

Effectively Utilizing Peer Competition to Motivate Sales Performance

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Dissertation Proposal

Presented to the Faculty and Students of the Bauer College of Business

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Abstract

Stimulating competition among salespeople is a key tool sales managers use to motivate effort and performance. Despite its widespread usage, experts differ in their opinions on intra-organizational competition, and research shows its effects to be mixed. Whereas some extol the motivational benefits of competition, others argue that fostering intramural competition is seldom, if ever, beneficial for either organizations or individuals. This study explores the psychological and behavioral paths through which competition motivates effort and performance. In contrast to previous treatments of intra-organizational competition, it begins with the premise that competition is likely to be neither purely beneficial nor detrimental, but a two-edged sword with some performance benefits but also a “dark side” that must be considered before pitting employees against one another. Results of a pilot study provide support for the proposed differential effects on customer- and sales-oriented behaviors, pending whether one perceives competition as more challenging or more threatening. The research methods that have been developed to test the hypotheses, including the creation of a sales simulation to test the effects of competition in a controlled environment, are discussed.

Effectively Utilizing Peer Competition to Motivate Sales Performance

Stimulating competition among salespeople is a key tool sales managers use to motivate effort and performance. Despite its widespread usage, experts differ in their opinions on intra-organizational competition, and research shows its effects to be mixed. Whereas some (e.g., Brown et al. 1998) extol the motivational benefits of competition, others argue that fostering intramural competition is seldom, if ever, beneficial for either organizations or individuals (Kohn 1992; Reeve and Deci 1996). The proposed study will explore the psychological and behavioral paths through which competition motivates effort and performance. In contrast to previous treatments of intra-organizational competition, it begins with the premise that competition is likely to be neither purely beneficial nor detrimental, but a two-edged sword with some performance benefits but also a “dark side” that must be considered before pitting employees against one another.

Competition offers important benefits to sales managers, such as motivating greater effort (Birkinshaw 2001) and sharpening the focus of effort on key metrics (Beltramini and Evans 1988; Brown et al. 1998). Although these benefits make competition attractive for managers seeking to increase sales performance, extant research on competition has not provided a clear understanding of its personal or organizational effects, or well-grounded guidelines for its effective use.

On the other hand, researchers who have focused on the negative effects of competition have emphasized its capacity to decrease intrinsic motivation (e.g., Deci 1973; Epstein and Harackiewicz 1992; Reeve and Deci 1996), cooperation among coworkers, and creativity (Deutsch 1949; Johnson et al. 1981). Thus, the extant literature is divided between proponents and critics of intramural competition and provides relatively little insight into the motivational

processes triggered by competition. The perspective of my research is that the motivational impulses engendered by competition are complex and bivalent, and that its ultimate effects on effort and performance depend on whether salespeople perceive it primarily as a challenge or a threat.

This perspective contrasts markedly with that of authors who have viewed competition in either a purely positive or negative light. The fundamental issue concerns how salespeople interpret the implications of competition for their personal status and well-being. In a manner consistent with a long-standing stream of research on psychological climate (e.g., Brown et al. 1998; James et al. 1990), salespeople interpret competition in terms of its implications for their personal status and well-being in the organization. In particular, to varying degrees, they are likely to perceive competition as either a challenge or a threat to their well-being and standing in the organization. Challenge and threat represent motivational impulses that are likely to have very different effects on salespeople's goal-directed effort and performance. In line with an abundance of research on cognitive appraisal and emotion, appraisals of challenge are likely to induce creative problem solving, long-term thinking, and customer orientation, whereas appraisals of threat are likely to lead to efforts to exploit, and even coerce, current prospects, short-term thinking, and sales orientation.

Customer orientation refers to a consultative approach to selling and relationship management that focuses on understanding and satisfying the needs of individual customers. As such, it is indispensable in helping companies develop strategic partnerships with customers and an essential component of successful business marketing (e.g., Dwyer and Tanner 2009; Manning et al. 2007; Saxe and Weitz 1982). Thus, management must understand the implications of fostering intramural competition on customer- versus sales-oriented selling

behavior and learn to influence employee perceptions to elicit a higher ratio of challenge to threat appraisals. Being able to do this will result in greater motivation to solve customer problems creatively for the benefit of long-term relationship effectiveness and growth, rather than exploitation of prospects for short-term gain. I also seek to identify managerially actionable leadership behaviors that moderate challenge and threat responses to intramural competition.

