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Personal Factors Affecting Sales Performance: Modeling the Effects of Experience, Competitiveness, Self-Efficacy, Effort, and Creativity.

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PERSONAL FACTORS AFFECTING SALES PERFORMANCE: MODELING THE EFFECTS OF EXPERIENCE, COMPETITIVENESS, SELF-EFFICACY, EFFORT, AND CREATIVITY

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Interdepartmental Program in Business Administration (Marketing)

by

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DEDICATION

This dissertation is dedicated to my parents, Wang Wenzhang and Yunqin, and my parents-in-law, Zhu Baichuan and Xie Zhaodi, for their sacrifice and unconditional love.
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Many thanks, first of all, to Ms. Sarah Hill, Ms. Connie Kyle, all the respondents to my surveys, and all the managers that I interviewed. Without their help, support, and their willingness to share with me their knowledge and experience, this research would still be in dreamland. I hope that those who requested a study summary will find that this research offers valuable insights to their practice.

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handedly raised Gillis, who was born shortly after I started my doctoral program. Gillis, at a too young age, began to be aware that Daddy had no time to play with him and the room where Daddy spent most of his time was called “office.” Qiaozhen’s unwavering encouragement, support, and love have been the major source of my energy and have spurred my continuous improvement. Thank you, Qiaozhen and Gillis. This dissertation is truly your accomplishment.
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ABSTRACT

Sales performance represents an important ongoing research stream to both academicians and practitioners. It is widely recognized that personal/individual factors affect how salespeople perform. Despite the numerous studies, the search for the most powerful determinants of salesperson performance has largely been unsuccessful (Churchill et al. 1985). This dissertation makes another attempt to understand the effects of select personal factors on salespeople's performance. In particular, a neglected personal factor, salesperson creativity, is introduced as a direct predictor of performance. Based on the social psychological research on creativity and the in-depth personal interviews with sales managers in various industries, the author defines salesperson creativity as new ideas generated, and novel behaviors exhibited, by the salesperson in performing his or her job activities. Drawing on motivational theory, social cognitive theory, and social psychological theories of creativity, the research proposes an individual-level model of salesperson performance. The model posits work effort and creativity as direct antecedents of performance, trait competitiveness and self-efficacy as indirect predictors, and selling experience as having both direct and indirect impacts on performance. The model was tested using two considerably different samples (real estate agents and outdoor billboard advertising salespeople). Six of the eight hypothesized relationships in the model were supported across the samples. The empirical findings highlight the incremental explanatory contribution of the creativity construct to sales performance, the critical influence of self-efficacy on creativity, and the overall validity of the model. A scale of salesperson creativity with acceptable psychometric measurement properties is also developed.

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CHAPTER ONE: INTRODUCTION

In Proctor & Gamble's recruiting brochure, sales careers at P&G are described as follows (Anderson, Hair, and Bush 1999, p. 2.6):

The challenge you face in sales is to become the acknowledged expert on your brands, categories, customers, and the marketplace. Your responsibility is to develop and execute selling strategies needed to drive the business ahead. You must analyze the business, identify opportunities, and then develop specific plans to capitalize on them. Sometimes you work alone, but more often you must skillfully manage others to achieve your goals. As a member of P&G Sales, you also must be an “entrepreneur,” and your own boss.

Obviously, as a member of P&G's Sales Team, you're no mere order-taker. You must be a creative merchandiser with business-building ideas. As your knowledge increases, you'll develop creative solutions for the day-to-day problems and challenges that are an inevitable part of the business: a newspaper advertising theme tying in your brands; a unique promotion relating your brands with a topic in the national or local spotlight; an innovative selling idea specifically aimed at the demographics of your area; or a tailored solution to a warehouse-to-store distribution problem. This kind of creativity and results-oriented thinking are the hallmark of the P&G salesperson.

Highlighting the creative nature of a sales job, the above is a typical description of a sales career in customer-oriented firms. To survive and excel in an era of increasing competition requires the salesperson to continuously learn and engage in creative activities. The importance of salesperson creativity is evidenced in numerous successful businesses. An examination of the 25 best sales forces selected by Sales & Marketing Management (July 1998) revealed a common characteristic of successful salespeople: they all emphasize creative, problem-solving approaches to selling. For the sales organization, finding and solving problems for the customer is a fundamental goal. Markets evolve, customers change, and technology advances, making it impossible to foresee all the problems customers might face. Even for the experienced salesperson, tasks such as finding new prospects, locating the decision-maker in a buyer
organization, identifying the real needs for a customer or prospect, and seeking tailored solutions to customer problems may all require creative thinking and novel solutions. Thus, creativity is an inherent requirement in the sales job; to ignore salesperson creativity is to leave out a vital part of the sales process. Unfortunately, the contemporary sales literature has virtually ignored the creative aspects of selling, and it has failed to address important issues related to salesperson creativity.

The purpose of this dissertation is to examine the role of salesperson creativity as an important determinant of the sales performance in the context of other more recognized performance predictors. An individual-level model of sales performance is proposed that posits salesperson creativity, work effort, and selling experience as direct predictors of performance. The model further hypothesizes that the salesperson's self-efficacy is a primary predictor of creativity and effort. Self-efficacy, on the other hand, is affected by the salesperson's trait competitiveness and selling experience. The remainder of this introductory chapter first provides an overview of the dissertation, followed by the methodology for testing the model. Finally, theoretical and managerial contributions are discussed.

DISSertation OVERview

In this section, the proposed model is briefly described. Before doing so, salesperson creativity is first defined based on contemporary creativity research from a social psychological tradition. A more detailed literature review is offered in Chapter Two.
Salesperson Creativity

Contemporary creativity research suggests that creativity can be expressed by anyone, though to different degrees and in different fashions. Further, creativity should be treated as a subjective judgment about one’s behavior as being both novel and useful within a specific domain (Amabile 1983a, b; Gardner 1993; Gruber, Terrell, and Wertheimer 1982; Nickerson 1999; Rubenson and Runco 1992; Sternberg and Lubart 1999; Williams and Yang 1999). In line with the behavioral emphasis in this literature, salesperson creativity is defined as new ideas generated and/or novel behaviors exhibited by the salesperson in performing his or her sales job activities.

The salesperson’s creativity can be exhibited in many aspects of the sales job. Creativity is evidenced when the salesperson generates new, better solutions for old problems, provides solutions for novel problems, sees old problems from a different perspective, defines a new problem, detects a neglected problem, and/or makes innovative sales presentations. Transferring knowledge and skills to sales problems from other domains can also be creative. These new ideas and behaviors are necessary and useful in solving unstructured, unexpected problems for the customer and the sales organization alike. They should contribute to the performance on the sales job and, in aggregate, should benefit organizational performance.

Based on theories of creativity and the theoretical and empirical evidence available in the sales literature, I propose a model of sales performance incorporating the construct of salesperson creativity as an important and direct antecedent to performance. The model is illustrated in Figure 1.1. A brief overview of the model follows.
Direct Antecedents of Sales Performance

The model proposes three direct antecedents to sales performance: work effort, creativity, and selling experience. This is in line with the long tradition of viewing sales performance as a function of motivation and skills and the more recent research that emphasizes both working hard and working smart for effective selling (Churchill, Ford, and Walker 1997; Sujan, Weitz, and Kumar 1994).

![Model of Salesperson Performance]

FIGURE 1.1
Model of Salesperson Performance

The salesperson's motivation level has been demonstrated as a significant predictor of sales performance (Churchill et al. 1997). Effort is a mediating mechanism by which motivation is translated into accomplished work (Brown and Peterson 1994). Although not much attention has been devoted to effort as a direct antecedent of performance, results obtained by the few authors who have studied the effect of work
effort show strong evidence of effort as a direct antecedent of sales performance (Bartkus, Peterson, and Bellenger 1989; Brown and Peterson 1994). Thus, effort is posited as having a direct and positive effect on sales performance.

The salesperson’s selling experience has been posited as another important predictor of job performance (Bartkus, Peterson, and Bellenger 1989; Behrman and Perreault 1984; Kerr and Jermier 1978; Walker, Churchill, and Ford 1977). Experience leads to higher levels of sales-related knowledge and skills and has been found to influence a number of important variables such as motivation, job skills, role perceptions, customer orientation, and finally, performance (Ingram and Bellenger 1983; O’Hara, Boles, and Johnston 1991; Walker, Churchill, and Ford 1975). Experienced salespeople have been suggested to have a better understanding of their jobs, customers, and company policies (Churchill, Ford, and Walker 1976). The final direct determinant of sales performance in the model is the salesperson’s creativity. As noted earlier, salesperson creativity has received virtually no attention in the academic sales research. Its effect on overall sales performance is, therefore, speculative at best, even though anecdotal evidence is abundant. It is suggested here that the salesperson’s creativity is likely to improve his or her job performance for at least three reasons. First, the effectiveness and efficiency of performing many job activities are likely to increase when the salesperson is able to creatively utilize available resources and find new and better ways of getting the work done. Second, creative identification of potential customers and their problems may lead to more successful development of new accounts. Third, creative solutions to customer problems tend to delight the customer and increase customer satisfaction, which will
lead to a higher level of customer retention and positive word-of-mouth referral. I suggest that creativity makes a unique contribution to performance beyond the effects of effort and experience.

**Indirect Antecedents of Sales Performance**

As well recognized in the sales literature, personal characteristics play a significant role in determining the salesperson’s performance. The proposed model posits three indirect antecedents of sales performance: self-efficacy, trait competitiveness, and selling experience. Salesperson creativity is conceptualized as different from scientific and artistic creativity in that the former represents smaller deviations from daily routines while the latter tends to be greater in scope and degree. In this regard, salesperson creativity is posited as being primarily affected by the individual’s self-efficacy beliefs. Self-efficacy, a central construct in social cognitive theory, refers to people’s judgments about their capability to organize and execute courses of action required to attain particular designated types of performance (Bandura 1986). It has been suggested that the effect of self-efficacy on task performance is primarily “through enlistment of effort and creative use of capabilities and resources” (Wood and Bandura 1989, p. 374). Research has shown that employees who feel efficacious of performing particular tasks will persist at them in the face of adversity (Lent, Brown, and Larkin 1987) and cope more effectively with change (Hill, Smith, and Mann 1987; Zhou 1998). Sales research has documented evidence that self-efficacy is positively related to adaptive selling and work effort (Spiro and Weitz 1990; Sujan, Weitz, and Kumar 1994). In an experimental setting, Redmond, Mumford, and
Teach (1993) documented the positive effect of self-efficacy on the quality and originality of solving marketing problems.

The proposed model incorporates two exogenous constructs, selling experience and trait competitiveness, as predictors of self-efficacy. These two constructs have been consistently regarded as extremely important determinants of sales performance (Brewer 1994; Brown, Cron, and Slocum 1998; Churchill, Ford, and Walker 1997), and their role as individual level determinants of the salesperson's self-efficacy cannot be overestimated. Social cognitive theory posits that self-efficacy beliefs can be enhanced in a number of ways, the most effective of which is mastery experiences (Bandura 1986). Selling experience provides the knowledge and skills that salesperson can rely on to effectively deal with different sales problems, thus increasing the level of self-efficacy.

Trait competitiveness is the "enjoyment of interpersonal competition and the desire to win and be better than others" (Spence and Helmreich 1983, p. 41). The mechanism by which this trait affects performance is not totally clear, however. It is suggested here that competitiveness is likely to affect performance indirectly through its effects on work effort and self-efficacy. Motivational theorists suggest individuals have innate, dispositional needs and motives that drive them to behave in certain ways (Hechhausen, Schmalt, and Schneider 1985). For the highly competitive salespeople, the inherent desire to be number one and the importance they attach to exceeding the performance of others motivate them to exert a high effort level, set high goals, and use effective approaches (Bartkus et al. 1989; Brown et al. 1998; Locke 1968). Social cognitive theory suggests that personality variables influence physiological and
psychological states, which in turn affect self-efficacy (Bandura 1986; Gist and Mitchell 1992). Indirect empirical evidence suggests that more competitive individuals have higher levels of physiological arousal and higher levels of self-efficacy (Friedman and Rosenman 1974; Taylor et al. 1984).

Model Summary

This research is the first attempt to study salesperson creativity. The effect of creativity on performance is investigated in conjunction with the effects of two well-established antecedents: work effort and selling experience. The model further proposes that self-efficacy, trait competitiveness, and experience are direct and indirect determinants of effort and creativity. Expanded theoretical rationale for the model is offered in Chapter Two.

METHODOLOGY

The proposed model was tested using cross-sectional survey data collected from two samples: real estate sales agents and outdoor billboard advertising salespeople. The survey data were analyzed with the structural equation modeling (SEM) technique. SEM allows researchers to test several direct and indirect linear relationships simultaneously (Bollen 1989; Hoyle 1995). While the nature of cross-sectional data prohibits any conclusion on causality, SEM may help us infer directional relationships among variables. Further, in estimating the model fit and path coefficients, the structural equation modeling technique incorporates the possible effects of measurement error of the constructs, thus allowing a more accurate account of the true relationships among the constructs.
Pretest Study

The first study served as a pretest, with a focus on developing the salesperson creativity scale, refining other measures, and identifying other problems in the measurement model. Data were collected from 156 real estate agents affiliated with a regional real estate company in the southern U.S. Measurement model results revealed the construct measures were adequate in terms of unidimensionality, construct validity, and internal consistency. The pretest procedures and results are reported in Chapter Three.

Main Dissertation Study

The second survey study served as the main dissertation study for testing the proposed model. Cross-sectional data were collected from 201 salespeople employed by a national billboard advertising company. The salespeople were asked to respond to questions pertaining to their performance, creativity, work effort, self-efficacy, trait competitiveness, and selling experience. Manager-rated performance and objective sales volume data were also collected from the salespeople's supervisors. Overall, the model received substantial empirical support. Seven of the eight hypothesized paths were significant and in the predicted directions. As a cross-validation effort, the pretest data were used to test the hypotheses. Again, seven of the eight hypothesized paths were supported. The procedures and findings of the main study are reported in Chapter Four.

CONTRIBUTIONS

This research contributes to the sales literature in several important ways. First, it introduces the concept of salesperson creativity and offers a conceptualization of it
based on contemporary theories of creativity. Second, integrating sales research with social cognitive theory, motivation theory, and social psychological research in creativity, the dissertation proposes and tests a model incorporating five direct and indirect antecedents to performance with a special focus on the effect of salesperson creativity on sales performance. Third, in testing the proposed model, a valid and reliable measurement instrument of salesperson creativity is developed, which will facilitate future research in this area. As such, the dissertation will open a new avenue of inquiry for research on personal selling and sales force management. Further, the significance of salesperson creativity lies not only in its effect on sales performance, but also in its potential impact on organizational knowledge, which leads to the firm’s competitive advantage. By and large, the topic of salesperson creativity deserves extensive devotion from not only sales researchers but organizational theorists as well.

Managerial implications that can be drawn from this research are also abundant. Management should pay close attention to fostering salesperson creativity. With heightened competition in the marketplace and more sophisticated and demanding customers with regard to various aspects of product and service, creativity will be needed. Salespeople will not only have to work very hard, but also have to be creative in carrying out various job activities in order to survive and excel. More competitive, self-efficacious, and experienced salespeople are more likely to succeed through their expended effort and heightened creativity. In the meantime, sales organizations should employ available managerial tools to foster creativity and self-efficacy among their salespeople.
CHAPTER TWO: MODEL AND THEORETICAL BACKGROUND

This chapter reviews the literature relevant to this dissertation, based on which an individual-level model of sales performance is proposed. The chapter is organized in three sections. The literature pertaining to antecedents of individual salesperson performance is reviewed in the first section. The second section is devoted to the conceptualization of salesperson creativity. Finally, the third section proposes the model, delineates each construct and path in the model, and develops hypotheses.

LITERATURE REVIEW

In this section, the literature on sales performance is reviewed. Specifically, the review will focus on three sets of individual level antecedents of sales performance, namely, personality, skills, and motivation and effort. These three groups of variables have been consistently viewed as important determinants of performance (Churchill et al. 1997; Weitz, Sujan, and Sujan 1986). Controlling and manipulating these variables effectively in the processes of selecting, recruiting, training, and organizing is an important on-going issue in sales force management.

Salesperson Performance

The importance of salesperson performance cannot be overstressed. The success of any sales and marketing organization ultimately depends on the success of individual salespeople, for their performance directly affects the firm’s bottom line, not just in the short run, but in the long run as well. In the process of buyer-seller interaction and communication, salespeople develop new business, build customer trust, nurture long-term relationships, create added value for customers, and provide market information to management. With changing and more diverse buyer behavior, the
salespeople’s role as relationship managers in the marketing organization has never been more critical (Anderson et al. 1999; Weitz, Castleberry, and Tanner 1998). Advances in technology are not replacing the salesperson (Keenan 1994); instead, the demand for salespeople has been increasing and continues to increase. By 2005, total sales jobs are projected to increase by 18% from 1992 to 16,400,000 (Bureau of Labor Statistics 1997). Further, costs associated with salespeople recruiting, selection, and training keep soaring. Therefore, knowledge of how to achieve superior salesperson performance is of fundamental and enduring interest to sales managers and organizations, as well as salespeople themselves.

While salesperson performance is the central concern of all sales organizations, firms emphasize different aspects of performance. In general, salesperson performance has been defined and measured from either objective or subjective perspectives, or both (Behrman and Perreault 1982). Objective performance is defined and measured in terms of unit sales volume, dollar sales volume, contribution to profit, number of new accounts, and the like. Subjective performance, on the other hand, is measured through evaluations by supervisors, customers, coworkers, or salespeople themselves on such aspects as communication effectiveness, sales volume, customer relations, controlling expenses, territory management, mastering selling skills, teamwork, providing information to management, and so forth.

A controversy exists as to whether salesperson performance should be measured subjectively or objectively and, if subjective measures are to be used, whose evaluations would be the most reliable. It has been suggested that a choice can be made on the basis of the aspects of performance in which the researcher is most interested (Landy
and Farr 1980). A number of researchers have argued for the validity and appropriateness of self-evaluations in assessing the performance of boundary-spanning employees such as salespeople (Behrman and Perreault 1982; Harris and Schaubroeck 1988; Sujan, Weitz, and Kumar 1994).

Since the focus of this dissertation is to examine the effects of certain aspects of the salesperson's behavior (i.e., creative behavior) on performance, an attempt is made to emphasize the quantitative outcome aspect of performance. Given that self-evaluation measures of salesperson performance are widely used and accepted, sales performance is operationalized here as the salesperson's perception of his or her overall achievement in sales, especially in the quantity of sales achieved, as compared with his or her fellow salespeople.

Antecedents of Salesperson Performance

Given the critical importance of sales performance to the sales organization, numerous studies have been conducted over the decades in searching for the most powerful determinants of salesperson performance. While the predictive power of these variables varies widely across situations and studies, the overall explained variance in sales performance has not been high (cf. Churchill et al. 1985; Vinchur et al. 1998). Churchill et al.'s (1985) meta-analysis grouped performance antecedents into six categories: role perceptions, aptitude, skill level, motivation level, demographics, and organizational and environmental variables. They found attenuation-corrected correlations of predictor-performance ranging widely from a low of .104 for organizational/environmental factors to a high of .379 for role perception variables. It is surprising to note that no single psychological, behavioral, environmental, or
organizational factor has been found to explain, on average, even as much as 10% of the variation in salesperson performance. Thus, more effort is needed to identify the most important determinants of variations in salesperson performance.

Among all the variables, individual-level antecedents of sales performance have probably been examined most frequently. These variables remain of interest for a number of reasons. First, many of these variables are relevant to the recruiting and selection of salespeople and the costs associated with hiring wrong salespeople are becoming prohibitively high. Second, variables at the organizational and environmental levels are likely to affect sales performance via the mediation and/or moderation of individual-level factors. Third, consistent and strong results for these individual-level variables are lacking despite the persistent research effort. For these reasons, this dissertation will also focus on individual level antecedents. In the remainder of this section, the individual-level antecedents related to personality, skills, and motivation, which are directly relevant to the proposed model, are critically reviewed.

**Personality Variables**

Extensive research has produced inconsistent results as to the predictive validity of personality variables for sales performance (e.g., Hunter and Hunter 1984; Schmitt et al. 1984). The Big Five model suggests five dimensions of personality: Extraversion (or Surgency), Emotional Stability (or Neuroticism), Agreeableness (or Likability), Conscientiousness (or Will to Achieve), and Openness to Experience (or Intellect) (Barrick and Mount 1991; Costa and McCrae 1985; Vinchur et al. 1998). The alternative Hough model suggests nine personality dimensions (Hough 1992; Hough et al. 1990). The Hough model shares three common dimensions with the Big Five model:
Adjustment (Emotional Stability), Agreeableness, and Intellectance (Openness to Experience). The Big Five dimension of Extraversion is divided into two sub-dimensions of Affiliation (sociability) and Potency (impact, influence, and energy). Conscientiousness is split into Achievement (striving for competence in one's work) and Dependability (reliability, organization, and respect for authority). Two other dimensions that do not have their equivalents in the Big Five model are Rugged Individualism (decisiveness, action-orientation, and lack of sentimentality) and Locus of Control (one's belief in the amount of control one has over rewards and punishment).

A couple of meta-analyses have been conducted to assess the ability of the personality dimensions and sub-dimensions to predict sales performance (Barrick and Mount 1991; Mount and Barrick 1995; Hough 1992; Hough et al. 1990). Predictor-performance correlation across these studies have ranged considerably from -.02 for Openness to Experience (Barrick and Mount 1991) to .51 for Conscientiousness (Mount and Barrick 1995). The limited number of sales studies examined by Hough (1992) suggest Potency is a modest predictor of performance with a mean uncorrected correlation of .25 with sales effectiveness, whereas Dependability showed an uncorrected correlation of only .06.

In a more recent meta-analysis, Vinchur et al. (1998) have found that while the personality dimensions and sub-dimensions have differential correlations with sales performance, the dimension of Conscientiousness and the sub-dimensions of Potency and Achievement are particularly strong predictors of sales performance. Potency had mean correlations (corrected for criterion unreliability and range restriction) of .28 and
.26 with subjective performance ratings and objective measures, respectively, whereas Achievement had coefficients of .25 and .41, respectively.

Vinchur et al.’s (1998) study indicates that personality variables that appear to be strong predictors of sales performance tend to reflect the salesperson’s motivational and skill levels. Both Achievement and Potency seem to be related to motivation and skills. Consistent with this observation, recent sales research has examined the effects of two constructs: the salesperson’s trait competitiveness and self-efficacy. Trait competitiveness is a personality trait related to both Achievement and Potency, and has been conceptualized as an aspect of personality that involves “the enjoyment of interpersonal competition and the desire to win and be better than others” (Spence and Helmreich 1983, p. 41). Although the effect of competitiveness has not been extensively investigated, the variable has shown promising association with performance in sales (Bartkus et al. 1989; Brown, Cron, and Slocum 1998; Brown and Peterson 1994; Plotkin 1987) as well as in other domains (Carsrud and Olm 1986; Helmreich et al. 1980). Self-efficacy, a central construct in Bandura’s (1977, 1986) social cognitive theory, refers to people’s judgments about their capability to organize and execute courses of action required to attain particular designated types of performance. It “is concerned not with the skills one has but with the judgments of what one can do with whatever skills one possesses” (Bandura 1986, p. 391). Sales research has documented empirical evidence that self-efficacy is positively related to adaptive selling (Spiro and Weitz 1990; Sujan, Weitz, and Kumar 1994) and selling effort (Sujan, Weitz, and Kumar 1994, Brown, Cron, and Slocum 1998). In this
dissertation, the effects of the salesperson's trait competitiveness and self-efficacy are hypothesized and tested.

