

RESILIENCY DEVELOPMENT OF ORGANIZATIONS, LEADERS AND
EMPLOYEES: MULTI-LEVEL THEORY BUILDING AND INDIVIDUAL-LEVEL,
PATH-ANALYTICAL EMPIRICAL TESTING

by

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INDIVIDUAL-LEVEL, PATH-ANALYTICAL**

EMPIRICAL TESTING

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PATH-ANALYTICAL EMPIRICAL TESTING

Carolyn M. Youssef, Ph.D.

University of Nebraska, 2004

Adviser: Fred Luthans

The need for understanding the development of resilient organizations, leaders and employees – those able to adapt, bounce back, and flourish despite adversity – has never been greater. Although receiving attention in clinical psychology, to date little is known about resiliency in organizational settings. Drawing from the positive psychology, positive organizational scholarship (POS), and positive organizational behavior (POB) movements, this dissertation explores the role of resiliency, in conjunction with self-efficacy, hope and optimism, in enhancing performance, job satisfaction, work happiness, and organizational commitment.

For the first time, a multi-level resiliency development model is introduced and conceptually supported. The model offers various antecedents (assets, risk factors and values), mediators (buffering processes at the organizational level, and hope, optimism and self-efficacy at the individual leader level), and outcomes (employee performance, job satisfaction, work happiness, and organizational commitment) for the resiliency development process. The model is then empirically tested using path-analysis, and

informed by the results, an alternative model is conceptualized and supported using a second data set.

Results of testing the individual (manager and employee) level of the initial model using 137 managers and 411 employees (effective $N = 341$ dyads) from 90 different organizations support the overall fit of the resiliency development model. The causal linkages within the model were mostly supported, indicating there are causal relationships between managers' hope, self-efficacy, and resiliency, as well as between employees' resiliency and their performance, job satisfaction, work happiness and organizational commitment.

Results of post-hoc analyses of the above data set ($N=522$ managers and employees), as well as testing the positive psychological capital model (Luthans, et al., 2004; Luthans & Youssef, 2004) as an alternative model using another data set of 484 managers and employees from 45 different organizations, provide strong support for the model, explaining over 30 percent of the variance in outcomes. Moreover, resiliency is supported as providing a foundational, additive, synergistic, and complementary role to that of self-efficacy, hope and optimism, in enhancing performance and attitudinal outcomes.

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**RESILIENCY DEVELOPMENT OF ORGANIZATIONS, LEADERS AND
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LEVEL, PATH-ANALYTICAL EMPIRICAL TESTING**

CHAPTER ONE: INTRODUCTION TO THE STUDY

Conceptualizing and understanding the significant contribution of resilient organizations, leaders and employees - those able to survive, adapt, swiftly bounce back, and flourish despite uncertainty, change, adversity or even failure - has recently had a surge of interest among management scholars and practitioners (Coutu, 2002; Horne & Orr, 1998; Klarreich, 1998; Luthans, 2002a; Luthans & Avolio, 2003; Mallak, 1998; Reivich & Shatte, 2002; Sutcliffe & Vogus, 2003; Worline, Dutton, Frost, Kanov, Lilius, & Maitlis, 2002; Youssef & Luthans, 2003a). It is becoming evident that the roller coaster ride so far in the 21st century geopolitical, economic, social and ethical environment can only be overcome through shifting to an emphasis on proactive endurance and a positive outlook that highly visible resilient organizations (e.g., Microsoft, General Electric, or United Airlines) and resilient leaders (e.g., Bill Gates or Carly Fiorina) seem to adopt. The parallel positive psychology (Keyes & Haidt, 2003; Seligman & Csikszentmihalyi, 2000; Sheldon & King, 2001; Snyder & Lopez, 2002), positive organizational scholarship (POS) (Cameron, Dutton & Quinn, 2003), and positive organizational behavior (POB) (Luthans, 2002a, b) movements signify this powerful positive reorientation.

STATEMENT OF THE PROBLEM

As the turn of the new millennium marked the emergence of positive psychology, there is now a similar shift away from negativity and dysfunctional behavior, and toward human strengths and moral values and ethics in the field of organizational behavior. In this post 9-11 era, and especially in light of the ramifications of corporate scandals, both academics and practitioners have become fed up with “gloom and doom” and what is wrong with people, and now yearn for the positive, what is good, worthwhile, sustainable, and authentic. This craving for positivity is evidenced by the bulging sales of feel-good, self-improvement, airport-type books, most of which have little or no theoretical grounding nor empirical research support. Organizational leaders, employees, stakeholders, and even lay observers have become constantly on the watch for positive, innovative, and morally sound approaches for developing and managing today’s organizations for sustainable performance and effectiveness.

Drawing from the positive psychology movement (Seligman, 1998b; Seligman & Csikzentmihalyi, 2000; Sheldon & King, 2001; Snyder & Lopez, 2002) and the environmental context for today’s organizations, positive organizational behavior, or simply POB, has been recently introduced as “the study and application of positively-oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace” (Luthans, 2002b: 59). Using this definition as a point of departure, in addition to being positive and strength-based, POB capacities must be based on theory and research (thus differentiating from the popular self-help, positive literature), be somewhat unique (thus differentiating from traditional organizational behavior constructs such as positive

affectivity or even humor), and, most important, state-like, open to development, change, and performance improvement (thus differentiating from trait-like, relatively fixed dispositional personality and motivational constructs found in most of the positive psychology and organizational behavior) literatures. The positive psychological constructs that best meet these POB inclusion criteria include confidence/ self-efficacy, hope, optimism and resiliency (Luthans, 2002a, 2002b). Stajkovic (2003) has integrated these four into a latent core confidence factor for work motivation, and Luthans and colleagues have recently combined them into a higher order factor that they call “positive psychological capital” (Luthans, Luthans, & Luthans, 2004; Luthans & Youssef, 2004).

In the current environment, organizational leaders and employees can no longer afford to be constantly in a problem-solving mode, putting out fires and reacting to problems after they have turned into full blown crises. Remedial approaches, which may have worked to a degree in the past, are no longer sufficient for the proactivity and creativity that today’s marketplace demands. Even the development and management of human and social capital, although important, are now deemed to be insufficient for effective, authentic leadership (Luthans & Avolio, 2003; May, Chan, Hodges, & Avolio, 2003) and sustainable performance (Luthans et al., 2004; Luthans & Youssef, 2004). On the other hand, the positive organizational behavior approach, through the psychological states of self-efficacy, hope, optimism, and resiliency, or in combination as positive psychological capital (Luthans et al., 2004; Luthans & Youssef, 2004), may be an alternative to the prevailing preoccupation with negatively-oriented approaches and challenges facing today’s organizational leaders.