In summary, I attempt to isolate and explain the adverse and beneficial effects of intramural competition by addressing two fundamental questions:

1. *How* (i.e., through what cognitive appraisals) does competition motivate?, and,
2. *What types of relational behaviors* (i.e., customer versus sales oriented) does competition motivate?

I intend to demonstrate that competition motivates through challenge and threat appraisals, and that these, in turn, elicit customer- and sales-oriented behaviors, respectively. I further propose to show that these appraisals of the personal implications of competition can be influenced by individual difference variables (i.e., trait competitiveness and self-efficacy) and managerial actions (i.e., transformational leadership).

Contributions to Marketing Practice

The primary contribution of this research to marketing practice will be increasing managers' ability to motivate greater effort and direct it toward behaviors that foster customer relationship growth and development. Specifically, it will indicate the reasons (i.e., challenge and threat appraisals) underlying the positive and negative effects of fostering competition and show how the positive can be enhanced and the negative reduced. Thus, the research will provide managers with: (1) a more refined understanding of the complex and bivalent effects of intramural competition and the psychological processes that underlie them, and (2) an indication

of how managers can influence salespeople's cognitive appraisals and thus increase the positive and reduce the negative effects of competition.

These contributions directly address widespread managerial practice in a conceptually well-grounded and actionable manner. At present, many managers who believe in the efficacy and appropriateness of competition foster it without full awareness of its personal and organizational ramifications. Others may scrupulously avoid stimulating competition in the belief that it inhibits team-building and intrinsic motivation. My contribution is offering a more balanced and realistic perspective on intramural competition that captures its positive and negative effects, explains the psychological processes underlying both, and suggests how management can enhance the positive and reduce the negative effects.

Motivating employees to engage in customer-oriented behaviors has many benefits. Increased customer orientation should translate into solutions that meet customer needs and result in greater loyalty (Saxe and Weitz 1982). Attempts to discover and respond to customer needs signal the seller's commitment and increase cooperation and relationship effectiveness (Jap and Ganesan 2000). Increased buyer – seller collaboration, in turn, should enhance profitability and competitive advantage for both parties (Jap 1999).

In summary, this research will contribute to marketing practice by informing and improving managers' efforts to motivate salespeople in ways that enhance, rather than jeopardize, healthy long-term relationships. It will indicate fundamental psychological processes that trigger customer- and sales-oriented behaviors and lead to beneficial and adverse relational outcomes, respectively. Further, it will indicate leadership behaviors that influence the balance of positive and negative sales behaviors and relational outcomes.

Theoretical Contribution: The Motivational Paths of Competition

Intramural competition motivates employees by making the distribution of organizational rewards contingent upon performing better than coworkers. This research builds on the well established conceptualization of psychological climate as individuals' perceptions and interpretations of the relevance of the work environment to their personal goals, status, and well being in the workplace (Brown and Leigh 1996; James et al. 1977). In line with an active stream of recent research (e.g., Arnold et al. 2009; Brown et al. 1998; Fletcher et al. 2008), I focus specifically on competitive psychological climate, or salespeople's perceptions of the extent to which the distribution of organizational rewards is contingent on performance compared to others (i.e., the competitive climate; Brown et al. 1998).

Competitive Psychological Climate

Psychological climate refers to salespeople's perceptions of the work environment in terms of its implications for their status and well-being. Despite working in the same environment, individuals are likely to have different perceptions of it. They interpret the environment (e.g., practices and procedures of the organization) in light of their own values and evaluate its implications for their personal status and well-being in the organization (James et al. 2008; James et al. 1978). Researching these perceptions is crucial because it is people's perceptions of the environment, not the environment itself, that motivate behavior (Brown et al. 1998; James et al. 1990; Smith et al. 1993).

