)

The results of the hierarchical linear regression reported in Table 19 indicate that performance goal orientation (GOPFSUM) does not have an impact on salesperson effectiveness (PERFSUM) (β = .066, p = .326).

TABLE 18. Hypothesis 3a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.030	0.576		3.526	0.001
	P5PRKNOW	0.486	0.069	0.488	7.041	0.000
	B2TITLE	-0.056	0.118	-0.039	-0.475	0.636
	B9OVER	0.011	0.004	0.219	2.565	0.012
	B10XALL	0.005	0.007	0.050	0.714	0.477
	B16EDU	-0.186	0.094	-0.141	-1.973	0.051
	B18INCOM	0.148	0.033	0.336	4.462	0.000
2	(Constant)	1.040	0.650		1.599	0.112
	P5PRKNOW	0.445	0.068	0.447	6.505	0.000
	B2TITLE	-0.082	0.115	-0.058	-0.717	0.475
	B9OVER	0.011	0.004	0.226	2.728	0.007
	B10XALL	0.006	0.007	0.057	0.832	0.407
	B16EDU	-0.230	0.092	-0.175	-2.489	0.014
	B18INCOM	0.151	0.032	0.342	4.690	0.000
	GOLNSUM	0.239	0.080	0.199	2.968	0.004

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .490 (.461)
c. Full Model F Value: 16.765
d. Significance of F change: Model 1 = .000
Model 2 = .004

TABLE 19. Hypothesis 3b

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.030	0.576		3.526	0.001
	P5PRKNOW	0.486	0.069	0.488	7.041	0.000
	B2TITLE	-0.056	0.118	-0.039	-0.475	0.636
	B9OVER	0.011	0.004	0.219	2.565	0.012
	B10XALL	0.005	0.007	0.050	0.714	0.477
	B16EDU	-0.186	0.094	-0.141	-1.973	0.051
	B18INCOM	0.148	0.033	0.336	4.462	0.000
2	(Constant)	1.743	0.645		2.700	0.008
	P5PRKNOW	0.487	0.069	0.489	7.047	0.000
	B2TITLE	-0.052	0.118	-0.037	-0.441	0.660
	B9OVER	0.010	0.004	0.216	2.526	0.013
	B10XALL	0.005	0.007	0.052	0.733	0.465
	B16EDU	-0.191	0.094	-0.145	-2.026	0.045
	B18INCOM	0.151	0.033	0.342	4.533	0.000
	GOPFSUM	0.062	0.063	0.066	0.987	0.326

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .458 (.427)
c. Full Model F Value: 14.717
d. Significance of F change: Model 1 = .000 Model 2 = .326

Hypothesis 4a. Learning goal orientation is positively associated with salesperson efficiency. (Supported)

The Tobit regression results reported in Table 20 support the positive relationship between learning goal orientation (GOLNSUM) and salesperson efficiency performance (D1BCC) (β = .047, p = .000). This relationship is significant at the .000 level of significant, it should be noted.

TABLE 20. Hypothesis 4a

Dependent variable: D1BCC

Number of observations = 114 Schwarz B.I.C. = -62.8892
Number of positive obs. = 114 Log likelihood = 79.4659
Fraction of positive obs. = 1.00000

Parameter	Estimate	Standard Error	t-statistic	P-value
C	.478895	.099655	4.80551	[.000]
GOLNSUM	.047041	.012991	3.62109	[.000]
B2CAPTV	.044776	.023325	1.91964	[.055]
B16EDU	-.020017	.013726	-1.45841	[.145]
B18INCOM	.735016E-02	.477819E-02	1.53827	[.124]
B5NEWBIZ	.154653E-02	.473486E-03	3.26626	[.001]
B7CLOSES	-.509222E-03	.102545E-02	-.496586	[.619]
SIGMA	.120512	.798109E-02	15.0997	[.000]

Hypothesis 4b. Performance goal orientation is negatively associated with salesperson efficiency. (Not supported)

Tobit regression results reported in Table 21 do not support the negative relationship between performance goal orientation (GOPFSUM) and salesperson efficiency performance (D1BCC) (β = .009, p = .007). Although

this relationship is significant (p = .007), the sign is positive, opposite to that hypothesized.

TABLE 21. Hypothesis 4b

Dependent variable: D1BCC

Number of observations = 114 Schwarz B.I.C. = -60.1983
Number of positive obs. = 114 Log likelihood = 76.7750
Fraction of positive obs. = 1.00000

Parameter	Estimate	Standard Error	t-statistic	P-value
C	.593806	.089320	6.64806	[.000]
GOPFSUM	.026527	.985136E-02	2.69273	[.007]
B2CAPTV	.063087	.024130	2.61441	[.009]
B16EDU	-.015445	.013925	-1.10920	[.267]
B18INCOM	.695275E-02	.489433E-0	2.42057	[.155]
B5NEWBIZ	.142156E-02	.483875E-03	2.93787	[.003]
B7CLOSES	-.221911E-03	.104248E-02	-.212869	[.831]
SIGMA	.123390	.817172E-02	15.0997	[.000]

Hypothesis 5a.The positive relationship between performance goal orientation and salesperson effectiveness is stronger for salespeople with high self-efficacy. (Supported)

The results reported in Table 22 support the proposition that self-efficacy moderates the positive relationship between salesperson performance goal orientation (GOPFSUM) and salesperson effectiveness performance (PERFSUM) (β = 1.109, p = .013).

TABLE 22. Hypothesis 5a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.030	0.576		3.526	0.001
	P5PRKNOW	0.486	0.069	0.488	7.041	0.000
	B2TITLE	-0.056	0.118	-0.039	-0.475	0.636
	B9OVER	0.011	0.004	0.219	2.565	0.012
	B10XALL	0.005	0.007	0.050	0.714	0.477
	B16EDU	-0.186	0.094	-0.141	-1.973	0.051
	B18INCOM	0.148	0.033	0.336	4.462	0.000
2	(Constant)	0.343	0.612		0.561	0.576
	P5PRKNOW	0.367	0.066	0.368	5.517	0.000
	B2TITLE	-0.045	0.107	-0.031	-0.416	0.678
	B9OVER	0.009	0.004	0.185	2.393	0.018
	B10XALL	0.003	0.007	0.032	0.506	0.614
	B16EDU	-0.204	0.085	-0.156	-2.398	0.018
	B18INCOM	0.133	0.030	0.300	4.390	0.000
	SESUM	0.459	0.087	0.345	5.282	0.000
3	(Constant)	0.311	0.649		0.479	0.633
	P5PRKNOW	0.368	0.067	0.369	5.493	0.000
	B2TITLE	-0.044	0.107	-0.031	-0.410	0.683
	B9OVER	0.009	0.004	0.185	2.379	0.019
	B10XALL	0.003	0.007	0.033	0.508	0.612
	B16EDU	-0.205	0.086	-0.156	-2.393	0.018
	B18INCOM	0.133	0.031	0.302	4.363	0.000
	SESUM	0.456	0.089	0.343	5.149	0.000
	GOPFSUM	0.009	0.058	0.009	0.151	0.880
4	(Constant)	3.783	1.514		2.498	0.014
	P5PRKNOW	0.380	0.066	0.382	5.789	0.000
	B2TITLE	-0.010	0.106	-0.007	-0.091	0.928
	B9OVER	0.007	0.004	0.146	1.883	0.062
	B10XALL	0.001	0.007	0.007	0.114	0.910
	B16EDU	-0.193	0.084	-0.147	-2.302	0.023
	B18INCOM	0.137	0.030	0.309	4.568	0.000
	SESUM	-0.190	0.270	-0.143	-0.704	0.483
	GOPFSUM	-0.854	0.346	-0.908	-2.466	0.015
	GOPFSE	0.154	0.061	1.109	2.526	0.013

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .578 (.546)
c. Full Model F Value: 18.242
d. Significance of F change: Model 1 = .000 Model 3 = .880
Model 2 = .000 Model 4 = .01

Hypothesis 5b. The negative relationship between performance goal orientation and salesperson efficiency is stronger for salespeople with high self-efficacy. (Not Supported)

The results of the Tobit regression reported in Table 23 indicate that self-efficacy (SESUM) does not moderate the salesperson performance goal orientation-efficiency relationship (β = -.00004, p = .997).

TABLE 23. Hypothesis 5b

Dependent variable: D1BCC

Number of observations = 114 Schwarz B.I.C. = -55.8555
Number of positive obs. = 114 Log likelihood = 77.1684
Fraction of positive obs. = 1.00000

Parameter	Estimate	Standard Error	t-statistic	P-value
C	.521545	.268351	1.94352	[.052]
GOPFSUM	.025155	.059070	.425842	[.670]
SESUM	.013999	.045301	.309028	[.757]
PGOSE	.378150E-04	.010337	.365815E-02	[.997]
B2CAPTV	.062779	.024073	2.60785	[.009]
B16EDU	-.014749	.013953	-1.05702	[.291]
B18INCOM	.644764E-02	.491753E-02	1.31116	[.190]
B5NEWBIZ	.148887E-02	.488518E-03	3.04774	[.002]
B7CLOSES	-.532020E-03	.110588E-02	-.481085	[.630]
SIGMA	.122965	.814357E-02	15.0997	[.000]

Hypothesis 6a. The market culture is positively associated with salesperson effectiveness. (Not Supported)

The results reported in Table 24 indicate a significant but negative relationship between market culture (OCMKTSUM) and salesperson effectiveness performance (PERFSUM) (β = -.264, p = .013). This negative

relationship is in the opposite direction to the hypothesized association between market culture and effectiveness. As such, this hypothesis is not supported.

TABLE 24. Hypothesis 6a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.030	0.589		3.447	0.001
	P5PRKNOW	0.499	0.069	0.510	7.199	0.000
	B2TITLE	-0.066	0.118	-0.047	-0.561	0.576
	B9OVER	0.011	0.004	0.233	2.678	0.008
	B10XALL	0.005	0.007	0.046	0.641	0.523
	B16EDU	-0.147	0.096	-0.113	-1.527	0.129
	B18INCOM	0.138	0.034	0.310	4.045	0.000
	OCCLASUM	-0.004	0.005	-0.061	-0.895	0.373
2	(Constant)	2.908	0.674		4.315	0.000
	P5PRKNOW	0.501	0.068	0.513	7.396	0.000
	B2TITLE	-0.052	0.116	-0.038	-0.454	0.651
	B9OVER	0.011	0.004	0.237	2.786	0.006
	B10XALL	0.002	0.007	0.023	0.332	0.741
	B16EDU	-0.137	0.094	-0.106	-1.460	0.147
	B18INCOM	0.133	0.033	0.299	3.984	0.000
	OCCLASUM	-0.018	0.007	-0.264	-2.517	0.013
	OCMKTSUM	-0.016	0.006	-0.264	-2.512	0.013

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .478 (.443)
c. Full Model F Value: 18.242
d. Significance of F change: Model 1 = .000
Model 2 = .013

Hypothesis 6b. The market culture is positively associated with salesperson efficiency. (Supported)

The Tobit regression results reported in Table 25 support the positive relationship between market culture (OCMKTSUM) and salesperson efficiency performance (D1BCC) (β = .010, p = .019).