To date, the literature that applies positive psychology to workplace contexts is just emerging. In particular, resiliency has been given surface recognition, but not systematically researched or analyzed, in the context of the workplace. Yet, in recent times with the extremely turbulent geopolitical, social, economic, and ethical environment facing organizations, managers and employees, their positive psychological capacity for resiliency becomes critical. In this dissertation, an attempt is made to begin to fill this void. A new, multi-level theoretical model is proposed and supported, in which organizational, leader and employee resiliency can be developed, and have a positive impact on performance, job satisfaction, work happiness, and organizational commitment. The POB states of self-efficacy, hope and optimism are introduced as possible mediators for resiliency development process of leaders. Hypotheses for testing and refining the model at the individual (manager and employee) level of analysis are then presented and tested using a path-analytical approach.

Defining Resiliency as Open to Development

Although resiliency has a long history in child and adolescent psychotherapy and numerous definitions in that literature (e.g. Block, 1993; Block & Block, 1980; Block & Kremen, 1996; Block, Block, & Keyes, 1988; Block, Gjerde, & Block, 1991; Huey & Weisz, 1997; Hunter & Chandler, 1999; Stewart, Reid, & Mangham, 1997), as part of the recently emerging positive psychology movement, Masten and Reed (2002: 75) define resiliency at the individual level as “a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity or risk.” In the context of positive organizational behavior (POB), and as an integral component of positive psychological capital, Luthans (2002a) defines resiliency as a developable capacity to

rebound or bounce back from adversity, conflict, failure or even positive events, progress and increased responsibility. This “bouncing back” capacity involves flexibility, adjustment, adaptability and continuous responsiveness to change and uncertainty that can otherwise represent a source of psychological strain and challenge one’s well-being over the long term. At the organizational level of positive organizational scholarship (POS), Worline and colleagues (2002), Klarreich (1998), and other POS perspectives define resiliency at the organizational level as the structural and processual dynamics that allow an organization or a unit to absorb strain and retain coherence and the capacity to bounce back, thus enabling the ongoing engagement of risk.

The above three orientations and definitions support viewing resiliency as a state-like, developmental process, rather than a deterministic organizational characteristic or “super material” that distinguishes survivors from failures (Sutcliffe & Vogus, 2003), or an individual difference that is solely determined through genetics or environmental factors (Masten. 2001; Masten & Reed, 2002). Coutu (2002) recognizes Salvatore R. Maddi, the Director of the Hardiness Institute, on his use of resiliency training and George Vaillant, the Director of the Study of Adult Development at Harvard Medical School, on how some people became markedly more resilient over their lifetimes. Wolin and Wolin’s (2003) Project Resilience, which offers a resiliency assessment and training program, has also been recognized in educational, treatment, and, most importantly, preventive contexts. Masten and Reed (2002) include three types of strategies for promoting resiliency development. The first is risk-focused strategies, which emphasizes the prevention and reduction of risks and stressors that can increase the probability of undesired outcomes. The second is asset-focused strategies, which focuses on enhancing

resources that increase the probability of positive outcomes, in terms of effective adaptive processes. The third category of organizational resiliency development strategies is process-focused. It involves the mobilization of the power of human adaptational systems.

Within organizational contexts, Reivich and Shatte's (2002) resiliency development program has over fifteen years of experience with corporate interventions. Conner (1993, 2003) also offers training interventions and organizational solutions in developing resiliency in the contexts of leadership development and change management in organizations such as Sun Microsystems. In other words, there is considerable practical experience with resiliency training and application. However, to date there is no published direct empirical research regarding the effectiveness of resiliency development interventions in the workplace. This dearth can be attributed in part to the complexity and interactional nature of resiliency as a construct, leading Sutcliffe and Vogus (2003) to describe resiliency as "inadequately theorized" and its research as "fragmented." Such a void calls for an integrative, multi-level approach that takes into consideration environmental, organizational, leader and employee level factors. There is also need for a cross-disciplinary perspective that draws upon other relevant areas such as clinical and developmental psychology, in which resiliency research is well-established.

Overview of the New, Multi-Level Resiliency Development Theoretical Model

The purpose of this study is to begin to build a multi-level resiliency development theory, in which antecedents and mediating factors of organizational, leader and employee resiliency are identified and some of the relationships with performance, job satisfaction, work happiness, and organizational commitment are proposed and studied.

Figure 1 summarizes this multi-level theory of resiliency development and serves to organize the discussion. As shown in Figure 1, assets, risk factors (Masten, 2001; Masten & Reed, 2002), and values (Coutu, 2002, Sutcliffe & Vogus, 2003; Youssef & Luthans, 2003a) at the organizational and individual leader level are introduced as antecedents to the organizational and leader resiliency development processes, respectively. The processes of strengthening, replenishing, limbering, strategic planning, organizational alignment, organizational learning, and corporate culture awareness, are offered as mediators at the organizational level. Hope, optimism, and self-efficacy are proposed as mediators at the individual leader level, with hope and optimism also being proposed as antecedents to self-efficacy.

The individual level of analysis utilized to describe the leader resiliency development process can lend itself to application at any level (top management, middle management, supervisors, or front line employees). However, a direct trickle down effect of resiliency is also proposed, in which employee resiliency is enhanced through the cascading of resiliency from the organization and its leaders, leading to higher employee performance, job satisfaction, work happiness, and organizational commitment.

Overview of the Empirical Study

With the above theoretical model as a point of departure, and in the rarity of published empirical research about positive psychological capital in the workplace in general and about resiliency in particular, at least partial testing of the above model seems crucial. Moreover, earlier positive organizational behavior models, such as the authentic leadership model (Luthans & Avolio, 2003), the core confidence model for work motivation (Stajkovic, 2003), and the positive psychological capital model (Luthans

et al., 2004; Luthans & Youssef, 2004), have proposed combining the POB states of self-efficacy, hope, optimism and resiliency as a “bundle” that can lead to performance improvement in the workplace. On the other hand, this model proposes that leaders’ hope and optimism are antecedents to leaders’ self-efficacy, and that self-efficacy contributes to leaders’ resiliency, which in turn enhances employee resiliency, leading to an increase in performance, job satisfaction, work happiness, and organizational commitment. In this dissertation, these alternative models, and several others, are explored and tested.

Although the proposed overall model is a unique contribution to the resiliency literature, testing the full model in one study is an impossible undertaking that is beyond the scope of this dissertation. Therefore, the empirical contribution of this dissertation focuses on testing and modifying the causal linkages that have not been proposed in the literature, namely those between leaders’ hope, optimism, self-efficacy, and resiliency; and employees’ resiliency, performance, job satisfaction, work happiness, and organizational commitment. An attempt is made to control for organizational level factors, which are currently being explored within the positive organizational scholarship literature (e.g. Sutcliffe & Vogus, 2003; Worline et al., 2002), as well as for individual level antecedents that are stable or trait-like. Figure 2 summarizes the relationships empirically tested in this study. Control variables are discussed in detail in Chapter Three.