Competitive psychological climate represents an individual's perception that organizational rewards are distributed based on their performance relative to others (Brown et al. 1998; Kohn 1992). If employees perceive that an aspect of the work environment, such as competition, has implications for their own status and well-being (i.e., personal stakes), they interpret the nature of these implications and assess path-goal contingencies, task requirements,

and resources available for coping with the situation (James and James 1989; Lazarus 1991a; Lazarus 1991b; Lazarus and Folkman 1984). Competition signals that performance results will be made public, and that one's performance relative to peers, good or bad, will be conspicuous. It motivates because employees perceive that they have a personal, public stake in performing well.

Cognitive appraisal theory (Folkman et al. 1986; Lazarus 1991a) argues that individuals use two heuristics to appraise an environment. The first, primary appraisal, involves an assessment of whether the situation is personally relevant (i.e., has implications for one's status and well-being). If so, the individual then appraises the resources they have to cope with situational demands and the likelihood of success or failure. Two fundamental types of appraisal, challenge and threat, arise from assessments of coping resources relative to perceived demands of the situation (Carver and Scheier 1994; Folkman and Lazarus 1985; Skinner and Brewer 2002; Tomaka et al. 1993). A challenge appraisal occurs when individuals assess resource requirements as taxing, but not exceeding, available resources; a threat appraisal occurs when they assess resource requirements as exceeding available resources (Lazarus and Folkman 1984).

Although challenge and threat appraisals arise from different assessments, they are not mutually exclusive; in fact, they are likely to co-occur. When performance outcomes are uncertain, individuals simultaneously experience both confidence and doubt (Monat et al. 1972). Carver and Scheier (1994) found that individuals frequently feel both challenged and threatened in anticipation of an uncertain outcome. Thus, I hypothesize that individuals will feel both challenged and threatened by a competitive work environment.

Hypothesis 1: Competitive psychological climate is positively related to challenge and threat appraisals.

When individuals perceive that competition is likely to affect their future well-being, an uncertain outcome can appear both stimulating and menacing. Depending on the cognitive appraisal of the situation, competition motivates either behavior geared to meet a challenge head-on and, in the process, expand one's capabilities, or to eliminate the risk of failure as quickly as possible. Together, the impulses to pursue success or avoid failure constitute the essence of motivation (McClelland 1987).

Behavioral Responses

Behavioral responses to competitive environments differ depending on whether one appraises the competition as challenging or threatening. Salespeople who perceive that they possess adequate resources to meet the demands of intramural competition are likely to regard it as an opportunity to advance their status in the organization. Thus, they are likely to explore creative ways of dealing with it and view their problem-solving efforts as paths to personal growth. This is conducive to finding innovative approaches to solving customer problems and generally practicing customer orientation.

On the other hand, because threat appraisals are highly aversive, they motivate individuals to try to resolve threatening situations in the quickest possible manner. This leads to short-sightedness in attempts to deal with immediate situational exigencies in a manner that will quickly resolve major risks of negative outcomes. Salespeople who perceive that intramural competition requires resources beyond what they are able to muster likely perceive it as a threat and thus engage in coercive, sales-oriented behaviors in attempts to reduce the likelihood of negative outcomes as quickly as possible.

Customer- versus Sales-Orientation

Customer-oriented salespeople focus on understanding customer wants and needs and helping them make the right buying decision (Saxe and Weitz 1982). A customer-oriented salesperson avoids high-pressure tactics and focuses instead on delivering long-term customer satisfaction. In contrast, sales-oriented salespeople pursue short-term gains and subordinate the best interest of customers to make an immediate sale (Saxe and Weitz 1982). Challenge and threat appraisals are likely to differentially influence the two approaches to selling.

Challenge inspires people to take pride in their work and look for ways to become more effective. They focus on creative approaches to achieving desired outcomes, such as devising satisfying solutions for customers and sustaining high performance in dynamically evolving situations (Csikszentmihalyi 1991). In contrast to threat, challenge motivates risk-taking in the interest of developing and utilizing skills and capabilities with short-term costs but potential long-term payoffs. Challenge elicits a willingness to try new approaches and desire to surmount obstacles (Frijda et al. 1989) and expands one's field of vision and exercise of creativity (Csikszentmihalyi 1991; Lazarus 1991a). Further, those motivated by challenge will likely eschew selling to customers whose needs they cannot well serve. Challenge appraisals are likely to broaden the scope of ideas and actions considered in response to stressors and improve decision-making and long-term outcomes (Fredrickson 2001; Fredrickson and Branigan 2005; Lazarus 1991a; Tugade and Fredrickson 2004). Challenge inspires workers to higher performance (e.g., Latham and Locke 1979), and does so through means that benefit both salespeople and their customers.