TABLE 25. Hypothesis 6b

Dependent variable: D1BCC

Number of observations = 111 Schwarz B.I.C. = -50.5236
Number of positive obs. = 111 Log likelihood = 74.0712
Fraction of positive obs. = 1.00000

Parameter	Estimate	Standard Error	t-statistic	P-value
C	-.266104	.408893	-.650792	[.515]
OCMKTSUM	.968210E-02	.412960E-02	2.34456	[.019]
OCADOSUM	.010701	.402494E-02	2.65855	[.008]
OCHIESUM	.932902E-02	.368753E-02	2.52989	[.011]
OCCLASUM	.957966E-02	.397871E-02	2.40773	[.016]
B2CAPTV	.049893	.027182	1.83553	[.066]
B16EDU	-.017750	.014478	-1.22598	[.220]
B18INCOM	.768427E-02	.515859E-02	1.48961	[.136]
B5NEWBIZ	.159826E-02	.512890E-03	3.11619	[.002]
B7CLOSES	.452187E-03	.105928E-02	.426882	[.669]
SIGMA	.124152	.833255E-02	14.8997	[.000]

Hypothesis 7a. The clan culture is negatively associated with salesperson effectiveness. (Supported)

The results reported in Table 26 support the negative relationship between clan culture (OCCLASUM) and salesperson effectiveness performance (PERFSUM) (β= -.264, p = .013).

TABLE 26. Hypothesis 7a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.086	0.603		3.461	0.001
	P5PRKNOW	0.495	0.069	0.506	7.144	0.000
	B2TITLE	-0.064	0.118	-0.046	-0.540	0.590
	B9OVER	0.011	0.004	0.231	2.659	0.009
	B10XALL	0.005	0.007	0.045	0.633	0.528
	B16EDU	-0.158	0.096	-0.122	-1.653	0.101
	B18INCOM	0.134	0.034	0.303	3.943	0.000
	OCMKTSUM	-0.004	0.004	-0.060	-0.880	0.381
2	(Constant)	2.908	0.674		4.315	0.000
	P5PRKNOW	0.501	0.068	0.513	7.396	0.000
	B2TITLE	-0.052	0.116	-0.038	-0.454	0.651
	B9OVER	0.011	0.004	0.237	2.786	0.006
	B10XALL	0.002	0.007	0.023	0.332	0.741
	B16EDU	-0.137	0.094	-0.106	-1.460	0.147
	B18INCOM	0.133	0.033	0.299	3.984	0.000
	OCMKTSUM	-0.016	0.006	-0.264	-2.512	0.013
	OCCLASUM	-0.018	0.007	-0.264	-2.517	0.013

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .478 (.443)
c. Full Model F Value: 13.528
d. Significance of F change: Model 1 = .000
Model 2 = .013

Hypothesis 7b. The clan culture is negatively associated with salesperson efficiency. (Not Supported)

The results of the Tobit regression reported in Table 27 indicate that clan culture (OCCLASUM) is not negatively associated with salesperson efficiency (D1BCC). Although the relationship is significant at the .016 level, the sign is positive and not in the same direction as hypothesized.

TABLE 27. Hypothesis 7b

Dependent variable: D1BCC

Number of observations = 111 Schwarz B.I.C. = -50.5236
Number of positive obs. = 111 Log likelihood = 74.0712
Fraction of positive obs. = 1.00000

Parameter	Estimate	Standard Error	t-statistic	P-value
C	-.266104.	408893	-.650792	[.515]
OCCLASUM	.957966E-02	.397871E-02	2.40773	[.016]
OCADOSUM	.010701	.402494E-02	2.65855	[.008]
OCHIESUM	.932902E-02	.368753E-02	2.52989	[.011]
OCMKTSUM	.968210E-02	.412960E-02	2.34456	[.019]
B2CAPTV	.049893	.027182	1.83553	[.066]
B16EDU	-.017750	.014478	-1.22598	[.220]
B18INCOM	.768427E-02	.515859E-02	1.48961	[.136]
B5NEWBIZ	.159826E-02	.512890E-03	3.11619	[.002]
B7CLOSES	.452187E-03	.105928E-02	.426882	[.669]
SIGMA	.124152	.833255E-02	14.8997	[.000]

Hypothesis 8a. The behavior control systems of supervisory activity orientation and capability orientation are positively associated with salesperson effectiveness. (Marginally Supported)

The results reported in Table 28 indicate that there is no positive relationship between the behavior control system of supervisory activity orientation (CSACTSUM) and effectiveness performance (PERFSUM) (β =

.129, p = .106). However, Table 29 indicates marginal support for the positive relationship between the behavior control system of supervisory capability orientation (CSCAPSUM) and salesperson effectiveness performance (PERFSUM) (β= .132, p = .085).

TABLE 28. Hypothesis 8a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	1.832	0.655		2.798	0.006
	P5PRKNOW	0.496	0.078	0.500	6.393	0.000
	B2TITLE	-0.145	0.148	-0.091	-0.980	0.330
	B9OVER	0.011	0.004	0.231	2.419	0.017
	B10XALL	0.011	0.008	0.105	1.347	0.181
	B16EDU	-0.148	0.112	-0.111	-1.313	0.192
	B18INCOM	0.161	0.038	0.363	4.210	0.000
2	(Constant)	1.595	0.665		2.398	0.018
	P5PRKNOW	0.476	0.078	0.480	6.107	0.000
	B2TITLE	-0.146	0.146	-0.092	-0.997	0.321
	B9OVER	0.009	0.004	0.195	2.006	0.048
	B10XALL	0.012	0.008	0.115	1.480	0.142
	B16EDU	-0.183	0.113	-0.138	-1.611	0.110
	B18INCOM	0.176	0.039	0.397	4.512	0.000
	CSACTSUM	0.088	0.054	0.129	1.630	0.106

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .478 (.440)
c. Full Model F Value: 12.450
d. Significance of F change: Model 1 = .000
Model 2 = .106

TABLE 29. Hypothesis 8a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	1.832	0.655		2.798	0.006
	P5PRKNOW	0.496	0.078	0.500	6.393	0.000
	B2TITLE	-0.145	0.148	-0.091	-0.980	0.330
	B9OVER	0.011	0.004	0.231	2.419	0.017
	B10XALL	0.011	0.008	0.105	1.347	0.181
	B16EDU	-0.148	0.112	-0.111	-1.313	0.192
	B18INCOM	0.161	0.038	0.363	4.210	0.000
2	(Constant)	1.547	0.668		2.314	0.023
	P5PRKNOW	0.480	0.077	0.484	6.211	0.000
	B2TITLE	-0.157	0.146	-0.099	-1.075	0.285
	B9OVER	0.010	0.004	0.213	2.240	0.027
	B10XALL	0.011	0.008	0.100	1.291	0.200
	B16EDU	-0.165	0.112	-0.124	-1.477	0.143
	B18INCOM	0.169	0.038	0.381	4.435	0.000
	CSCAPSUM	0.100	0.058	0.132	1.738	0.085

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .480 (.442)
c. Full Model F Value: 13.528
d. Significance of F change: Model 1 = .000
Model 2 = .085

Hypothesis 8b. The behavior control systems of supervisory activity orientation and capability orientation are positively associated with salesperson efficiency. (Supported)

The Tobit regression results reported in Table 30 support the positive impact of supervisory activity orientation (CSACTSUM) on salesperson efficiency performance (D1BCC) (β = .019, p = .029). In addition, the Tobit regression results reported in Table 31 provide marginal support for the

positive impact of supervisory capability orientation (CSCAPSUM) on salesperson efficiency performance (D1BCC) (β = .016, p = .071).

TABLE 30. Hypothesis 8b

Dependent variable: D1BCC

Number of observations = 90 Schwarz B.I.C. = -44.5612
Number of positive obs. = 90 Log likelihood = 60.3106
Fraction of positive obs. = 1.00000

Parameter	Estimate	Standard Error	t-statistic	P-value
C	.586262	.100478	5.83470	[.000]
CSACTSUM	.018783	.858400E-02	2.18815	[.029]
B2CAPTV	.075554	.027563	2.74112	[.006]
B16EDU	-.898296E-02	.016515	-.543939	[.586]
B18INCOM	.744780E-02	.579855E-02	1.28442	[.199]
B5NEWBIZ	.128509E-02	.555713E-03	2.31251	[.021]
B7CLOSES	.105969E-05	.118418E-02	.894872E-03	[.999]
SIGMA	.123804	.922780E-02	13.4164	[.000]

TABLE 31. Hypothesis 8b

Dependent variable: D1BCC

Number of observations = 90 Schwarz B.I.C. = -43.8258
Number of positive obs. = 90 Log likelihood = 59.5751
Fraction of positive obs. = 1.00000

Parameter	Estimate	Error	t-statistic	P-value
C	.613889	.099023	6.19946	[.000]
CSCAPSUM	.016412	.910163E-02	1.80318	[.071]
B2CAPTV	.068118	.027210	2.50346	[.012]
B16EDU	-.488075E-02	.016501	-.295783	[.767]
B18INCOM	.502348E-02	.567195E-02	.885672	[.376]
B5NEWBIZ	.113440E-02	.551510E-03	2.05691	[.040]
B7CLOSES	.460465E-03	.116669E-02	.394676	[.693]
SIGMA	.124820	.930352E-02	13.4164	[.000]

Hypothesis 9a. The outcome control systems of supervisory end results orientation is positively associated with salesperson effectiveness. (Marginally Supported)

The results reported in Table 32 marginally support the positive relationship between supervisory end results orientation (CSENDSUM) and salesperson effectiveness performance (PERFSUM) (β = .129, p = .096).