Skill Levels

Researchers have long noticed the importance of job-related skills and abilities as predictors of sales performance. Consistent results regarding the predictive power of cognitive ability are lacking, however. Hunter and Hunter (1984) found corrected mean correlations of .61, .40, and .29 between salesperson performance and cognitive ability, perceptual ability, and psychomotor ability, respectively. Vinchur et al.'s (1998) meta-analysis also indicates the strong predictive power of sales ability and interest in sales, although only a limited number of studies were used. Schmitt et al. (1984), however, revealed poor validity of cognitive ability tests for predicting sales performance. Also, cognitive ability appears to predict managerial ratings of performance relatively well, but it does not predict objective sales volume measures (Vinchur et al. 1998).

Sales-related skills, on the other hand, seem to be more promising antecedents to sales performance. Skills are the salesperson's learned proficiency at performing the necessary tasks (Leong, Busch, and Roedder John 1989). The skills related to sales performance are thought to include vocational skills, presentation skills, interpersonal skills, general management skills (Ford, Walker, Churchill, and Hartley 1987), and information collection and analysis skills (Weitz et al. 1986). Churchill et al. (1985) report an attenuation-corrected meta-correlation of .32 between skill and performance. Correlation of this magnitude, although smaller than that between performance and role perception (.379), is larger than that between performance and aptitude (.193),
motivation (.258), personal factors (.292), or organizational/environmental factors (.104).

Skills and knowledge are inseparable. They tend to reinforce each other in that knowledge facilitates the development and application of skills, and in the meantime, skills improve knowledge acquisition and utilization (Churchill et al. 1997). Salespeople need an elaborate knowledge base of sales-related situations, behaviors, and contingencies that link behaviors to situations (Weitz et al. 1986). Research has examined the salesperson’s knowledge developmental stages. Anderson (1982) posits a three-stage model of knowledge development. The first stage is referred to as the declarative stage where knowledge is represented propositionally or as facts. Declarative knowledge (or schema-based knowledge) is attribute information pertaining to clients that is organized in categories (Szymanski 1988). It is the set of situational cues that enables a salesperson to recognize or classify a particular selling situation as an instance of a more general category (Leigh and McGraw 1989). The second developmental stage is a gradual compilation process by which knowledge is converted from declarative to procedural form so that it can be applied directly to generating behavior. In the final stage, fine-tuned procedural knowledge is developed so that it will be applied more appropriately and efficiently. Procedural knowledge, also called “script” knowledge, is essentially “a set of learned behavioral routines that fit various selling situations. Once activated from memory in a sales context, procedural knowledge guides the implementation of an intended selling approach” (Leigh and McGraw 1989, p. 17).
Based on the three stages of knowledge development, Weitz et al. (1986) propose that procedural knowledge is the key feature distinguishing an expert’s knowledge structure from that of a non-expert, and that procedural knowledge should be positively related to the effectiveness of adaptive selling. Adaptive selling refers to altering sales behaviors during a customer interaction or across customer interactions based on the perception of the selling situation (Weitz et al. 1986). Thus, adaptive selling has an emphasis on customer interactions and the message communicated from the salesperson to the customer. As Weitz et al. (1986) put it, an extreme example of non-adaptive selling is delivering the same “canned” presentation to all customers. When the salesperson uses unique sales presentation for each customer and also alters his or her behavior during an interaction, he or she is said to be extremely adaptive.

With an elaborate knowledge structure, especially a rich inventory of procedural knowledge, the salesperson can practice adaptive selling by choosing the most effective presentation from the existing memory.

While much recent research attention has been devoted to salespeople’s practice of adaptive selling, a direct link between adaptive behavior and sales performance has not been demonstrated conclusively. Significant positive relationships have been reported in research by Predmore and Bonnice (1994), Spiro and Weitz (1990), and Sujan et al. (1994), whereas less convincing results are suggested in Goolsby, Lagace, and Boorom (1992) and Marks, Vorhies, and Badovick (1996). A direct link across situations seems unlikely because the effectiveness of adaptive selling may be contingent on a number of situational factors (Weitz 1981; Weitz et al. 1986).
The above review of sales skills and adaptive selling points to an important gap in this stream of research. As noted, adaptive selling behavior is typically manifested through the alteration of the sales presentation based on the understanding that customers have different beliefs and needs (Sujan et al. 1994; Weitz et al. 1986). When the differences among the customers are small and within expectations, adaptation in sales presentation is possible and may be sufficient. The salesperson with a rich knowledge structure should have ready scripts stored in his or her memory in the form of procedural and declarative knowledge to deal with the different situations. But what if the selling situation is a novel one that has not been encountered before and there is no satisfactory solution existing in the salesperson’s memory? This can occur when the market conditions are rapidly changing and customer requirements differ dramatically in various aspects of product and service. Scripts in memory become inadequate, and simple adaptation in presentations may no longer be sufficient. In this case, the effective salesperson may have to use existing knowledge to generate new ideas and approaches. This process is what is termed “salesperson creativity” or “creative behavior” in this dissertation.

An exemplar process in which creativity plays a role can be described as follows. When encountering a selling situation or sales problem, the salesperson will first search his or her memory for the most appropriate approaches or solutions. If the salesperson fails to find a suitable solution from the inventory, he or she may have to generate an idea or solution that is better suited than existing solutions for the particular problem at hand, or the customer may become unsatisfied and turn away from the salesperson. Once the idea or solution is generated and proved to be a useful one, it
becomes part of the inventory and can be used later for more effective adaptation. This is consistent with the following discussion by Weitz et al. (1998):

> When [salespeople] encounter a customer with needs different than those they have dealt with previously — a customer who does not fit into an existing category — they add a new category to their repertoire. Salespeople with more categories, or customer types, have more selling approaches to use and thus have a greater opportunity to practice adaptive selling — to adjust their sales presentation to specific customer needs. (p. 164)

In today’s dynamic markets, customer needs have become more divergent and firms can be successful only if they are able to target to their customers’ specific needs. In this context, creativity is required of the salesperson to address the customer’s concerns and deliver the exact product and service the customer needs.

It should be noted that a concept similar to salesperson creativity has been studied in the literature. Churchill, Ford, and Walker (1976) noticed that the sales job often requires the salesperson to produce innovative solutions to nonroutine problems, and some sales jobs demand more innovativeness than others. They proposed that true innovativeness is required of the salesperson “only when (1) he faces a unique, nonroutine situation, and (2) the company has not provided him with sufficient guidelines, information, support, or training to know how to cope with it” (p. 325). Based on this, they argued that the degree of innovativeness required of the salesperson may have a negative impact on overall job satisfaction. Their survey results showed that an innovativeness demand was negatively related to the salesperson’s satisfaction with supervision, company support, and promotion. Building on Churchill et al.’s (1976) argument, Behrman and Perreault (1984) proposed a role stress model of sales performance and job satisfaction, where an innovativeness requirement was posited as
positively related to role conflict. The proposition was supported by their empirical results. While neither of the studies was looking at the innovativeness-performance link, Behrman and Perreault (1984) reported a positive correlation (0.257, p < .01) between the two.

This dissertation takes a different perspective to the issue of innovativeness. Since salespeople perform a variety of activities besides interacting with customers directly (Moncrief 1986), some of the activities involve generating creative solutions for various problems, as illustrated by numerous cases including the P&G case at the beginning of Chapter One. Sales performance can be affected by the effectiveness and efficiency in carrying out these problem-solving activities. Therefore, to generate creative ideas in the face of novel situations and problems appears to be an important skill for the salesperson. Consequently, this dissertation attempts to understand the concept of salesperson creativity by examining its potential positive effect on sales performance.

An important factor related to sales knowledge and skill is selling experience. One major purpose of sales training and mentoring has been to transfer the knowledge and skills from the experienced to the inexperienced. However, much of the sales skill is tacit and action-centered, and remains unarticulated and known only to the person who possesses the skill (Polanyi 1967). Tacit knowledge is knowledge that cannot be explicated fully even by an expert and, thus, can be transferred from one person to another only through a long process of apprenticeship. In other words, one cannot easily transfer one’s tacit knowledge and skills to another without substantial loss of relevant information. Experience, therefore, plays an important role in achieving a high
level of sales-related knowledge and skills. In addition, experience has also been found to influence a number of important variables such as motivation, role perceptions, customer orientation, and performance (Ingram and Bellenger 1983; O’Hara, Boles, and Johnston 1991; Walker, Churchill, and Ford 1975). Experienced salespeople tend to have a better understanding of their jobs, customers, and company policies (Churchill, Ford, and Walker 1976). Selling experience has been posited as another important predictor of job performance (Bartkus, Peterson, and Bellenger 1989; Behrman and Perreault 1984; Kerr and Jermier 1978; Walker, Churchill, and Ford 1977). Given the importance and potential impact of experience, the dissertation examines the effect of creativity on performance in conjunction with that of selling experience.

**Motivation and Effort**

Much sales research has assumed that performance is a function of motivation. In Churchill et al.’s (1985) meta-analysis, motivation has a positive correlation coefficient of .258 with sales performance. The overall pattern of the results for the motivational variables suggests that, on average, motivation is a better predictor of performance than aptitude, but not as good a predictor as skill level (Churchill et al. 1985). Motivation has been defined as “the amount of effort the salesperson desires to expend on each activity or task associated with the job” (Churchill et al. 1997, p. 332). A couple of motivation theories (Herzberg, Mausner, and Snyderman 1959; Maslow 1954; McClelland 1964; Vroom 1964) have been found relevant to sales management.

Two types of motivation have been distinguished: intrinsic motivation and extrinsic motivation. Extrinsic motivation is present when an individual is energized by some external incentives (e.g., financial rewards, recognition, and promotions) that are
derived from the environment surrounding the task or work and have to be provided by sources other than the individual (Dyer and Parker 1975; Lawler 1973). Intrinsic motivation refers to the motivational state in which an individual is attracted to and energized by the task itself instead of some external outcomes that might be obtained through doing the task. Intrinsic rewards are rewards derived directly from or inherent in the task or job itself – associated with the content of task or job. In other words, when the salesperson is intrinsically motivated, he or she enjoys doing sales and sees the process of doing the sales task as an end in itself beyond the perception of the job as a means to an end (Deci and Ryan 1985). Intrinsic motivation tends to be associated with higher order needs such as self-actualization (Maslow 1954) and achievement (Herzberg et al. 1959). While both common sense and research acknowledge monetary compensation (an extrinsic motivator) as a major motivator for salespeople (Churchill and Pecotich 1982; Walker et al. 1977), the importance of intrinsic motivation to salespeople’s effectiveness and success is also documented (Weitz et al. 1986).

What links motivation to performance is effort, which has been recognized in sales and organizational behavior literature for its importance in determining sales performance (Naylor, Pritchard, and Ilgen 1980; Walker et al. 1977). Effort can be defined as the total amount of energy spent on the sales activities, reflected in both the duration of time spent in working and the intensity of work activities (i.e., energy spent in working per unit of time) (Brown and Peterson 1994; Campbell and Pritchard 1976). Effort is typically considered as the mechanism by which motivation is translated into accomplished work (Naylor, Pritchard, and Ilgen 1980). A motivated salesperson is intensely involved in the sales activities and is persistent at reaching the goal (Campbell
and Pritchard 1976). Moreover, intrinsically motivated salespeople also tend to be flexible in the ways they choose to carry out the sales tasks (Weitz et al. 1986). The difference between effort and motivation is that effort represents the force, energy, or activity by which work is completed, whereas motivation is the individual's psychological state or predisposition with respect to choices involving the direction, intensity, and persistence of behavior (Brown and Peterson 1994). The limited number of studies that investigated the direct effect of effort on sales performance have shown promising results (Bartkus, Peterson, and Bellenger 1994; Brown and Peterson 1994). This dissertation will also examine the effect of effort on sales performance in conjunction with those of creativity and selling experience. As illustrated in Figure 1.1, work effort is posited to have a direct impact on sales performance.

CONCEPTUALIZATION OF SALESPERSON CREATIVITY

Theories of Creativity

Despite its potential importance at the individual, organizational, and societal levels, creativity had been a neglected research area even in psychology until fairly recently (Guilford 1950). While many roadblocks are responsible for this lack of attention, one of the problems involves the difficulty in defining the construct "creativity" and in determining the criteria for judging creativity (Sternberg and Lubart 1999). Diverse approaches have been employed to study the subject, with each approach having its own definition of creativity. Nevertheless, in contemporary social psychological literature, it is generally agreed upon that creativity refers to something that is both novel and valuable. Further, definitions of creativity often focus on the attributes of creative products and designate attributes of people, processes, and places.
as contributors to these creative products (Brown 1989; Ford 1996; Nickerson 1999).

As a conceptual base, this dissertation adopts Amabile’s (1983a) widely-cited definition:

A product or response will be judged as creative to the extent that (a) it is both a novel and appropriate, useful, correct, or valuable response to the task at hand and (b) the task is heuristic rather than algorithmic. (p. 360)

Amabile (1983a) suggests that “creativity is best conceptualized not as a personality trait or as a general ability, but as a behavior resulting from particular constellations of personal characteristics, cognitive abilities, and social environments” (p. 358). In other words, creativity is viewed as a behavior resulting from the interaction between the person (e.g., personality characteristics and cognitive abilities) and the social/environmental factors. The creative behaviors are evidenced in products or other observable outcomes/responses. She argues that creativity is something novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive concerning task constraints) that people can recognize and often agree on, even when they are not given a guiding definition.

Further, Amabile’s (1983a) definition specifies that the task must be heuristic rather than algorithmic. Algorithmic tasks have a clearly identified goal, and the path to the goal is clear and straightforward – tasks for which an algorithm exists. By contrast, heuristic tasks are those not having a clear and readily identifiable path to the solution – tasks for which algorithms must be developed, and in many cases the goal itself must be defined by the problem solver. The determination of the label “algorithmic” or “heuristic” in many cases may not be clear-cut and may depend on the individual performer’s knowledge about the task. If an algorithm for a task solution exists but the
individual has no knowledge about it, the task can be considered heuristic for that individual.

Earlier theory and research on creativity focused almost exclusively on a personality approach and, to a lesser extent, on a cognitive-abilities approach (Williams and Yang 1999). Recent theoretical and empirical developments, however, have witnessed an emergence of systems theories of creativity, represented by several confluence approaches. These theories generally emphasize the interaction between the individual and the environment and maintain that multiple components must converge for creativity to occur (Sternberg and Lubart 1999; Williams and Yang 1999).

Amabile's (1983a, b) social psychology of creativity is one of the most representative of such systems theories. She views creativity as the production of responses or works that can be reliably assessed as creative by appropriate judges. Creativity results from the confluence of three main components, namely, task motivation, domain-relevant skills, and creativity-relevant skills. Task motivation accounts for motivational variables that determine an individual’s approach to a given task. Domain-relevant skills, which include factual knowledge, technical skills, and special talents in the domain in question, can be considered the basis from which any performance must proceed. Creativity-relevant skills include (a) a cognitive style that involves coping with complexities and breaking one’s mental set during problem solving, (b) knowledge of heuristics for generating novel ideas, such as trying a counterintuitive approach, and (c) a work style characterized by concentrated effort, an ability to set aside problems, and high energy. The three components are proposed to operate at different levels of specificity. Creativity-relevant skills operate at the most
general level, domain-relevant skills at an intermediate level, and task motivation at the most specific level.

Many theorists have recognized that creativity can vary in degrees; that is, creativity can be expressed by nearly anyone, but not necessarily in the same way or to the same extent (Amabile 1983b; Gruber, Terrell, and Wertheimer 1982; Nickerson 1999). This can be interestingly illustrated by Gardner’s (1993) contrast of “little C” and “big C” creativity. “Little C” creativity refers to the sort that all of us may manifest in our daily lives, expressed in small departures from our daily routines. “Big C” creativity is the kind of breakthrough that occurs only very occasionally, made by people like T. S. Eliot, Albert Einstein, Pablo Picasso, and others whose work has played a significant role in shaping the ideas and standards of their culture (Nickerson 1999). Similarly, there is the notion of H-creativity and P-creativity (Boden 1999). The novelty of a creative idea may be defined with reference to either the previous ideas of the individual concerned or the whole of human history. The former definition concerns P-creativity (P for psychological), the latter H-creativity (H for historical). H-creativity presupposes P-creativity, for if someone has a historically novel idea, then it must be new to that person as well.

To summarize, contemporary creativity theories suggest that (1) creativity is a subjective judgment about one’s behavior or behavioral outcome within a specific domain, (2) creativity can vary in degrees from “little C” creativity to “big C” creativity, or from P-creativity to H-creativity, and (3) an individual’s creativity is influenced by a variety of factors including personal motivation and skills. With these suggestions in mind, salesperson creativity is now conceptualized.
Salesperson Creativity

In today’s dynamic, competitive, and global economy, creativity and innovation are an essential requirement for organizational success. Organizational creativity and innovation ultimately lie in the individual members working in and for the organization. Therefore, enhancing employees’ creative performance represents an imperative step if organizations are to achieve a competitive advantage. Although the traditional view would suggest that work is associated with conformity and has little in common with creativity (Whyte 1956), people do create at work. People spend more than half of their waking hours at work, and it is on their jobs that people confront some of the most challenging problems of their lives (Mumford, Whetzel, and Reiter-Palmon 1997). Employees’ creativity can be observed in various aspects of the workplace, although the degree of creativity may vary from person to person, from job to job, and from firm to firm.

Theorists maintain that creativity at work should be studied with respect to the job characteristics and the specific work situations that call for creative problem-solving (Mumford, Whetzel, and Reiter-Palmon 1997). Whether creative thinking and behaviors are required depends on the nature of the problem that the employee is trying to solve, which in turn depends on his/her job responsibilities. Amabile (1983a, b) argues that creative behavior occurs only when the task is to some degree heuristic. In other words, only ill-defined or poorly structured problems to which many potential solutions are possible would require a creative attempt (Mumford et al. 1997). In some production jobs, for example, people’s responsibilities tend to be highly circumscribed. The problems presented to them tend to be well-defined and solutions to these problems
are likely to have been specified by the organization or the production process. Such employees may have relatively few opportunities for creative problem-solving, and as a consequence, creativity may be discouraged by the organization.

Boundary spanning positions, on the other hand, represent a quite different scenario from that of a typical production worker. Boundary role positions such as sales and marketing positions are explicitly tasked with guiding the organization’s responses to changes in technology, markets, or production process (Katz and Kahn 1978). Occupants of these positions (e.g., salespeople) are presented with the kinds of novel, ill-defined problems that call for creative thought. Hence, creative problem-solving is required in these boundary roles. The sales job is a typical boundary spanning position where the occupant (i.e., the salesperson) is typically presented with challenging tasks that are ill-defined, poorly structured, and thus heuristic in nature. This is especially true in today’s dynamic market environment. The description cited at the beginning of Chapter One clearly shows the importance of creativity to the salesperson’s job performance.

To gain a deeper understanding of the salesperson creativity construct, six in-depth open-structured personal interviews were conducted with sales managers and executives from various industries (i.e., insurance, real estate, advertising, utility, construction machinery, and piping systems). Each interview lasted for about an hour, and the managers’ viewpoints on various aspects of salesperson creativity were solicited. Five of the interviews were audio tape-recorded, and one manager requested that the interview not be recorded.
These interviews, together with the sales literature, suggest two important aspects in which salesperson creativity appears crucial for job performance: customer interaction and problem solving. Creativity in customer interactions may be a result of improvisation or planning (Tanner 1994), for virtually every contact a salesperson has involves different sales situations (Thompson 1973). This can be reflected in innovative presentations, handling objections in creative ways, persuading with novel approaches, building customer rapport in unusual ways, and so forth. This aspect appears similar to the concept of adaptive behavior, which has an emphasis in tailored sales messages. The difference is whether the approach used is invented by the salesperson or adopted from the inventory.

While customer interactions provide ample opportunities for the salesperson to act creatively, it is important to note that salesperson creativity is not limited to the domain of customer interaction, for salespeople perform a variety of activities besides interacting with customers (Moncrief 1986). However, all activities do not require an equally high level of creativity. As noted, for creativity to occur, the task must be poorly structured, ill-defined, and thus heuristic to some degree (Amabile 1983a). Some of the sales activities may require more creativity than others, because the problems represented by various activities differ on the algorithmic/heuristic dimension. For example, among the activities documented by Moncrief (1986), those related to the primary selling function (e.g., selecting products, overcoming objections, planning selling activities, searching out leads) seem to involve problems that are less clearly defined, and thus require more creativity than do activities such as correcting orders, writing up orders, and traveling.
The second important aspect of salesperson creativity revealed in the interviews is creativity in problem solving, which requires the salesperson to detect new problems, see old problems from new or different perspectives, and generate and evaluate multiple alternatives for the problems. The problem-solving approach to selling is the foundation of building long-term relationships with customers and other partners (Weitz et al. 1998). Customers are satisfied only when their problems are correctly understood and tailored solutions are successfully generated and implemented. Creativity in this regard increases the perceived value of the salesperson’s service and gives the salesperson and the selling firm a competitive edge.

In light of the proceeding discussions, salesperson creativity is defined as new ideas generated, and novel behaviors exhibited, by the salesperson in performing his or her job activities. These new ideas and behaviors are generated and performed because the salesperson thinks they are necessary and useful in solving the unstructured, unexpected problems for the salesperson him- or herself, the customer, and the sales organization alike. They should contribute to the performance of the sales job and, in aggregate, should benefit organizational performance. Using Gardner’s (1993) concepts of “big C” and “little C” creativity and Boden’s (1999) H- and P-creativity, one would expect that in most cases, salespeople will exhibit “little C” rather than “big C” creativity, and P- rather than H-creativity. That is, salesperson creativity is expected to be relatively small deviations from established daily routines. The significance of “little C” lies in its necessity for solving everyday task problems. The accumulation of “little C” at the individual level may lead to creativity at the organizational level that is closer to something of “big C” nature.
In summary, it is proposed that salespeople need to behave creatively and generate novel and useful ideas in order to perform some of their job activities effectively. Salesperson creativity is expected to be characterized by small deviations from established routines. Creativity in customer interaction and in problem-solving seems to be particularly important to the salesperson’s performance. In the next section, I propose a model of salesperson performance incorporating creativity as an important antecedent and develop hypotheses.