The balance of this chapter is devoted to defining the components of the model. With this theoretical background as a point of departure, the purpose, scope, and research questions of this study are delineated. The chapter ends with a brief outline of the organization of this dissertation.

DEFINING THE COMPONENTS OF THE MODEL

In an earlier section, resiliency has been defined and presented as a positive psychological state that is open to development and management in today's workplace. In this section, the various components of the multi-level resiliency development model are clearly defined. Emphasis is given to definitions drawn from the positive psychology, positive organizational behavior (POB), and positive organizational scholarship (POS) literatures. Where relevant, definitions from other literatures are drawn upon, and discrepancies are highlighted and resolved.

Organizational-Level Assets and Risk Factors

In their discussion of resiliency as a positive psychology construct, Masten and Reed (2002: 76) describe an asset as a "measurable characteristic in a group of individuals or their situation that predicts positive outcome in the future on a specific outcome criterion," and a risk factor as an "elevated probability of an undesirable outcome." Risk factors then are "variables which expose the individuals and populations of the organization to specific negative or undesirable outcomes" (Cowan, Cowan, & Schulz, 1996). Given the current environment, organizations could consider any combination of the following examples to pose risk at the organizational level. Downsizing (Caudron, 1996), work-life balance (Thomas & Ganster, 1995), emotional labor/ burnout (Morris & Feldman, 1996), poor leadership, and lack of personal and professional growth opportunities (Buckingham & Coffman, 1999) are all prominently mentioned items that fit within the category of risk factors.

On the other hand, organizational level assets are "resources that contribute to a unit's capacity to absorb strain (such as) knowledge and skill, trust and heedfulness,

positive emotion, felt community and commitment. The structure and practices of a unit create, transform, and redirect these resources in ways that build different kinds of capabilities for developing resiliency” (Worline et al., 2002: 36). Examples of assets possessed by an organization include structural capital, knowledge management systems resulting in shared information, clear communication channels, personal and professional growth opportunities.

Organizational-Level Values

Organizational values are an integral component of an organization’s vision, mission, and strategic orientation (Digman, 2002). They reflect the assumptions, priorities, range of goals, objectives and aspirations, and explicit and implicit norms of conduct underlying an organization’s culture (Hodgetts & Luthans, 2003). Coutu (2002) emphasizes the importance of values in developing resiliency. She asserts that, “strong values infuse an environment with meaning because they offer ways to interpret and shape events” (Coutu, 2002: 52). Values are the compass for the organization. They provide unwavering direction, so that when the ambiguity and speed of the current work environment are heightened, clarity is provided to the decisions necessary to navigate the challenges presented. Weick (1993) offers that the rules and regulations that may make some organizations appear less innovative may actually increase their resiliency in times of turbulence, because “when people are put under pressure, they regress to their most habituated ways of responding” (Weick, 1993: 638-639). Properly established and reinforced values can create positive and effective habituated responses to stress.

Organizational-Level Buffering Processes

According to Cowan, Cowan, and Schulz (1996: 12), “A buffer, protection, or immunization decreases the probability of a negative or undesirable outcome in the presence of a risk.” Buffering is “a reducer of the probability of negative outcomes despite risks” (Cowan et al., 1996: 14). In other words, the organization’s buffering processes shape the perceptions of assets and risks in a way that may be more significant and influential than the actual presence/ absence of assets or risk factors. That is why Masten and Reed (2002) emphasize the importance of process-focused strategies in building resiliency. Cowan and colleagues (1996: 9) support this view when they assert that, “the active ingredients of a risk do not lie in the variable itself, but in the set of processes that flow from the variable, linking risk conditions with specific dysfunctional outcomes.”

Drawing from the scarce research in this area, buffering can be accomplished through the processes of strengthening, replenishing, limbering (Worline et al., 2002), strategic planning, organizational alignment, organizational learning, and corporate culture awareness (Horne and Orr, 1998). These processes, as well as their contribution to building organizational resiliency, are explicated in Chapter Two.

Individual (Leader)-Level Assets and Risk Factors

Leaders bring into their organizations various aspects of themselves, both positive and negative, including their personal characteristics, backgrounds, strengths, vulnerabilities, insights, and perceptual biases. The trait theories of leadership emphasize these individual differences and uphold them as antecedents for leadership success and

effectiveness (e.g. Lord, DeVader, & Alliger, 1986; Fleishman, Zaccaro, & Mumford, 1991, 1992a, b; Lord & Hall, 1992).

The positive psychology and positive organizational scholarship literatures are also rich with dispositional traits and virtues that, if present in one's life, enrich the depth and breadth of his/ her success and satisfaction, and, if absent can hold people back from achieving life's full potential (Cameron, Dutton, & Quinn, 2003; Seligman & Csikszentmihalyi, 2000; Sheldon & King, 2001; Snyder & Lopez, 2002). These traits include general efficacy (Chen, Gully, & Eden, 2001; Judge & Bono, 2001), dispositional hope (Snyder, 2000; Snyder et al., 1991), trait optimism (Peterson, 2000; Scheier & Carver, 1992), positive/ negative affectivity (Chemers, Watson, & May, 2000; George, 1990; Russell & Carroll, 1999; Staw & Barsade, 1993) and many others (Snyder & Lopez, 2002).

The human capital stream of research also emphasizes the uniqueness and strategic importance of the educational background and experience, and the resulting knowledge, skills and abilities that individuals bring into an organization (Coleman, 1988; Hitt & Ireland, 2002; Hitt et al., 2001). Moreover, in addition to human capital, the salient role of social capital, i.e. relationships and networking between individuals and organizations that leads to value-creation and action facilitation, has been recently highlighted, at the individual, organizational, and inter-organizational levels (Adler & Kwon, 2002; Coleman, 1988; Hitt & Ireland, 2002; Prusak & Cohen, 2001). The managerial activities stream of research also clearly presented networking as one of the main pillars of managerial activities, and the most related to managerial success across cultures (e.g. Luthans, 1988; Luthans & Lockwood, 1984; Luthans, Rosenkrantz, &

Hennessey, 1985; Luthans, Welch & Rosenkrantz, 1993). The relationship between emotional intelligence and success has also been established (Goleman, 1998).

Masten (2001) presents various individual level assets that act as antecedents for resiliency in children and youth. These include cognitive abilities, temperament, positive self-perceptions (self-efficacy), faith, a positive outlook on life, emotional stability and self-regulation, a sense of humor, and general appeal or attractiveness. She also discusses several relationship-based assets such as care-giving adults, effective parenting, pro-social and rule-abiding peers, and collective efficacy in the community. At the individual level, risk factors primarily refer to the lack of one or more of these essential assets.