Hypothesis 2a: Challenge appraisals are negatively related to sales-orientation.

Hypothesis 2b: Challenge appraisals are positively related to customer-orientation.

Threat appraisals prompt defensive efforts to preserve one's personal interest and lead individuals to ruminate on the potential for and implications of loss of rewards and public embarrassment that accompany poor performance (Lazarus 1991b). To extricate themselves from this aversive state, they narrow their field of vision in attempts to quickly resolve the causes of threat and eliminate its major downside risks. This makes efforts to understand and creatively solve customer problems less likely than quick attempts to exploit the latent potential in current prospects and relationships. In contrast to the expansive effects of challenge, threat appraisals have constrictive effects.

Kohn (1993) argues that incentives and contests reduce cooperation and creativity. Customer-oriented salespeople must cooperate with customers and coworkers to devise creative solutions. They must also be willing to forego sales that do not serve customers' best interests (Saxe and Weitz 1982). Employees who perceive their well-being to be in jeopardy from unfavorable comparisons to peers are unlikely to invest in development of long-term customer solutions or forego any immediate sales. Indeed, they are more likely to sell aggressively, even coercively, with scant regard to customers' best interests.

Hypothesis 3a: Threat appraisals are positively related to sales orientation.

Hypothesis 3b: Threat appraisals are negatively related to customer orientation.

Appraisal as a Function of Individual Differences

Competition is a source of stress (Fletcher et al. 2008). For those who experience it primarily as a challenge, it is a source of performance-facilitating eustress that provides opportunity for growth (Singh 1998). For those who appraise it primarily as a threat, it is a source of distress, and the possibility and implications of loss loom large. It is likely that appraisals of intramural competition as challenge or threat are systematically affected by

individual differences among salespeople. Prior research has studied the effects of trait competitiveness (Brown et al. 1998) and self-efficacy (Brown et al. 2001; Brown et al. 2005; Sujan et al. 1994) on sales performance. I assess the moderating effects of these two individual difference variables on salespeople's appraisals of intramural competition.

Trait Competitiveness

Trait competitiveness, defined as the extent to which one enjoys striving to perform better than others (Helmreich and Spence 1978), is a personality variable that has been shown to moderate the effects of competitive climate (Brown et al. 1998; Fletcher et al. 2008). Trait competitive individuals are likely to adapt well and thrive in competitive environments (Brown et al. 1998; Kohn 1992). Brown et al. (1998) found that individuals high on trait competitiveness set higher goals than less competitive individuals, and Fletcher and colleagues (2008) found that trait competitive individuals experienced greater satisfaction and organizational commitment in competitive climates. In essence, competitive individuals are intrinsically motivated by competition because they enjoy the process of competing and are unlikely to ruminate on its downside risks. They are likely to be attracted to potential rewards of competing and appraise it as an opportunity for growth. Thus, competitive climates should elicit more challenge appraisals for competitive individuals.

Hypothesis 5a: Trait competitiveness positively moderates the effect of competitive climate on challenge appraisals.

Hypothesis 5b: Trait competitiveness negatively moderates the effect of competitive climate on threat appraisals.

Self-Efficacy

Self-efficacy, the belief that one has the resources to perform effectively, has been shown to influence the strength and perseverance of goal-directed efforts (Bandura 1977). In competitive athletic events, self-efficacy has been shown to be a strong predictor of performance (Weinberg et al. 1981; Weinberg et al. 1980; Weiss et al. 1989). This relationship has also been demonstrated in competitive work environments; for example, Brown et al. (1998) demonstrated that self-efficacious individuals set higher goals and performed better in competitive climates. Efficacy beliefs are likely to increase challenge and decrease threat appraisals in response to competition. Bandura (1982) posits that self-efficacy enhances efforts to cope with stressful situations because self-efficacious individuals act with confidence that they have what they need to perform effectively and surmount obstacles in their paths.