TABLE 32. Hypothesis 9a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	1.832	0.655		2.798	0.006
	P5PRKNOW	0.496	0.078	0.500	6.393	0.000
	B2TITLE	-0.145	0.148	-0.091	-0.980	0.330
	B9OVER	0.011	0.004	0.231	2.419	0.017
	B10XALL	0.011	0.008	0.105	1.347	0.181
	B16EDU	-0.148	0.112	-0.111	-1.313	0.192
	B18INCOM	0.161	0.038	0.363	4.210	0.000
2	(Constant)	1.495	0.679		2.202	0.030
	P5PRKNOW	0.490	0.077	0.495	6.376	0.000
	B2TITLE	-0.173	0.147	-0.109	-1.175	0.243
	B9OVER	0.010	0.004	0.220	2.314	0.023
	B10XALL	0.013	0.008	0.125	1.591	0.115
	B16EDU	-0.169	0.112	-0.127	-1.510	0.134
	B18INCOM	0.165	0.038	0.372	4.343	0.000
	CSENDSUM	0.090	0.053	0.129	1.680	0.096

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .479 (.441)
c. Full Model F Value: 12.494
d. Significance of F change: Model 1 = .000
Model 2 = .096

Hypothesis 9b. The outcome control systems of supervisory end results orientation is negatively associated with salesperson efficiency. (Not Supported)

The results of the Tobit regression reported in Table 33 indicate that the outcome control system of supervisory end results orientation (CSENDSUM) is not negatively associated with salesperson efficiency (D1BCC) (β = .014, p = .148).

TABLE 33. Hypothesis 9b

Dependent variable: D1BCC

Number of observations = 90 Schwarz B.I.C. = -43.2651
Number of positive obs. = 90 Log likelihood = 59.0144
Fraction of positive obs. = 1.00000

Parameter	Estimate	Standard Error	t-statistic	P-value
C	.610719	.107145	5.69991	[.000]
CSENDSUM	.013532	.934540E-02	1.44800	[.148]
B2CAPTV	.075629	.029166	2.59308	[.010]
B16EDU	-.615791E-02	.016661	-.369598	[.712]
B18INCOM	.492837E-02	.571062E-02	.863017	[.388]
B5NEWBIZ	.125340E-02	.571041E-03	2.19493	[.028]
B7CLOSES	.392707E-04	.122753E-02	.031992	[.974]
SIGMA	.125600	.936166E-02	13.4164	[.000]

Hypothesis 10a. Salesperson training is positively associated with salesperson effectiveness. (Marginally Supported)

The results of the hierarchical linear regression reported in Table 34 indicate that salesperson career training (B8TRACAR) is positively associated with salesperson effectiveness (PERFSUM) at the .10 level of significance (β =

.143, p = .088). The results reported in Table 34 do not, however, support the positive relationship between pre-training (B8TRAPRE) and salesperson effectiveness performance (PERFSUM). Although this relationship is significant, the sign is negative and in the opposite direction to the hypothesized relationship. In addition, the results reported in Table 34 do not support the positive relationship between advanced training (B8TRAADV) and salesperson effectiveness (PERFSUM) (β = -.016, p = .858).

TABLE 34. Hypothesis 10a

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	1.794	0.644		2.787	0.006
	P5PRKNOW	0.499	0.075	0.486	6.639	0.000
	B2TITLE	-0.015	0.132	-0.010	-0.111	0.912
	B9OVER	0.012	0.005	0.216	2.419	0.017
	B10XALL	0.012	0.008	0.105	1.394	0.166
	B16EDU	-0.156	0.105	-0.113	-1.492	0.139
	B18INCOM	0.130	0.037	0.283	3.562	0.001
2	(Constant)	1.608	0.661		2.434	0.017
	P5PRKNOW	0.515	0.076	0.502	6.813	0.000
	B2TITLE	-0.022	0.131	-0.015	-0.170	0.866
	B9OVER	0.013	0.005	0.235	2.669	0.009
	B10XALL	0.014	0.009	0.123	1.600	0.113
	B16EDU	-0.136	0.104	-0.099	-1.307	0.194
	B18INCOM	0.130	0.038	0.283	3.404	0.001
	B8TRAPRE	-0.009	0.003	-0.201	-2.491	0.014
	B8TRACAR	0.005	0.003	0.143	1.722	0.088
	B8TRAADV	-0.001	0.003	-0.016	-0.179	0.858

a. Dependent Variable: PERFSUM
b. R^2 (Adj. R^2): .503 (.459)
c. Full Model F Value: 11.566
d. Significance of F change: Model 1 = .000
Model 2 = .066

Hypothesis 10b. Salesperson training is positively associated with salesperson efficiency. (Not Supported)

The results of Tobit regression reported in Table 35 indicate that salesperson training (B8TRAPRE, B8TRACAR, and B9TRAADV) is not significantly associated with salesperson efficiency (D1BCC). Although the sign of two of the measures of salesperson training is positive, the coefficients are not significant at the .05 level of significance.

TABLE 35. Hypothesis 10b

Dependent variable: D1BCC

Number of observations = 100 Schwarz B.I.C. = -48.2595
Number of positive obs. = 100 Log likelihood = 68.9828
Fraction of positive obs. = 1.00000

Parameter	Estimate	Standard Error	t-statistic	P-value
C	.638554	.085932	7.43091	[.000]
B8TRAPRE	.512478E-03	.550923E-03	.930218	[.352]
B8TRACAR	.455544E-04	.445141E-03	.102337	[.918]
B8TRAADV	-.464994E-03	.457971E-03	-1.01534	[.310]
B2CAPTV	.063730	.025424	2.50665	[.012]
B16EDU	-.141186E-02	.014931	-.094559	[.925]
B18INCOM	.011634	.567743E-02	2.04924	[.040]
B5NEWBIZ	.139530E-02	.525105E-03	2.65718	[.008]
B7CLOSES	.408046E-03	.107046E-02	.381188	[.703]
SIGMA	.121388	.858340E-02	14.1421	[.000]

Summary

This chapter reports the results of the statistical analyses of this study. The results included in the analyses were descriptive statistics relating to the respondents and the study variables; factor analytic statistics; reliability

statistics; and reports on non-response bias. In addition, hypotheses were tested using hierarchical and moderated regression analysis, data envelopment analysis, and Tobit regression analysis, and the results were reported. A summary of the findings with regard to the tested hypotheses is reported in Table 36.

In the next chapter, the conclusion and contributions of this study will be presented. Limitations of the study and implications for future research will also be provided.

TABLE 36. Hypothesis Analysis
Summary of Results

Hypothesis		Results
H1a	Working smart is positively associated with salesperson effectiveness.	(β = .210, p = .003) Supported
H1b	Working smart is positively associated with salesperson efficiency.	(β = .057, p = .010) Supported
H2a	Working hard is positively associated with salesperson effectiveness.	(β = .210, p = .002) Supported
H2b	Working hard is negatively associated with salesperson efficiency.	(β = -.005, p = .560) Not Supported
H3a	Learning goal orientation is positively associated with salesperson effectiveness.	(β = .199, p = .004) Supported
H3b	Performance goal orientation is positively associated with salesperson effectiveness.	(β = .066, p = .326) Not Supported
H4a	Learning goal orientation is positively associated with salesperson efficiency.	(β = .047, p = .000) Supported
H4b	Performance goal orientation is negatively associated with salesperson efficiency.	(β = .009, p = .000) Not Supported
H5a	The positive relationship between performance goal orientation and salesperson effectiveness is stronger for salespeople with high self-efficacy.	(β = 1.109, p = .013) Supported
H5b	The negative relationship between performance goal orientation and salesperson efficiency is stronger for salespeople with high self-efficacy.	(β = -.000, p = .997) Not Supported

TABLE 36 Continued

H6a	The market culture is positively associated with salesperson effectiveness.	(β = -.264, p = .013) Not Supported
H6b	The market culture is positively associated with salesperson efficiency.	(β = .010, p = .019) Supported
H7a	The clan culture is negatively associated with salesperson effectiveness.	(β = -.264, p = .013) supported
H7b	The clan culture is negatively associated with salesperson efficiency.	(β = .009, p = .016) Not Supported
H8a	The behavior control systems of supervisory activity orientation and capability orientation are positively associated with salesperson effectiveness.	(β = .129, p = .100); (β = .132, p = .085) Marginally Supported
H8b	The behavior control systems of supervisory activity orientation and capability orientation are positively associated with salesperson efficiency.	(β = .019, p = .029); (β = .016, p = .074) Supported
H9a	The outcome control system of supervisory end results orientation is positively associated with salesperson effectiveness.	(β = .129, p = .096) Marginally Supported
H9b	The outcome control system of supervisory end results orientation is negatively associated with salesperson efficiency.	(β = .014, p = .148) Not Supported
H10a	Salesperson training is positively associated with salesperson effectiveness.	(β = .143, p = .088) Marginally Supported
H10b	Salesperson training is positively associated with salesperson efficiency.	(β = .000, p = .352) Not Supported

CHAPTER 5

CONCLUSIONS

This chapter interprets the findings of this study and discusses the implications of its results. It consists of five sections. The first section discusses the relevant findings in the statistical analysis presented in Chapter 4. The contributions of this study to the marketing literature are offered in the second section. The third section presents managerial implications of the study and the fourth section outlines the limitations of the study. Finally, the fifth section discusses areas for future research.

Interpretation and Discussion of Research Findings

The objective of the present study was three-fold: (1) to investigate key personal and organizational factors that influence salesperson efficiency; (2) to investigate key personal and organizational factors that influence salesperson effectiveness; and (3) to apply data envelopment analysis to measure salesperson efficiency. It should be noted that antecedent effects on salesperson efficiency have not been examined in the marketing literature. This study is the first study to examine such influences (H1b, H2b, H4a, H4b, H5b, H6b, H7b, H8b, H9b, and H10b). In addition, organizational culture's

effects on salesperson effectiveness that were examined in H6a and H7a have not previously been empirically investigated.

Data Envelopment Analysis

Salesperson efficiency was measured using data envelopment analysis (DEA). Two DEA models (the CCR model and the BCC model) were employed in this analysis in order to test the robustness of the efficiency results in this study.

Seven input and seven output variables were selected for DEA analyses based upon previous empirical sales studies (Boles, Donthu, and Lohtia 1995; Horsky and Nelson 1996; Mahajan 1991; Pilling, Donthu, and Henson 1999). Analysis revealed that the seven inputs and seven outputs selected for this study were significantly correlated as discussed in Chapter 4. This supported the assumed correlations between DEA inputs and outputs (Charnes et al. 1994).