Individual (Leader)-Level Values

In the same way that values are necessary for enhancing organizational resiliency, Coutu (2002) discusses the importance of values and beliefs at the individual level as a source of meaning, as well as a tool for making a sometimes overwhelmingly difficult present more manageable, and linking it to a more fulfilling future. They allow people to elevate themselves over their painful present, and play a salient role in presenting different approaches for interpreting and shaping events.

However, Coutu (2002) also warns that stable values and beliefs need not be ethical in order to contribute to the resiliency development process. For example, the “survival” values that have been held by the “fittest” in previous eras may have not been ethical (e.g., the early capitalist “robber barons”), although they were effective in maintaining their existence and growth. Most importantly, Coutu’s conceptualization of the role of values in enhancing resiliency is based on the stability of those values as a source of meaning, not necessarily on their ethicality, morality or rightness. In fact, some

questionable values may still serve a survival function, if they are strong enough to warrant a stable source of meaning (Kobsa, 1982).

Individual (Leader)-Level Hope

From a positive psychology and a POB perspective, hope entails a lot more than positive thinking, advice and encouragement offered by friends, relatives and counselors in times of adversity. Although attempts to study and measure hope were made in the past, this initial approach was primarily clinical and more related to hopelessness and mental illness, i.e., the traditional negative psychology approach. On the other hand, the most recognized positive psychology and now POB approach to hope can be found in the extensive theory and research of clinical/ social psychologist C. R. Snyder.

According to Snyder and colleagues, hope is “a positive motivational state that is based on an interactively derived sense of successful (1) agency (goal-directed energy) and (2) pathways (planning to meet goals)” (Snyder, Irving, & Anderson, 1991: 287). In other words, Snyder (2000) believes that as humans move towards the achievement of their goals, there are two necessary factors to reach these goals. The first factor is “agency”, which includes the determination and energy invested towards goal achievement, as well as the internalization of that sense of agency. The second factor is “pathways”, which is the capacity to generate multiple alternative ways to accomplish goals if the original ones are blocked. These two ingredients of “willpower” and “waypower” constitute hope. Unlike other POB constructs, which emphasize one or the other of these two factors, hope gives them equal, additive weight; with one’s hope level being the cumulative level of perceived agency and pathways resulting from the continuous iteration between the cognitive analysis of agency and pathways. This is

unlike most of the typical dictionary definitions of hope, as well as many previous clinical discussions about hope, which emphasize positive perceptions and expectations to achieve goals, but not the means to achieve them. Particularly important for POB is Snyder's theoretical support for hope not only as a disposition or trait (Snyder et al., 1991), but also as a state, i.e., a situational factor that is open to learning and development (Snyder et al., 1996). Research shows that hope is positively related to success in various life domains (see Snyder, 2000 for comprehensive reviews), including the workplace (Adams, Snyder, Rand, King, Sigmon, & Pulvers, 2002; Jensen & Luthans, 2002; Peterson & Luthans, 2003).

Although from a POB perspective hope is a cognitive process, this does not make emotions irrelevant to it. Hope simply gives emotions a somewhat different role. Hope is not a bunch of emotions as the older historical views portrayed. Emotions related to hope follow from one's cognitive perceptions of agency and pathways of goal-related activities. When a person with high hope cognitively assesses that s/he possesses sufficient agency and pathways for a specific situation, s/he is likely to perceive a high probability of attaining his/ her goals, and to focus on success rather than failure. This is likely to result in positive emotions and a sense of challenge as actions are conceptualized and undertaken toward achieving goals. On the other hand, a person with low hope perceives insufficient agency and pathways, and consequently low probability of goal attainment. This is likely to lead to negative emotions and a focus on failure. In other words, high-hope people experience less negative emotions than low-hope people when they are faced with blockages in the pursuit of their goals, primarily due to their

willingness and ability to generate and utilize more alternative pathways (Luthans & Jensen, 2002; Snyder, 2000).

Individual (Leader)-Level Optimism

Drawing from attribution theory and the recognized father of positive psychology Martin Seligman's (1998a) substantial research, an optimistic explanatory style entails attributing favorable events to personal, permanent, and pervasive causes, and unfavorable events to external, temporary, and situation-specific ones. On the other hand, a pessimistic explanatory style has the opposite - externalizing positive events and attributing them to temporary, situation-specific causes, while internalizing negative events, and attributing them to permanent and pervasive causes. As is the case with the POB states of self-efficacy, hope, and resiliency, Seligman (1998a) emphasizes that optimism is a learnable and developable state. He presents empirical research evidence from various life domains, including work, education, sports, politics, and health. In the workplace context, research shows that optimism is related to effectiveness in sales (Schulman, 1999; Seligman, 1998a), entrepreneurial success (Cooper, Woo, & Dunkelberg, 1988; Palich & Bagby, 1995; Pinfold, 2001), and leadership effectiveness (Wandburg, 1997; Wunderley, Reddy, & Dember, 1998).

An indiscriminant, across-the-board optimistic explanatory style can be unrealistic, and possibly irresponsible. If a person consistently takes credit for all the positive events in life, then one's talents, skills and abilities can be overestimated. If this overly optimistic person also externalizes all negative events, then responsibility for poor choices can be evaded. This is why Seligman, as well as other researchers in the area of optimism (e.g., Schneider, 2001), highlight the importance of "realistic optimism," which

does not take an extreme in internalizing good events and externalizing negative ones. Seligman and others (e.g., Peterson, 2000) also recommend “flexible optimism,” which is the ability to use both optimistic and pessimistic explanatory styles, and the adaptive capacity that allows for the use of alternative explanatory styles depending on the situation.

Individual (Leader)-Level Self-Efficacy

Grounded in social cognitive theory (Bandura, 1986), self-efficacy is “one’s belief about his or her ability to mobilize the motivation, cognitive resources, and courses of action necessary to execute a specific action within a given context” (Stajkovic & Luthans, 1998b: 66). Self-efficacy encompasses an enabling confidence that allows challenges to be perceived as achievable, efforts as conducive to accomplishment, and obstacles as surmountable. In other words, self-efficacy supports people with the power to dream, and the motivated effort to accomplish their dreams. Moreover, a meta-analysis of 114 studies has found a highly significant positive correlation of .38 between self-efficacy and work-related performance (Stajkovic & Luthans, 1998a). This is higher than recent meta-analyses conducted on the relationship between satisfaction and performance (Judge, Thoresen, Bono, & Patton, 2001) and “Big Five” personality traits and performance (Barrick & Mount, 1991). However, most relevant for positive organizational behavior, self-efficacy is a trainable, developable state. Established approaches to building self-efficacy in a particular domain include mastery and successful experiences, vicarious learning and modeling, social persuasion, and physiological and psychological arousal (Bandura, 1997).