Hypothesis 6a: Self-efficacy positively moderates the effect of competitive psychological climate on challenge appraisals.

Hypothesis 6b: Self-efficacy negatively moderates the effect of competitive psychological climate on threat appraisals.

Changing Appraisals through Leadership

Prior research on organizational and psychological climate has discussed the importance of the manager in shaping climate perceptions (e.g., Liao and Chuang 2007; Piccolo and Colquitt 2006). Job perceptions can be influenced through modifying leader behavior, even without substantive changes in job characteristics (Griffin 1981; Piccolo and Colquitt 2006). From a conceptual point of view, managers positively influence cognitive appraisals through any actions that increase subordinates' perceived coping resources. For example, individuals who view their supervisor as a mentor and confidant will perceive their coping resources as greater than those

who view their manager as aloof and uncaring do. As a result, they will appraise competition more as a challenge than as a threat.

Transformational leaders motivate subordinates through the use of idealized influence, individualized consideration, inspirational motivation, and intellectual stimulation, resulting in greater effort outputs and adoption of larger organization-focused goals. Conversely, transactional leadership motivates subordinates through a process of exchange (Bass 1985). Recent research has demonstrated that leadership style influences performance and stress appraisals and showed that transformational leadership is the more effective motivator. Compared to transactional leadership, transformational leadership is more strongly (positively) related to sales performance (Martin and Bush 2006) and more effective in reducing threat appraisals (Lyons and Schneider 2009). Lyons and Schneider (2009) find transformational leadership to be associated with enhanced task performance, greater task efficacy, perceived social support, and lower threat appraisals.

Transformational leaders have more positive interactions with subordinates, creating strong supportive and emotional bonds that inspire employees to set higher goals (Bass 1985; Dvir et al. 2002). They empower employees by providing them with increased social support, adding to their perceived coping resources and helping reframe stressful situations as growth opportunities. Perceptions of increased availability of resources changes secondary appraisals from threat to challenge. Thus, I posit that leadership style moderates the effect of competitive psychological climate on challenge and threat appraisals.

Hypothesis 7a: Transformational leadership positively moderates the effect of competitive psychological climate on challenge appraisals.

Hypothesis 7b: Transformational leadership negatively moderates the effect of competitive psychological climate on threat appraisals.

The hypothesized relationships are summarized in Figure 1.

Methods

The conceptual framework and hypotheses lend themselves to testing using multiple methods. I have already conducted a small sample pilot study using survey methods and a convenience sample of student salespeople to subject the main effect hypotheses to a rigorous preliminary falsification attempt. The results of this study, described below, provide provisional support for most of the hypotheses. I have developed a simulation game as a basis for testing the hypotheses in controlled experiments. I am also planning to conduct a large sample field study using survey methods. I briefly describe each of these approaches to the research in the following sections.

Pilot Study

I tested the main effect hypotheses and moderating effects of trait competitiveness in a pilot study, conducted with 86 student salespeople enrolled in a professional selling program at the University of Houston. The study participants had extensive classroom and field training in all aspects of personal selling. Moreover, the program fostered competition among salespeople in a manner very similar to industrial sales organizations, and their course grades depended on sales performance in curricular and fundraising activities of the program. I measured their perceptions of competitive climate, trait competitiveness, appraisals of challenge and threat, and customer- and sales-orientation (see Appendix 2 for measures). Study participants ranged in age from 19-34. Average selling experience was just under 3 years (2.85).

I tested the hypotheses using partial least squares (PLS-graph). This program uses a non-parametric bootstrapping algorithm that makes no distributional assumptions and is advantageous for testing hypotheses with small to medium sample sizes (Cassel et al. 1999). I estimated the model using 500 bootstrap samples. Figure 2 reports the mean parameter estimates across the 500 samples. The results indicated strong support for the hypothesized main effects. Competitive climate was positively related to appraisals of both challenge and threat. In turn, challenge appraisals were positively related to customer orientation and negatively related to sales orientation, whereas threat appraisals increased sales orientation.