PROPOSED MODEL OF SALESPERSON PERFORMANCE

Based on the theories of creativity and the theoretical and empirical evidence offered in the sales literature, I propose an individual level model of salesperson performance, illustrated in Figure 1.1. The model highlights the unique effect of creativity on sales performance. Creativity, effort, and selling experience are posited as direct antecedents to salesperson performance. The model further emphasizes the role of self-efficacy in determining sales behavior and performance. Trait competitiveness and experience represents two exogenous variables that have direct and indirect effects on performance. As an individual-level model, it is generally consistent with Churchill et al.’s (1997) framework, which suggests performance as affected by various factors including personality, skills, and motivation. The model is also in line with Bandura’s (1986) social cognitive theory by recognizing the critical role played by the salesperson’s self-efficacy. In this section, the individual constructs and the paths linking them as posited in the model are examined in detail.
Effect of Salesperson Creativity on Performance

Performance is of ultimate interest in any business-related research including sales research. Although sales performance has been conceptualized and measured in many ways (Behrman and Perreault 1982; MacKenzie, Podsakoff, and Fetter 1993), this study is concerned with the salesperson's in-role job performance. Specifically, performance is operationalized as the salesperson's perception of his or her overall achievement in sales, especially in the quantity of sales achieved, which is of central concern to management. Since salesperson creativity has received virtually no attention in the academic research, its effect on overall sales performance is speculative at best. Conceptually, the salesperson's creativity is likely to improve his or her job performance for at least three reasons. First, the effectiveness and efficiency of performing many of the job activities are likely to increase when the salesperson comes up with creative ideas on how to better carry out the activities. As discussed earlier, the salesperson performs a variety of task activities (Moncrief 1986), some of which are more structured than others (Amabile 1983a). The more heuristic or unstructured the task activity, the more room for creative improvement in the job processes. Second, creative identification of potential customers and their problems may lead to more successful development of new accounts. Prospecting has been viewed as one of the most important steps in the personal selling process (Weitz et al. 1998). While there are popular prospecting methods used in each trade and industry, it may prove fruitful if the salesperson is able to detect prospects neglected by common methods. Further, when problems are not obvious for the prospect or the salesperson, or both, the salesperson's ability to discern the prospect's needs from perspectives different from what is
generally prescribed will help consummate the sale. Finally, given that customer problems are more diverse and require more customized solutions, creative solutions may delight customers and increase their satisfaction, which leads to higher levels of customer retention, repeat business, and word-of-mouth referral. Therefore, in absence of empirical evidence, the following is hypothesized:

H1: A salesperson's creativity is positively associated with his/her sales performance.

Effort

It is well-acknowledged that the salesperson's motivation level is a significant predictor of sales performance (Churchill et al. 1985). Although effort and motivation have often been thought as equivalent to each other, they are conceptually distinct (Naylor, Pritchard, and Ilgen 1980; Walker et al. 1977). Effort represents the force, energy, and/or activity by which work is accomplished, whereas motivation is the individual's psychological state with regard to choices involving the direction, intensity, and persistence of behavior (Brown and Peterson 1994; Ilgen and Klein 1988; Naylor et al. 1980). Researchers have argued that effort should reflect both the duration of time spent in working and the intensity of work activities (Brown and Peterson 1994; Campbell and Pritchard 1976; Ilgen and Klein 1988; Naylor et al. 1980). In keeping with this, work effort is defined as the amount of time and energy a salesperson devotes to sales-related activities within a specific period of time.

The importance of effort to sales performance lies in both its distinction from, and association with, motivation. It is a mediating mechanism by which motivation is translated into accomplished work (Naylor et al. 1980). In other words, effort can be
viewed as a natural outcome of one's motivational state and, in the meantime, a direct antecedent of work performance. In fact, conceptual models in sales force management and organizational behavior research have consistently incorporated effort as an important performance antecedent (Naylor et al. 1980; Walker et al. 1977). Ford, Churchill, and Walker (1985) further explicitly note that studying the effects of effort should be critical to expanding our knowledge on salesperson performance.

Despite this wide recognition of work effort as an important performance determinant, only scarce empirical attention has been devoted to the construct as a direct antecedent of performance. Nevertheless, results obtained by the authors who have studied the effect of effort show rather strong evidence of work effort as a direct antecedent of sales performance. Behrman and Perreault (1984) found sales performance to be significantly related to the number of hours worked. In a study of 380 direct salespeople who worked for a national company that sells a durable product line door-to-door, Brown and Peterson (1994) found a significant standardized path of .64 from work effort to sales performance. Bartkus, Peterson, and Bellenger (1989) also showed a direct effect of effort on sales performance. Ingram, Lee, and Skinner (1989) reported that effort mediated the effects of job commitment and extrinsic motivation on sales performance. Brown and Peterson's (1994) meta-analysis found weighted-mean effort-performance correlations of .27 and .31 for five sales force studies and for six non-sales force studies, respectively, providing preliminary evidence for the generalizability of the effect of effort. Other researchers documented a significant influence of work effort on managers' evaluations of salespeople (Mowen,
Keith, Brown, and Jackson 1985). In sum, the available theoretical and empirical evidence suggests a direct path from work effort to sales performance.

H2: A salesperson's work effort is positively associated with his/her sales performance.

The salesperson's behaviors (e.g., effort and creativity) can be affected by many factors including demographics, personality characteristics, role perceptions, supervisory behaviors, job characteristics, and environmental factors. This dissertation focuses on two personality variables and one demographic variable: self-efficacy, trait competitiveness, and experience. Self-efficacy is a central construct influencing employee behavior in social cognitive theory (Bandura 1977, 1986). Trait competitiveness has been studied, though not extensively, in the sales context in relation to the salesperson's effort and performance, but its relationship with creativity is unknown. Experience plays diverse roles in affecting behavior and performance, as revealed in the literature review. In the following sections, hypotheses related to these constructs are developed.

**Self-Efficacy**

Self-efficacy refers to people's judgments about their capability to organize and execute courses of action required to attain particular designated types of performance (Bandura 1986). It "is concerned not with the skills one has but with the judgments of what one can do with whatever skills one possesses" (Bandura 1986, p. 391). Social cognitive theory posits that an individual's self-efficacy belief in performing a particular task should predict the individual's actual level of performance. The theory further suggests that the effect of self-efficacy on task performance is primarily
"through enlistment of effort and creative use of capabilities and resources" (Wood and Bandura 1989, p. 374). A self-regulatory process is enacted that influences the individual’s initial choice of activities and tasks as well as his or her coping efforts (Gist and Mitchell 1992; Lent et al. 1987; Stumpf, Brief, and Hartman 1987). As employees’ levels of self-efficacy increase, they exert more effort, become more persistent, and learn to cope with task-related obstacles (Bandura 1977; Gist 1987). Empirical research has shown that employees who feel efficacious in performing particular tasks will perform them better (Barling and Beattie 1983), persist at them in the face of adversity (Lent, Brown, and Larkin 1987) and cope more effectively with change (Hill, Smith, and Mann 1987; Zhou 1998). Self-efficacy is thus an important motivational construct that “influences individual choices, goals, emotional reactions, efforts, coping, and persistence” (Gist and Mitchell 1992, p. 186).

While creativity research has identified many personal characteristics, including persistence, energy, need for autonomy, and broad interests, that affect creativity (Woodman, Sawyer, and Griffin 1993), self-efficacy is one critical determinant of workplace creativity. Measures intended to tap feeling of self-efficacy, self-esteem, or self-confidence have been found to be effective predictors of creativity (Mumford and Gustafson 1988). Indeed, self-efficacy has been viewed as having generative capability in that it influences thought patterns, emotional reactions, and the orchestration of performance through the adroit use of sub-skills, ingenuity, and resourcefulness (Bandura 1984, 1986; Gist and Mitchell 1992). This would be particularly true in the sales context, since salesperson creativity is conceptualized as different from scientific
and artistic creativity in that the former represents smaller deviations from daily routines while the latter tends to be greater in scope and degree.

Research in marketing has also demonstrated the importance of the self-efficacy construct. Empirical evidence shows that self-efficacy is positively related to adaptive selling (Spiro and Weitz 1990; Sujan, Weitz, and Kumar 1994) and selling effort (Sujan, Weitz, and Kumar 1994). Redmond, Mumford, and Teach (1993) documented in an experimental setting the positive effect of self-efficacy on the quality and originality of marketing problem-solving. In the light of the proceeding discussion, the following two hypotheses are advanced:

H3: A salesperson's self-efficacy is positively associated with his/her creativity.

H4: A salesperson's self-efficacy is positively associated with his/her work effort.

**Trait Competitiveness**

The model incorporates two exogenous constructs, selling experience and trait competitiveness, as predictors of self-efficacy. These two constructs have been consistently regarded as extremely important determinants of sales performance (Brewer 1994; Brown, Cron, and Slocum 1998; Churchill, Ford, and Walker 1997), and their role as individual-level determinants of the salesperson's self-efficacy cannot be overstated. Trait competitiveness is a personality variable relating to the "enjoyment of interpersonal competition and the desire to win and be better than others" (Spencer and Helmreich 1983, p. 41). It is synonymous to Kohn's (1992) intentional competitiveness, which "concerns the desire on the part of the individual to be number one" (p. 4). Earlier research has documented a positive relationship between
competitiveness and job performance in domains other than sales (Carsrud and Olm 1986; Helmreich et al. 1980; Murphy 1986). As a dispositional characteristic of individual salespeople, trait competitiveness has received attention from only a handful of researchers, but positive associations between competitiveness and sales performance have been reported (Brown and Peterson 1994; Plotkin 1987).

The mechanism by which this trait affects performance is not totally clear, however. It has been suggested that trait competitiveness may only have indirect impacts through the salesperson’s behaviors. Brown, Cron, and Slocum (1998) found that goal-setting behavior mediates the competitiveness-performance relationship. Locke (1968), on the other hand, suggests that the effect of competitiveness on sales performance is likely to occur through higher levels of work effort. Motivation theory and social cognitive theory suggest that trait competitiveness can have both direct and indirect effects on sales behaviors. First, motivational theorists suggest individuals have innate, dispositional needs and motives that drive them to behave in certain ways (Hechhausen, Schmalt, and Schneider 1985). For highly competitive salespeople, the inherent desire to be number one and the importance they attach to exceeding the performance of others motivate them to set high goals, exert a high effort level, and act meaningfully in the expectation that the chosen behaviors will lead to winning performance (Bartkus et al. 1989; Brown et al. 1998; Locke 1968). In other words, highly competitive salespeople tend to exert greater amount of time and energy than their less competitive counterparts. Bartkus, Peterson, and Bellenger (1989) found that Type A behavior pattern, of which competitiveness is a component, affects sales performance through the mediation of work effort. Therefore, it is proposed here that
competitiveness is likely to affect performance indirectly through its effect on work effort.

Second, competitiveness may also affect behavior and performance through self-efficacy. Social cognitive theory suggests individuals make judgements about anticipated performance (i.e., self-efficacy beliefs) based on the state of arousal (Gist and Mitchell 1992). Positive state of arousal (e.g., excited, enthusiastic) may increase the level of self-efficacy, whereas negative state of arousal (e.g., fearful, anxious) may decrease it. Certain personality variables influence the individual’s physiological and/or psychological states of arousal, which in turn affect self-efficacy (Bandura 1986; Gist and Mitchell 1992). Research has shown that Type A personalities have higher levels of psychological arousal, self-efficacy, and performance than Type B’s (Friedman and Rosenman 1974; Taylor et al. 1984). Given that trait competitiveness is one important component of type A personality, more competitive individuals are expected to have higher levels of arousal and higher levels of self-efficacy. The proceeding discussion leads to the following hypotheses:

H5: A salesperson’s trait competitiveness is positively associated with his/her self-efficacy.

H6: A salesperson’s trait competitiveness is positively associated with his/her work effort.

Selling Experience

The second exogenous construct in the model is selling experience, posited as directly affecting both self-efficacy and performance. This variable is important to both managers and academic researchers. From managerial standpoint, it is intuitively
appealing to suggest that experienced salespeople perform better. However, managers are often faced with a dilemma of choosing between a less experienced but hard-working salesperson and a more experienced one who is more costly to hire, harder to control, and may be less diligent (Behrman and Perreault 1984). Academic research has also recognized the effect of experience on sales performance (Behrman and Perreault 1984; Kerr and Jermier 1978; Walker, Churchill, and Ford 1977). In a role stress model of sales performance, Behrman and Perreault (1984) propose experience as a direct predictor of sales performance. Using a sample of 196 sales representatives from five different industrial firms, they found sales experience to be significantly and positively related to sales performance. They further noticed that effort and experience had virtually independent, and therefore, compensatory effects of identical magnitude on performance. Bartkus, Peterson, and Bellenger (1989) also found the number of years in real estate sales has a direct and positive effect on the real estate agent’s sales performance.

However, experience may also have indirect effect on performance. As a salesperson becomes more experienced in the routines and complexities in the sales job, he or she gains a clearer understanding of the different role expectations. It is therefore not surprising that experience was found to be negatively related to role ambiguity (Behrman and Perreault 1984) and positively related to role clarity (Bartkus et al. 1989). Relationships between experience and other sales-related constructs seems more ambiguous. For instance, O’Hara, Boles, and Johnston (1991) found job tenure to be negatively correlated with job involvement, organizational commitment, and customer orientation for a sample of industrial salespeople but not for a group of advertising
salespeople. In Tanner’s (1994) trade show study, experience, as measured by job title and trade show experience, was not found to be related to the salesperson’s adaptive behavior. Experience has been found to be related to job satisfaction in somewhat curvilinear fashion (Churchill, Ford, and Walker 1976). Given the importance of sales experience to performance, it seems more research is needed to investigate the mechanism through which experience influences sales behaviors and performance.

In this dissertation, it is suggested that experience affects performance not only directly but also indirectly through its impact on the salesperson’s self-efficacy beliefs. The effect of experience on self-efficacy is grounded in social cognitive theory. The theory identifies four categories of experience that influence self-efficacy: enactive mastery (i.e., personal attainments), vicarious experience (i.e., modeling), verbal persuasion, and emotional arousal. Enactive mastery, defined as repeated performance accomplishments, has been found to enhance self-efficacy most effectively (Bandura 1982, 1986; Bandura, Adams, and Beyer 1977). On average, experienced salespeople tend to have more accomplishments. These past accomplishments instill a sense of self-confidence into the salesperson and create a high level of self-efficacy in sales activities. Moreover, it has been proposed that the four types of experience influence the self-efficacy belief through three types of assessment processes: analysis of task requirements, attributional analysis of experience, and assessment of personal and situational resources and constraints (Gist and Mitchell 1992). Selling experience appears to have an impact on each of these assessment processes. First, when the salesperson has performed the task personally and frequently in the past, understanding of the task requirements is enhanced. Second, attributional analysis involves the
salesperson's judgments about why a particular performance level occurred. A wide
range of personal experience provides the strongest information for attributional
analysis, leading to more accurate understanding of the causes to performance and more
effective self-management and environmental management (Kelley 1971). Finally,
experience helps the salesperson examine the availability of specific resources and
constraints for performing the task at various levels. The understanding of various
selling situations and customer characteristics, the knowledge of company policies and
role expectations, and the accurate self-assessment of skill and effort requirements
provide the seasoned salesperson with the internal and external resources that often are
not available to rookies. The availability of more resources enhances the seasoned
salesperson's ability and self-efficacy to deal with different sales problems. In sum,
selling experience should have positive effect on the salesperson's self-efficacy belief.
Experience associated with performance accomplishments is particularly important in
that it not only builds up the knowledge and skills, coping abilities, and exposure
needed for superior performance in different selling environment, but also helps the
salesperson assess task requirements, performance attributions, and the availability of
resources and constraints. Based on the above discussion, the following hypotheses are
proposed:

H7: Selling experience is positively related to the salesperson's self-efficacy.

H8: Selling experience is positively related to the salesperson's performance.

Summary

To summarize, the model incorporates three direct performance antecedents
(effort, creativity, and selling experience) and three indirect predictors (trait
competitiveness, self-efficacy, and experience). The unique effect of salesperson creativity is highlighted. Eight hypotheses are proposed based on the creativity literature, motivational theory, social cognitive theory, and the extant sales literature.
CHAPTER THREE: PRETEST

PRETEST OVERVIEW

Before formally testing the hypothesized relationships in the model, a pretest was undertaken to develop and refine measurement items. The primary goal was to derive theoretically valid and internally consistent measures for the model constructs using the covariance structural modeling technique (Joreskog and Sorbom 1996). Survey research methods were employed to collect cross-sectional data from a sample of real estate sales agents affiliated with a regional real estate firm in the southern U.S.

Real estate agents were chosen for several reasons. First, the agents work as independent contractors rather than as employees, perform a variety of task activities, and enjoy high levels of work autonomy. In carrying out the sales tasks, they have a considerable leeway in determining how and when to get the work done. Second, the products they sell are high-ticket items, suggesting customer requirements may be high and diverse. Consequently, one would expect the agents to differ considerably in terms of their work effort and creativity. Finally, the entry to the profession is easy, only requiring a state license. Unlike many other firms, no personality or other psychological tests were given prior to their affiliation with the firm. Thus, one may expect a great variation in their trait competitiveness and self-efficacy. In sum, for the purposes of measurement development, it is believed that the real estate agents were a proper sample.

Sample and Procedures

As stated, real estate sales agents affiliated with a regional real estate broker in the southern U.S. were chosen to be the sample frame. Twenty-one branch office
managers agreed to participate in the study. The survey was administered in two stages. Data were first collected from agents in two largest branch offices in attempt to determine which creativity items were not applicable to the real estate sales job (see the scale development procedure for the creativity construct in the next two sections). The item pool for measuring the salesperson creativity construct was then shortened and the questionnaire was revised and administered on the other 19 branches. Through the brokerage firm's internal mailing system, a packet containing questionnaires for all agents in the branch was sent to each branch manager, who was asked to distribute the questionnaires to the agents. A total of 945 questionnaires were distributed. Each questionnaire was accompanied with a cover letter that described the nature and purposes of the study and assured the respondents of complete confidentiality and anonymity. A postage-paid return envelope was attached to each questionnaire, and the agents were asked to return the completed surveys directly to the researcher. Two reminder letters were distributed to each agent through the managers one week and two weeks, respectively, after the delivery of the survey. The three-wave effort generated 157 returned surveys, with a response rate of 16.6%.

The respondents' average age was 53.1 years, 73.5% of the respondents were female, and 45.5% received 4-year college or higher education. The respondents had been affiliated with the real estate firm for an average of 8.38 years and their average selling experience was 15.2 years. The majority (91.0%) of the respondents worked full-time as real estate agents. On average, the respondents worked 42 hours per week in the year 1998. Because of assured confidentiality and anonymity of the survey, non-response bias was not assessed.
OPERATIONALIZATION OF THE MEASURES

In this section, I first describe the process for developing the creativity measures, and then detail measures used to assess the other five constructs in the model. The final form of all construct measures resulted from the pretest is displayed in Table 3.1.

Salesperson Creativity

Salesperson creativity, or creative behavior, was measured with a scale developed by the author with a process consistent with the procedures recommended in the measurement literature (e.g., Clark and Watson 1995; DeVellis 1991; Nunnally and Bernstein 1994). First, based on the theoretical definition, the interviews with sales managers, and extant sales and creativity research, a large pool of items was generated to adequately reflect the conceptual domain of salesperson creativity. These items described the creative behaviors a salesperson might be engaged in. The measurement format was to ask respondents to rate the frequency with which they exhibited each behavior on a 5-point Likert scale, where 1 = “Practically Never,” 2 = “Seldom,” 3 = “Sometimes,” 4 = “Usually,” and 5 = “Almost Always.” Since specific sales activities differ across jobs, firms, and industries, respondents were also given the choice of “N/A” if the behavior described was thought as “not applicable” to their sales job. This approach to have the salespeople evaluate their own creative behavior is deemed consistent with Amabile’s (1983a,b) argument that creativity can be assessed by appropriate judges even when a definition is not given. The “little C” nature of salesperson creativity and the high level work autonomy enjoyed by the salespeople make the salespeople themselves the only appropriate judge of their creative behaviors.
TABLE 3.1
Pretest Measures and Factor Loadings

<table>
<thead>
<tr>
<th>Source</th>
<th>Construct and Measures</th>
<th>Completely Standardized Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown and Peterson (1994)</td>
<td><strong>Sales Performance</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. How effective were you in making sales presentations?</td>
<td>.76 9.77</td>
</tr>
<tr>
<td></td>
<td>2. How effective were you in closing sales?</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>3. How would you rank your overall performance?</td>
<td>.81 10.84</td>
</tr>
<tr>
<td></td>
<td>4. How would you rate yourself in terms of the quantity of sales you have achieved?</td>
<td>.76 9.83</td>
</tr>
<tr>
<td></td>
<td>5. How would you rate your performance in regard to customer relations?</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>6. How would you rate your performance in regard to time management, planning ability, and management of expenses?</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>7. How would you rate your knowledge of your products, your company, competitors’ products, and customer needs?</td>
<td>--</td>
</tr>
<tr>
<td>Brown and Peterson (1994)</td>
<td><strong>Effort</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. The overall effort I put into the sales tasks in 1998 was:</td>
<td>.85 12.09</td>
</tr>
<tr>
<td></td>
<td>2. The total number of hours I worked at tasks involved in selling in 1998 was:</td>
<td>.88 12.71</td>
</tr>
<tr>
<td></td>
<td>3. The number of calls I made in 1998 was:</td>
<td>.87 12.47</td>
</tr>
<tr>
<td></td>
<td>4. The number of clients I serviced in 1998 was:</td>
<td>.89 13.02</td>
</tr>
<tr>
<td>Author</td>
<td><strong>Creative Behavior</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Persuading clients creatively.</td>
<td>.75 9.98</td>
</tr>
<tr>
<td></td>
<td>2. Making sales presentations in innovative ways.</td>
<td>.78 10.47</td>
</tr>
<tr>
<td></td>
<td>3. Carrying out sales tasks in ways that are resourceful.</td>
<td>.79 10.83</td>
</tr>
<tr>
<td></td>
<td>4. Coming up with new ideas for satisfying customer needs.</td>
<td>.79 10.76</td>
</tr>
</tbody>
</table>

(Table 3.1 to be continued)
<table>
<thead>
<tr>
<th>Source</th>
<th>Construct and Measures</th>
<th>Completely Standardized Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Creative Behavior</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author</td>
<td>5. Generating and evaluating multiple alternatives for novel customer problems.</td>
<td>0.63 7.89</td>
</tr>
<tr>
<td></td>
<td>6. Seeing the customer's problem from different perspectives.</td>
<td>0.70 9.01</td>
</tr>
<tr>
<td></td>
<td>7. Having fresh perspectives on old problems.</td>
<td>0.73 9.51</td>
</tr>
<tr>
<td></td>
<td>8. Improvising methods for solving a problem when an answer is not apparent.</td>
<td>0.67 8.58</td>
</tr>
<tr>
<td></td>
<td>9. Generating creative selling ideas.</td>
<td>0.70 9.06</td>
</tr>
<tr>
<td></td>
<td>10. Handling objections creatively.</td>
<td>0.76 10.14</td>
</tr>
<tr>
<td></td>
<td>11. Finding a customer need or desire that was not previously known.</td>
<td>0.65 8.16</td>
</tr>
<tr>
<td><strong>Self-Efficacy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chowdhury (1993); Sujan, Weitz, and Kumar (1994)</td>
<td>1. I am good at selling.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>2. I know the right thing to do in selling situations.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>3. I am good at finding out what customers want.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>4. It is easy for me to get customers to see my point of view.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>5. Overall, I am confident of my ability to perform my job well.</td>
<td>0.90 12.91</td>
</tr>
<tr>
<td></td>
<td>6. I feel I am very capable at the task of selling.</td>
<td>0.83 11.50</td>
</tr>
<tr>
<td></td>
<td>7. I feel I have the capabilities to successfully perform this job.</td>
<td>0.88 12.59</td>
</tr>
<tr>
<td><strong>Trait Competitiveness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brown, Cron, and Slocum (1998)</td>
<td>1. I enjoy working in situations involving competition with others.</td>
<td>0.83 11.34</td>
</tr>
<tr>
<td></td>
<td>2. It is important to me to perform better than others.</td>
<td>0.73 9.46</td>
</tr>
<tr>
<td></td>
<td>3. I feel that winning is important in both work and games.</td>
<td>0.61 7.44</td>
</tr>
<tr>
<td></td>
<td>4. I try harder when I am in competition with other people.</td>
<td>0.88 12.30</td>
</tr>
<tr>
<td><strong>Selling Experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author</td>
<td>How long have you been employed in a selling position (current and prior firms)?</td>
<td>1.00 16.31</td>
</tr>
</tbody>
</table>
Three sales managers from different companies and three marketing professors with substantial research and teaching interest in personal selling and sales management provided valuable inputs in the initial item generation process, from which a total of 45 items were resulted. These 45 items were then judged by two well-known sales researchers. The judges were given the definition of salesperson creativity and asked to place each item into one of the three categories: "Clearly Representative," "Somewhat Representative," and "Clearly Not Representative." All items were judged to be either "Clearly Representative" or "Somewhat Representative," with only one exception, where the item was rated as "Somewhat Representative" by one judge but "Clearly Not Representative" by another. Since the choice of N/A (not applicable) would be given in the survey, this item was still retained. Due to content redundancy and the particular characteristics of the real estate sample, two items were excluded from the survey. Thus, a total of 43 items were used as the initial item pool to measure salesperson creativity. The 43 items were included in the first-stage questionnaire administered on the agents in the two largest branch offices. The 14 items that received at least one "N/A" (not applicable) responses were removed from the second stage questionnaire. The remaining 29 items were submitted to exploratory and confirmatory factor analyses to ensure satisfactory levels of psychometric properties. The factor analysis procedures are reported in the next section.