Recent studies have shown the importance of self-efficacy in various workplace domains, such as leadership efficacy (Bennis & Nanus, 2003; Chemers, Watson, & May, 2000), moral/ ethical efficacy (May et al., 2003; Youssef & Luthans, 2004), creative self-efficacy (Tierney & Farmer, 2002), test-taking self-efficacy of job applicants (Truxillo, Bauer, Campion, & Paronto, 2002), computer self-efficacy (Thatcher & Perrewe, 2002), job change self-efficacy (Cunningham et al., 2002), participation efficacy (Lam, Chen, & Schaubroeck, 2002), career decision-making self-efficacy (Nilsson, Schmidt, & Meek, 2002), learning self-efficacy (Ramakrishna, 2002), and entrepreneurial self-efficacy (Boyd & Vozikis, 1994; Chandler & Jansen, 1997; Chen, Greene, & Crick, 1998; Neck, Neck, Manz, & Godwin, 1999).

Self-efficacy is domain-specific (Bandura, 1997). Therefore, it is not necessarily generalizable across realms of life. Bandura (1997) offers that self-efficacy regarding a particular domain constitutes two primary dimensions: magnitude and strength. The magnitude of self-efficacy assesses the level of task difficulty in which a person expects to be able to perform. The strength of self-efficacy refers to the degree of certainty that a person possesses about the ability to perform at each level of difficulty (Bandura, 1997; Locke, Frederick, Lee, & Bobko, 1984; Stajkovic & Luthans, 1998b). Moreover, according to Bandura's (1997) theory-building, self-efficacy is founded in the cognitive processes of symbolizing, forethought, observation, self-regulation, and self-reflection.

Individual (Employee)-Level Outcomes

In line with the definitional criteria of positive organizational behavior, resiliency should not only be positive, measurable and developmental, but also manageable for performance improvement in the workplace. In other words, developing resiliency should

result in enhancing employee performance. The lack of (or unwillingness to disclose) objective performance measures is an unfortunate issue that has been tackled in the literature (e.g., Dess & Robinson, 1984). As discussed in detail in Chapters Two and Three, in this study, a broader perspective is taken, in which several favorable attitudinal outcomes that have established measures in the literature are assessed, in addition to self-reported performance.

The outcomes theorized and tested in this study are: employee performance (self-reported), job satisfaction, work happiness, and organizational commitment. An extensive body of research shows that job satisfaction is strongly related to performance (see Judge et al., 2001, for a qualitative and quantitative review). Happiness is a broader construct than job satisfaction. It incorporates both cognitive and emotional dimensions that result in a subjective sense of well-being and satisfaction with life in general (Diener, 2000). Moreover, subjective well-being is related to the perception, emotional interpretation, and cognitive processing of events and situations, rather than to actual conditions and happenstances (Luthans, 2002b). Despite the lack of empirical research that relates subjective well-being to the work performance, happiness and life satisfaction have been shown to be related to physical and mental health, personal striving, coping with stress (Diener & Fujita, 1995; Emmons, 1992; Folkman, 1997; Fordyce, 1988), and satisfaction with important life domains (Diener, 2000; Diener, Suh, Lucas, & Smith, 1999), including being a predictor of job satisfaction (e.g., Judge & Hulin, 1993; Judge & Watanabe, 1993; Tait, Padgett, & Baldwin, 1989). Together, this research evidence supports the utility of including work happiness as a component in the broad definition of performance adopted in this study.

Several recent meta-analyses have shown that organizational commitment is also significantly related to performance (e.g., Riketta, 2002; Mathieu & Zajac, 1990; Wright & Bonett, 2002). Therefore, job satisfaction, work happiness and organizational commitment are relevant factors that complement performance measures and provide a broader perspective to management effectiveness. Fortunately, these desirable workplace outcomes have established measures with acceptable and consistent validity and reliability assessments. These measures, as well as other approaches that are adopted to enhance the credibility of the findings of this study and deal with the limitations of utilizing survey measures in this study and in general (e.g., single-source bias, social desirability), are discussed in detail in Chapter Three.

RESEARCH QUESTIONS

This study attempts to present and empirically support a theoretically sound, operationalizable and practical workplace resiliency development model. Instead of just admiring and romanticizing resilient organizations and leaders, the time has come to understand the mechanisms through which resiliency can be developed at the organizational, leader and employee levels. Moreover, the role of resilient organizations in enhancing their leaders' resiliency, as well as the contributions of resilient leaders to developing a resilient, productive, satisfied, and committed workforce are worth studying, especially in light of the most recent events and their negative implications on manager and employee performance and well-being. The interactive process through which resiliency trickles down to the lowest-level employees should not be overlooked.

In addition, due to the limited research that applies resiliency to the workplace, a multidisciplinary approach is necessary, expanding the boundaries of existing theories in

other fields, particularly child and adolescent psychology (e.g. Block, 1993; Block & Block, 1980; Block & Kremen, 1996; Block, Block, & Keyes, 1988; Block, Gjerde, & Block, 1991; Huey & Weisz, 1997; Hunter & Chandler, 1999; Stewart, Reid, & Mangham, 1997). Finally, since the proposed components of the model are likely to be correlated, the approach utilized to test the proposed relationships should help delineate not only the significance of relationships and their predictive powers, but also causal directions. For example, do the hope and optimism levels of a leader lead to higher self-efficacy, which leads to higher leader resiliency, as suggested by the proposed model? Or do the four positive psychological states, individually or in combination, predict performance (Luthans, 2002a; Luthans et al., 2004; Luthans & Youssef, 2004; Stajkovic, 2003; Youssef & Luthans, 2003b, 2004)? Therefore, this dissertation attempts to answer the following questions:

- How can resiliency be developed?
- More specifically, what are the antecedents and mediators of the resiliency development process at various levels?
- And, what are the outcomes of developing resiliency, in terms of employee performance, broadly defined as self-reported performance, as well as psychometrically assessed attitudinal outcomes?
- Relatedly, is there a cascading, trickle-down effect from organizations, to leaders, to their associates?