Experimental Design

I plan to conduct a series of controlled experimental tests of the hypotheses using students enrolled in the same professional selling program as the pilot study (no student salespeople will participate in both studies), as well as students from marketing classes who are not enrolled in the selling program.

Study participants will participate in a simulation selling game that involves allocating effort and formulating selling strategy to achieve an ambitious quota. The simulation was programmed and will be conducted with the software z-Tree (Fischbacher 2007). Upon arrival, study participants will complete measures of trait competitiveness, self-efficacy, and sales orientation/customer orientation. Subsequently, they will be given a few minutes to read instructions for the simulation (see Appendix 3). The instructions include an experimental manipulation of competition (i.e., competitive versus non-competitive). Study participants are told that they work for a local wine distributor, selling wine to area restaurants, and that they have just inherited 10 new accounts, for which they will be allocating a time budget and devising a sales strategy. After reading the instructions, study participants complete measures of

competition (as a manipulation check) and cognitive appraisal of the task (i.e., challenge and threat).

Participants are given a booklet of “CRM Notes” from the prior salesperson in the territory, consisting of qualitative descriptions of accounts, including potential account revenue and the subjective probability of making a sale. Participants are encouraged to use both the qualitative and quantitative data to guide their time allocation and selling strategy decisions and given 15 minutes to review the qualitative information before they open the computer program.

The first stage of the computer simulation contains the time allocation task. Participants are given a table to fill out, which includes three already populated columns (Customer Name, Sale Value, and Probability of Sale). The fourth column, Hours Allocated, is blank, and participants are told to allocate 0-5 hours for each customer, and that they have a maximum of 15 hours to see new customers in the round. Participants will have been informed in the instructions that customers may still buy even if they are not called on in the current round.

Next, study participants will be asked to rate various selling approaches as to their appropriateness for each account that they budgeted time. Participants preferring a sales oriented approach improve their probability of closing business in the current round, but reduce the probability in subsequent rounds, whereas those preferring a customer-oriented approach will, to a lesser extent, positively influence the probability of closing in the current round, but increase the probability of closing in subsequent rounds (see Appendix 3 for algorithms).

After study participants have allocated the time budget and indicated selling strategies for the first round, the program determines outcomes probabilistically (according to the prior subjective probabilities, adjusted for selling effort and strategy) and resets the closing probabilities and revenue potential values for the next round. The simulation (time allocation and

strategy rating tasks) will be repeated four times, causing participants to make trade-offs between immediate results and a long-term account relationship and growth strategy. I expect that, in a manner consistent with the conceptual framework, challenge appraisals will lead to customer-oriented, relationship-developing strategies with greater long-term payoffs over sales-oriented strategies with high probability short-term payoffs, whereas threat appraisals will lead to sales-oriented strategies with high probability prospects to eliminate the immediate downside risks of failure.

For the study participants from the professional selling program, I will measure, rather than manipulate competitive psychological climate (consistent with the pilot study), as competition among peers is an everyday reality in the program. For these students, no experimental manipulation will take place, and the simulation will demonstrate the effects of perceived competition on time allocation among customers and the selling approaches utilized in a sales call.

In both studies, the measured personality variables (self-efficacy and trait competitiveness) are expected to moderate the relationship between competitive psychological climate and cognitive appraisals. Individuals high on either variable will view the simulation task as more challenging and less threatening than individuals with lower scores on those variables, subsequently allocating more effort to low to medium probability accounts and customer-oriented, relationship building sales approaches.

Transformational Leadership

In another experimental study, I plan to manipulate the leadership style of the sales manager. Participants will begin the simulation as described above, but at the end of the first round, they will be told that they failed to make quota. Rather than automatically beginning the

next round, participants will receive an e-mail from their manager. In the transformational leader manipulation, the e-mail will encourage participants by letting them know that other successful salespeople started off missing their quotas as well, that the manager believes the participant is capable of making the quota, and to use the last round as a learning experience. Participants in the transactional leader condition will be receive an e-mail from their manager letting them know that if they miss quota one more time, their services will no longer be needed. Consistent with my hypotheses, I expect participants in the transformational leader condition to utilize more customer-oriented approaches, having perceived that they have the resources necessary for success. The subjects in the transactional leader condition will rely on more sales-oriented tactics aimed at high-probability customers, as they quickly attempt to avoid the threat of missing quota.