**Performance**

While researchers have noted the inadequacies of performance measures in general (Behrman and Perreault 1982; Landy and Farr 1980), sales performance in the context of this study may be best measured with a self-report scale. Behrman and
Penreault (1982) argue that self-report evaluations are the most appropriate when responses are confidential, when much of the effort is not directly observable by the manager, and when a reliable scale has been developed to tap different aspects of performance. Further, Churchill et al.’s (1985) meta-analysis suggests that self-report measures of sales performance do not demonstrate any particular upward bias. They conclude that there is no evidence in favor of using any one particular measure instead of another. Indeed, self-report performance measures have been widely used in sales research (DeCarlo, Teas, and McElroy 1997; Kohli, Shervani, and Challagalla 1998; Sujan et al. 1994).

The characteristics of the real estate agent sample also demanded a self-report performance measure. Because of guaranteed confidentiality and anonymity, objective performance data from managerial sources were impossible to collect. Since many branch managers supervised more than 50 agents, it would be an overwhelming burden for the managers had they been asked to evaluate each of their agents. Moreover, given the high autonomy enjoyed by the real estate agents, managers might have inadequate information about their agents’ day-to-day performance.

Based on these considerations, sales performance was assessed with a seven-item self-evaluation measure adopted from Brown and Peterson (1994) and other research. All seven items were anchored on 7-point scales. Two of the seven items asked the effectiveness in making sales presentations and closing, which were anchored by 1 = “Not Effective at All” to 7 = “Extremely Effective.” The other five items tapped such aspects as overall performance, sales quantity, customer relations, time management, planning ability, management of expenses, and sales-related knowledge.
Respondents were asked to rate their performance in these aspects for the year 1998 relative to that of their colleagues in the same branch office. The items were anchored by 1 = “Among the worst in the branch” to 7 = “Among the best in the branch.”

**Effort**

Following Brown and Peterson (1994), work effort was measured with four self-report items assessing the overall effort expended in the sales task, number of hours worked, number of calls made, and the number of clients served. The items asked the salespeople to rate how they compared with all other agents in the branch office on 7-point scales anchored by “Among the least in the branch” (1) to “Among the most in the branch” (7).

**Self-Efficacy**

The salesperson’s self-efficacy in performing the sales job was assessed via seven Likert-scale items adopted from Sujan, Weitz, and Kumar (1994) and Chowdhury (1993). The use of Likert scale to measure self-efficacy is consistent with recent development in the self-efficacy research. Following Bandura’s (1977) recommendation, self-efficacy has traditionally been measured via both the magnitude and strength. It requires the participant to (a) answer “yes” or “no” to a question of whether or not he or she will be able to perform a specific task at a certain level (assessing magnitude) and (b) give his or her percent confidence in that answer (assessing strength). These responses are then combined to determine a self-efficacy score. However, Maurer and Pierce (1998) demonstrated that measures of self-efficacy using two different format (i.e., Likert and the traditional format) yielded virtually identical results in terms of factor structure, reliability, and correlations with criteria.
Mudgett and Quinones (1997) also compared the two formats of measurement and suggested Likert scales as an alternative to the traditional format. In the sales literature, the Likert scale format for measuring self-efficacy has also been used (Sujan et al. 1994; Chowdhury 1993). In this pretest, the items assessed the salesperson’s confidence in his or her ability to perform in various selling contexts. An example item read: “Overall, I am confident in my ability to perform my job well.” Responses were anchored on 7-point scales from “Strongly Disagree” (1) to “Strongly Agree” (7).

**Trait Competitiveness**

Trait competitiveness was assessed using a measure developed by Helmreich and Spence (1978). This scale was used by Brown et al.’s (1998) in sales research and demonstrated acceptable reliability. The 4-item scale recorded the responses on 7-point scales from 1 = “Strongly Disagree” to 7 = “Strongly Agree.” An example item read: “I enjoy working in situations involving competition with others.”

**Selling Experience**

Selling experience is operationalized as the total number of years in sales. It was measured with the following question: “How long have you been employed in a selling position (current and prior firms)?”

**MEASUREMENT MODEL**

**Item Purification for the Salesperson Creativity Measure**

A pool of 43 items was initially used to measure the construct of salesperson creativity. Given the large number of items, a procedure consistent with what is recommended in the measurement literature was used to trim the items (Clark and Watson 1995; DeVellis 1991; Nunnally and Bernstein 1994). The items marked “N/A”
(not applicable) by respondents were the first candidates for deletion. As mentioned earlier, the survey was administered in two stages and the second stage questionnaire only included the 29 items that received no “N/A” responses in the first stage. Although a few of the 29 items also received one or two “N/A” responses in the second stage, they were retained for further analyses because of their face and content validity with regard to the conceptual domain of creativity.

A series of exploratory factor (principal component) analyses were performed on the remaining 29 items. The initial Kaiser-Meyer-Olkin measure of sampling adequacy was .918, and Chi-square for Bartlett’s test of sphericity was 2869.84 (d.f. = 406, p < .000). Measures of sampling adequacy for individual items all exceeded .80. Only 2 of the 406 pairs of partial correlations were larger than .50. These results indicated the substantial intercorrelation among the items and the appropriateness of performing principal component analyses (Hair et al. 1995).

The criterion of eigenvalue greater than 1.0 was used to extract the factors (Hair et al. 1995). Varimax rotation was chosen to evaluate the factor loadings. In assessing the properties of each item, consideration was given to statistical criteria including the absence of substantial crossing loadings, communality greater than .50, and factor loadings greater than .50 (Clark and Watson 1995; Hair et al 1995). Content/face validity, however, has always been an important consideration in scale development (Clark and Watson 1995). As such, if an item was felt to have high face validity to the construct’s conceptual domain as discussed in Chapter Two, the item was retained. Items with unsatisfactory loadings, cross loadings, and/or communality values were deleted one at a time, followed by another round of component analysis. This process
resulted in the deletion of 16 items. In the final round of exploratory factor analysis with the 13 items, only one eigenvalue was greater than one. In other words, all 13 items loaded on one factor, indicating potential unidimensionality of the creativity construct. A preliminary examination of internal consistency revealed that the 13-item scale had a Cronbach's alpha of .93 (Cronbach 1951). All item-total correlations were greater than .50. Given these results, the 13 items, with adequate content validity, were retained for confirmatory factor analysis.

Confirmatory Factor Analysis and Measurement Model Fit

The primary objective of conducting confirmatory factor analysis and evaluating the measurement model was to develop and finalize unidimensional and internally consistent measures with adequate construct validity for all model constructs. Items with inadequate measurement properties would be excluded from being used in the main study.

The 13 creativity items, together with 7 performance items, 4 effort items, 7 self-efficacy items, 4 trait competitiveness items, and 1 selling experience item, were subjected to an iterative confirmatory factor analysis procedure using the LISREL 8 program (Joreskog and Sorbom 1996). The six constructs were modeled as six correlated first-order factors with a total of 36 manifest indicators. The 36x36 covariance matrix was used as input. The sample size was 134 as a result of listwise deletion of cases with missing data. Since selling experience is a single-item measure, its error term was fixed to zero. Given that selling experience is operationalized as the total number of years in selling jobs, one would expect the respondent to provide a
fairly accurate answer to the experience question. To fix the error term to zero should be acceptable and reasonable (Anderson and Gerbing 1988).

In the first iteration of the measurement model with 36 items, all items loaded significantly on their respective latent constructs (p < .01), indicating convergent validity of the items within the constructs. However, the overall model fit was less than adequate as indicated by some key fit indices, reported in the first row of Table 3.2. The likelihood-ratio Chi-square statistic ($\chi^2$) is the most fundamental measure of overall fit. A large $\chi^2$ value, relative to its degrees of freedom, indicates that the actual and predicted input matrices are statistically different. The goodness-of-fit index (GFI) is a non-statistical measure ranging from 0 (poor fit) to 1.0 (perfect fit). It represents the overall degree of fit without the adjustment of the degrees of freedom. The adjusted-goodness-of-fit index (AGFI) is an extension of GFI, adjusted by the ratio of degrees of freedom for the proposed model to the degrees of freedom for the null model. Although no threshold value has been established for GFI, values of .90 or greater have been deemed acceptable for AGFI (Hair et al. 1995). As shown in the table, the $\chi^2$ statistic was significant ($\chi^2 = 946.95$, df = 580, p < .01), the goodness-of-fit index (GFI) and adjust-goodness-of-fit index (AGFI) were .73 and .69, respectively, indicating inadequate fit. However, it has been argued that the $\chi^2$ measure is sensitive to sample size and that both GFI and AGFI may suffer from inconsistencies due to sampling characteristics (Bollen 1989; Hair et al. 1995; Hoyle and Panter 1995). Therefore, two other fit indices that have been viewed as robust to sampling characteristics are also reported in the table. The Non-Normed Fit Index (NNFI) combines a measure of parsimony into a comparative index between the proposed model and the null model.
Bentler’s (1990) comparative fit index (CFI) also represents a comparison between the estimated model and the null model. Values of .90 or above have been suggested as designating adequate fit for NNFI and CFI. As shown in the table, NNFI and CFI were in the .80 range, indicating less than satisfactory fit. Also presented in Table 3.2 is the root mean square error of approximation (RMSEA), whose value is representative of the goodness-of-fit that could be expected if the model were estimated in the population rather than the sample drawn for the estimation. Values ranging from .05 to .08 are deemed acceptable (Hair et al. 1995). The measurement model had an RMSEA of .069, making it the only fit index among those reported that suggested adequate fit.

**TABLE 3.2**

<table>
<thead>
<tr>
<th>Pretest Measurement Model Fit Statistics</th>
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<tbody>
<tr>
<td>χ²</td>
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<tr>
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<tr>
<td>Measurement Model (36 items)</td>
</tr>
<tr>
<td>Measurement Model (26 items)</td>
</tr>
</tbody>
</table>

a. χ² statistics both significant at .01 level.

In an attempt to improve the model fit, several iterations of confirmatory factor analysis were performed to systematically delete problematic items. A number of criteria and heuristics suggested in the measurement and scale development literature were used to evaluate each item with regard to its measurement properties (Bagozzi and Yi 1988; DeVellis 1991). Items that simultaneously suffered from several deficiencies were deleted. These deficiencies included high modification indices for lambda cross loadings (> 5.0), high standardized residuals (> 2.58, indicating within and/or cross factor correlated measurement error), and low completely standardized loadings (< .60).
Eight items that displayed these inadequacies were dropped from the measurement model.

The final measurement model contained 26 items, i.e., 3 for sales performance, 4 for work effort, 11 for creative behavior, 4 for trait competitiveness, 3 for self-efficacy, and 1 for selling experience. These items are displayed in Table 3.1. The second row of Table 3.2 presents the fit statistics for the 26-item measurement model. All fit indices showed improvement over the original 36-item model. The goodness-of-fit index (GFI) and the adjusted-goodness-of-fit index (AGFI) were .81 and .77, respectively, indicating marginal fit. NNFI and CFI were now in the .90 range and RMSEA was .064, showing adequate fit. Therefore, these fit indices indicated adequate measurement model fit.

Construct Validity

Three types of construct validity were examined: content validity, convergent validity, and discriminant validity. As Table 3.3 shows, the correlations among the latent constructs (i.e., the φ matrix) for 26-item measurement model did not show appreciable difference from those of the original 36-item model, suggesting the construct domains were preserved (Fornell 1983). The items and the completely standardized factor loadings and their t-values are presented in Table 3.1. An examination of face validity of the items against the construct definitions indicates the constructs' conceptual domains are adequately represented by the final items, thus ensuring content validity. No items were deleted from effort and trait competitiveness measures. Four items were deleted from the original seven-item measure for sales performance. The remaining three items cover overall performance and such important
aspects as quality of customer interaction (i.e., presentation) and quantity of sales.

Similarly, four items were excluded from the self-efficacy scale; the remaining three items tap the salesperson's felt confidence and capability in performing the selling job.

The resulting creativity scale contains 11 items relating to customer interaction, problem-solving, risk taking, and general sales activities. Overall, the content domains of the constructs are deemed adequately covered.

### TABLE 3.3

**Means, Standard Deviations, and Correlations among Latent Constructs**

*(Pretest Study)*

**36-item Model**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Performance (7 items)</td>
<td>5.35</td>
<td>.86</td>
<td>1.00</td>
</tr>
<tr>
<td>2. Effort (4 items)</td>
<td>4.83</td>
<td>1.35</td>
<td>.71 1.00</td>
</tr>
<tr>
<td>3. Creativity (13 items)</td>
<td>3.61</td>
<td>.67</td>
<td>.68 .46 1.00</td>
</tr>
<tr>
<td>4. Self-Efficacy (7 items)</td>
<td>5.72</td>
<td>.92</td>
<td>.80 .58 .71 1.00</td>
</tr>
<tr>
<td>5. Trait Competitiveness (4 items)</td>
<td>5.32</td>
<td>1.17</td>
<td>.63 .63 .59 .68 1.00</td>
</tr>
<tr>
<td>6. Experience (1 item)</td>
<td>14.52</td>
<td>10.35</td>
<td>.36 .23 .18 .30 .24 1.00</td>
</tr>
</tbody>
</table>

**26-item Model**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Performance (3 items)</td>
<td>5.20</td>
<td>1.06</td>
<td>1.00</td>
</tr>
<tr>
<td>2. Effort (4 items)</td>
<td>4.83</td>
<td>1.35</td>
<td>.77 1.00</td>
</tr>
<tr>
<td>3. Creativity (11 items)</td>
<td>3.62</td>
<td>.67</td>
<td>.63 .46 1.00</td>
</tr>
<tr>
<td>4. Self-Efficacy (3 items)</td>
<td>6.02</td>
<td>.96</td>
<td>.71 .54 .65 1.00</td>
</tr>
<tr>
<td>5. Trait Competitiveness (4 items)</td>
<td>5.32</td>
<td>1.17</td>
<td>.65 .63 .60 .64 1.00</td>
</tr>
<tr>
<td>6. Experience (1 item)</td>
<td>14.52</td>
<td>10.35</td>
<td>.37 .23 .20 .31 .24 1.00</td>
</tr>
</tbody>
</table>

**NOTE:** All correlations are significant at the .01 level.

**N = 134**

60
Convergent validity is indicated when the path coefficients from latent constructs to their corresponding manifest indicators are statistically significant (i.e., p < .01). As shown in Table 3.1, all loadings were greater than or equal to .60 and were significant at the .01 level with lowest t-value being 7.55, therefore providing evidence of convergent validity of the items within each construct. The significant loadings, the lack of cross-loadings, and the adequate level of the measurement model fit also supported the unidimensionality of each construct (Anderson and Gerbing 1988; Clark and Watson 1995). The summated scale of the three performance items correlated significantly with self-report total number of units sold (r = .56, p < .01) and dollar sales volume (r = .53, p < .01), which is another indication for the construct validity of the performance measure.

To assess the discriminant validity among the constructs, the criterion recommended by Fornell and Larcker (1981) was used. If the square of the parameter estimate (correlation) between two constructs ($\phi^2$) is less than the average of their average variance extracted (AVE) estimates, discriminant validity is supported. This criterion, which has been viewed the most stringent test of discriminant validity, was met across all possible pairs of constructs.

Internal Consistency

The means, standard deviations, and correlations among the latent constructs of the 26-item model are shown in Table 3.3. Three internal consistency measures were calculated for each construct, presented in Table 3.4. All Cronbach's alpha coefficients were greater than .70, indicating satisfactory levels of internal consistency (Nunnally
Composite reliability is an estimate of internal consistency generated by LISREL that is analogous to coefficient alpha. As shown, composite reliability coefficients ranged from .82 to .93. The average variance extracted (AVE) assesses the amount of variance captured by a construct's measure relative to measurement error. AVE estimates of .50 or higher indicate acceptable reliability for a construct's measure. All AVE estimates met this criterion. These measures of internal consistency all suggest satisfactory level of reliability of the measures used to test the model (Fornell and Larcker 1981).

**TABLE 3.4**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach's Alpha</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Performance (3 items)</td>
<td>.83</td>
<td>.82</td>
<td>.60</td>
</tr>
<tr>
<td>2. Effort (4 items)</td>
<td>.93</td>
<td>.93</td>
<td>.76</td>
</tr>
<tr>
<td>3. Creative Behavior (11 items)</td>
<td>.92</td>
<td>.92</td>
<td>.53</td>
</tr>
<tr>
<td>4. Self-efficacy (3 items)</td>
<td>.90</td>
<td>.90</td>
<td>.76</td>
</tr>
<tr>
<td>5. Trait Competitiveness (4 items)</td>
<td>.85</td>
<td>.85</td>
<td>.59</td>
</tr>
<tr>
<td>6. Selling Experience (1 item)</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**Measurement Model Summary**

Following the procedures recommended in the measurement and scale development literature, the construct measures were purified using both exploratory and confirmatory factor analysis techniques. The resulting 26-item measurement model contained 3 performance items, 4 effort items, 11 creativity items, 3 self-efficacy items, 4 trait competitiveness items, and 1 selling experience item. The measurement showed adequate fit as indicated by several key fit indices. The construct measures
demonstrated desirable content validity, convergent validity, discriminant validity, and internal consistency.
CHAPTER FOUR: MAIN DISSERTATION STUDY

MAIN STUDY OVERVIEW

Given the satisfactory measurement properties exhibited by the construct measures in the pretest, the main dissertation study was designed to finalize the measures and formally test the model relationships. A sample of outdoor billboard advertising salespeople was chosen for the main study. Mail survey instruments were used to collect cross-sectional data from both the salespeople and their supervisors. Covariance structural modeling was again employed following Anderson and Gerbing’s (1988) two-step approach. Based on the measurement model results, items were furthered purified before testing the proposed structural relationships. For cross-validation purpose, the pretest data were also used to test the structural model with the reduced-item measures. While the hypothesized relationships received substantial support from both data sets, there were some discrepancies between two data sets that deserve further attention.

Sample and Procedures

A national outdoor billboard advertising company was contacted and cooperation was obtained from the President and CEO. The company had 99 production facilities across the United States, employing a total of around 370 account executives. Outdoor advertising salespeople were considered a proper sample for testing the model based on two considerations. First, billboard advertising represents a product that has attributes of both tangible goods (the billboard) and intangible services (the ad). The product can be customized to some degree based on the customer’s specific requirements. Thus, the ability to creatively meet the customer’s specific needs
would be important in performing the sales job successfully. Second, as in the case of the pretest, large variations in the model constructs should be expected. The company did not use personality tests or other standardized screening procedures in the hiring process. Instead, it used word-of-mouth and newspaper ads to recruit applicants. One would expect selling experience, trait competitiveness, and self-efficacy to vary significantly among the salespeople. The company employed a commission based compensation plan, which allows its salespeople a significant amount of freedom to decide the desired effort level in doing the job.

A survey research method was employed to collect cross-sectional data from both the salespeople and their immediate supervisors. The 26 items purified in the pretest were used to measure the model constructs. The salespeople rated on the measures of experience, trait competitiveness, self-efficacy, creativity, and effort. They also evaluated their own performance in the year before (i.e., the year 1998). The supervisors provided subjective evaluations of their salespeople and objective performance data including dollar volume, quota achievements, and total compensation for the past year.

A total of 372 sets of questionnaires were distributed to 99 branch companies through the company's internal mailing system. The questionnaire set included a cover letter to the sales manager, a cover letter to the salesperson, a one-page performance evaluation sheet (one for each salesperson) for the manager to fill out, and a three-page questionnaire for the salesperson. The questionnaires were identified by the salespersons' names, but confidentiality was assured. Postage-paid return envelopes were included for both the managers and the salespersons to mail the questionnaires

65
directly to the author. A week before the survey distribution, the vice president of human resources sent an e-mail notice to the branch managers informing them of the upcoming survey and management’s endorsement of the study. Two weeks after the initial mailing, the VP of human resources sent an e-mail reminder to the managers. Three weeks after the e-mail reminder, the author sent a follow-up e-mail message to branches from which complete responses had not been received.

A total of 201 responses were received from the account executives, and managers provided data for 187 account executives. For 105 salespeople, responses were received from both the salespeople themselves and their managers. Thirty-seven of those to whom questionnaires were distributed were found to be no longer with the company or not in a sales capacity, resulting in valid response rates of 60.0% from the salespeople and 55.8% from the managers. The responding salespeople had a mean age of 37.4 years, and an average of 4.6 years of tenure with the company or another company that the advertising company had acquired lately. Of all the account executives that responded, 60.9% were male, 58.4% received 4-year college or higher education, 76.1% had been in a formal training program during the past 3 years (with an average of 15 hours), and on average, they work 45.5 hours per week on the sales job. According to the company’s human resources data, the average age and tenure of the entire sales force were 36.1 and 3.7, respectively, corresponding well to the mean age and tenure of the respondents.

Analysis Procedures

The two-step approach to structural model advocated by Anderson and Gerbing (1988) was employed to test the model hypotheses. The LISREL 8 program was used...
throughout the analyses (Joreskog and Sorbom 1993). The measurement model was first assessed to ensure desirable psychometric properties of the measures, especially with regard to the unidimensionality, internal consistency, and construct validity of the measures. Items with inadequate measurement properties were deleted. The structural model was then tested with covariances as input. The model was evaluated on the criteria of model fit, significance of path coefficients, and explained variance in endogenous constructs.

MEASURES

Measures developed and purified in the pretest were used to collect data in the main study to assess the model constructs.

Performance

Management endorsement obtained from the advertising company enabled the author to collect performance data from both the salespeople and their supervisors. Self-report performance was measured with the three-item scale finalized in the pretest. Performance data were also collected from the managers. The managers were asked to rate on the same three items to which the salespeople were to respond. Seven-point response scales were used in both questionnaires. Managers also provided objective sales data including the salesperson's dollar sales volume, annual quota achievement, and total income for the past year (i.e., 1998).