PURPOSE OF THE STUDY

The first purpose of this dissertation is to conceptually build a multi-level resiliency development theory, through identifying and theoretically supporting the

antecedents and mediating factors of organizational, leader and employee resiliency, as well as their relationships with employee performance, job satisfaction, work happiness, and organizational commitment. The second purpose of this dissertation is to empirically test the individual (leader and employee)-level relationships in the model, providing initial support for the model, establishing causal linkages within the tested relationships, and proposing and testing at least one alternative model if necessary. Figure 2 depicts the portion of the model empirically tested in this study. These relationships are:

- Leaders' hope and leaders' self-efficacy
- Leaders' optimism and leaders' self-efficacy
- Leaders' self-efficacy and leaders' resiliency
- Leaders' resiliency and employees' resiliency
- Employees' resiliency and their performance, job satisfaction, work happiness, and organizational commitment

Organizational variables and individual-level antecedents that are stable or trait-like are treated as control variables. As discussed in detail in Chapter Three, causality is statistically established by using path-analysis. If supported, the proposed model is confirmed using a second data set. If the proposed model is not supported, the results of the path-analysis are utilized to refine the model, and the second data set is used to test the alternative model.

ORGANIZATION OF THE DISSERTATION

This dissertation is organized into five chapters. This first chapter introduces the study, outlines the problem statement, and delineates the research questions and purpose of the study. In Chapter Two a literature review is presented for each of the components

proposed in the multi-level resiliency development theoretical model. Based on the reviewed literature, the proposed relationships are conceptually supported, and the hypotheses of the study are outlined. The third chapter explains the design, measures, and methodology of the study. Chapter Four provides the findings of the study, including statistical analysis. Finally, Chapter Five provides a summary of the findings and contributions of this study, as well as a discussion of its theoretical and practical implications, strengths and limitations.

CHAPTER TWO: LITERATURE REVIEW & HYPOTHESES

The need for better understanding the development of resilient organizations, leaders and employees - those able to survive, adapt, bounce back, and flourish despite adversity - has never been greater. Although receiving attention in clinical psychology, to date little is known about the theory or development of this capacity at organizational, leader or employee levels. In Chapter One, drawing from the positive psychology, positive organizational scholarship (POS), and positive organizational behavior (POB) movements, various definitions of resiliency were presented. Resiliency was supported as a positive psychological state that is open to development and management in today's workplace. A new, multi-level resiliency development theoretical model was proposed (see Figure 1), and the various antecedents (assets, risks and values), mediators (buffering processes at the organizational level, and hope, optimism and self-efficacy at the individual leader level), and outcomes (employee performance, job satisfaction, work happiness, and organizational commitment) were defined.

In this chapter, the resiliency literature, as well as the literature for each of the components and relationships of the multi-level resiliency development theoretical model, is reviewed in depth. Based on the reviewed literature, hypotheses are drawn and conceptually supported for the variables and relationships operationalized and tested in this study, which are also depicted in Figure 2.

RESILIENCY: THE POWER TO STAY ON TRACK DESPITE ADVERSITY

Resiliency has been a critical factor in the level of success experienced in every organization. In his book, *Built to Last*, Jim Collins (1994: 23) includes resiliency as a key organizational variable, and notes that "indeed, all of the visionary companies ...

faced setbacks and made some mistakes at some point during their lives, and some are (still) experiencing difficulty. Yet - and this is a key point - visionary companies display a remarkable resiliency, an ability to bounce back from adversity.” The need for resiliency in successful organizations has continuously increased throughout history and as evidenced by several recent global events and business trends, the need for resiliency will continue to increase. Several factors, both internal and external to the organization symbolize this need. As Luthans and Avolio (2003: 241) describe, “in times of swirling negativity, as has occurred in recent years with the dot-bombs, 9/11 terrorism, gyrating stock values, and the meltdown of corporate ethics, society in general and organizations in particular turn to leaders for optimism and direction.” A new paradigm of organizational expectations is emerging, and prior consistencies and expectations of organizational members out of their organizations are being displaced. Mischel (1973) referred to such dynamic situations as representing a ‘weak context.’ In such a context, individuals are vulnerable since the new guidelines, rules, or directions for action have yet to be established. Luthans and Avolio (2003: 255) also emphasize that “especially relevant to the recent environment, where most organizations and their managers have experienced economic and moral/ ethical setbacks, resiliency as a positive psychological capacity takes on added importance.” Employees are now considering their roles, work, security, and their leaders in many different ways as a result. In response, organizations and their leaders will need to acknowledge this shift in viewpoints.

Organizations have also experienced evolution resulting from many competitive forces. Stajkovic (2003) mentions global hyper-competitiveness, a skilled work force, cutting edge technological proficiency, exemplary customer service, and constant

demands for higher quality products and services. Each of these factors dictates that successful organizations will be required to risk, and inevitably some risks will fail. Organizations can increase their chances for success by achieving high levels of resiliency, enabling members to risk, fail, “bounce back,” (Huey & Weisz, 1997; Hunter & Chandler, 1999; Stewart, Reid & Mangham, 1997) and risk again in further attempts for success. Any organization assessing its ability to succeed or survive, in the environment described, needs to gauge the level of resiliency it possesses as an organization, and consider its ability to develop this attribute to compete in today’s turbulent surroundings. Such an organization needs to formally implement systems to create and continually develop the levels of resiliency it possesses at the individual and organizational levels, in order to effectively adapt to the ever-present challenges of change.

The Status of the Resiliency Literature

Given that pressing need for resiliency, it is both surprising and unfortunate that the resiliency literature is scarce, inadequate, and fragmented (Sutcliffe and Vogus, 2003). To illustrate this fact, an electronic search of the *Business Source Premier* and *PsycINFO* databases for the words “resiliency,” “resilience” and “resilient” yields thousands of articles, even when the search is limited to peer-reviewed journals. However, most of these articles, including those that specify resiliency as one of their key variables (and have the word in their titles and/ or abstracts), use resiliency as a general term that is synonymous to patience, perseverance, survival, recovery, exceptionally high tolerance, sustenance over time, or simply the negatively-oriented notion of lack of pathological symptoms. Moreover, in many cases, the definition of resiliency is implied,

a common understanding of what resiliency is (and is not) is assumed, and limited effort is extended to conceptualize and set, let alone test the boundaries of the resiliency construct.

A few examples of the diverse, and sometimes conflicting, conceptualizations of resiliency can serve as anchors for the above point. Rudolph and Reppening's (1991) model of disaster dynamics conceptualizes resilience as trouble-free organizational system performance that is eroded through the accumulation of frequent, routine, but threshold-inducing interruptions, and/ or novel disasters. In their view, a presently resilient (smoothly functioning, self-regulating) entity can be on the verge of an unexpected, quantity-induced collapse. Thus, organizational system resilience can be a deceptive phenomenon that masks future trauma. In fact, attempts for assumption-challenging, reframing, adaptation, and double-loop learning that are usually recommended for qualitatively different situations can result in reaching a "tipping threshold" in situations when crises are the resultant of gradually precipitating, non-novel interruptions. They believe that the set of dynamics explicated in their theoretical framework can be applied with little distinction between the individual, group or organizational levels of analysis.