Survey

I plan to conduct a longitudinal survey of salespeople to test the hypotheses. The ideal context would be the sales force of a large organization in a business-to-business setting in which salespeople function as both prospectors for new business and long-term relationship managers. I would only ask for fifteen minutes of salespeople's time to complete the questionnaire. I would also ask managers to rate salespeople's selling style and performance and request archival measures of objective sales performance, which I would use to assess longitudinal effects of intramural competition and salespeople's responses to it.

I plan to use multilevel modeling to test the hypotheses. Multilevel methods are essential for my research program, as the nature of the data (e.g., sales people grouped under differing managers) would violate the independence assumption of simple OLS. Further, I hypothesize a variety of cross-level moderating effects in my proposal including the effect of leadership style on the competitive climate-cognitive appraisal relationship.

The measures I plan to use for this study include a combination of measures that have a well-established history in marketing and measures that I am specifically developing for this study. All measures that I am proposing to use in the survey study can be found in Appendix 4.

Competitive Psychological Climate

Competitive psychological climate will be measured with a four-item scale adapted from Brown et al. (1998). This scale has been the primary scale used in studies of competitive psychological climate (e.g., Arnold et al. 2009; Brown et al. 1998; Fletcher et al. 2008). These items asked for perceptions of the extent to which organizational rewards were based on performance relative to others.

Trait Competitiveness

I will measure trait competitiveness with four items from Helmreich and Spence (1978). These items asked respondents to rate their enjoyment of competing and desire to perform better than others.

Self-Efficacy

I will measure self-efficacy with confidence scores, as recommended by Bandura (1997). Following prior work on self-efficacy (e.g., Brown et al. 2005), I will present 10 potential levels of sales growth (from 2% to 20%) and ask respondents whether they felt it was possible to achieve each of those targets (Yes/No) and how confident they are that they will be able to meet those targets (0% - 100%). Self-efficacy scores will consist of the summation of confidence ratings by the respondents.

Transformational Leadership Behaviors

I will adapt Podsakoff et al.'s (1990) Transformational Leadership Behavior Inventory to assess the transformational leadership behaviors of the sales managers in this study. Prior

research using this inventory has shown four dimensions of transformational leadership: core transformational leader behavior (articulating a vision, behavior modeling, and fostering acceptance of group goals), high performance expectations, individualized support, and intellectual stimulation (e.g., Mackenzie et al. 2001; Podsakoff et al. 1990).

Transactional Leadership Behaviors

I will measure transactional leadership behaviors with scales measuring contingent reward behavior and contingent punishment adapted from Podsakoff et al. (1984). These scales assess the degree to which the leader provides positive feedback contingent upon high performance levels and punishment contingent on low performance levels, respectively.

Challenge and Threat Appraisals

The scales developed to measure appraisals of challenge and threat in the pilot study will be adapted to fit the context of our data collection. The items were developed following the guidelines of construct and questionnaire development suggested by (Churchill 1979; Peterson 2000). After a thorough review of the literature on stress and cognitive appraisal, a list of items was constructed. The items were then taken to professors from the professional selling program, as well as students in the program, to assess the meaningfulness of the items. The items not meaningful to the respondents were eliminated.

I will measure threat with four items adapted from the scale developed for the pilot study. Items asked respondents to rate their feelings of being overwhelmed at the prospect of not keeping up with their peers and feelings that this inability to perform would negatively impact their future.

I will measure challenge with the six item scale developed for the pilot study. These items concerned the extent to which the striving to satisfy high performance expectations required hard-work and offered opportunity for personal growth.

Sales Orientation/Customer Orientation (SOCO)

I developed a pair of four-item scales to measure sales and customer orientation for the pilot study. Items asked respondents how much they considered meeting the needs of their customers in order to make sales (customer oriented) and their willingness to use coercive selling tactics (sales oriented). I will adapt these items to fit the context of the study.