In testing the model, the self-report performance measure was used for several reasons. First, the literature review in Chapter Two suggests that there is no evidence in favor of using any one particular measure over another, and that self-report performance measures have been used in sales research and have not shown any particular upward
bias (Churchill et al. 1985). The data indicated that the correlations among the self-rating, manager-rating, and objective performance measures (dollar volume and total compensation) were of modest magnitude. The self-report measure had even a higher correlation than manager ratings to the two objective measures. The correlations are reported in a later section where construct validity of the self-rating performance measure is examined. Second, the objective measures concerned only the quantity of sales as reflected in dollar volume and total compensation. Given that the company served a diverse national market, sales quantity achievement may vary depending on many regional and market factors beyond the individual salesperson’s control. The dollar volume and compensation, therefore, might not reflect a salesperson’s true level of performance, especially when the salespeople were to be compared across different regions and territories. The subjective measures, on the other hand, covers overall performance in addition to quantity achievement. In making a subjective judgment, the rater should take into account regional and market factors as well as other performance aspects, such as customer satisfaction, account management, and time and territory management. The final consideration was sample size. The use of the performance measures provided by the managers would result in a sample size of about 100, while the self-rating measure allowed a sample size close to 180. Structural equation modeling methodology is based on asymptotic theory, which describes the behavior of statistics as the sample size becomes arbitrarily large. Researchers recommend a sample size of around 200 as the critical sample size to obtain trustworthy z-tests on the significance of parameter estimates (Bentler and Chou 1987; Hair et al. 1995). In this case, the sample size offered by self-rate measure would be more desirable. In sum, the
self-rating subjective measure should not be inferior to other measures; instead, it concerned overall performance in addition to sales quantity and it provided a substantially larger sample size. Therefore, the self-report performance measure was preferred in this study.

**Effort**

As in the pretest, work effort was measured with the four items adopted from Brown and Peterson (1994). The 7-point items assess the salesperson’s overall effort expended in the sales task, number of hours worked, number of sales calls made, and number of clients serviced as compared with his or her fellow salespeople.

**Creativity**

The 11 items developed in the pretest were used to measure the salesperson’s creativity. Respondents were instructed to indicate the frequency with which they exhibited the specified creative behaviors during the year 1998 on 5-point scales ranging from “Practically Never” (1) to “Almost Always” (5). An example item read: “Coming up with new ideas for satisfying customer needs.”

**Self-efficacy**

The three items trimmed through the pretest were used to assess the salesperson’s self-efficacy beliefs regarding the sales job. The original scale was adapted and modified from Sujan, Weitz, and Kumar (1994) and Chowbury (1993). The items measured the confidence level of the salesperson in performing the sales job and sales-related tasks. Responses were made on 7-point scales from “Strongly Disagree” (1) to “Strongly Agree” (7).
Trait Competitiveness

As in the pretest, trait competitiveness was measured with the four items adopted from Helmreich and Spence (1978), which have been applied in the sales context by Brown et al. (1998). The items were anchored on “Strongly Disagree” (1) to “Strongly Agree” (7).

Selling Experience

As in the pretest, selling experience was measured with one question: “How many years of total selling experience do you have (in current AND prior firms)?”

MEASUREMENT MODEL

Anderson and Gerbing’s (1988) two-step approach was followed in analyzing the data. The measurement model was evaluated prior to estimating the structural model. The primary objective of assessing the measurement model was to finalize the measures for the model constructs in order to avoid what Burt (1976) referred to as interpretational confounding. Although the pretest provided some preliminary evidence for the construct validity of the measures, sample characteristics and random error might have affected the true psychometric properties of the measures.

Measurement Model Fit

The 26 items, including 11 creativity items, 3 self-report performance items, 4 effort items, 3 self-efficacy items, 4 trait competitiveness items, and 1 selling experience item, were subjected to an iterative confirmatory factor analysis procedure using the LISREL 8 program. The six constructs were modeled as six correlated first-order factors with a total of 26 manifest indicators. As in the pretest, the error term of
the single-item measure of selling experience was fixed to zero. The sample size was 174 as a result of listwise deletion of cases with missing data.

In the first iteration of the measurement model with 26 items, all items loaded significantly on their respective constructs (p < .01), indicating convergent validity of the items within the constructs. However, the overall model fit might be improved as indicated by some key fit indices, reported in the first row of Table 4.1. The likelihood-ratio Chi-square statistic was 500.59 (df = 285, p < .01). The model had a goodness-of-fit index (GFI) of .83 and adjusted-goodness-of-fit index (AGFI) of .79. The Non-Normed Fit Index (NNFI) and comparative fit index (CFI), which are more robust to sampling characteristics, were .87 and .89, respectively. Although the model had a root mean square error of approximation (RMSEA) of .066, which suggested adequate fit, other fit indices such as GFI, AGFI, NNFI, and CFI indicated that a better fitting measurement model might be available.

**TABLE 4.1**

<table>
<thead>
<tr>
<th>Measurement Model Fit Statistics (Main Study)</th>
<th>$\chi^2$</th>
<th>df</th>
<th>GFI</th>
<th>AGFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement Model (26 items)</td>
<td>500.59</td>
<td>285</td>
<td>.83</td>
<td>.79</td>
<td>.87</td>
<td>.89</td>
<td>.066</td>
</tr>
<tr>
<td>Measurement Model (19 items)</td>
<td>191.85</td>
<td>138</td>
<td>.90</td>
<td>.86</td>
<td>.95</td>
<td>.96</td>
<td>.047</td>
</tr>
</tbody>
</table>

a. $\chi^2$ statistics are both significant at .01 level
b. N = 174

Guided by the procedures recommended in the measurement and scale development literature (Bagozzi and Yi 1988; DeVellis 1991), the author performed several iterations of confirmatory factor analysis to purify the measurement items. A number of criteria and heuristics were used in making the decisions whether to retain or
remove an item. Items that simultaneously suffered from several deficiencies were deleted. These deficiencies included high modification indices for lambda cross loadings (> 5.0), high standardized residuals (> 2.58), and low completely standardized loadings (< .50). Throughout the process, content and face validity of the each item was always taken into account in decisions involving deleting or retaining the items. Seven items that displayed these inadequacies were dropped from the measurement model.

The resulting measurement model contained 19 items, including 2 items for sales performance, 3 for work effort, 7 for creativity, 3 for self-efficacy, 3 for trait competitiveness, and 1 for selling experience. The second row of Table 4.1 presents the fit statistics for the 19-item measurement model. All fit indices showed improvement over the 26-item model. The goodness-of-fit index (GFI) and the adjusted-goodness-of-fit index (AGFI) were .90 and .86, respectively. The NNFI and CFI were .95 and .96, respectively. Further, RMSEA was .047. These fit indices indicated a good fit of the measurement model.

Construct Validity

The construct validity of the measures was examined with regard to their content validity, convergent validity, and discriminant validity. The correlations among the latent constructs (i.e., the $\phi$ matrix) for the 19-item measurement model did not show appreciable difference from those of the original 26-item model (see Table 4.2), suggesting the conceptual domains were preserved (Fornell 1983). The final items and the completely standardized factor loadings and their t-values are presented in Table 4.3. An examination of face validity of the items against the construct definitions indicates the constructs’ conceptual domains are adequately represented by the finalized
TABLE 4.2
Means, Standard Deviations, and Correlations among Latent Constructs (Main Study)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Performance (3 items)</td>
<td>5.58</td>
<td>.94</td>
<td>1.00</td>
</tr>
<tr>
<td>2. Effort (4 items)</td>
<td>5.86</td>
<td>.83</td>
<td>.74** 1.00</td>
</tr>
<tr>
<td>3. Creativity (11 items)</td>
<td>3.83</td>
<td>.49</td>
<td>.45** .54** 1.00</td>
</tr>
<tr>
<td>4. Self-Efficacy (3 items)</td>
<td>6.34</td>
<td>.67</td>
<td>.38** .52** .59** 1.00</td>
</tr>
<tr>
<td>5. Trait Competitiveness (4 items)</td>
<td>5.81</td>
<td>.94</td>
<td>.21** .26** .41** .45** 1.00</td>
</tr>
<tr>
<td>6. Experience (1 item)</td>
<td>10.18</td>
<td>8.12</td>
<td>.33** .21** .08 .15* -.11 1.00</td>
</tr>
</tbody>
</table>

The 19-item Model

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Performance (2 items)</td>
<td>5.72</td>
<td>1.15</td>
<td>1.00</td>
</tr>
<tr>
<td>2. Effort (3 items)</td>
<td>5.86</td>
<td>.84</td>
<td>.68** 1.00</td>
</tr>
<tr>
<td>3. Creativity (7 items)</td>
<td>3.80</td>
<td>.56</td>
<td>.47** .57** 1.00</td>
</tr>
<tr>
<td>4. Self-Efficacy (3 items)</td>
<td>6.33</td>
<td>.67</td>
<td>.38** .52** .59** 1.00</td>
</tr>
<tr>
<td>5. Trait Competitiveness (3 items)</td>
<td>5.75</td>
<td>.96</td>
<td>.21** .25** .39** .47** 1.00</td>
</tr>
<tr>
<td>6. Experience (1 item)</td>
<td>10.09</td>
<td>8.09</td>
<td>.32** .23** .08 .15* -.12 1.00</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
N = 174
### TABLE 4.3

Main Study Measures and Factor Loadings

<table>
<thead>
<tr>
<th>Sources</th>
<th>Construct and Measures</th>
<th>Complete Standardized Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Loading</td>
</tr>
<tr>
<td></td>
<td><strong>Sales Performance</strong></td>
<td></td>
</tr>
<tr>
<td>Brown and Peterson (1994)</td>
<td>1. How effective were you in making sales presentations?</td>
<td>.94</td>
</tr>
<tr>
<td></td>
<td>2. Your overall performance in 1998 was:</td>
<td>.94</td>
</tr>
<tr>
<td></td>
<td>3. Your performance in 1998 in terms of the quantity of sales you achieved was:</td>
<td></td>
</tr>
<tr>
<td><strong>Effort</strong></td>
<td></td>
<td>.86</td>
</tr>
<tr>
<td>Brown and Peterson (1994)</td>
<td>1. The overall effort I put into the sales tasks in 1998 was:</td>
<td>.86</td>
</tr>
<tr>
<td></td>
<td>2. The total number of hours I worked at tasks involved in selling in 1998 was:</td>
<td>.77</td>
</tr>
<tr>
<td></td>
<td>3. The number of calls I made in 1998 was:</td>
<td>.69</td>
</tr>
<tr>
<td></td>
<td>4. The number of clients I serviced in 1998 was:</td>
<td>--</td>
</tr>
<tr>
<td><strong>Salesperson Creativity</strong></td>
<td></td>
<td>.60</td>
</tr>
<tr>
<td>Author</td>
<td>1. Making sales presentations in innovative ways.</td>
<td>.60</td>
</tr>
<tr>
<td></td>
<td>2. Carrying out sales tasks in ways that are resourceful.</td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td>3. Coming up with new ideas for satisfying customer needs.</td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td>4. Generating and evaluating multiple alternatives for novel customer problems.</td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td>5. Seeing the customer’s problem from different perspectives.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>6. Having fresh perspectives on old problems.</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td>7. Improvising methods for solving a problem when an answer is not apparent.</td>
<td>.64</td>
</tr>
<tr>
<td></td>
<td>8. Generating creative selling ideas.</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>9. Using approaches that are different from those of your colleagues.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>10. Handling objections creatively.</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>11. Finding a customer need or desire that was not previously known.</td>
<td>--</td>
</tr>
</tbody>
</table>

(Table 4.3 to be continued)

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(Table 4.3 continued)

<table>
<thead>
<tr>
<th>Sources</th>
<th>Construct and Measures</th>
<th>Completely Standardized Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-Efficacy</td>
<td>Loading t-value</td>
</tr>
<tr>
<td>Chowdhury (1993); Sujan, Weitz, and Kumar (1994)</td>
<td>1. Overall, I am confident in my ability to perform my job well.</td>
<td>.79 11.76</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. I feel I am very capable at the task of selling.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. I feel I have the capabilities to successfully perform this job.</td>
</tr>
<tr>
<td>Brown, Cron, and Slocum (1998)</td>
<td>Trait Competitiveness</td>
<td>1. I enjoy working in situations involving competition with others.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. It is important to me to perform better than others.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. I feel that winning is important in both work and games.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. I try harder when I am in competition with other people.</td>
</tr>
<tr>
<td>Author</td>
<td>Selling Experience</td>
<td>How many years of total selling experience do you have (in current and prior firms)?</td>
</tr>
</tbody>
</table>

items, thus ensuring content validity. No item was further deleted from the self-efficacy scale. One item was deleted from the trait competitiveness measure. One item regarding the number of clients serviced by the salesperson was removed from the work effort scale. One item was excluded from the self-report sales performance scale. The remaining two performance items covered overall performance and sales quantity. The final creativity scale contained seven items pertaining to customer interaction, sales presentation, problem-solving, and general sales activities. Overall, the content domains of the constructs are deemed adequately covered.
Convergent validity is indicated when the path coefficients from latent constructs to their corresponding manifest indicators are statistically significant (i.e., \( p < .01 \)). As shown in Table 4.1, all loadings were greater than or equal to .60 with only one exception, and all were significant at the .01 level. One trait competitiveness item had a completely standardized loading of .58 (\( t = 7.44 \)). These loading statistics provided evidence of convergent validity of the items within each construct. The significant loadings, the lack of cross-loadings, and the adequate level of the measurement model fit also ensured the unidimensionality of each construct (Anderson and Gerbing 1988; Clark and Watson 1995).

To further assess the convergent validity of the self-report performance measure, the relationships among the self-report measure, the manager evaluations, and the objective performance data obtained from the managers were examined. A summated scale of self-report performance was formed using the average of the two self-report items retained. The sales managers were asked to rate their salespeople on the same items that were asked to the salespeople. The same two items (overall performance and quantity of sales) were used to form a summated scale of manager-rate performance. Managers also provided the past year's (i.e., 1998) performance data (dollar volume, quota attainment, and total compensation received). The intercorrelations among self-report performance, manager-rate performance, dollar, quota, and compensation are presented in Table 4.4. As shown, except for the percentage of annual quota attainment, which did not appear to be related to any other measures, all performance measures were correlated significantly (\( p < .01 \)). Further, the correlations between the self-report measure and dollar volume and compensation (\( r = .441 \) and .451, respectively) were
actually larger than those between manager-ratings and dollar and compensation \((r = .308 \text{ and } .297, \text{ respectively})\), which was another strong indication for the construct validity of the self-report performance measure.

**TABLE 4.4**

**Correlations Among Self-Report, Manager-Rating, and Objective Performance Measures**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Manager-rating</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-report</td>
<td>.386*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Dollar Volume</td>
<td>.308*</td>
<td>.441*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Quota Attainment</td>
<td>-.030</td>
<td>.007</td>
<td>-.040</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>5. Compensation</td>
<td>.297*</td>
<td>.451*</td>
<td>.776*</td>
<td>-.038</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* \(p < .01\)

\(N = 105\) (Listwise deletion)

To assess the discriminant validity among the constructs, the criterion recommended by Fornell and Larcker (1981) was used. If the square of the parameter estimate (correlation) between two latent constructs \(\phi^2\) is less than the average of their AVE estimates, discriminant validity is supported. This criterion, which has been viewed as the most stringent test of discriminant validity, was met across all possible pairs of constructs.

**Internal Consistency**

The means, standard deviations, and correlations among the latent constructs of the 19-item model are shown in Table 4.2. Three internal consistency measures were calculated for each construct and are presented in Table 4.5. All Cronbach’s alpha coefficients were greater than .70, indicating satisfactory levels of internal consistency (Nunnally and Bernstein 1994). Composite reliability is an estimate of internal consistency generated by LISREL that is analogous to coefficient alpha (Fornell and
As shown, composite reliability coefficients ranged from .76 to .93.

The average variance extracted (AVE) estimate assesses the amount of variance captured by a construct's measure relative to measurement error. AVE estimates of .50 or higher indicate acceptable reliability for a construct's measure. Four AVE estimates met this criterion while one failed. The creativity measure had an AVE estimate of .43, which is less than ideal. However, given that the coefficient alpha and composite reliability of the creativity scale showed sufficient internal consistency, the scale is deemed as having acceptable reliability. Thus, evidence of satisfactory levels of reliability of the construct measures was obtained.

**TABLE 4.5**

**Internal Consistency (Main Study)**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach's Alpha</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Performance (2 items)</td>
<td>.93</td>
<td>.93</td>
<td>.87</td>
</tr>
<tr>
<td>2. Effort (3 items)</td>
<td>.81</td>
<td>.82</td>
<td>.60</td>
</tr>
<tr>
<td>3. Creativity (7 items)</td>
<td>.84</td>
<td>.84</td>
<td>.43</td>
</tr>
<tr>
<td>4. Self-Efficacy (3 items)</td>
<td>.83</td>
<td>.84</td>
<td>.65</td>
</tr>
<tr>
<td>5. Trait Competitiveness (3 items)</td>
<td>.73</td>
<td>.76</td>
<td>.51</td>
</tr>
<tr>
<td>6. Experience (1 item)</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

N = 174

**Measurement Model Summary**

Following the procedures recommended in the measurement and scale development literature, the construct measures were purified using the confirmatory factor analysis technique. The final 19-item measurement model contained 2 performance items, 3 effort items, 7 creativity items, 3 self-efficacy items, 3 trait competitiveness items, and 1 selling experience item. The measurement model results showed adequate fit as indicated by several key fit indices. Although the AVE estimate
of the creativity measure fell short of expectation, overall, the construct measures demonstrated desirable content validity, convergent validity, discriminant validity, and internal consistency.

STRUCTURAL MODEL

Given that the requirement in the measurement part of model testing was satisfied, the structural relationships among the constructs as hypothesized were subsequently tested via LISREL 8. The covariance matrix of the 19 items was used as input, and the sample size was 177 as a result of listwise deletion of cases with missing data. Table 4.6 presents the results for the proposed structural model in Figure 1.1. The structural model fit, path estimates, and explained variance in the endogenous constructs are now reported.

Structural Model Fit

The overall fit of the structural model was adequate as indicated by the levels of fit on GFI (.89), AGFI (.86), NNFI (.95), CFI (.95), and RMSEA (.051). While the $\chi^2$ statistic of 210.01 was significant (df = 144, p < .01), the other fit indices were sufficient to suggest adequate level of model fit.

Model Hypotheses

Chapter Two has proposed an individual-level model of sales performance that incorporates five performance antecedents. The hypotheses related to the construct relationships are now briefly reviewed before the path coefficients are examined. While the effects of work effort and sales experience on sales performance have been well-recognized in the literature (Behrman and Perreault 1984; Brown and Peterson 1994; Ford, Churchill, and Walker 1985; Kerr and Jermier 1978; Walker, Churchill, and Ford 1979, reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
TABLE 4.6

Structural Model Fit, Path, and Explained Variance Estimates (Main Study)

<table>
<thead>
<tr>
<th>Fit Statistics</th>
<th>χ²</th>
<th>df</th>
<th>GFI</th>
<th>AGFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Model</td>
<td>210.01</td>
<td>144</td>
<td>.89</td>
<td>.86</td>
<td>.95</td>
<td>.95</td>
<td>.051</td>
</tr>
</tbody>
</table>

NOTE: The χ² statistic is significant at the .01 level.

Completely Standardized Path Estimates, t-values, and Explained Variance Estimates

<table>
<thead>
<tr>
<th>Path Estimate</th>
<th>t-value</th>
<th>Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trait competitiveness =&gt; Effort (H6: γ_{21})</td>
<td>-.01</td>
<td>-.08 (ns)</td>
</tr>
<tr>
<td>Trait competitiveness =&gt; Self-Efficacy (H5: γ_{11})</td>
<td>.52</td>
<td>4.78</td>
</tr>
<tr>
<td>Experience =&gt; Self-Efficacy (H7: γ_{12})</td>
<td>.24</td>
<td>3.22</td>
</tr>
<tr>
<td>Experience =&gt; Performance (H8: γ_{42})</td>
<td>.21</td>
<td>3.40</td>
</tr>
<tr>
<td>Self-Efficacy =&gt; Effort (H4: β_{21})</td>
<td>.55</td>
<td>5.23</td>
</tr>
<tr>
<td>Self-Efficacy =&gt; Creativity (H3: β_{31})</td>
<td>.62</td>
<td>5.85</td>
</tr>
<tr>
<td>Effort =&gt; Performance (H2: β_{42})</td>
<td>.57</td>
<td>6.95</td>
</tr>
<tr>
<td>Creativity =&gt; Performance (H1: β_{43})</td>
<td>.15</td>
<td>2.05</td>
</tr>
<tr>
<td>Trait competitiveness - Experience (φ_{12})</td>
<td>-.12</td>
<td>-1.43 (ns)</td>
</tr>
</tbody>
</table>

R² - Self-Efficacy | .29 |
R² - Effort | .29 |
R² - Creativity | .39 |
R² - Performance | .48 |

NOTE: N = 177. Path estimates are completely standardized. Except where noted by "ns" (non-significant), all paths are significant at the .01 level or higher.

1977), the model highlights the role the salesperson’s creativity plays in affecting performance. It is hypothesized that creativity will have a unique and direct effect on performance that is above and beyond the effects of effort and experience. This unique effect is primarily based on the fact that salespeople perform a variety of structured and unstructured activities (Moncrief 1986) and that the unstructured tasks require creativity on the part of the performer (Amabile 1983a). The conceptualization of salesperson creativity realizes that salesperson creativity generally is of the “little C” nature that is different from scientific and artistic creativity.
Creativity research indicates self-efficacy is one critical determinant of workplace creativity (Woodman et al. 1993). Further, social cognitive theory suggests that self-efficacy affects performance primarily through increased effort level and creative use of resources (Bandura 1986; Gist and Mitchell 1992; Wood and Bandura 1989). Thus, the model proposes self-efficacy as a major antecedent to effort and creativity. Further, recent literature highlights the role of the salesperson's trait competitiveness as an individual difference factor in determining sales behaviors and performance (Brown et al. 1998; Hechhausen et al. 1985). Therefore, the model proposes positive effects of trait competitiveness on self-efficacy and work effort. In sum, based on creativity theory, motivational theory, social cognitive theory, and relevant sales literature, the following hypotheses have been advanced (see Figure 1.1):

H1: A salesperson's creativity is positively associated with his/her sales performance ($\beta_{43}$).

H2: A salesperson's work effort is positively associated with his/her sales performance ($\beta_{42}$).

H3: A salesperson's self-efficacy is positively associated with his/her creativity ($\gamma_{31}$).

H4: A salesperson's self-efficacy is positively associated with his/her work effort ($\beta_{21}$).

H5: A salesperson's trait competitiveness is positively associated with his/her self-efficacy ($\gamma_{11}$).

H6: A salesperson's trait competitiveness is positively associated with his/her work effort ($\gamma_{21}$).
H7: Selling experience is positively related to the salesperson’s self-efficacy ($\gamma_{12}$).

H8: Selling experience is positively related to the salesperson’s performance ($\gamma_{42}$).

Path Results and Explained Variance Estimates

Table 4.6 displays the structural model results including fit statistics, path estimates, significance levels (t-values), and explained variance estimates ($R^2$). With only one exception, the completely standardized path coefficients were all significant and in the hypothesized directions. In other words, all but one hypotheses were supported. The path coefficients and their associated t-values are also presented in Figure 4.1.