DEA results showed that the mean of the CCR DEA model efficiency score was .79 with a standard deviation of .13. The mean score and standard deviation of the BCC model were .88 and .14, respectively. The mean efficiency score for the BCC model was slightly higher than the score for the CCR model. This is not unexpected due to the model differences as discussed in Chapter 3. In addition, in order to assess the robustness of the DEA results, a different combination of inputs and outputs was also analyzed using the CCR and BCC models (Charnes et al. 1996). Notably, a Spearman non-parametric correlation analysis showed that all four DEA efficiency scores

were significantly correlated. This again strongly supported the robustness of the DEA results in this study. Overall, the DEA results were deemed reliable and consistent.

Working Smart, Working Hard, and Salesperson Performance

Hypothesis 1a: Working smart is positively associated with salesperson effectiveness. (Supported).

Hypothesis 1b: Working smart is positively associated with salesperson efficiency. (Supported).

Hypothesis 2a: Working hard is positively associated with salesperson effectiveness. (Supported).

Hypothesis 2b: Working hard is negatively associated with salesperson efficiency. (Not Supported).

The results of the study provided support for a direct, positive relationship between salespeople's working smart behavior and efficiency (H1b). Thus, the results indicate that salespeople who engage in working smart behaviors (i.e., those who perform sales planning, adapt their sales presentation, and have flexibility in selling situations) are more likely to work more efficiently than salespeople who do not engage in these behaviors. Working smart and working hard were both found to have a direct, positive, and similar impact upon salesperson effectiveness (H1a and H2a), supporting past research. However, working hard was not significantly related to efficiency. This "non-finding" is important as it suggests that gains in

salesperson efficiency can only be achieved through working smart, though not working hard, behaviors.

Although the hypotheses relating working smart and working hard to efficiency were posited to be opposite in direction to each other (positive and negative, respectively), they were done so to explore and highlight the distinction between these constructs. Had the relationship between working hard and efficiency been found to be significantly negative, however, the implications would be potentially problematic for sales managers. That is, asking salespeople to work hard would, based on the results of this study, positively impact their selling effectiveness but at the same time negatively influence selling efficiency–a result few sales managers would desire. Indeed, salespersons selling in an inefficient manner may ultimately reach a state of "burnout" (Boles, Donthu, and Lohtia 1995), that is, a reduced feeling of personal accomplishment accompanied by emotional exhaustion (Rhoads, Singh, and Goodell 1994). Thus, the non-significant result of this study with regard to working hard behavior and efficiency should perhaps not be unexpected but, in fact, has practical appeal. That is, the practical implication for managers who wish their salespersons to be both efficient and effective is, simply, to direct them to work both hard and smart.

Goal Orientation, Self-Efficacy, and Salesperson Performance

Hypothesis 3a: Learning orientation is positively associated with salesperson effectiveness. (Supported).

Hypothesis 3b: Performance orientation is positively associated with salesperson effectiveness. (Not Supported).

Hypothesis 4a: Learning orientation is positively associated with salesperson efficiency. (Supported).

Hypothesis 4b: Performance orientation is negatively associated with salesperson efficiency. (Not Supported).

Hypothesis 5a: The positive relationship between performance goal orientation and salesperson effectiveness is stronger for salespeople with high self-efficacy. (Supported).

Hypothesis 5b: The negative relationship between performance goal orientation and salesperson efficiency is stronger for salespeople with high self-efficacy. (Not Supported).

An additional focus of this study was to examine the effect of goal orientation on salesperson effectiveness and efficiency. Learning goal orientation was found to have a direct, positive impact upon effectiveness and efficiency (H3a and H4a). The finding of a positive relationship between learning goal orientation and effectiveness is in consonance with those in several other empirical sales studies (Kohli, Shervani, and Challagalla 1998; Sujan, Weitz, and Kumar 1994; VandeWalle et al. 1999). Thus, salespeople with a learning orientation have a strong desire to improve and master their selling skills and abilities that reflects positively in their selling effectiveness.

The positive relationship found between learning goal orientation and efficiency that was examined for the first time in this study contributes to the

sales and marketing literature. This finding suggests that improving one's sales skills through learning enhances one's efficiency as wells as effectiveness. This underscores the importance of a learning orientation to a successful sales career.

On the other hand, a performance goal orientation was not found to be related to salesperson effectiveness. This is in contrast to Kohli, Shervani, and Challagalla's (1998) study that found a direct, positive relationship between performance goal orientation and salesperson effectiveness. However, Ames and Archer (1988) and Dweck and Leggett (1988) found a negative relationship between performance goal orientation and salesperson effectiveness, similar to the present finding. In further contrast, Sujan, Weitz, and Kumar (1994) provided evidence that the relationship between performance goal orientation is moderated by self-efficacy. In other words, the direct influence of performance goal orientation on effectiveness may be significant only at higher levels of salesperson self-efficacy. This notion was posited in H5a and, in fact, supported, as discussed below. In addition, a performance goal orientation was not found to negatively affect salesperson efficiency as hypothesized (H4b). These results suggest that a performance goal orientation by itself has no direct impact on either salesperson effectiveness or efficiency.

Again, the insignificant results for the negative association between performance goal orientation and efficiency have favorable implications for management. Since previous findings suggest that a performance goal

orientation can improve salesperson effectiveness (Kohli, Shervani, and Challagalla 1998), it would clearly behoove sales managers to stress such an orientation to their salespeople. Clearly, a significant, negative relationship of performance goal orientation with salesperson efficiency would offset the benefits of this orientation. Thus, the non-significant results should not be totally unexpected. In fact, they provide the sales manager with clear guidance: performance goal orientation will enhance salespersons' effectiveness and have no influence on salesperson efficiency.

Notably, self-efficacy was found to moderate the relationship between performance goal orientation and salesperson effectiveness (H5a). This finding concurs with the results in Sujan, Weitz, and Kumar's (1994) study. However, self-efficacy was not found to moderate the relationship between performance goal orientation and salesperson efficiency (H5b). This insignificant moderating finding, taken together with the result of H4b, suggests that performance goal orientation has no relationship, contextual or otherwise, with salesperson efficiency.

Organizational Culture and Salesperson Performance

Hypothesis 6a: The market culture is positively associated with salesperson effectiveness. (Not Supported).

Hypothesis 6b: The market culture is positively associated with salesperson efficiency. (Supported).

Hypothesis 7a: The clan culture is negatively associated with salesperson effectiveness. (Supported).

Hypothesis 7b: The clan culture is negatively associated with salesperson efficiency. (Not Supported).

It was proposed that two types of organizational culture—clan and market—influenced salesperson performance. A market organizational culture type with its external orientation and focus on order and stability was proposed to positively impact both salesperson effectiveness and efficiency (H6a and H6b). The results provided support for the direct, positive relationship between market culture and efficiency. That is, the market organizational culture type appears to provide an organizational setting and accompanying set of values that promotes sales force efficiency. However, results did not support a direct, positive relationship between market culture and effectiveness. This finding is in contrast to previous theoretical and empirical work (Deshpandé, Farley, and Webster 1993; Deshpandé and Webster 1989). However, Deshpandé, Farley, and Webster (1993) found a positive relationship between culture and effectiveness at the organizational level of analysis, though not at the individual level. Nevertheless, the current study's results indicate that market culture appears to be related to salesperson efficiency, but not to effectiveness.

In contrast to a market culture, a clan culture is internally-oriented and emphasizes informal governance. A clan organizational culture type was proposed to negatively impact effectiveness and efficiency (H7a and H7b).

The results provided support for a direct, negative association with effectiveness, but not with efficiency. That is, overall, a clan organizational culture type appears to foster a sales setting that diminishes sales force effectiveness but has an indeterminate effect on efficiency. Although no previous study has examined the influence of a clan culture on salesperson performance, the finding of a negative effect of clan culture on salesperson effectiveness is similar to Deshpandé, Farley, and Webster's (1993) empirical results at an organizational level of analysis. Specifically, Deshpandé, Farley, and Webster (1993) found that a clan culture was negatively associated with organizational performance. The insignificant influence of clan culture on salesperson efficiency indicates that this influence may not be as strong as the influence of market culture on efficiency, and/or was not detectable in this study due to, perhaps, insufficient statistical power.

In summary, the results of this exploratory study of the effect of organizational culture on salesperson performance were mixed but nevertheless encouraging. Given that two organizational culture types were found to be associated with salesperson effectiveness and efficiency, it appears that the potential for organizational culture to impact salesperson performance does exist. These results suggest the need to explore these relationships further.

Sales Force Control Systems and Salesperson Performance

Hypothesis 8a: The behavior control systems of supervisory activity orientation and capability orientation are positively associated with salesperson effectiveness. (Marginally Supported).

Hypothesis 8b: The behavior control systems of supervisory activity orientation and capability orientation are positively associated with salesperson efficiency. (Supported).

Hypothesis 9a: The outcome control system of supervisory end-result orientation is positively associated with salesperson effectiveness. (Marginally Supported).

Hypothesis 9b: The outcome control system of supervisory end-result orientation is negatively associated with salesperson efficiency. (Not Supported).

The behavior control systems of supervisory activity orientation and capability orientation were hypothesized to positively impact both effectiveness and efficiency (H8a and H8b). The results provided marginal support for the direct, positive relationship between supervisory capability orientation and effectiveness (p-value = .085). This positive association supports previous studies (e.g., Anderson and Oliver 1994; Challagalla and Shervani 1996). The results do not, however, support the relationship between supervisory activity orientation and effectiveness (p-value = .106).

More interestingly, supervisory activity orientation was found to have a direct, positive relationship with efficiency, while supervisory capability

orientation was found to have a direct, positive, although marginal, relationship with efficiency (p-value = .071). As such, behavior control systems appear to have the potential to enhance salespersons' efficiency and at the same time increase their effectiveness. These results suggest that an emphasis on these behavioral control systems would provide considerable advantage to sales managers who adopt them.

It was proposed that supervisors with an end—results orientation would positively impact effectiveness but negatively influence salesperson efficiency (H9a and H9b). This study provided marginal support for a direct, positive relationship between end-results orientation and effectiveness (p-value = .096). This finding supports previous empirical studies (Anderson and Oliver 1994; Challagalla and Shervani 1996). The results did not, however, support a negative relationship between end-results orientation and efficiency. That is, supervisory end-results orientation is likely to improve salesperson effectiveness but not influence salesperson efficiency. As discussed earlier, such non-significant results should not be totally unexpected. Because supervisory end-results orientation can improve salesperson effectiveness, it should be an approach that managers would be well-served to utilize. Significant, negative results related to efficiency would contradict this strategy, however. As such, the advantage of adopting a supervisory end-results orientation is clear and straightforward.