The construct of career-resilience is another case-in-point. According to Waterman, Waterman and Collard (1994: 88), a career-resilient workforce is "a group of employees who not only are dedicated to the idea of continuous learning but also stand ready to reinvent themselves to keep pace with change; who take responsibility for their own career management; and, last but not least, who are committed to the company's success." The relationship between the organizations and their members is shifting away

from the traditional views of loyalty and commitment to one career path within one organization and one area of specialization at all costs, and toward a more volatile relationship that is sustained as long as it is mutually beneficial. Employees are in charge of continuously benchmarking, anticipating changes in organizational needs, and upgrading their skills and abilities accordingly, in order to continue to contribute to their organizations' goals. Organizations are not responsible for the "employment," but rather the "employability" of their members, through training, development and supporting life-long learning that enhances employees' opportunities, both within and outside the organization. In other words, career-resilience is not a violation or betrayal of the psychological contract (Robinson, Kraatz, & Rousseau, 1994). It is a new type of psychological contract, with different but still balanced expectations (Bagshaw, 1997; "Enhancing career resilience ...," 2000).

Another conceptualization of resiliency is presented by Hind, Frost and Rowley (1996), who define organizational resiliency along six dimensions. These dimensions are: power structure, relationships, reality sense, attitude to change, differentiation, and communication. The interplay of these six factors determines the level of resilient (or dysfunctional) functioning. Masten (2001) also distinguishes between variable-focused and person-focused models of resiliency. Whereas variable-focused models attempt to measure and assess the various factors and causal relationships that create or hinder resiliency (i.e., the *how* aspect of resiliency), person-focused approaches emphasize single case studies of resilient individuals, families, groups or organizations (i.e., *who* is resilient). To summarize, there seems to be an implied or assumed consensus regarding the broad category of factors constituting resiliency. However, until the turn of this

century, there also seems to have been a lack of consistent understanding and use of the resiliency construct.

Transforming the Resiliency Literature

There is no doubt that the recent positive psychology, positive organizational scholarship (POS), and positive organizational behavior (POB) movements have revolutionized the resiliency literature. With two back-to-back special issues of the *American Psychologist* (January 2000 and March 2001), several authoritative books (e.g., Bandura, 1997; Cameron et al., 2003; Giacalone, Dunn, & Jurkiewicz, 2004; Keyes & Haidt, 2003; Seligman, 1998a, 2002; Snyder, 2000; Snyder & Lopez, 2002) and credible journals articles (e.g., Luthans, 2002a, 2002b; Luthans, Luthans, Hodgetts, & Luthans, 2002, Luthans, et al., 2004; Luthans & Youssef, 2004; May et al., 2003; Seligman, 1998b), and a lot of energy and investment in emerging research (e.g., two international positive psychology summits), this positive transformation cannot be overlooked. Besides the conceptualization and definition of numerous positively oriented constructs, these movements have resulted in a paradigm shift, a reemphasis on strengths and healthy functioning, and, most importantly, a reorientation toward developmental, state-like psychological capacities, including resiliency.

Drawing from its legacy in developmental psychotherapy, resiliency as a POB state can be defined as “the positive psychological capacity to rebound, to ‘bounce back’ from adversity, uncertainty, conflict, failure or even positive change, progress and increased responsibility” (Luthans, 2002a: 702). Unlike self-efficacy, hope and optimism, resiliency is reactive, rather than proactive in nature. It constitutes the adaptive capacity that allows people to “equilibrate and reequilibrate” when faced with change or

uncertainty (Block & Kremen, 1996: 349). Based on the established research of positive psychologist Ann Masten and her colleagues (e.g., Masten, 2001, Masten & Reed, 2002), resiliency can be viewed as a group of phenomena that is characterized by patterns of positive adaptation in response to adversity or risk. Resiliency is influenced by three sets of factors: assets, risks and adaptational processes. Assets include knowledge, skills, abilities, social relationships, and material resources that can enhance chances of success and adaptation despite setbacks. Risk factors include adversities such as unemployment, divorce, loss of loved ones, and physical illness, as well as the lack of essential assets. Adaptational processes include coping, stress management, problem solving, and goal setting strategies. These adaptational processes may contribute more resiliency than the presence of assets or the lack of risk factors (Cowan, Cowan, & Schulz, 1996).

According to Coutu (2002: 48), the elements of resiliency include: “a staunch acceptance of reality; a deep belief, often buttressed by strongly held values, that life is meaningful; and an uncanny ability to improvise.” Moreover, resiliency is not a magical capacity that only a few have been endowed with (Masten, 2001). It is a developable, trainable state. It is a life-long, transactional learning process that is based on the interaction between the person and the environment over time, rather than just a desirable outcome or a trait that enhances chances of success (Egeland, Carlson, & Sroufe, 1993). Recent research emphasizes the importance of resiliency for employees (e.g., LaMarch, 1997; Luthans, 2002a, Youssef & Luthans, 2003a), managers and leaders (e.g., Luthans & Avolio, 2003; Luthans et al., 2002; May et al., 2003; Zunz, 1998), work motivation (Stajkovic, 2003), organizations (e.g., Doe, 1994; Horne & Orr, 1998; Klarreich, 1998; Mallak, 1998; Ortiz, 2002; Sutcliffe & Vogus, 2003; Worline et al., 2002) and even

countries (e.g., Fay & Nordhaug, 2002; Youssef & Luthans, 2003b), especially in light of the recent events and the related socioeconomic and geopolitical turbulence.

The positive psychological capital model (Luthans et al., 2004; Luthans & Youssef, 2004) presents a unique perspective, in which positive psychological states, including resiliency, go beyond “what you have” (economic capital), “what you know” (human capital), and “who you know” (social capital). Positive psychological capital represents the core of “who you are.” For example, applying the authentic leadership model (Luthans & Avolio, 2003) to ethical decision making, May and colleagues (2003) describe “morally resilient” leaders as adaptive but assertive individuals who follow their own principles and moral values, even when faced with pressures from peers, subordinates or significant others inside or outside the organization. Their positive, internalized, and motivating “core belief system” allows them to maintain their integrity, prevail, and even find personal meaning in adversities and setbacks. Knowing who they are and what they stand for allows these leaders to sustain their authentic, ethical performance over time. This is also consistent with Block & Kremen’s (1996) construct of ego-resiliency, which goes beyond the traditional, negatively-oriented concept of passive adjustment, to incorporate the unique balance between adaptability and ego-control (self-regulation). In other words, a resilient individual is capable of exhibiting malleable but self-controlled, purposeful behaviors, including delayed gratification, managed curiosity, and anger-control, which are becoming vital for sustainable and ethical performance in today’s business environment.