![Diagram of relationships between variables]

FIGURE 4.1

Main Study (Advertising Sample) Results (Path Coefficients and t-values)

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Gamma ($\gamma$) paths are directional paths from exogenous to endogenous constructs. Among the four hypothesized $\gamma$ paths, three were supported at the .01 or higher levels, while one was not. In particular, the findings supported H5, which posits competitive salespeople have higher levels of self-efficacy ($\gamma_{11} = .52, t = 4.78$). H7, which suggests experienced salespeople are self-efficacious in performing the sales job, was also supported ($\gamma_{12} = .24, t = 3.22$). Results also supported H8, suggesting selling experience is directly related to sales performance ($\gamma_{42} = .21, t = 3.40$). The data failed to support H6, however. H6 proposes that trait competitiveness is positively associated with work effort ($\gamma_{21} = -.01, t = -.08$).

All four hypothesized beta ($\beta$) paths were supported. A $\beta$ path leads from one endogenous construct to another. H2, which posits a positive link between work effort and sales performance, was strongly supported ($\beta_{42} = .57, t = 6.95, p < .01$). The results also strongly supported H3, which proposes a positive efficacy-creativity association ($\beta_{31} = .62, t = 5.85, p < .01$). H4, suggesting self-efficacious salespeople are likely to exhibit a high level of work effort, was also supported ($\beta_{21} = .55, t = 5.23, p < .01$). More important, the findings supported H1 ($\beta_{43}$), which posits salesperson creativity is positively associated with sales performance. This path is a critical component of the model since it suggests the unique effect of creativity on performance that is above and beyond the effects of effort and experience.

The model accounted for approximately 29% of the variance in self-efficacy, 29% in work effort, 39% in creative behavior, and 48% in salesperson performance. As such, the model received substantial empirical support from the data collected from the advertising salespeople.
HYPOTHESIS TESTING USING THE PRETEST DATA

Given the substantial support the model received in the data collected from the advertising salespeople, the structural model with the final 19 items was tested again using the pretest data collected from the real estate agents. Given the differences between the two groups of salespeople, the cross-validation results should provide some evidence for generalization of the model relationships. Sample size as a result of listwise deletion of missing data was 138. Table 4.7 presents the results including the fit statistics of the measurement and structural models, structural path estimates, and explained variance in endogenous constructs. The path coefficients and their associated t-values are also presented in Figure 4.2.

As shown in Table 4.7, the measurement model had a satisfactory fit level as indicated by the fit indices. While the model had a significant χ² estimate of 214.78 (df = 138, p < .01), other indices demonstrated adequate fit level. The model had a goodness-of-fit index (GFI) of .87 and an adjusted-goodness-of-fit index (AGFI) of .82. Further, the Non-Normed Fit Index (NNFI) and the comparative fit index (CFI), which have been advocated as robust to sampling characteristics, were .94 and .95, respectively. Finally, the root mean square estimate approximation (RMSEA) was .064, again showing adequate fit of the measurement model.

The structural model also exhibited adequate fit level. Although the χ² statistic was again significant (χ² = 229.22, df = 144, p < .01), the GFI and AGFI were .86 and .81, respectively, and the NNFI and CFI were .93 and .95, respectively. The model had an RMSEA of .066. As in the measurement model, the fit was satisfactory.
Table 4.7 also presents the completely standardized structural path estimates, t-values, and explained variance estimates. As shown, all hypothesized \( \gamma \) paths were significant at the .01 or higher levels. H5 posits trait competitiveness has a positive association with self-efficacy. The results provided strong support for the hypothesis \( (\gamma_{11} = .60, t = 6.43) \). H6 proposes that trait competitiveness is positively related to work effort. Although this hypothesis was not supported with the advertising sample, it received support from the pretest data \( (\gamma_{21} = .57, t = 4.87) \). As in the main study, H7, which suggests experienced salespeople are more self-efficacious in performing the
sales job, was again supported ($\gamma_{12} = .15, t = 2.01$). Results also supported H8, suggesting selling experience has a direct impact on sales performance ($\gamma_{42} = .17, t = 2.26$).

FIGURE 4.2
Pretest Study (Real Estate Sample) Results (Path Coefficients and t-values)

Three of the four hypothesized beta (β) paths were supported. H2, which posits a positive link between work effort and sales performance, was strongly supported (β42 = .64, $t = 7.04$, $p < .01$). The results also strongly supported H3, suggesting a positive relationship between self-efficacy and salesperson creativity (β31 = .64, $t = 7.03$, $p < .01$). More important, the findings supported H1 (β43 = .25, $t = 3.01$, $p < .01$), which posits salesperson creativity is positively associated with sales performance. Again, this path suggests the unique effect of creativity on performance that is above and beyond the effects of effort and experience. H4 posits that self-efficacious salespeople are

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likely to expend higher level of work effort. The path was not significant ($\beta_{21} = .15$, $t = 1.42$). The hypothesis failed to gain support from this sample.

The model accounted for approximately 43% of the variance in self-efficacy, 45% in work effort, 41% in creative behavior, and 66% in sales performance. As such, the model received substantial empirical support from the data collected from the real estate sales agents.

**SUMMARY AND DISCUSSION**

Two survey field studies were conducted to test the proposed model in Figure 1.1. The first study was carried out with a sample of real estate sales agents. The primary purpose of the pretest was to develop and refine the measures, especially the salesperson creativity scale, to be used to test the model. The pretest yielded construct measures that exhibited acceptable psychometric properties, including satisfactory levels of internal consistency, unidimensionality, and construct validity. The main study first finalized the construct measures and then tested the structural model relationships. The final model consisted of a total of 19 items including 2 performance items, 3 effort items, 7 creativity items, 3 self-efficacy items, 3 trait competitiveness items, and 1 selling experience item. For cross-validation purposes, the pretest data were also used to test the model with the finalized 19-item measures. For both data sets, both the measurement and structural models showed adequate levels of fit as indicated by several key fit indices. The majority of the hypothesized relationships were statistically significant in the structural model in both studies. Therefore, the model received substantial empirical support.
Particularly, both studies supported H1, H2, H3, H5, H7, and H8. H1 posits salesperson creativity as a critical determinant of sales performance. The support received by the hypothesis strongly highlights an area that deserves attention from sales researchers. H2 relates to work effort as an important antecedent to performance. The empirical support found is consistent with the existing sales literature (e.g., Brown and Peterson 1994). Grounded in social cognitive theory, H3 suggests the critical role of self-efficacy in affecting salesperson creativity. This path had strong coefficient estimates in both samples, suggesting the validity of social cognitive theory and the "little C" nature of salesperson creativity. The support received by H5 again confirms the idea in social cognitive theory that positive states of arousal affect self-efficacy judgments (Gist and Mitchell 1992). H7 and H8 relate to the effects of selling experience on performance. The model posits that selling experience may have both direct and indirect effects. The data supported such assertion.

Following the extant literature (Bartkus et al. 1989; Brown et al. 1998), H6 posits that more competitive salespeople will exert higher work effort in order to perform better than others. This hypothesis was supported in the pretest but not in the main study. The proposition advanced in H4 regarding the positive association between self-efficacy and work effort is based on social cognitive theory. H4 was supported in the main study but not in the pretest. The inconsistency in supporting H4 and H6 may result from sample characteristics and/or the suppress effect caused by multicollinearity among the model constructs. Chapter Five will be devoted to the discussion of the theoretical and managerial implications of the findings as well as limitations and future research directions.
CHAPTER FIVE: DISCUSSION

This chapter is organized in four sections. First, I provide a general discussion regarding the empirical findings and their theoretical implications. The limitations of the two studies are then examined, followed by a section on future research directions. The chapter concludes with an elaboration on managerial implications.

GENERAL DISCUSSION

This dissertation offers important contributions to the literature. First, it introduces to the sales literature the construct of salesperson creativity, and proposes that salesperson creativity has a unique, direct effect on performance that is above and beyond the effects of work effort and selling experience. The significant and consistent results obtained from the two studies should alert sales researchers of this potentially important construct. Second, an individual-level model of sales performance is proposed and tested across two diverse samples. The model integrates the sales research with three bodies of literature, namely, social cognitive theory, motivation theory, and social psychology of creativity. More specifically, the model incorporates five performance antecedents: trait competitiveness, selling experience, self-efficacy, work effort, and creativity. With a focus on salesperson creativity, the research highlights the critical importance of self-efficacy beliefs in affecting creativity. Finally, in conjunction with model testing, a seven-item creativity scale has been developed following recommended steps in scale development research. The scale exhibited acceptable unidimensionality, construct validity, and internal consistency. Special attention was paid to the avoidance of firm- or industry-specific items or wordings. Therefore, the scale has a potential to be used in future research in other sales settings.

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Cross-sectional field survey data were collected from two diverse samples of salespeople to test the model. The first sample comprised of real estate sales agents affiliated with a regional real estate agency, while the second was from the account executives employed by a national outdoor billboard advertising firm. Tested using the structural modeling technique, the proposed model received substantial support from both data sets. In each of the two samples, seven of the eight hypothesized paths were supported. Overall, the direct effects of work effort, creativity, and selling experience on performance were consistently demonstrated. The effects of self-efficacy on creativity, selling experience on self-efficacy, and trait competitiveness on self-efficacy were also significant across the two samples. The interrelationships among trait competitiveness, self-efficacy, and work effort, on the other hand, showed some inconsistencies across the samples.

Salesperson Creativity

Based on social psychological research on creativity, this dissertation conceptualizes salesperson creativity as the salesperson's new ideas or behaviors used to carry out his or her sales-related activities. It was hypothesized that salesperson creativity should have a direct and positive impact on sales performance given the more diverse customer base and more competitive marketplace. The two field studies provided encouraging evidence for the validity of this hypothesized effect. The studies supported the literature and conventional wisdom with regard to the strong and positive associations between performance and both effort and experience, and both samples showed work effort as having the strongest impact on performance among the three direct antecedents. In both studies, the direct effect of creativity on performance was
positive and significant in the presence of the effects of work effort and selling experience. In other words, the incremental explanatory power of salesperson creativity was clearly demonstrated. In the real estate sample, the effect of creativity \( (t = 3.01) \) on performance appeared even stronger than that of experience \( (t = 2.26) \).

The consistent results regarding the creativity-performance relationship have important implications for sales research. Although much anecdotal evidence suggests salespeople should be creative for achieving a high level of sales success, little support can be found in the extant academic literature. Some researchers even viewed sales jobs that require the salesperson to generate innovative solutions as having a negative impact on job satisfaction (e.g., Churchill et al. 1976) and role perceptions (e.g., Behrman and Perreault 1984). However, selling today, especially in the business-to-business setting, is becoming increasingly complicated given the unique customer problems and high level of buyer sophistication. As a result, we have witnessed an increased emphasis on system selling, team selling, and product customization (Churchill et al. 1997; Weitz et al. 1998). A problem-solving approach to selling in complicated buyer-seller interactions clearly requires the salesperson of the ability to creatively identify and solve customer problems. Naturally, academic research should study the creative aspects of selling, especially those related to problem identification and solution generation on the part of the salesperson. As such, the dissertation will open a new avenue for sales research to explore critical sales behaviors that contribute to performance.

The significance of the salesperson creativity construct lies even beyond its relation to performance. Contemporary organizational theory maintains that
organizations need to develop individuals to perform in new and more complex ways and to exhibit personal initiatives (Frese, Fring, Soose, and Zempel 1996; Lawler 1994). From the perspective of job enrichment, job enlargement, and employee empowerment, the creativity required to successfully perform one's job should lead to higher levels of felt meaningfulness, intrinsic motivation, and job satisfaction. Literature on leadership substitutes would also suggest that jobs requiring some creative ideas and independent thinking provide stronger feelings of fulfillment and intrinsic satisfaction, depending on the characteristics of job incumbents and organizational environment (e.g., Childers, Dubinsky, and Skinner 1990; Podsakoff and MacKenzie 1994). With the increased levels of selling situation complexity and buyer sophistication, salespeople today in general are better educated, more knowledgeable, and more professional. These characteristics of professional salespeople represent the type of leadership substitutes that correspondingly require high levels of job autonomy and work creativity. These human and job factors in combination will contribute to salespeople's better performance in addition to higher motivation and job satisfaction. Sales organizations that incorporate salespeople's creative potential into their job design and employee empowerment effort may find their salespeople having more favorable job attitudes and performance. Therefore, salespeople's creative behavior may well be related to other important job aspects.

Self-Efficacy

Although self-efficacy is conceptually related to a variety of job outcomes and workplace attitudes, only a limited number of authors have studied self-efficacy in sales research (e.g., Brown et al. 1998; Spiro and Weitz 1990; Sujan, Weitz, and Kumar
1994). Their studies, nevertheless, demonstrated a clear relevance of the construct to salespeople's behaviors and performance. Extant sales research, however, has not yet investigated self-efficacy in relation to the creativity that salespeople exhibit in performing their jobs. I hypothesized the salesperson's self-efficacy belief as a primary determinant of his or her creative behavior. The results supported such hypothesis; the association between self-efficacy and creativity was consistently strong across the two samples ($t = 5.85$ and $7.03$ for advertising and real estate samples, respectively).

While the notion of self-efficacy as a predictor of creativity is well grounded in both creativity research and social cognitive theory (Bandura 1986; Gist and Mitchell 1992; Mumford and Gustafson 1988), the construct is particularly critical in predicting the "little C" type such as salesperson creativity. Research in social psychology suggests that creativity stems from the confluence of task motivation and relevant task and creative skills (Amabile 1983b, 1997). Given the product and organizational constraints imposed on the salesperson, salesperson creativity is likely to be small, minor deviations from daily routines; its degree, therefore, is manifested by the frequency of occurrence rather than the amount of deviation from known solution or existing routines. Self-efficacy reflects the salesperson's perception of what he or she can do with the selling skills, knowledge, and motivation he or she brings to the job. Felt competency in performing a task may increase the likelihood to try out new ways of doing things, the courage and initiative needed to risk doing things differently, and the probability of looking at a problem from different perspectives. Thus, although the importance of actual task expertise and creativity skills cannot be overestimated, the self-perception of skills and motivation level may be more critical in the case of "little
C” than “big C.” While the degree of creativity should be conceptualized as a continuum rather than a dichotomy, the implication is that the closer our subject of interest (i.e., creativity) is to the “little C” end of the continuum, the more important the perception of motivation and skills (i.e., self-efficacy) becomes for creativity to occur.

As an important motivational construct, self-efficacy has been suggested to have a generative capacity in influencing human behaviors, and, therefore, to affect performance primarily through expanded work effort and creative use of available resources (Bandura 1986; Gist and Mitchell 1992; Wood and Bandura 1989). Accordingly, it was hypothesized that self-efficacy affects sales performance through work effort and creativity. The results highlighted the critical role of self-efficacy in determining the degree to which the salesperson would exhibit creative ideas and behaviors. Although the efficacy-effort path was significant only in the advertising study, it was in the right (i.e., positive) direction with the real estate sample. Overall, the notion of two routes by which self-efficacy affects individual salesperson’s performance was supported. The two routes to sales performance are analogous to Sujan, Weitz, and Kumar’s (1994) distinction of two work behaviors and their thesis that sales performance depends on both working hard and working smart. A general conclusion to be inferred from this dissertation is that sales performance is depending not only on the amount of work effort (e.g., time and number of calls) but also on the salesperson’s creative ideas and behaviors that provide appropriate solutions to sales-related problems. The salesperson’s self-efficacy belief is related to both effort and creativity.
Trait Competitiveness

The model incorporates two exogenous constructs, one of which is trait competitiveness. Trait competitiveness has recently been recognized as one of the most important personality traits of successful salespeople (Brewer 1994), but the mechanism by which the trait affects performance is not clear. In this dissertation, the construct was hypothesized as having both direct and indirect effects on sales behaviors. Its effect on self-efficacy was modeled based on social cognitive theory, which suggests that positive state of arousal may increase the level of self-efficacy (Gist and Mitchell 1992). The results from both studies strongly supported the hypothesized positive effect, suggesting that trait competitiveness tends to affect sales performance through self-efficacy, which in turn affects sales behaviors such as effort and creative behavior.

An empirical inconsistency was observed regarding the competitiveness-effort relationship. The path was hypothesized based on the motivation theory positing that individuals have innate, dispositional needs and motives that drive them to behave in certain ways (Hechhausen et al. 1985). The support for this path was mixed. The coefficient estimate was positive and significant in the real estate sample but not in the advertising sample. This could be due to a number of reasons, which will be discussed shortly under the subheading of "Empirical Inconsistencies."

Overall, the results seem to support social cognitive theory for an indirect effect of trait competitiveness on sales behaviors. Although a number of studies have been conducted investigating the competitiveness-performance relationship in personal selling contexts (Bartkus et al. 1989; Brown et al. 1998; Brown and Peterson 1994; Locke 1968), no research has specifically related the construct to self-efficacy. Brown
et al. (1998) did report a positive correlation between the two, but that was not the focus of their study. The findings from the two studies confirm the idea that certain personality variables may influence the individual’s state of arousal, which in turn affects self-efficacy (Gist and Mitchell 1992). The findings aid our understanding of how a personality trait influences one’s work behaviors and job performance.

**Selling Experience**

Despite the intuitive appeal of experience as a performance predictor, the mechanism by which experience affects performance has not been adequately studied. Past research revealed ambiguous relationships between experience and other sales related constructs (Bartkus et al. 1989; Behrman and Perreault 1984; O’Hara et al. 1991; Tanner 1994). Social cognitive theory suggests a positive impact of selling experience on self-efficacy. According to the theory, selling experience may influence self-efficacy by way of more accurately analyzing task requirements, attribution, and situational resources and constraints (Gist and Mitchell 1992). In keeping with social cognitive theory, the findings from both studies suggest that heightened self-efficacy may represent a major tunnel through which experience feeds into better performance.

Besides its impact on self-efficacy, selling experience also demonstrated strong direct effect on sales performance. While self-evident and consistent with the literature (Bartkus et al. 1989; Behrman and Perreault 1984), this direct effect suggests that experience not only increases the salesperson’s efficacy perception, but may also affect performance through other factors that are not included in the model. Experience may actually enrich the knowledge structure that enables the salesperson to more effectively handle different sales situations. Previous years in the field may have a carryover effect
on current period performance due to reputation, word-of-mouth referral, customer loyalty, and long-term customer relationship, more apparent when the salesperson has sold in the same territory for a prolonged period. Firms with dual career paths for the sales force may assign senior salespeople to key accounts and/or better territories, and provide extra resources for motivational purposes (Churchill et al. 1997). These factors as a result of years of selling may all contribute to the better performance enjoyed by the more experienced salespeople.

In sum, this research finds that experience have both direct and indirect, positive effects on performance. The indirect effect through self-efficacy is especially interesting because of the critical role of self-efficacy in affecting salesperson creativity. Conceptually, the relationship between experience and creativity can be either negative or positive. Self-efficacy as a mediator makes a lot of sense for understanding their relationship. Experience builds up confidence, and confidence leads to creativity.

Empirical Inconsistencies

Two inconsistencies existed across the two samples. They pertained to the interrelationships among trait competitiveness, self-efficacy, and work effort. The effect of trait competitiveness on work effort was evidenced in the real estate sample but not in the advertising sample, whereas the hypothesized path from self-efficacy to work effort was supported by the advertising data but not by the real estate data. Several possible explanations may be offered. First, the inconsistencies may be due to sample characteristics. One difference between the two groups of salespeople is that the advertising salespeople were assigned to territories where they did not compete directly against each other for business, whereas the real estate agents did not have a predefined
territory in which to conduct business, indicating the agents in a branch office could be in direct competition. It is possible that under direct competition, few choices will be available besides working harder. As some practitioners may put it, “It’s a numbers game.” Therefore, the enjoyment of interpersonal competition and the desire to perform better than others may be more easily translated into work effort such as making more sales calls and working longer hours. In situations involving little direct competition, however, other behavioral options or selling strategies may be more desirable for better performance. Salespeople working in different territories may be faced with differing customer and market characteristics, available resources, and market potential. While work effort is still important, the use of other viable strategies may be more critical.

The self-efficacy belief about the ability to use different strategies and selling approaches should be conducive to the performance of appropriate behaviors such as effort and creativity. Thus, trait competitiveness may have more indirect impact on effort through the self-efficacy beliefs.

Some empirical research seems to support such a speculation on the possible role of direct competition. In Brown and Peterson’s (1994) study of door-to-door salespeople, for instance, the competitiveness-effort path was also hypothesized but not significant, suggesting that the effect of competitiveness on performance might occur primarily through behavioral channels other than effort. Although Brown and Peterson did not mention the competitive situation among the salespeople, direct competition for customers seemed unlikely since the 380 salespeople they surveyed spread across all 50 states and several foreign countries. In a more recent study, Brown et al. (1998) found trait competitiveness interacted with perceived competitive environment in that
competitive salespeople set higher goals when the environment was more competitive, while in low competitive environment more competitive salespeople did not differ from their less competitive colleagues in their self-set goal levels.

As for the non-significant efficacy-effort path in the real estate study, sample characteristics may also be a reason. Due to the direct competition among the real estate agents, competitive sales agents put higher levels of work effort than their less competitive counterparts. The competitive state of psychological arousal may have a second route to affecting performance. As identified in the model, this second route is through the feeling of competence (i.e., self-efficacy), which in turn prompts creativity in carrying out work tasks. In other words, when more direct competition is involved, trait competitiveness may affect performance through (1) a direct impact on the level of work effort and (2) an indirect effect on creativity through self-efficacy. Although work effort seems to have a stronger direct effect than does creativity on performance, creativity may play a greater role than effort in transforming self-efficacy beliefs to performance. In sum, it would be reasonable to suspect the degree to which salespeople are in direct competition with each other for customers and business may moderate the interrelationships among trait competitiveness, work effort, and self-efficacy.

Another difference between the two samples was in demographics. Three quarters of the real estate respondents were female, while the majority of the advertising salespeople (61%) in the main study sample were male. The average age of the real estate agents was 53, whereas that of the advertising salespeople was 37. The real estate agents had an average of 15 years of selling experience, while the advertising respondents only had 10 years. Less than half of the real estate agents had college
education, but nearly 60% of the advertising sales executives received college or higher education. These sample characteristics may also have contributed to the inconsistencies observed in the results. For instance, younger, more educated salespeople may be more open-minded and flexible than their older counterparts. Their competitive personality may not drive them directly to work more hours; instead, they may seek out new and more effective and efficient ways to approach sales.

Besides the possible sample-specific explanations, a second reason for the empirical inconsistency on the competitiveness-effort link could be the "suppressor" effect due to the multicollinearity among the performance predictors that distorted the competitiveness-effort relationship. Suppressor effect occurs when the sign of the path coefficient is different from that of the correlation between two constructs (Bentler and Chou 1987; Pedhazur 1997). The correlation between the latent constructs of competitiveness and effort was .26 (p < .01). Although not significant, the path from competitiveness to effort was negative (γ21 = .01, t = -.08). The suppressor effect due to multicollinearity in this case leads to an uninterpretable result that might be hard to replicate (Bentler and Chou 1987).

Finally, the non-significance of the efficacy-effort path estimate in the real estate sample could be a result of small sample size. Structural equation modeling methodology is based on asymptotic theory, which describes the behavior of statistics as the sample size becomes arbitrarily large. Researchers recommend a critical sample size of around 200 in order to obtain trustworthy z-tests on the significance of parameter estimates (Bentler and Chou 1987; Hair et al. 1995). Given the t-value of 1.42, the path would probably be significant with a larger sample, say, of 200.
In summary, the empirical inconsistencies observed in the samples may be due to sample characteristics, suppressor effect, and/or the small sample sizes. More research is called for to examine the interrelationships among trait competitiveness, work effort, and self-efficacy.