In summary, the results of this study provide tentative evidence that supervisory control systems are associated with salesperson performance.

Thus, the orientation that managers assume and the environment that they may create for their sales force does appear to influence the two key aspects of sale force performance examined in this study: salesperson effectiveness and efficiency.

Salesperson Training and Salesperson Performance

Hypothesis 10a: Salesperson training is positively associated with salesperson effectiveness. (Marginally Supported).

Hypothesis 10b: Salesperson training is positively associated with salesperson efficiency. (Not Supported).

Salesperson training was hypothesized to positively influence both effectiveness and efficiency (H10a and H10b). Surprisingly, the pre-contract training had a significant, negative impact upon salesperson effectiveness. Advanced training was not related to effectiveness in this study. The results of this study provided only marginal support for a direct, positive relationship between career training and salesperson effectiveness (p-value = .088). A positive relationship between training and salesperson effectiveness has been reported in several empirical studies, however (e.g., Churchill et al. 1985; Sujan, Sujan, and Bettman 1988; Weitz 1981). Thus, the mixed results do not, in general, support previous findings.

Additionally, salesperson training was not found to influence salesperson efficiency. This result seems to be contradict Weitz, Sujan, and Sujan's (1986) proposition that training would elevate salesperson productivity.

As such, this finding indicates that training may not have a direct influence on efficiency. Alternatively, the scales used to measure training may not be reliable or valid. To the degree that this is true, the results may be invalid. However, training may have an indirect relationship with salesperson efficiency.

Contributions of the Study

The current study has made several significant contributions to the sales research literature. First, this study theorized and found support for the antecedent influence of working smart on salesperson efficiency. This relationship has not been previously tested in a sales setting. Previous research in this area only investigated the influences of working smart and working hard on salesperson effectiveness. Because the current business environment's emphasis on cost-cutting and maximizing productivity requires, in addition to effectiveness, a high level of efficiency from salespeople (Boles, Donthu, and Lohtia 1995; Mahajan 1991; Pilling, Donthu, and Henson 1999), it should be equally important to explore the influences of working smart and working hard on salesperson efficiency. As such, this study extends the previous research on working smart and provides evidence that working smart does enhance salesperson efficiency. That is, working smart makes salespeople more efficient in selling.

This study supports past research that indicated that both working smart and working hard are appropriate behaviors in terms of increasing salesperson effectiveness (Sujan, Weitz, and Kumar 1994). However, the

present study's findings indicate that only working smart should be the focus when managers are intent on improving salesperson efficiency. This is a distinct contribution to the personal selling research literature that warrants further empirical investigation.

A second contribution of this study was to theorize and empirically find a positive relationship between learning goal orientation and salesperson efficiency. This relationship had not been previously tested in a sales setting. Thus, this study extends the work of previous research on learning goal orientation and provides evidence that a learning goal orientation provides additional benefits to the sales organization that had not previously been considered. This is another distinct contribution to the personal selling research literature that calls for further empirical investigation.

The third contribution of this study was to establish the effect of key organizational variables on salesperson performance. First, this study found that the clan organizational culture type negatively influences salesperson effectiveness, while the market type culture positively influences efficiency. While Deshpandé, Farley, and Webster (1993) found that organizational culture directly influenced organizational performance, their study did not examine the influence of organizational culture on individual performance. As such, the present study supports and extends this research stream to the individual level and to efficiency measures of performance as well.

In addition, this study is the first to establish the effect of another organizational variable—sales force control systems—on salesperson

efficiency performance. In particular, behavior control systems were found to enhance salesperson efficiency and marginally improve effectiveness, making salespeople more efficient as well as more effective. As such, this study supports and extends sales force control system research in a significant way.

The fifth and overarching contribution of this study was to differentiate between salesperson effectiveness and efficiency. The current business environment's emphasis on maximizing productivity requires a high level of efficiency from salespeople (Boles, Donthu, and Lohtia 1995; Mahajan 1991; Pilling, Donthu, and Henson 1999). This study is the first to empirically investigate both personal and organizational antecedents of salesperson efficiency. As such, this study extends the salesperson performance research stream into a new frontier of sales research: how to increase the efficiency of sales personnel.

In addition, this study contributes to the marketing research field by being the first such study to employ a Tobit regression methodology in testing antecedent variable's influence on efficiency performance. Tobit regression is an appropriate methodology when the dependent variable is limited in range and not normally distributed—characteristics of many variables found in marketing research. This is a contribution to the marketing research methodology literature.

Finally, the present study applied two data envelopment analysis (DEA) models—the BCC model and the CCR model. Multiple models and multiple combinations of input and output variables ensure the robustness of DEA

efficiency results. This is another contribution to the marketing research methodology literature in terms of appropriately applying DEA in marketing research.

Managerial Implications

This study has several implications for managers. First, it demonstrates to sales managers a powerful management science tool—data envelopment analysis (DEA)—that can be used to measure salesperson efficiency performance. This study showed how DEA can be used to measure individual salesperson efficiency and subsequently identify those variables that influence this important measure of salesperson performance. Managers using DEA can also identify and subsequently reward the most efficient salespeople and, additionally, guide the inefficient salespeople to become more efficient. Such efficiency evaluations can in turn be utilized to recruit and select higher performing salespeople; to determine the training needs of new and existing salespeople; and to better design and administer salesperson compensation systems.

The present study also provides sales managers with an understanding of several key personal and organizational factors that influence salesperson efficiency performance. With the prescriptive insight relating working smart to selling efficiency, managers can identify other key efficiency-related attributes and skills for further sales force training. In addition, this study's results provide direction to managers suggesting that, through the development of the

proper organizational environment, they can enhance both the efficiency and the effectiveness of their sales force.

This study found that working smart behaviors and a learning goal orientation improve both salesperson efficiency and effectiveness. This insight in these areas can be applied to improve recruitment and selection of new hires, as well as to the management of the existing sales force.

In addition, this study found that a market culture enhances salesperson efficiency while a clan culture diminishes effectiveness. As such, sales managers should consider, through their organizational culture, developing an appropriate set of organizational values to lead salespeople to achieve greater effectiveness and efficiency.

Furthermore, this study found that the behavior control systems of supervisory activity orientation and capability orientation enhanced both salesperson efficiency and effectiveness. Such knowledge provides sales managers with an increased understanding of the particular supervisory control system that can best motivate their salespeople. The ultimate result of these contributions is improved sales performance on the part of the salesperson in terms of both effectiveness and efficiency.

Limitations of the Study

Several limitations of the present study have the potential to influence the interpretation of its results and their generalizability. These limitations should be considered when applying the findings of this study to other research settings.

Sample Frame

The sample frame consisted of 30,000 life insurance professionals who subscribed to Life Insurance Selling magazine. From this sample frame, a sample of 1,000 names was randomly selected. This sample may not be truly representative of the whole life insurance industry. However, the response rate for this study was 23 percent. This relatively high response rate may help to mitigate such concerns.

In addition, all respondents who participated in the present study worked in the life insurance industry. This use of a single-industry sample may limit the external validity of this study. As such, caution should be exercised when generalizing these results to other industries.

Self-Reporting of Study Variables

This study used a self-report, mail questionnaire to collect respondent information. This method of collecting primary data may lead to sequence bias (Churchill 1999). Respondents have the opportunity to view the entire questionnaire and, thus, their answers to one or more questions may be influenced by other questions. In addition, an upward bias in self-report scores, particularly with respect to performance, may exist. However, while the potential for bias is present in self-reporting survey methods, the self-report method is widely accepted in sales survey research and support for such bias has not been reported (Behrman and Perreault 1982; Sujan, Weitz, and Kumar 1994).

Design of the Study

Another limitation of this study's design was the cross-sectional nature of the survey. Although widely used in sales and marketing research, cross-sectional research is nevertheless believed to achieve breadth of knowledge at the expense of depth of understanding (Churchill 1999). A longitudinal study may more accurately detect antecedent influences on salesperson performance.

Operationalization of Variables

The working hard scale has three items assessing the salesperson's persistence in job-related activities in addition to a report of how many hours per week the salesperson worked on average (Sujan, Weitz, and Kumar 1994). The reliability analysis results indicated that the Likert-type working hard items were unreliable and therefore not used in this study. Thus, this study used only the number of hours per week that a salesperson worked to assess the working hard construct. The attendant limitations of single-item indicators thus apply here. The coefficient alpha of .68 found by Sujan, Weitz, and Kumar (1994) suggests that further scale development for working hard is warranted.

Future Research

The relationships between personal and organizational antecedents and salesperson effectiveness and efficiency that were examined in this study

have important implications for further research. Several of these implications are discussed next.

First, several key antecedent influences of personal and organizational variables on individual efficiency have been identified in an insurance sales setting. Researchers should determine if the same relationships hold in other industries and sales settings.

Second, this study examined the direct influences of organizational variables on salesperson performance. It seems plausible that organizational variables may indirectly influence salesperson performance. That is, the relationship between organizational variables and performance may be mediated by personal variables (i.e., working smart and working hard behaviors as well as goal orientations).

A third area of future research is to more closely examine the construct of working smart. As previously stated, there is theoretical and empirical support for working smart to be composed of three dimensions. These three dimensions are: (1) planning of sales behaviors and activities, (2) functional flexibility, and (3) adaptive selling behavior. Recent studies have indicated that adaptive selling may have multiple dimensions (e.g., Marks et al. 1996). Future research awaits this determination.

Fourth, future research should explore other possible moderators that may influence the relationship between organizational culture and performance. Does the impact of organizational culture on effectiveness and efficiency performance depend on other environmental factors? Alternatively,

does organizational culture moderate the influence of other variables on salesperson performance? The answers to these questions await future research.

Finally, this study explored salespeople's self-report of the influence of personal and organizational variables on individual efficiency and effectiveness. Of equal importance is the perspective of sales managers. Sales managers' perceptions may be different from those of salespeople. An understanding of management's perspective on salesperson efficiency may provide new insights into this area of salesperson performance research.

In summary, the present study, exploratory in nature, has introduced and found several key personal and organizational variables that influence salesperson effectiveness and efficiency. These relationships are ripe for future research in this important area of personal selling research.

APPENDIX A

SURVEY INSTRUMENT

Professional Salesperson Survey

We are conducting research on what makes insurance salespersons productive. Your input on your and your firm's sales practices is very important to us. Please take a few minutes to complete this survey.