Appendix 1: Figures

Figure 1: The Motivational Path of Competition

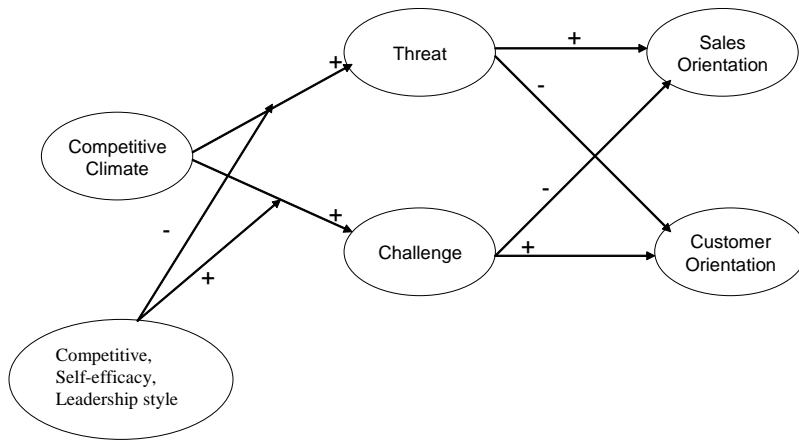
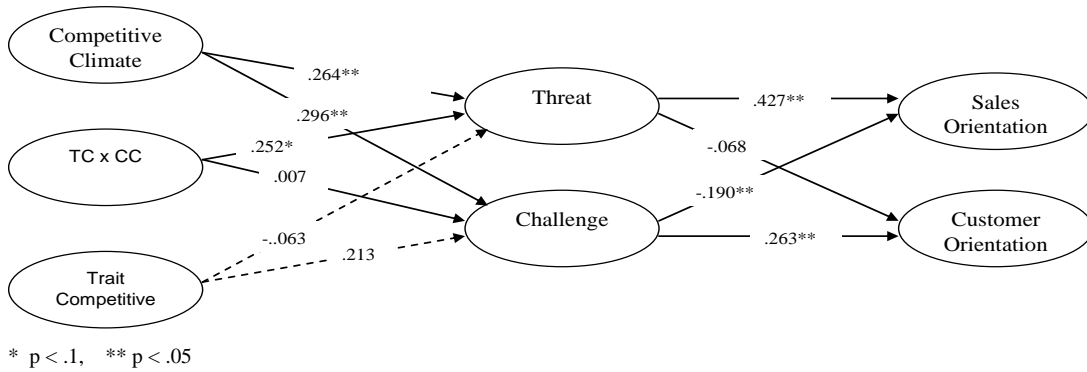


Figure 2: Results of Pilot Study



Appendix 2: Pilot Study Scales

Competitive Psychological Climate

1. My sales are frequently compared with those of other students.
2. The recognition you get in the PES depends on how your sales rank compared to other students.
3. Other students frequently compare their sales numbers with mine.
4. We are rewarded based on our sales performance relative to others.

Trait Competitiveness

1. I enjoy working in situations involving competition with others.
2. It is important to me to perform better than others on a task.
3. I feel that winning is important in both work and games.
4. I try harder when I am in competition with other people.

Challenge

1. I have to work hard to keep pace with other students.
2. Meeting the quota set by PES requires me to do more than I thought I could.
3. I would have to work at maximum capacity to be the top seller in the PES.

Threat

1. I often feel like I may not be able to keep my sales numbers up with others in the PES.
2. I sometimes find the prospect of not selling as much as my classmates overwhelming.
3. The preparation of other students in the PES leaves me feeling like I cannot compete.
4. I am afraid my ranking compared to others in the PES will put me at a disadvantage.
5. I often feel like the selling requirements of the PES are out of my reach.

Sales Orientation/Customer Orientation

1. Customer satisfaction is secondary to closing a sale.
2. In a sales presentation, I would say whatever is necessary to make a sale.
3. I might overpromise in order to close a sale.
4. I only provide as much information as is necessary to close a sale.
5. I would always provide technically accurate information, even if it costs me the sale.
6. I am more obsessed with satisfying customers than with making quota.
7. In a sales presentation, I would stop trying to sell if I determine my product is not the best fit for a customer.
8. I would never make a deceptive statement, even if it meant not making a sale or quota

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