LIMITATIONS

Like any research, the dissertation has limitations, and when interpreting the findings one should always take the limitations into account. The first limitation relates to the fact that measures for both exogenous and endogenous constructs in the model were based on pencil-and-paper self-reports. As a result, common method variance might be present, inflating the magnitude of reported relationships. However, it is unlikely that the respondents guessed the hypotheses. Moreover, the procedures used for data collection (e.g., assured anonymity in the real estate study, assured confidentiality in both samples, and questionnaires that were mailed directly back to the researcher) were unlikely to have motivated the respondents to manage a favorable impression.

Second, the use of a self-report performance measure places another potential limitation on the studies. Although past research has shown the validity of self-report performance measures (Behrman and Perreault 1982; Churchill et al. 1985), self-evaluations may still have inflated the relationships between performance and its predictor constructs, and results may have been different had some objective performance measures been used in testing the model. However, some procedures were incorporated in the research design to reduce this potential bias. Anonymity (for the real estate sample) and confidentiality (for both samples) should reduce the potential
upward bias in performance evaluation. The performance items focused on the outcome rather than the input aspects of performance. As reported in previous chapters, the measure demonstrated substantial correlations with objective performance data and/or manager evaluations. In the advertising data, the self-evaluation was correlated stronger than manager-evaluation with objective performance data provided by the managers.

Third, both samples used in the dissertation were convenient samples. As the discussion on the two empirical inconsistencies indicates, sample characteristics may hinder the generalizability of the study results. The fact that both samples were not large (N < 200) may cast doubt on the reliability of the estimated path coefficients. Further, in the real estate study, the low response rate and the inability to assess the potential non-response bias due to the guaranteed anonymity also present a caution. However, the choice of the two diversely different samples should contribute to the model generalizability. Real estate agents are independent contractors, deal with consumers, sell a concrete, physical product, and do not have an assigned territory, whereas advertising salespeople are employees, deal with business buyers, sell a product whose benefits are uncertain, and have a pre-assigned territory. While caution should be taken in generalizing the findings, the two samples should have provided a solid piece of evidence for the validity of the model.

Finally, the cross-sectional data prohibit us from drawing any conclusion on causality, although a focus of this research was to identify individual/personal factors that explain sales performance. Only carefully designed and controlled experimental research may provide evidence for cause-effect relationships. Nevertheless, the SEM
methodology does help us infer directional relationships among the latent constructs. Further, the parameter estimates are more accurate accounts of the true relationships than other linear models since SEM incorporates the possible effects of measurement error.

DIRECTIONS FOR FUTURE RESEARCH

Creativity and Performance

This dissertation demonstrated a unique effect of creativity on sales performance with two diverse samples. Since this is the first attempt to investigate the construct of salesperson creativity, more research is needed in other sales settings. In order to establish the causal effect of creativity on sales productivity, longitudinal studies and experimental designs should be used. The effect of creativity, compared with that of work effect, was not large as indicated by the path coefficient (β_{43}), suggesting the existence of moderating factors. The rationale is similar to the suggestion that the importance of salespeople's customer orientation and adaptive behavior may depend on sales situations such as whether the customer-salesperson relationship is long-term and cooperative and/or whether salespeople are needed for the customers' needs to be satisfied (Saxe and Weitz 1982; Weitz 1981). Saxe and Weitz's (1982) findings indicate a positive relationship exists between customer orientation and sales performance when the customer-salesperson relationship is long-term and cooperative and the salesperson's ability to help satisfy customer need is high. Likewise, the effect of creativity may vary depending on such factors as the nature of the specific sales activities, the characteristics of the product market, and the customer relationships. For example, Amabile (1983a) maintains that creativity is only required when task is
unstructured. Since sales jobs vary across industries, firms, and corporate divisions, it is likely that the effect of creativity on performance may also vary across jobs, firms, and industries. The problem-solving approach to selling is probably more productive in complicated, large sales, therefore, future research could focus on more complicated business to business sales settings, such as team selling, systems selling, and sales involving product customization. Organizational culture and working environment may also be relevant factors. Supervisory behaviors related to high initiation of structure, for instance, may potentially prevent subordinates' discretionary behaviors from happening. Consequently, creativity may be discouraged. In such organizational climate, salesperson creativity is not likely to be related to sales performance. Future research should identify the moderating factors that strengthen, weaken, or nullify the creativity-performance relationship.

Having realized salesperson creativity as an important antecedent to sales performance, the next step naturally would be to identify the factors that possibly enhance or impede creativity. At the individual level, it has been suggested that creativity is most likely to occur when people's skills overlap with their strongest intrinsic interests (Amabile 1983a). At the organizational level, social or work environment can influence both the level and frequency of creative behavior (Amabile 1997). The two studies reported here demonstrated self-efficacy as a critical determinant of salesperson creativity. Future research should investigate not only the main effects of personal and situational factors but also how personal characteristics (e.g., competitiveness, self-efficacy, experience, intrinsic and extrinsic motivation, knowledge, and skills) and environmental factors (e.g., job characteristics, supervisory
behaviors, team selling, and organizational culture) interactively affect salesperson creativity.

Determinants of Self-Efficacy

Self-efficacy is a dynamic construct that changes over time and across tasks (Wood and Bandura 1989). More specifically, social cognitive theory suggests self-efficacy can be changed through four categories of experience: enactive mastery, modeling, verbal persuasion, and physiological/psychological arousal state (Bandura 1986). These experiences are integrated with other information such as task factors (e.g., autonomy, complexity, and controllability), personal factors (e.g., skills and motivation), and situational factors (e.g., noise, distraction, organizational culture, and supervisory behavior) to give rise to a self-efficacy judgment (Gist and Mitchell 1992; Wood and Bandura 1989). Other factors such as relevant training, interventions, and job enrichment may also provide opportunities for enhancing self-efficacy (Parker 1998). Unfortunately, little research has been conducted in the personal selling context with respect to the determinants of self-efficacy (McMurrian 1998). This dissertation investigated competitiveness and selling experience as antecedents to the salesperson's self-efficacy. Given the critical role of self-efficacy in affecting salesperson behaviors (i.e., effort and creativity) and performance as indicated in this research, more factors that contribute to enhancing the salesperson's self-efficacy beliefs, especially those factors that can be controlled and/or influenced by management, should be identified. Social cognitive theory offers valuable guidance to this endeavor. With the increased buyer sophistication, complexity of selling situations, team-orientation, and
interdepartmental cooperation, Parker's (1998) concept of role breadth self-efficacy may also prove relevant in the sales context and should be investigated.

Other Issues

The objective of this research was not to propose and test a comprehensive sales performance model. As a result, many potentially relevant constructs for predicting sales performance and creativity are left unexamined. For instance, the existence of the significant direct experience-performance path indicates that some mediating constructs are missed out in the model. Constructs related to sales knowledge and skills, for instance, seem relevant in translating experience into performance and should be examined in future research. These constructs should also be examined regarding their relationships with creativity. With a richer knowledge structure, is the salesperson more able to exhibit creative ideas and behaviors, or is it no longer necessary for the salesperson to generate as many new solutions? While the measurement of actual sales knowledge and skills will definitely be a challenge, sales research along this line should provide a test, in the context of "little C" creativity, of the validity of theories of creativity that dictate the essentiality of domain-related knowledge and creative skills (e.g., Amabile 1983a).

Another area for future research would be the interaction between trait competitiveness and situational competitiveness. Sample characteristics were offered as a possible explanation for the empirical inconsistencies observed across the two studies. More specifically, the degree of direct competition among the salespeople may have played a role. Brown et al. (1998) demonstrated an interaction between situational competitiveness and trait competitiveness in affecting the level of self-set sales goals.
How situational and trait competitiveness interacts to affect effort, creativity, and self-efficacy would be of interest to both theory and practice.

Finally, literature on organizational knowledge and competitive advantage suggests that individual creativity is the ultimate source for organizational innovation (e.g., Cummings and Oldham 1997). Given the salespeople’s boundary role linking the organization and the external clientele, their creativity should be properly cultivated and utilized. In aggregate, their creative ideas and behaviors in interacting with customers and solving customer problems should contribute to the development of organizational knowledge. Therefore, another research area would be to explore the ways of cultivating and utilizing salespeople’s scattered creative ideas for the organizational knowledge development.

MANAGERIAL IMPLICATIONS

Fostering Salesperson Creativity

This research highlights the critical role played by the salesperson creativity in affecting the individual salesperson’s performance. Echoing Sujan’s (1986) notion of working hard and smart, the findings point to two behavioral routes to sales success: effort and creativity. The incremental explanatory power of the creativity construct suggests that the perception of the sales job as a “numbers game” is not accurate. Still, the more effort (longer hours, more sales calls, etc.) salespeople put into their work, the higher performance is likely to be. However, effort does not seem to be the only way to sales success. Salespeople’s new ideas in carrying out job activities and creative problem solutions add to the likelihood of achieving successful sales quantity and overall performance. In today’s more dynamic marketplace, given more sophisticated
buyers and more diverse customer needs, it is time to realize the importance of salesperson creativity to sales performance. Creativity is a requirement of the external environment (e.g., market, customer, and competition) but is influenced by the internal organizational environment. From a managerial standpoint, due to the close connection between salespeople and customers, it is only rational and appropriate to encourage salespeople to think independently and creatively, and to empower salespeople so that they are able to decide how to best configure the product, deliver the product, and service the clients. Thus, organizational design, supervisory style, and managerial support should aim to developing a nurturing environment that cares about the creative ideas and behaviors of the sales force (von Krogh 1998).

Salespeople’s new and creative ideas should be viewed as a valuable source for organizational innovation and knowledge development. Accordingly, creative ideas should be constantly exchanged among the salespeople through formal or informal means of communication so that salespeople can learn from each other and improve their knowledge, skills, and coping strategies for different selling situations. In the meantime, management should routinely collect the creative ideas and procedures from the sales force and feed into the organizational knowledge inventory. Salespeople’s first-hand knowledge and understanding of the customer, the market, and the competition make their creativity a unique and valuable source for developing superior organizational knowledge that keeps the firm ahead of competition.

Enhancing Self-Efficacy

This research demonstrated the critical importance of the self-efficacy belief to salespeople’s behaviors, especially the generation of creative ideas and behaviors.
Management should pay close attention to ways that can potentially enhance self-efficacy. Social cognitive theory prescribes a number of sources for improving employees' self-efficacy perceptions. Important in the sales context are the managerially controllable ways. This dissertation examined a personality trait (competitiveness) and a demographic variable (selling experience), both showing positive effects on self-efficacy. This indicates that hiring competitive and more experienced salespeople may be an option for management concerned with the efficacy level of the sales force. Effective training programs, mentoring, positive feedback, and other managerial tools are also candidates to be used.
REFERENCES


Reduced Substitutes for Leadership Scales,” *Journal of Applied Psychology*, 79 (5), 702-713.


APPENDIX A: PRETEST QUESTIONNAIRE (FIRST STAGE)
April 14, 1999

Dear Agent,

My name is Walter Wang, and I’m a Ph.D. student in the Marketing Department at the Louisiana State University. This study of real estate salespeople, which is my dissertation project, is important not only to sales management and research, but also to me personally because of its potential impact on my future career. Your candid and honest responses are crucial to the success of this study and are greatly appreciated.

I realize that the questionnaire is long and some questions are rather similar to each other, but please take the time to complete the survey in its entirety. It is very important that you answer all the questions, since I will be unable to use your responses if there is a missing answer to any of the questions.

The survey is completely confidential and anonymous, and your responses will be used for this study only. After completing the questionnaire, please seal it in the envelope provided and return it to your supervisor. I will come pick up the surveys at noon on Friday, April 30.

Should you have any questions or concerns about the survey, please feel free to contact me at (225) 334-5063, 388-8616 (fax), or GWANG4@LSU.EDU.

Thank you very much for your participation.

Sincerely,

Walter Wang
## Job Survey

I. First, we would like you to rate your own performance in the year 1999 on the following scales as objectively as possible. Do this by circling an appropriate number for each question.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not Effective at All</th>
<th>Extremely Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How effective were you in making sales presentations?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>2. How effective were you in closing sales?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>3. How would you rank your overall performance?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>4. How would you rate yourself in terms of the quantity of sales you have achieved?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>5. How would you rate your performance in regard to customer relations?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>6. How would you rate your performance in regard to time management, planning ability, and management of expenses?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>7. How would you rate your knowledge of your products, your company, competitors’ products, and customer needs?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
</tbody>
</table>

II. Please indicate your level of agreement with each of the following statements as they apply to your job.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Each customer requires a unique approach.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>2. When I feel that my sales approach is not working, I can easily change to another.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>3. I like to experiment with different sales approaches.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>4. I am very flexible in the selling approach I use.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>5. I feel that most buyers can be dealt with in pretty much the same manner.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>6. I don’t change my approach from one customer to another.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>7. I can easily use a wide variety of selling approaches.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>8. I use a set sales approach.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>9. It is easy for me to modify my sales presentation if the situation calls for it.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>10. Basically I use the same approach with most customers.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>11. I am very sensitive to the needs of my customers.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
</tbody>
</table>
III. The following is a list of items that may describe your behaviors in performing your sales job. Please indicate on the 1-to-5 scales how often you behaved as described by each of the items during the twelve months of the year 1998. Circle 1 if you PRACTICALLY NEVER engaged in such behavior, 2 if you SELDOM did, 3 if you SOMETIMES did, 4 if you USUALLY did, or 5 if you ALMOST ALWAYS did as the item describes. If an item is not applicable to your job activities, please circle N/A.

1. Seeking out new ways of conducting selling activities.  
2. Trying to figure out innovative ways of doing your sales job.  
3. Reaching new customers in ways that surprise your colleagues.  
4. Persuading clients creatively.  
5. Making sales presentations in innovative ways.  
6. Providing innovative product offerings to unique customers.  
7. Coming up with creative sales terms geared to specific customer needs.  
8. Carrying out sales tasks in ways that are resourceful.  
9. Coming up with new ideas for satisfying customer needs.  
10. Finding new ways for locating decision-makers in buyer organizations.  
11. “Keeping up” with developments in the company.  
12. Coming up with novel ideas for attracting potential customers’ attention.  
13. Attending functions that are not required, but that help the company image.  
15. Risking disapproval in order to express my beliefs about what’s best for the company.  
16. Consuming a lot of time complaining about trivial matters.

<table>
<thead>
<tr>
<th>Item</th>
<th>Never</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Seeking out new ways of conducting selling activities.</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Trying to figure out innovative ways of doing your sales job.</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Reaching new customers in ways that surprise your colleagues.</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Persuading clients creatively.</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Making sales presentations in innovative ways.</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Providing innovative product offerings to unique customers.</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Coming up with creative sales terms geared to specific customer needs.</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Carrying out sales tasks in ways that are resourceful.</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Coming up with new ideas for satisfying customer needs.</td>
<td>N/A</td>
<td></td>
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<tr>
<td>10. Finding new ways for locating decision-makers in buyer</td>
<td>N/A</td>
<td></td>
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<td>organizations.</td>
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<tr>
<td>11. “Keeping up” with developments in the company.</td>
<td>N/A</td>
<td></td>
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<tr>
<td>12. Coming up with novel ideas for attracting potential customers'</td>
<td>N/A</td>
<td></td>
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<tr>
<td>attention.</td>
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<tr>
<td>13. Attending functions that are not required, but that help the</td>
<td>N/A</td>
<td></td>
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<td>company image.</td>
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<tr>
<td>14. Winning customer rapport creatively.</td>
<td>N/A</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>15. Risking disapproval in order to express my beliefs about what's best for the company.</td>
<td>N/A</td>
<td></td>
<td></td>
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<tr>
<td>16. Consuming a lot of time complaining about trivial matters.</td>
<td>N/A</td>
<td></td>
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<tr>
<td>17. Discovering new ways of monitoring competitors.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
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<tr>
<td>18. Making problems bigger than they are.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>19. Conscientiously following company regulations and procedures.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>20. Finding new ways of collecting market information.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>21. Returning phone calls and responding to other messages and requests for information promptly.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>22. Using existing information creatively.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>23. Turning in budgets, sales projections, expense reports, etc. earlier than is required.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>24. Finding unique solutions for selling problems.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
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<tr>
<td>25. Coming up with new promotion ideas.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>26. Coming up with new ways of entertaining clients.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>27. Reducing selling costs in creative ways.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>28. Analyzing market and competition creatively.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>29. Creatively using available resources.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tr>
<tr>
<td>30. Finding better ways to deliver a product or service.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>31. Finding more effective ways of pricing.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>32. Finding better ways of organizing information.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
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<tr>
<td>33. Developing creative proposals and/or bids.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>34. Finding more efficient ways of managing time.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>35. Coming up with new advertising themes.</td>
<td>N/A</td>
<td></td>
<td>2</td>
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<td>4</td>
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<tr>
<td>36. Finding new ways of networking.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>37. Coming up with ideas that surprise customers.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tr>
<tr>
<td>38. Generating and evaluating multiple alternatives for novel customer problems.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>39. Seeing the customer’s problem from different perspectives.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>40. Challenging established rules in selling.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>41. Having fresh perspectives on old problems.</td>
<td>N/A</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>42. Risking doing things differently.</td>
<td>N/A</td>
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<td>3</td>
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<tr>
<td>43. Improvising methods for solving a problem when an answer is not apparent.</td>
<td>Never</td>
<td>Always</td>
<td></td>
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<tr>
<td>N/A</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
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<tr>
<td>44. Searching out new technologies, processes, and techniques for use in performing your job.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
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<tr>
<td>45. Generating creative selling ideas.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
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<tr>
<td>46. Focusing on what’s wrong with your situation, rather than the positive side of it.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>47. Improvising solutions for novel problems.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>48. Helping orient new agents even though it is not required.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
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<td></td>
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<tr>
<td>49. Using approaches that are different from those of your colleagues.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
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<tr>
<td>50. Ready to help or to lend a helping hand to those around you.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>51. Planning a unique sales call.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>52. Willingly giving your time to help others.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>53. Handling objections creatively.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
<td></td>
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<td></td>
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<tr>
<td>54. Creatively handling customer complaints.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>55. Finding a customer need or desire that was not previously known.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>56. Finding a better system to show houses.</td>
<td>N/A</td>
<td>1 2 3 4 5</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**IV. Please indicate your degree of agreement with the following statements as they apply to your job.**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am good at finding out what customers want.</td>
<td>1 &lt;small&gt;2 3 4 5 6 7&lt;/small&gt;</td>
<td></td>
</tr>
<tr>
<td>2. I try very hard to improve my sales skills continuously.</td>
<td>1 &lt;small&gt;2 3 4 5 6 7&lt;/small&gt;</td>
<td></td>
</tr>
<tr>
<td>3. I spend a lot of time learning new approaches for dealing with customers.</td>
<td>1 &lt;small&gt;2 3 4 5 6 7&lt;/small&gt;</td>
<td></td>
</tr>
<tr>
<td>4. I try hard to find the best way to solve the selling problems I encounter.</td>
<td>1 &lt;small&gt;2 3 4 5 6 7&lt;/small&gt;</td>
<td></td>
</tr>
<tr>
<td>5. I know the right thing to do in selling situations.</td>
<td>1 &lt;small&gt;2 3 4 5 6 7&lt;/small&gt;</td>
<td></td>
</tr>
<tr>
<td>6. I can decide on my own how to go about doing my work.</td>
<td>1 &lt;small&gt;2 3 4 5 6 7&lt;/small&gt;</td>
<td></td>
</tr>
<tr>
<td>7. It is easy for me to get customers to see my point of view.</td>
<td>1 &lt;small&gt;2 3 4 5 6 7&lt;/small&gt;</td>
<td></td>
</tr>
<tr>
<td>8. Overall, I am confident of my ability to perform my job well.</td>
<td>1 &lt;small&gt;2 3 4 5 6 7&lt;/small&gt;</td>
<td></td>
</tr>
<tr>
<td>9. I put in a great deal of effort to learn new selling approaches.</td>
<td>1 &lt;small&gt;2 3 4 5 6 7&lt;/small&gt;</td>
<td></td>
</tr>
</tbody>
</table>
10. I feel I have the capabilities to successfully perform this job.  
Strongly Disagree: 1 2 3 4 5 6 7

11. I have significant autonomy in determining how I do my job.  
Strongly Disagree: 1 2 3 4 5 6 7

12. I have considerable opportunity for independence and freedom in how I do my job.  
Strongly Disagree: 1 2 3 4 5 6 7

13. I am good at selling.  
Strongly Disagree: 1 2 3 4 5 6 7

Strongly Disagree: 1 2 3 4 5 6 7

15. I feel I am very capable at the task of selling.  
Strongly Disagree: 1 2 3 4 5 6 7

16. This job allows me to use personal initiative or judgment in carrying out the work.  
Strongly Disagree: 1 2 3 4 5 6 7

V. Compared with other salespeople in your branch office, how would you rate yourself on the following scales?

1. The overall effort I put into the sales tasks in 1998 was:  
Strongly Among the Least in Among the Most in the
Disagree: 1 2 3 4 5 6 7
Branch

2. The total number of hours I worked at tasks involved in selling in 1998 was:  
Strongly Among the Least in Among the Most in the
Disagree: 1 2 3 4 5 6 7
Branch

3. The number of calls I made in 1998 was:  
Strongly Among the Least in Among the Most in the
Disagree: 1 2 3 4 5 6 7
Branch

4. The number of clients I serviced in 1998 was:  
Strongly Among the Least in Among the Most in the
Disagree: 1 2 3 4 5 6 7
Branch

VI. The following statements pertain to your perceptions about the customers you service. Please circle one number for each statement to indicate the proportion of your customers that are accurately described by the statements. The meanings of the numbers are:
1. The clients I serve are demanding in regard to product/service quality and reliability.  
True for None: 1 2 3 4 5

2. The clients I serve are sophisticated in terms of the service we offer.  
True for None: 1 2 3 4 5

3. The clients I serve are very sensitive to product/service costs.  
True for None: 1 2 3 4 5

4. My clients have high expectations for service and support.  
True for None: 1 2 3 4 5

5. My clients are very concerned with return on real estate investment.  
True for None: 1 2 3 4 5
6. My clients require a perfect fit between their needs and our product/service offering.

7. My clients expect me to deliver the highest levels of product and service quality.

VII. The statements below describe various ways a salesperson might act with customer or prospect (for convenience, the word "customer" is used to refer to both customers and prospects). For each statement please indicate the proportion of your customers with whom you act as described in the statement. Do this by circling one of the numbers from 1 to 7. The meanings of the numbers are:

1 - True for NONE of your customers
2 - True for A FEW ...
3 - True for SOMewhat LESS THAN Half
4 - True for ABOUT Half ...
5 - True for SOMEWHAT MORE THAN Half
6 - True for a LARGE MAJORITY ...
7 - True for ALL ...