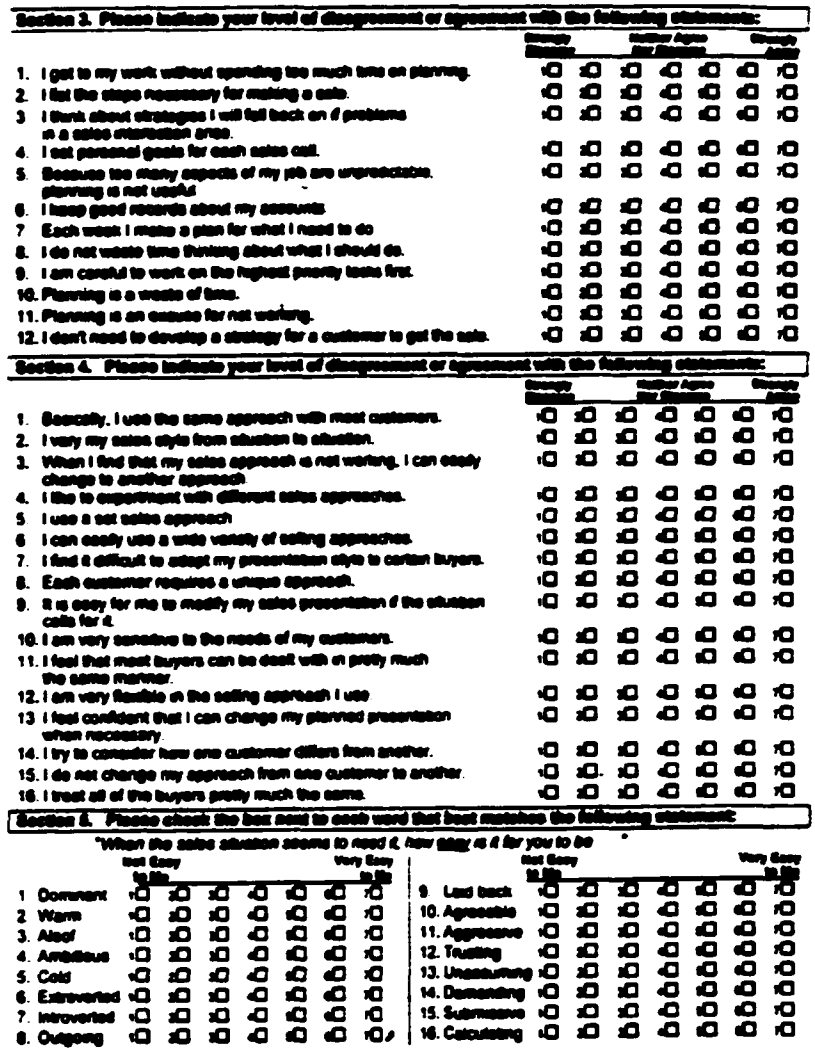
- Please do not put your name on the questionnaire. All information that you provide will be anonymous.
- Note: there are no right or wrong answers—just your perceptions and ideas about your selling experiences.
- Your participation in this important study is greatly appreciated. We thank you in advance for your input.

Section 1. Please indicate your level of disagreement or agreement with the following statements:

		Strongly Disagree			Neither Agree Nor Disagree			Strongly Agree
1	It is worth spending a lot of time learning new approaches for dealing with customers	○	○	○	○	○	○	○
2	An important part of being a good salesperson is continually improving your sales skills.	○	○	○	○	○	○	○
3	I put in a great deal of effort in order to learn something new about selling.	○	○	○	○	○	○	○
4	It is important for me to learn from each selling experience I have.	○	○	○	○	○	○	○
5	Learning how to be a better salesperson is of fundamental importance to me.	○	○	○	○	○	○	○
6	Making mistakes when selling is just part of the learning process.	○	○	○	○	○	○	○
7	I am always learning something new about my customers.	○	○	○	○	○	○	○
8	There really are not a lot of new things to learn about selling.	○	○	○	○	○	○	○
9	Making a tough sale is very satisfying.	○	○	○	○	○	○	○
10	It is very important to me that my manager sees me as a good salesperson.	○	○	○	○	○	○	○
11	I feel very good when I know I have outperformed other salespeople in my company.	○	○	○	○	○	○	○
12	I always try to communicate my achievements to my manager.	○	○	○	○	○	○	○
13	I very much want my co-workers to consider me to be good at selling.	○	○	○	○	○	○	○
14	I spend a lot of time thinking about how my sales performance compares with other salespeople's.	○	○	○	○	○	○	○
15	I evaluate myself using my supervisor's standards.	○	○	○	○	○	○	○

Section 2. Please indicate your level of agreement or disagreement with the following statements:

		Strongly Disagree			Neither Agree Nor Disagree			Strongly Agree
1	I am good at selling.	○	○	○	○	○	○	○
2	I work long hours to meet my sales objectives.	○	○	○	○	○	○	○
3	It is difficult for me to put pressure on a customer.	○	○	○	○	○	○	○
4	I work unfailingly at selling a customer until I get an order.	○	○	○	○	○	○	○
5	I know the right thing to do in selling situations.	○	○	○	○	○	○	○
6	I do not give up easily when I encounter a customer who is difficult to sell.	○	○	○	○	○	○	○
7	I find it difficult to convince a customer who has a different viewpoint than mine.	○	○	○	○	○	○	○
8	My temperament is not well-suited for selling.	○	○	○	○	○	○	○
9	I am good at finding out what customers want.	○	○	○	○	○	○	○
10	It is easy for me to get customers to see my point of view.	○	○	○	○	○	○	○



Section 6. The following questions have been designed to investigate different ideas about people. There are no right or wrong answers. We are interested in your ideas.

• Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements by checking the number that corresponds to your opinion in the boxes next to each statement.

1. Your ability to sell is something about you that you can't change very much	☐1	☐2	☐3	☐4	☐5	☐6
2. You can learn new things, but you can't really change your basic selling ability.	☐1	☐2	☐3	☐4	☐5	☐6
3. You have a certain amount of sales ability and you really can't do much to change it.	☐1	☐2	☐3	☐4	☐5	☐6
4. As much as I hate to admit it, you can't teach an old dog new tricks. You can't really change your deepest attributes.	☐1	☐2	☐3	☐4	☐5	☐6
5. You can always substantially change the kind of person you are.	☐1	☐2	☐3	☐4	☐5	☐6
6. Everyone is a certain kind of person, and there is not much that can be done to really change that.	☐1	☐2	☐3	☐4	☐5	☐6
7. No matter what kind of person you are, you can always change very much.	☐1	☐2	☐3	☐4	☐5	☐6
8. Please leave this line blank for administrative purposes.	☐1	☐2	☐3	☐4	☐5	☐6
9. All people can change even their most basic qualities.	☐1	☐2	☐3	☐4	☐5	☐6
10. Everyone, no matter who they are, can significantly change their basic characteristics.	☐1	☐2	☐3	☐4	☐5	☐6
11. The kind of person you are is something very basic about you and it can't be changed very much.	☐1	☐2	☐3	☐4	☐5	☐6
12. You can do things differently, but the important parts of who you are can't really be changed.	☐1	☐2	☐3	☐4	☐5	☐6

Section 7. Please indicate your level of disagreement or agreement with the following statements:

1. My firm has the same values as I do with regard to how employees should be managed.	☐1	☐2	☐3	☐4	☐5	☐6	☐7
2. I feel that my personal values are a good fit with my firm with regard to what an effective leadership style is.	☐1	☐2	☐3	☐4	☐5	☐6	☐7
3. My firm has the same values as I do with regard to what it emphasizes, values, and thinks is important.	☐1	☐2	☐3	☐4	☐5	☐6	☐7
4. I feel fairly well satisfied with my present line of work.	☐1	☐2	☐3	☐4	☐5	☐6	☐7
5. I feel that my personal values are a good fit with my firm with regard to the bonds that hold the organization and its employees together.	☐1	☐2	☐3	☐4	☐5	☐6	☐7
6. I feel a great sense of satisfaction from my line of work.	☐1	☐2	☐3	☐4	☐5	☐6	☐7
7. I feel that my personal values are a good fit with my firm with regard to how it defines achievement and success.	☐1	☐2	☐3	☐4	☐5	☐6	☐7
8. Overall, I feel that my personal values are a good fit with my firm.	☐1	☐2	☐3	☐4	☐5	☐6	☐7
9. All things considered (i.e., pay, promotion, supervisors, co-workers, etc.), how satisfied are you with your present line of work.	☐1	☐2	☐3	☐4	☐5	☐6	☐7
10. Rate your chance of leaving your firm in the next three (3) months:	☐1	☐2	☐3	☐4	☐5	☐6	☐7
11. Rate your chance of leaving your firm in the next six (6) months:	☐1	☐2	☐3	☐4	☐5	☐6	☐7
12. Rate your chance of leaving your firm in the next twelve (12) months:	☐1	☐2	☐3	☐4	☐5	☐6	☐7

Section B. The following questions relate to what your sales organization is like.

Each of the following six parts contains descriptions of organizations. Please distribute 100 points among the four descriptions in each part depending on how similar the description is to your sales organization.
- Please note: None of the descriptions are any better than any other; they are just different.
- Please read all four questions in each part first, then divide the 100 points based on what your firm is like.

– *Most businesses will be some mixture of those described* –

1. KIND OF ORGANIZATION [distribute 100 points]

"My organization is . . .

____ points — a very *personal* place. It is like an extended family. People seem to share a lot of themselves.

____ points — a very *dynamic* and *entrepreneurial* place. People are willing to stick their necks out and take risks.

____ points — a very *controlled and structured* place. Formal procedures generally govern what people do.

•____ points / 100 points — *results oriented*. A major concern is with getting the job done. People are very competitive and achievement oriented.

2. LEADERSHIP [please distribute 100 points]

"The leadership in my organization is generally considered to embody or exemplify . . .

____ points — mentoring, facilitating, or nurturing.

____ points — entrepreneurship, innovating, or risk taking.

____ points — organizing, coordinating, or *smooth-running* efficiency.

•____ points / 100 points — a no-nonsense, aggressive, *results-oriented* focus.

3. WHAT HOLDS THE ORGANIZATION TOGETHER [please distribute 100 points]

"The glue that holds my organization together is . . .

____ points — *loyalty and mutual trust*. Commitment to this firm runs high.

____ points — *commitment to innovation and development*. There is an emphasis on being on the cutting edge.

____ points — *formal rules and policies*. Maintaining a smooth-running organization is important.

•____ points / 100 points — an emphasis on *achievement and goal accomplishment*. Aggressiveness and winning are common themes.