1. I try to help customers achieve their goals.

2. I try to achieve my goals by satisfying customers.

3. I have the customer's best interest in mind.

4. I try to get customers to discuss their needs with me.

5. I try to influence a customer by information rather than by pressure.

6. I offer the product of mine that is best suited to the customer's problem.

7. I try to find out what kind of product would be most helpful to a customer.

8. I answer a customer’s questions about products as correctly as I can.

9. I try to bring a customer with a problem together with a product that helps him solve that problem.

10. I am willing to disagree with a customer in order to help him make a better decision.

11. I try to give customers an accurate expectation of what the product will do for them.

12. I try to figure out what a customer’s needs are.

<table>
<thead>
<tr>
<th>Statement</th>
<th>True for None</th>
<th>True for All</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>3.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>4.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>5.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>7.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>8.</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>9.</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>10.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>12.</td>
<td>1 2 3 4 5 6 7</td>
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</tbody>
</table>
VIII. Please indicate your level of agreement with each of the following statements.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Generally speaking, I am very satisfied with my job.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. I don't like to have to do a lot of thinking.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>3. ABC regularly measures customer satisfaction.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. I try to avoid situations that require thinking in depth about something.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>5. I feel a great sense of personal satisfaction from my job.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>6. I prefer complex to simple problems.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>7. Thinking hard and for a long time about something gives me little satisfaction.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>8. ABC is committed to creating superior customer value.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>9. ABC understands customer needs.</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>10. I feel fairly satisfied with my present job.</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>11. ABC has customer satisfaction objectives.</td>
<td>1 2 3 4 5 6 7</td>
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</tr>
<tr>
<td>12. In all likelihood, I will quit this job sometime this year.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>13. ABC offers superior after-sales service.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>14. I am willing to put in a great deal of effort beyond that normally expected in order to help ABC be successful.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>15. I talk up ABC to my friends as a great organization to work for.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>16. I would accept any type of job assignment in order to keep working for ABC.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>17. I enjoy working in situations involving competition with others.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>18. I am proud to tell others that I am part of ABC.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>19. ABC really inspires the very best in me in the way of job performance.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>20. I try harder when I am in competition with other people.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>21. I am extremely glad that I chose ABC to work for over other firms I was considering at the time I joined.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>22. I really care about the fate of ABC.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>23. For me, ABC is the best of all possible organizations for which to work.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>24. It is important to me to perform better than others.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
25. I intend to quit my current job within the next 6 months.

26. I find that my values and ABC’s values are very similar.

27. I feel that winning is important in both work and games.

IX. The following questions concern how satisfied you are with your job and whether you intend to leave the job. Please circle the numbers that most accurately describe your feelings.

1. All in all, how satisfied are you with your present job? 

2. All things considered (i.e., pay, promotions, supervisors, coworkers, etc.), how satisfied are you with your present job?

How would you rate your chance of quitting this job?

3. In the next six months.

4. Sometime in the next year.

5. Sometime in the next two years

X. Lastly, the following questions are for classification purposes only.

1. How old are you? _______ years.

2. What is your gender?  ____ Female  ____ Male.

3. Please indicate the category that best describes you:
   ____ African American  ____ Hispanic  ____ White, Non-Hispanic
   ____ Asian American  ____ Native American  ____ Other (please specify) ____________

4. What is the highest level of education you have attained?
   ____ High school  ____ Some college/2-year degree  ____ 4-year degree
   ____ Some graduate work  ____ Graduate degree

5. How long have you been employed by ABC? _____ years _____ months.

6. How long have you been employed in a selling position (including positions in other industries)? _____ years.

7. Is your job at ABC part-time or full-time?  ____ Part-time  ____ Full-time

8. Where is your branch office located?  ____ Perkins Rd.  ____ Sherwood Forest

9. On average, how many hours per week did you devote to your job at ABC in 1998? _____ hours.

10. In the year 1998, how many real estate units, both commercial and residential, did you sell? _____ units.

11. What is your best estimate of the dollar volume of all real estate you sold in the year 1998? $ __________

This is the end of this survey. Thank you for your time and effort.
May 6, 1999

Dear Agent,

My name is Walter Wang, and I'm a Ph.D. student in the Marketing Department at the Louisiana State University. This study of real estate salespeople, which is my dissertation project, is important not only to sales management and research, but also to me personally because of its potential impact on my future career. Your candid and honest responses are crucial to the success of this study and are greatly appreciated.

Because of the importance and comprehensiveness of the study, the questionnaire is long and some questions are rather similar to each other, but please take the time to complete the survey in its entirety. It is very important that you answer all the questions, since I will be unable to use your responses if there is a missing answer to any of the questions.

The survey is completely confidential and anonymous, and your responses will be used for this study only. After completing the questionnaire, please mail it directly to me in the postage-paid envelope provided.

If you are interested in the results of the study, please let me know and I'd be more than happy to send you a summary report when the study is completed. Should you have any questions or concerns about the survey, please feel free to contact me at (225) 334-5063 (home), 388-8417 (office), 388-8616 (fax), or GWANG4@LSU.EDU (e-mail).

Thank you very much for your participation.

Sincerely,

Walter Wang
Job Survey – ABC

1. First, we would like you to rate your own performance in the year 1998 on the following scales as objectively as possible. Do this by circling an appropriate number for each question.

<table>
<thead>
<tr>
<th></th>
<th>Not Effective at All</th>
<th>Extremely Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How effective were you in making sales presentations?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>2. How effective were you in closing sales?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>3. How would you rank your overall performance?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>4. How would you rate yourself in terms of the quantity of sales you have achieved?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>5. How would you rate your performance in regard to customer relations?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>6. How would you rate your performance in regard to time management, planning ability, and management of expenses?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>7. How would you rate your knowledge of your products, your company, competitors' products, and customer needs?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
</tbody>
</table>

II. Please indicate your level of agreement with each of the following statements as they apply to your job.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Each customer requires a unique approach.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>2. When I feel that my sales approach is not working, I can easily change to another.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>3. I like to experiment with different sales approaches.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>4. I am very flexible in the selling approach I use.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>5. I feel that most buyers can be dealt with in pretty much the same manner.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>6. I don't change my approach from one customer to another.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>7. I can easily use a wide variety of selling approaches.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>8. I use a set sales approach.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>9. It is easy for me to modify my sales presentation if the situation calls for it.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>10. Basically I use the same approach with most customers.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>11. I am very sensitive to the needs of my customers.</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
</tbody>
</table>
12. I find it difficult to adapt my presentation style to certain buyers.  
   | Strongly | Strongly |
   | Disagree | Agree   |
   | 1  2  3  4  5  6  7 |

13. I vary my sales style from situation to situation.  
   | Strongly | Strongly |
   | Disagree | Agree   |
   | 1  2  3  4  5  6  7 |

14. I try to understand how one customer differs from another.  
   | Strongly | Strongly |
   | Disagree | Agree   |
   | 1  2  3  4  5  6  7 |

15. I feel confident that I can effectively change my planned presentation when necessary.  
   | Strongly | Strongly |
   | Disagree | Agree   |
   | 1  2  3  4  5  6  7 |

16. I treat all of my buyers pretty much the same.  
   | Strongly | Strongly |
   | Disagree | Agree   |
   | 1  2  3  4  5  6  7 |

III. The following is a list of items that may describe your behavior in performing your sales job. Please indicate on the 1-to-5 scales how often you behaved as described by each of the items during the twelve months of the year 1998. Circle 1 if you PRACTICALLY NEVER engaged in such behavior, 2 if you SELLDOM did, 3 if you SOMETIMES did, 4 if you USUALLY did, or 5 if you ALMOST ALWAYS did as the item describes. If an item is not applicable to your job activities, please circle N/A.

   | Never | Always |
   | N/A  | 1  2  3  4  5 |

1. Seeking out new ways of conducting selling activities.  
2. Trying to figure out innovative ways of doing your sales job.  
3. Reaching new customers in ways that surprise your colleagues.  
4. Persuading clients creatively.  
5. Making sales presentations in innovative ways.  
6. Carrying out sales tasks in ways that are resourceful.  
7. Coming up with new ideas for satisfying customer needs.  
8. Coming up with novel ideas for attracting potential customers' attention.  
10. Using existing information creatively.  
11. Coming up with new promotion ideas.  
12. Reducing selling costs in creative ways.  
13. Creatively using available resources.  
15. Finding more efficient ways of managing time.  
16. Coming up with new advertising themes.  
17. Finding new ways of networking.  
18. Coming up with ideas that surprise customers.
   Never  | Always
   N/A   | 1  2  3  4  5

20. Seeing the customer’s problem from different perspectives.  
   N/A   | 1  2  3  4  5

   N/A   | 1  2  3  4  5

22. Risking doing things differently.  
   N/A   | 1  2  3  4  5

23. Improvising methods for solving a problem when an answer is not apparent.  
   N/A   | 1  2  3  4  5

24. Generating creative selling ideas.  
   N/A   | 1  2  3  4  5

25. Using approaches that are different from those of your colleagues.  
   N/A   | 1  2  3  4  5

   N/A   | 1  2  3  4  5

27. Creatively handling customer complaints.  
   N/A   | 1  2  3  4  5

28. Finding a customer need or desire that was not previously known.  
   N/A   | 1  2  3  4  5

29. Finding a better system to show houses.  
   N/A   | 1  2  3  4  5

IV. Compared to other salespeople in your branch office, how would you rate yourself on the following scales?

1. The overall effort I put into the sales tasks in 1991 was:  
   Among the Least in the Branch  |  Among the Most in the Branch
   1  2  3  4  5  6  7

2. The total number of hours I worked at tasks involved in selling in 1991 was:  
   1  2  3  4  5  6  7

3. The number of calls I made in 1991 was:  
   1  2  3  4  5  6  7

4. The number of clients I serviced in 1991 was:  
   1  2  3  4  5  6  7

V. Please indicate your degree of agreement with the following statements as they apply to your job.

1. I am good at finding out what customers want.  
   Strongly Disagree  | Strongly Agree
   1  2  3  4  5  6  7

2. I try very hard to improve my sales skills continuously.  
   1  2  3  4  5  6  7

3. I spend a lot of time learning new approaches for dealing with customers.  
   1  2  3  4  5  6  7

4. I try hard to find the best way to solve the selling problems I encounter.  
   1  2  3  4  5  6  7

5. I know the right thing to do in selling situations.  
   1  2  3  4  5  6  7
6. I can decide on my own how to go about doing my work.

7. It is easy for me to get customers to see my point of view.

8. My manager frequently compares my results with those of other salespeople.

9. Overall, I am confident of my ability to perform my job well.

10. I put in a great deal of effort to learn new selling approaches.

11. I feel I have the capabilities to successfully perform this job.

12. I have significant autonomy in determining how I do my job.

13. The amount of recognition you get in this company depends on how your sales rank compared to other salespeople.

14. I have considerable opportunity for independence and freedom in how I do my job.

15. I am good at selling.

16. Everybody is concerned with finishing at the top of the sales rankings.

17. My job gives me much leeway in solving sales-related problems.

18. I feel I am very capable at the task of selling.

19. My coworkers frequently compare their results with mine.

20. This job allows me to use personal initiative or judgment in carrying out the work.

VI. The following statements pertain to your perceptions about your clients/customers and how you treat them. Please circle one number for each statement to indicate the proportion of your customers that are truly described by the statements.

1. The clients I serve are demanding in regard to product/service quality and reliability.

2. The clients I serve are sophisticated in terms of the service we offer.

3. The clients I serve are very sensitive to product/service costs.

4. My clients have high expectations for service and support.

5. My clients are very concerned with return on real estate investment.

6. My clients require a perfect fit between their needs and our product/service offering.
7. My clients expect me to deliver the highest levels of product and service quality.

8. I try to help customers achieve their goals.

9. I try to achieve my goals by satisfying customers.

10. I have the customer's best interest in mind.

11. I try to get customers to discuss their needs with me.

12. I try to influence a customer by information rather than by pressure.

13. I offer the product of mine that is best suited to the customer's problem.

14. I try to find out what kind of product would be most helpful to a customer.

15. I answer a customer's questions about products as correctly as I can.

16. I try to bring a customer with a problem together with a product that helps him solve that problem.

17. I am willing to disagree with a customer in order to help him make a better decision.

18. I try to give customers an accurate expectation of what the product will do for them.

19. I try to figure out what a customer's needs are.

VII. Please indicate your level of agreement with each of the following statements.

1. I enjoy working in situations involving competition with others.

2. In all likelihood, I will quit this job sometime this year.

3. I am willing to put in a great deal of effort beyond that normally expected in order to help ABC be successful.

4. I talk up ABC to my friends as a great organization to work for.

5. Generally speaking, I am very satisfied with my job.

6. I would accept any type of job assignment in order to keep working for ABC.

7. I feel fairly satisfied with my present job.

8. I am proud to tell others that I am part of ABC.
9. I feel a great sense of personal satisfaction from my job.

10. ABC really inspires the very best in me in the way of job performance.

11. I try harder when I am in competition with other people.

12. I am extremely glad that I chose ABC to work for over other firms I was considering at the time I joined.

13. I really care about the fate of ABC.

14. For me, ABC is the best of all possible organizations for which to work.

15. It is important to me to perform better than others.

16. I intend to quit my current job within the next 6 months.

17. I find that my values and ABC's values are very similar.

18. I feel that winning is important in both work and games.

19. It is likely that I will quit my present job sometime in the next two years.

V. Lastly, the following questions are for classification purposes only.

1. All in all, how satisfied are you with your present job?

2. All things considered (i.e., pay, promotions, supervisors, coworkers, etc.), how satisfied are you with your present job?

VIII. Lastly, the following questions are for classification purposes only.

1. Your age? _______ years. Your gender? _____ Female _____ Male

2. What is the highest level of education you have attained?

____ High school ______ Some college/2-year degree ______ 4-year degree

____ Some graduate work ______ Graduate degree

3. How long have you been employed by ABC? ______ years ______ months.

4. How long have you been employed in a sales position (current and prior firms)? ______ years.

5. Is your job at ABC part-time or full-time? _____ Part-time _____ Full-time

6. On average, how many hours per week did you devote to your job at ABC in 1998? ______ hrs.

7. In 1998, how many real estate units, both commercial and residential, did you sell? ______ units.

8. What is your best estimate of the total dollar volume of all real estate you sold in 1998? $ ______

This is the end of the survey. Thank you for your time and effort.
APPENDIX C: MAIN STUDY QUESTIONNAIRE
June 25, 1999

Dear XYZ Account Executive,

I'm a Ph.D. student in the Marketing Department at the Louisiana State University. This study of advertising salespeople you are about to participate in is my dissertation project. The purpose of this study is to identify some key factors that contribute to successful sales performance. Your honest, complete, and prompt responses are greatly appreciated.

The survey is completely confidential, and your responses will be used for this study only. Your name, provided by XYZ management, appears on the questionnaire for the only purpose of matching data from other sources. My advisor and I are the only persons that have access to your individual responses. Nobody at XYZ will see your answers. After completing the questionnaire, please mail it directly to me in the postage-paid envelope provided.

If you want to have a copy of the study summary, please indicate so by checking the box at the beginning of the survey and I'll send you one when the study is completed. Should you have any questions or concerns about the survey, please feel free to contact me at (225) 334-5063, 388-8616 (fax), or GWANG4@LSU.EDU (e-mail).

Thank you very much for your time and participation.

Sincerely,

Walter Wang
Job Survey – XYZ Advertising

Check here if you want to receive a copy of the study summary
(This survey is strictly confidential. No one but the researchers – no one at XYZ – has access to your responses)

1. First, we would like you to rate your own performance in the year 1998 on the following scales as objectively as possible. Do this by circling an appropriate number for each question.

<table>
<thead>
<tr>
<th>Performance</th>
<th>Not Effective at All</th>
<th>Extremely Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How effective were you in making sales presentations?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>2. How effective were you in closing sales?</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>3. Your overall performance was:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The quantity of sales you achieved was:</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
</tbody>
</table>

11. The following is a list of items that may describe your behaviors in performing your sales job. Please indicate on the 1-to-5 scales how often you behaved as described by each of the items during the year 1998. Circle 1 if you PRACTICALLY NEVER engaged in such behavior, 2 if you SOMETIMES did, 3 if you USUALLY did, or 5 if you ALMOST ALWAYS did as the item describes. If an item is not applicable to your job activities, please circle N/A.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Never</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Persuading clients creatively.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2. Making sales presentations in innovative ways.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3. Carrying out sales tasks in ways that are resourceful.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4. Coming up with new ideas for satisfying customer needs.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>5. Coming up with ideas that surprise customers.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>7. Seeing the customer’s problem from different perspectives.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>8. Having fresh perspectives on old problems.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>9. Risking doing things differently.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>10. Improvising methods for solving a problem when an answer is not apparent.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>11. Generating creative selling ideas.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>12. Using approaches that are different from those of your colleagues.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>13. Handling objections creatively.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>14. Finding a customer need or desire that was not previously known.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>15. Seeking out new ways of conducting selling activities.</td>
<td>N/A 1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>
### III. The following statements pertain to your perceptions about your clients/customers. Please circle one number for each statement to indicate the proportion of your customers that are truly described by the statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>True for No Clients</th>
<th>True for All Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The clients I serve are demanding in regard to product/service quality and reliability.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2. The clients I serve are sophisticated in terms of the service we offer.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3. The clients I serve are very sensitive to product/service costs.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4. My clients have high expectations for service and support.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>5. My clients are very concerned with return on their advertising investment.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>6. My clients require a perfect fit between their needs and our product/service offering.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>7. My clients expect me to deliver the highest levels of product and service quality.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

### IV. Please indicate your level of agreement with each of the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I enjoy working in situations involving competition with others.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>2. I have significant autonomy in determining how I do my job.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>3. When I feel that my sales approach is not working, I can easily change to another.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>4. I like to experiment with different sales approaches.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>5. I am very flexible in the selling approach I use.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>6. I can easily use a wide variety of selling approaches.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>7. It is easy for me to modify my sales presentation if the situation calls for it.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>8. I vary my sales style from situation to situation.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>9. I can decide on my own how to go about doing my work.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>10. I feel that winning is important in both work and games.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>11. I have considerable opportunity for independence and freedom in how I do my job.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>12. I am good at finding out what customers want.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>13. I know the right thing to do in selling situations.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>14. It is easy for me to get customers to see my point of view.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>15. Overall, I am confident of my ability to perform my job well.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>16. I feel confident that I can effectively change my planned presentation when necessary.</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>
17. I try harder when I am in competition with other people.  
18. I try hard to find the best way to solve the selling problems I encounter.  
19. I feel I have the capabilities to successfully perform this job.  
20. I am good at selling.  
21. I put in a great deal of effort to learn new selling approaches.  
22. I feel I am very capable at the task of selling.  
23. It is important to me to perform better than others.  
24. I try very hard to improve my sales skills continuously.  
25. I spend a lot of time learning new approaches for dealing with customers.  
26. This job allows me to use personal initiative or judgment in carrying out the work.

V. Please compare yourself with other account executives in your plant on the following scales as objectively as possible.

1. Your overall performance in 1991 was:  
   Among the Worst in the Plant  2  3  4  5  6  7  
   Among the Best in the Plant

2. Your performance in 1991 in terms of the quantity of sales you achieved was:  
   Among the Least in the Plant  2  3  4  5  6  7  
   Among the Most in the Plant

3. The overall effort you put into the sales tasks in 1991 was:  
   Among the Worst in the Plant  2  3  4  5  6  7  
   Among the Best in the Plant

4. The total number of hours you worked at tasks involved in selling in 1991 was:  
   Among the Least in the Plant  2  3  4  5  6  7  
   Among the Most in the Plant

5. The number of calls you made in 1991 was:  
   Among the Least in the Plant  2  3  4  5  6  7  
   Among the Most in the Plant

6. The number of clients you serviced in 1991 was:  
   Among the Least in the Plant  2  3  4  5  6  7  
   Among the Most in the Plant

VI. Lastly, the following questions are for classification purposes only.

1. Your gender?   Female   Male

2. What is the highest level of education you have attained?  
   _____ High school  _____ Some college/2-year degree  _____ 4-year degree  
   _____ Some graduate work  _____ Graduate degree

3. How many years of total selling experience do you have (in current AND prior firms)?  _____ years.

4. Have you been in a formal sales training program(s) during the last 3 years?  No   Yes (Approx. _____ hours.)

5. On average, how many hours per week did you devote to your sales job at XYZ in 1991?  _____ hours.

THANK YOU FOR YOUR TIME AND COOPERATION. Please return the completed questionnaire in the attached postage-paid envelope. Again, all information is held in strictest confidence.
June 25, 1999

Dear XYZ Manager,

I’m a Ph.D. student in the Marketing Department at the Louisiana State University. The study you are about to participate in is my dissertation project. The purpose of this study is to identify some key factors that contribute to successful sales performance. Please distribute the questionnaires to your salespeople (their names appear on the top of the first page) and encourage them to respond.

In the meantime, I’d like you to rate each of your salespeople on a few items on a separate page. The survey is completely confidential, and only my advisor and I have access to your individual ratings. Upon completion, please mail them directly to me in the postage-paid envelope provided.

If you are interested in the study results, please indicate so by including a business card in the return envelope and I’d be more than happy to send you a summary report when the study is completed. Should you have any questions or concerns about the survey, please feel free to contact me at (225) 334-5063, 388-8616 (fax), or GWANG4@LSU.EDU (e-mail).

Thank you very much for your time and help.

Sincerely,

Walter Wang
Manager Ratings of Account Executive’s Performance

Company # and AE’s Name:

I. Please provide the following performance data for the above-named Account Executive (AE):
1. The total dollar volume of advertising this AE sold in 1991 was $___________.
2. The percentage of annual sales quota attained by this AE in 1998 was _____ %.
3. The total amount of compensation the AE received in 1998 was $___________.

II. Please rate the AE’s performance in the year 1998 on the following scales as objectively as possible. Do this by circling an appropriate number for each question.

<table>
<thead>
<tr>
<th>Not Effective at All</th>
<th>Extremely Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

1. How effective was the AE in making sales presentations?
2. How effective was the AE in closing sales?
3. The AE’s overall performance in 1998 was:
4. The quantity of sales the AE achieved in 1998 was:

III. Please compare the Account Executive with other AEs in your plant on the following scales. If you have only one or two AEs in your plant, please ignore this part.

<table>
<thead>
<tr>
<th>Among the Worst in the Plant</th>
<th>Among the Best in the Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

1. The AE’s overall performance in 1998 was:
2. The AE’s performance in 1998 in terms of the quantity of sales achieved was:
3. The AE’s performance in 1998 in regard to customer relations was:
4. The AE’s performance in 1998 in regard to time management, planning ability, and management of expenses was:
5. The AE’s knowledge of your products, your company, competitors’ products, and customer needs was:

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VITA

Guangping Wang was born in Shangyu, Zhejiang, the People’s Republic of China on May 20, 1966. He holds a bachelor of science degree in engineering and a bachelor of arts degree in economics, both from China. Guangping worked as a salesperson and sales manager for six years in Shanghai before he came to the United States for his graduate work in December 1994. After receiving his master of business administration degree in 1996 from the University of New Orleans, he started his doctoral program in marketing at Louisiana State University. He will receive his doctoral degree in May 2000. Currently, he is Visiting Assistant Professor of Marketing at Bradley University in Peoria, Illinois. Starting Fall 2000, he will be Assistant Professor at Penn State Hazleton.
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Guangping Wang

Major Field: Business Administration (Marketing)

Title of Dissertation: Personal Factors Affecting Sales Performance: Modeling the Effects of Experience, Competitiveness, Self-efficacy, Effort, and Creativity

EXAMINING COMMITTEE:

Approved:

Major Professor and Chairman

Dean of the Graduate School

Date of Examination: January 21, 2000