4. WHAT IS IMPORTANT [distribute 100 points]

"My organization emphasizes . . .

____ points — *human development*. High trust, openness, and participation persist.

____ points — acquiring *new resources* and creating *new challenges*. Trying new things and prospecting for opportunities are valued.

____ points — *stability and permanence*. Control, efficiency, and smooth operations are important.

•____ points / 100 points — *competitive actions and achievement*. Hitting stretch targets and winning in the marketplace are dominant.

5. MANAGEMENT OF EMPLOYEES [dist. 100 pts.]

"The management style in my organization is characterized by . . .

____ points — teamwork, consensus, and participation.

____ points — *individual* risk-taking, innovation, freedom, and uniqueness.

____ points — security of employment, conformity, predictability, and stability in relationships.

•____ points / 100 points — hard-driving competitiveness, high demands, and achievement.

6. CRITERIA OF SUCCESS [distribute 100 points]

"My organization defines success on the basis of . . .

____ points — the development of human resources, teamwork, employee commitment, and concern *for people*.

____ points — having the most *unique or newest products*. It is a product leader and innovator.

____ points — efficiency. Dependable servicing, smooth scheduling, and low-cost sales production are crucial.

•____ points / 100 points — winning in the marketplace and outpacing the competition. Competitive market leadership is key.

Section 9. Following are some questions about your manager. If you do not report to anyone directly or on a consistent basis (i.e., weekly/bi-weekly), please SKIP this section and proceed to Section 10.

		Strongly Disagree			Neither Agree Nor Disagree			Strongly Agree
A. In answering the following questions, please focus ONLY on SALES VOLUME or SALES QUOTA targets.								
1	My manager tells me about the level of achievement expected on sales volume or sales quota goals.	☐	☐	☐	☐	☐	☐	☐
2	I receive feedback on whether I am meeting expectations on sales volume or sales quota targets.	☐	☐	☐	☐	☐	☐	☐
3	My manager monitors my progress on achieving sales volume or sales quota targets.	☐	☐	☐	☐	☐	☐	☐
4	Please leave this line blank for administrative purposes.	☐	☐	☐	☐	☐	☐	☐
5	My manager ensures I am aware of the extent to which I attain sales volume or sales quota goals.	☐	☐	☐	☐	☐	☐	☐
B. In answering the following questions, please focus ONLY on SALES ACTIVITIES (e.g., call rate, number of presentations, customers to be contacted, reports to turn in, etc.)								
6	My manager informs me about the sales activities I am expected to perform.	☐	☐	☐	☐	☐	☐	☐
7	My manager monitors my sales activities.	☐	☐	☐	☐	☐	☐	☐
8	My manager informs me on whether I meet he/her expectations on sales activities.	☐	☐	☐	☐	☐	☐	☐
9	If my manager feels I need to adjust my sales activities, s/he tells me about it.	☐	☐	☐	☐	☐	☐	☐
10	My manager evaluates my sales activities.	☐	☐	☐	☐	☐	☐	☐
C. In answering the following questions, please focus ONLY on SELLING SKILLS / SELLING ABILITIES (e.g., negotiation, communication, presentation, etc.)								
11	My manager has standards by which my selling skills are evaluated.	☐	☐	☐	☐	☐	☐	☐
12	My manager periodically evaluates the selling skills I use to accomplish a task (e.g., how I negotiate).	☐	☐	☐	☐	☐	☐	☐
13	My manager provides guidance on ways to improve selling skills and ability.	☐	☐	☐	☐	☐	☐	☐
14	My manager evaluates how I make sales presentations and communicate with customers.	☐	☐	☐	☐	☐	☐	☐
15	My manager assists by suggesting why using a particular sales approach may be useful.	☐	☐	☐	☐	☐	☐	☐

Section 10. Please rate your own level of performance in insurance sales for the last two (2) years.

•Evaluate how you compare to other salespeople in your firm in similar selling situations in the following areas.

	"I would rate my performance on . . ."	Far Below Average			About Average			Far Above Average
1	Sales commissions earned	☐	☐	☐	☐	☐	☐	☐
2	Exceeding sales objectives and targets	☐	☐	☐	☐	☐	☐	☐
3	Generating high levels of new-customer sales	☐	☐	☐	☐	☐	☐	☐
4	Generating high levels of current-customer sales (additional sales)	☐	☐	☐	☐	☐	☐	☐
5	Product knowledge and understanding	☐	☐	☐	☐	☐	☐	☐
6	Assisting your sales supervisor to meet his or her goals	☐	☐	☐	☐	☐	☐	☐
7	Quickly generating sales of new company products	☐	☐	☐	☐	☐	☐	☐
8	Number of current-customer contacts (phone, mail, or in-person)	☐	☐	☐	☐	☐	☐	☐
9	Number of prospecting contacts (phone, mail, or in-person)	☐	☐	☐	☐	☐	☐	☐
10	Customer satisfaction	☐	☐	☐	☐	☐	☐	☐
11	Overall, compared to a typical agent in my firm, I rate my performance	☐	☐	☐	☐	☐	☐	☐

12. How many new insurance sales (i.e., completed applications) have you averaged per month over the last year? . . . . . ____ sales per month

Section II. Please answer the following background questions describing your present situation
• please note that all answers are strictly confidential

1 Please indicate the type of products you primarily sell. Check the three (3) products that you sell the most:
☐ Term Life ☐ Whole/Universal Life ☐ Property-Casualty Insurance ☐ Other (please specify)
☐ Disability ☐ Health Insurance ☐ Annuities _____

2 What is your job title/description? _____
• Would you consider yourself a captive agent? ___ yes ___ no

3 How competitive is the insurance market in which you compete? Is there a lot of competition or a little?
Not Very Competitive 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ Very Competitive

4 Where would your typical customer's income fall within the following national income ranges?
☐ Bottom 25% | ☐ Lower middle 25% | ☐ Upper middle 25% | ☐ Upper 25%

5. Approximately what percentage of your life insurance business is
New Business – from new customers _____ %
Repeat Business – from current customers + _____ %
100%

6 How many customer (or prospective customer) meetings do you have per month? _____ meetings/month
• On average, how long is your typical customer (or prospective customer) meeting? _____ minutes/meeting

7 How many closing presentations do you conduct per month? ___ closings per month

8 How much training have you had in insurance sales?
A. Pre-Contract Training – training prior to selling insurance ..... _____ days
B. Career Training – training in your first two years of insurance sales (e.g., LUTC, company correspondence courses, etc.) ..... _____ days
C. Advanced Training – training in advanced forms of insurance sales (e.g., CLU, ChFC, CPCU, estate planning, etc.) ..... _____ days

9 Approximately what percentage of your compensation is
• ___ % Commission / Bonus (on personal production)
• ___ % Fixed Salary
• ___ % Overrides / general agent's commission (based on other agents' production)
• ___ % Other (please describe. _____)
100%

10. How many years of experience do you have selling insurance with your current employer, _____ years
selling insurance (all insurance employers)? _____ years
selling (in sales overall)? _____ years

11 On average, how many hours per week do you currently work? _____hours/week
• Of these hours, approximately what percent are spent ___ % prospecting (locating prospects, making prospect presentations, etc.)
___ % servicing current clients
___ % non-selling activities (e.g., paperwork, helping managers or other salespeople, district meetings, etc.)
100%

Please tell us about yourself (for statistical purposes only). All information is strictly confidential.

12 Are you ☐ Male ☐ Female ⇒⇒⇒ 13 Your Age _____ ⇒⇒⇒ 14. ☐ Married ☐ Not Married

15 # of dependents (excluding yourself) you help support financially (e.g., spouse, children). ____dependents

16 How many years of formal education did you complete (starting with 1st grade)?
☐ Less than high school
☐ High school diploma
☐ Some college
☐ College degree
☐ Advanced college degree (Masters, JD, Ph.D., etc.)

17 Do you hold an insurance-related designation/certification? If so, please indicate which one _____

18 What is your average annual income over the last two years
☐ < $30k ☐ $30-39k ☐ $40-49k ☐ $50-59k
☐ $60-69k ☐ $70k-79k ☐ $80k-89k ☐ over $90k

– Thank you for participating in this study. Your help is greatly appreciated. –

APPENDIX B

COVER LETTER

<name>
<address>
<address>
<address>

Dear Life Insurance Professional:

As a sales researcher and former insurance salesperson, I am greatly interested in ways to increase salesperson productivity. I am presently conducting a nationwide study of life insurance professionals to identify what influences and impacts salesperson productivity. I would greatly appreciate your assistance in this regard.

Through your insights, opinions, and experiences, as well as those of others like you, I hope to determine how salespeople become more productive and, most importantly, stay productive.
Just as importantly, my objective is to identify how the sales organization can help salespersons accomplish this.

Having sold insurance, I know how valuable your time is, but please take about 15 minutes to complete the enclosed questionnaire. I unfortunately can afford to send out only a limited number of questionnaires. Thus, your response counts -- it is critical to my study.

Your name appeared in a random sample of life insurance agents from firms around the nation. However, please do not put your name on the questionnaire. Your anonymity is guaranteed. Neither your questionnaire nor your envelope can be distinguished from others; your responses will be combined and only composite results will be produced. To make the process convenient, I have enclosed a postage-paid reply envelope.

As a token of my sincere thanks for completing the questionnaire, I would like to send you an Executive Summary of the results of this study. You should find it interesting, informative, and helpful to your practice. Simply enclose your business card with your survey or, to preserve your anonymity, just drop your card in a separate envelope (or email me: dwyer@cab.LaTech.edu).

I hope that you can take a few minutes from your busy schedule, complete the questionnaire, and return it to me. Again, your cooperation is vital to my study. If you have any questions about the survey, please feel free to contact me at (318) 257-2887. Thank you in advance for your assistance -- it is greatly appreciated.

Respectfully,

Sean Dwyer, Ph.D.
Professor, Marketing

PS If you feel that the survey does not apply to you, please let me know this either in a note placed in the reply envelope or via email. I will then be able to send the survey to another person.

APPENDIX C

FOLLOW-UP LETTER

<name>
<address>
<address>
<address>

Dear Life Insurance Professional:

About two weeks ago, we mailed you a questionnaire examining salesperson productivity and sales organizations' practices related to salesperson productivity. We hope that you have been able to mail us your completed questionnaire. If you have, we greatly appreciate your help and thank you for your considerable assistance.

In case the survey has been misplaced, a second copy is enclosed. If you have not returned a completed copy, will you please take a few minutes to give us your response? The information that you can supply is very important to our study. Our objective is to identify what influences and impacts salesperson productivity. And remember, all of your responses to this survey are anonymous.

Again, as a token of my thanks, I would like to send you an Executive Summary of the results of this survey. You should find it interesting, informative, and helpful to your practice. Simply enclose your business card with your survey or, to preserve your anonymity, feel free to drop your card in a separate envelope (or just email me at dwyer@.LaTech.edu).

I hope that you can take a few minutes from your busy schedule, complete the questionnaire, and return it to me. Your cooperation is extremely important to my study.

If you have any questions about the survey, please feel free to contact me at (318) 257-2887.

Thank you in advance for your assistance. It is greatly appreciated.

Sincerely,

Sean Dwyer, Ph.D.
Professor, Marketing

PS If you feel that the survey does not apply to you, please let me know this either in a note placed in the reply envelope or via email. I will then be able to send it to another person.

APPENDIX D

HUMAN SUBJECT PERMISSION TO USE THE QUESTIONNAIRE

LOUISIANA TECH
UNIVERSITY

RESEARCH & GRADUATE SCHOOL

MEMORANDUM

TO: Sean Dwyer
Xueming Luo ✓
Shahid Bhuian
Gene Johnson

FROM: Deby Hamm, Graduate School

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: April 11, 2000

In order to facilitate your project, an **EXPEDITED REVIEW** has been done for your proposed study entitled:

"Antecedents of salesperson effectiveness and efficiency performance: a data envelopment analysis-tobit approach"

Proposal # 1-TF

The proposed study procedures were found to provide reasonable and adequate safeguards against possible risks involving human subjects. The information to be collected may be personal in nature or implication. Therefore, diligent care needs to be taken to protect the privacy of the participants and to assure that the data are kept confidential. Further, the subjects must be informed that their participation is voluntary.

Since your reviewed project appears to do no damage to the participants, the Human Use Committee grants approval of the involvement of human subjects as outlined.

You are requested to maintain written records of your procedures, data collected, and subjects involved. These records will need to be available upon request during the conduct of the study and retained by the university for three years after the conclusion of the study.

If you have any questions, please give me a call at 257-2924

A MEMBER OF THE UNIVERSITY OF LOUISIANA SYSTEM
P.O. BOX 7925 • RUSTON, LA 71272-0029 • TELEPHONE (318) 257-2924 • FAX (318) 257-4687 • [illegible]

APPENDIX E

WORKING SMART AND WORKING HARD SCALE

Items for Working Smart and Working Hard Scale

Working Smart

Planning for the Sale

1. I get to my work without spending too much time on planning.
2. I list the steps necessary for making a sale.
3. I think about strategies I will fall back on if problems in a sales interaction arise.
4. Because too many aspects of my job are unpredictable, planning is not useful.
5. I keep good records about my accounts.
6. I set personal goals for each sales call.
7. Each week I make a plan for what I need to do.
8. I do not waste time thinking about what I should do.
9. I am careful to work on the highest priority tasks first.
10. Planning is a waste of time.
11. Planning is an excuse for not working.
12. I don't need to develop a strategy for a customer to get the sale.

The Practice of Adaptive Selling

1. Basically, I use the same approach with most customers.
2. I vary my sales style form situation to situation.
3. I like to experiment with different sales approaches.
4. I use a set sales approach.

5. I can easily use a wide variety of selling approaches.

6. I find it difficult to adapt my presentation style to certain buyers.

7. Each customer requires a unique approach

8. I am very sensitive to the needs of my customers

9. When I find that my sales approach is not working,

10. I can easily change to another approach.

11. It is easy for me to modify my sales presentation if the situation calls for it.

12. I feel that most buyers can be dealt with in pretty much the same manner.

13. I am very flexible in the selling approach I use.

14. I try to consider how one customer differs from another.

15. I feel confident that I can change my planned presentation when necessary.

16. I do not change my approach from one customer to another.

17. I treat all of the buyers pretty much the same.

Functional Flexibility in Sales

"When the sales situation seems to need it, how easy is it for you to be . . ."

1. Dominant

2. Warm

3. Aloof

4. Ambitious

5. Cold

6. Extroverted
7. Introverted
8. Outgoing
9. Laid back
10. Agreeable
11. Aggressive
12. Trusting
13. Unassuming
14. Demanding
15. Submissive
16. Calculating

Working hard

1. I work long hours to meet my sales objectives.
2. I do not give up easily when I encounter a customer who is difficult to sell.
3. I work untiringly at selling a customer until I get an order.
4. On average, how many hours a week do you currently work?

APPENDIX F

GOAL ORIENTATION SCALE

Items for Goal Orientation Scale

Learning Goal Orientation Items

1. It is worth spending a lot of time learning new approaches for dealing with customers.
2. An important part of being a salesperson is continually improving your sales skills.
3. I put in a great deal of effort sometimes in order to learn something new about selling.
4. It is important for me to learn from each selling experience I have.
5. Learning how to be a better salesperson is of fundamental importance to me.
6. Making mistakes when selling is just part of the learning process
7. I am always learning something new about my customers.
8. There really are not a lot of new things to learn about selling.
9. Making a tough sale is very satisfying.

Performance Goal Orientation Items

1. It is very important to me that my manager sees me as a good salesperson.
2. I feel very good when I know I have outperformed other salespeople in my company.
3. I always try to communicate my achievements to my manager.
4. I very much want my coworkers to consider me to be good at selling.
5. I spend a lot of time thinking about how my performance compares with that of other salespeople.
6. I evaluate myself using my supervisor's criteria.

APPENDIX G

SELF-EFFICACY SCALE

Items for Self-Efficacy Scale

1. I am good at selling.
2. It is difficult for me to put pressure on a customer.
3. I know the right thing to do in selling situations.
4. I find it difficult to convince a customer who has a different viewpoint than mine.
5. My temperament is not well-suited for selling.
6. I am good at find out what customers want.
7. It is easy for me to get customers to see my point of view.

APPENDIX H

ORGANIZATIONAL CULTURE SCALE

Items for Organizational Culture

Market Culture Items

My organization is ...

...results oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.

The leadership in my organization is generally considered to exemplify...

...a non-nonsense, aggressive, results-oriented focus.

The glue that holds my organization together is...

...an emphasis on achievement and goal accomplishment. Aggressiveness and winning are common themes.

My organization emphasizes...

...competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant.

The management style in my organization is characterized by...

...hard-driving competitiveness, high demands, and achievement.

My organization defines success on the basis of...

...winning in the marketplace and outpacing the competition. Competitive market leadership is the key.

Clan Culture Items

My organization is ...

...a very personal place. It is like an extended family. People seem to share a lot of themselves.

The leadership in my organization is generally considered to exemplify...

...mentoring, facilitating, or nurturing.

The glue that holds my organization together is...

...loyalty and mutual trust. Commitment to this firm runs high.

My organization emphasizes...

...human development. High trust, openness, and participation persist.

The management style in my organization is characterized by...

...teamwork, consensus, and participation.

My organization defines success on the basis of ...

...the development of human resources, teamwork, employee commitment and concern for people.

Adhocracy Culture Items

My organization is ...

...a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.

The leadership in my organization is generally considered to exemplify...

...entrepreneurship, innovating, or risk-taking.

The glue that holds my organization together is...

...commitment to innovation and development. There is an emphasis on being on the cutting edge.

My organization emphasizes...

...acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.

The management style in my organization is characterized by...

...individual risk taking, innovation, freedom, and uniqueness.

My organization defines success on the basis of ...

...having the most unique or newest products. It is a product leader and innovator.

Hierarchy Culture Items

My organization is ...

...a very controlled and structured place. Formal procedures generally govern what people do.

The leadership in my organization is generally considered to exemplify...

...coordinating, organizing, or smooth-running efficiency.

The glue that holds my organization together is...

...formal rules and policies. Maintaining a smooth-running organization is important.

My organization emphasizes...

...permanence and stability. Control, efficiency, and smooth operations are important.

The management style in my organization is characterized by...

...security of employment, conformity, predictability, and stability in relationships.

My organization defines success on the basis of...

...efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical.

APPENDIX I

SALES FORCE CONTROL SYSTEMS SCALE

Control Systems

Supervisory End-Results Orientation

1. My manager tells me about the level of achievement expected on sales volume or sales quota goals.
2. I receive feedback on whether I am meeting expectations on sales volume or sales quota targets.
3. My manager monitors my progress on achieving sales volume or sales quota targets.
4. My manager ensures I am aware of the extent to which I attain sales volume or sales quotas.

Supervisory Activity Orientation

5. My manager informs me about the sales activities I am expected to perform.
6. My manager monitors my sales activities.
7. My manager informs me on whether I meet his/her expectations on sales activities.
8. If my manager feels I need to adjust my sales activities s/he tells me about it.
9. My manager evaluates my sales activities.

Supervisory Capability Orientation

10. My manager has standards by which my selling skills are evaluated.
11. My supervisor periodically evaluates the selling skills I use to accomplish a task.
12. My manager provides guidance on ways to improve selling skills and ability.
13. My supervisor evaluates how I make sales presentations and communicate with customers.
14. My manager assists by suggesting why using a particular sales approach may be helpful.

APPENDIX J

SALESPERSON TRAINING SCALE

Training

How much training have you had in insurance sales?

A. **Pre-Contract Training – training prior to selling insurance**
1_____ **days**

B. **Career Training – training in your first two years of insurance sales (e.g., LUTC, company correspondence courses, etc.)**
2_____ **days**

C. **Advanced Training – training in advanced forms of insurance sales (e.g., CLU, ChFC, CPCU, estate planning, etc**
3_____ **days**

APPENDIX K

SALESPERSON EFFECTIVENESS PERFORMANCE SCALE

Salesperson Effectiveness Performance

"I would rate my performance on . . .

1. Sales commissions earned.
2. Exceeding sales objectives and targets
3. Generating high levels of new-customer sales.
4. Generating high levels current-customer sales (additional sales).
5. Product knowledge and understanding.
6. Assisting your sales supervisor to meet his or her goals.
7. Quickly generating sales of new company products.
8. Number of current-customer contacts (phone, mail, or in-person)
9. Number of prospecting contacts (phone, mail, or in-person).
10. Customer satisfaction.
11. Overall, compared to the typical agent in my firm, I rate my performance.
12. How many new insurance sales (i.e., completed applications) have you averaged per month over the last year? _____ sales per month?

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