ORGANIZATIONAL RESILIENCY DEVELOPMENT

The top portion of Figure 1 shows how organizational level assets, risk factors and values are antecedents and buffers of strengthening, replenishing, limbering, strategic planning, organizational alignment, organizational learning, and corporate culture awareness are mediators in developing resilient organizations.

The Role of Organizational Level Assets and Risk Factors

In relation to resiliency, Masten and Reed (2002: 76) describe an asset as “a measurable characteristic in a group of individuals or their situation that predicts positive outcome in the future on a specific outcome criterion.” At the organizational level, Worline et al. (2002: 36) refer to assets contributing to resiliency as “resources that contribute to a unit’s capacity to absorb strain (such as) knowledge and skill, trust and heedfulness, positive emotion, felt community and commitment. The structure and practices of a unit create, transform, and redirect these resources in ways that build different kinds of capabilities for developing resiliency.” Examples of such assets possessed by an organization include structural and financial capital, effective leadership, continuous open communication, knowledge management systems resulting in shared information, counseling and Employee Assistance Programs (EAPs), physical and mental healthcare programs, and career development opportunities for personal and professional growth (e.g., Holloway, 2002). Each of these examples of assets, if positioned correctly, can provide a foundation of resiliency for the entire organization. These assets can minimize the dysfunctional reactive downside of resiliency and help reduce the negative effect of the encountered risks. For instance, Knight (2000) argues that organizational learning, inter-organizational relationships, and intra-organizational collaboration are

vital for organizational resiliency. He highlights the importance of trust, commitment and teamwork, not only between organizational members and units, but also in supplier and customer relations.

Masten and Reed (2002: 76) describe risk as an “elevated probability of an undesirable outcome.” Such risks expose the organizational participants to specific negative or undesirable outcomes (Cowan et al., 1996). Despite the traditional research emphasis, as well as the face validity of the necessity for reducing or avoiding risks (e.g., Masten, 2001), in the proposed model, risk should be viewed as inevitable, not necessarily to be avoided, but rather controlled and managed as a part of the process towards nurturing the resiliency development process. Cowan et al. (1996: 9) support this view when they assert that, “the active ingredients of a risk do not lie in the variable itself, but in the set of processes that flow from the variable, linking risk conditions with specific dysfunctional outcomes.” Examples of organizational-level risk factors include downsizing, re-engineering, restructuring, outsourcing, discrimination and prejudice (e.g., Vickers & Kouzmin, 2001), inadequate resources, crisis management techniques or institutional status (e.g., Hills, 2000), declining profitability or competitiveness, scarcity of competent trained human resources, and deficient or misdirected research and development efforts (e.g., Nohara & Verdier, 2001). Each of these pose a threat and a chance for an undesirable outcome, but each also offers an opportunity for resiliency development and subsequent success.

The Role of Organizational Values

Besides the importance of assets and risk factors, Coutu (2002) emphasizes the importance of values in developing organizational resiliency. She asserts that, “strong

values infuse an environment with meaning because they offer ways to interpret and shape events” (Coutu, 2002: 52). Values are the compass for the organization. They provide unwavering direction so that when the ambiguity and speed of the current environment facing organizations are heightened, clarity is provided to the decisions necessary to navigate the challenges presented. Weick (1993) suggests that organizational rules and regulations that seemingly introduce rigidity and hinder creativity are necessary and effective structuring tools that foster an organization’s resiliency in times of turbulence. He notes that, “when people are put under pressure, they regress to their most habituated ways of responding” (Weick, 1993: 638-639). Thus, properly established and reinforced organizational values are necessary foundations that can create stability and allow for positive and effective habituated responses to turmoil as the organization adapts, accumulates knowledge, broadens its perspective, builds its resources, and restores collective efficacy towards developing its resiliency, rather than panicking and down-spiraling into cognitive narrowing and threat-rigidity cycles (Sutcliffe & Vogus, 2003).

In order to ensure thorough adoption, organizational values contributing to resiliency must be communicated and demonstrated consistently from multiple sources. As Coutu points out, “if resilient employees are all interpreting reality in different ways, their decisions and actions may well conflict, calling into doubt the survival of their organization” (2002: 52). Since resiliency is simply the ability to withstand and produce successful results in the midst of turbulence and change, the elevation of stable, meaning-providing values by the organization’s leadership may actually be more important for organizational resiliency than simply selecting and developing resilient individuals

(Coutu, 2002). In their model of organizational resiliency, Horne and Orr (1998: 31) highlight the importance of a “whole-system response,” and provide empirical evidence that “a collection of resilient individuals within a company does not add up to a resilient organization as a whole. Indeed, in some cases, it may be counter-productive because strongly resilient individuals may dominate and override the shared vision of others.”

Two examples of organizational values that can enhance organizational resiliency are strength-based organizations and high performance work practices. Strength-based organizations emphasize the importance of selection and placement of individuals in positions that provide them with daily opportunities to work within their areas of strength, and focus growth and development around objectively assessed talents (Buckingham & Coffman, 1999). Strength-based organizations are expected to be more resilient, since they instill a culture of positivity and engagement (Harter, Schmidt, & Hayes, 2002) where weakness areas are not focused upon, and where discovery of talents (or lack thereof) is viewed as an opportunity to capitalize on potential areas of excellence.

Pfeffer (1998) explains that only about one-eighth of organizations adopt and sustain high performance work practices (HPWPs) that emphasize the importance of the human side as a major source of competitive advantage. These HPWPs include pay for performance, 360 degree feedback, behavioral management, and self-managed teams. Interestingly, those organizations are documented to be world-class, compared to those that only believe and buy into the idea (about one-half of all organizations), and those that both believe and take action to implement (about one-quarter of all organizations), but do not “stick to it” (only one-eighth) (Pfeffer, 1998). Examples of such “one-eighth” world organizations include Microsoft, General Electric, Southwest Airlines, Gallup, and

others, that are by all means among the most resilient organizations, as evidenced by their growth and effectiveness, even within the increasingly uncertain and turbulent business environment in which they operate.

Positive moral values are not included in most definitions of resiliency. Only the inclusion of a stable, meaning-providing set of values is specified (Coutu, 2002). So, it will be necessary for the organization to utilize the appropriate leadership style to demonstrate positive values. Transformational and authentic leadership both demonstrate values that define the process and decisions necessary for the organization to attain beneficial results for all stakeholders. Bass and Avolio (1994) suggest that not only leaders, but also organizations could exhibit characteristics of transformational leadership. A key component for organizational resiliency development offered by transformational leadership is the development of leadership abilities within followers. Moreover, in the positive organizational context that Luthans and Avolio (2003) offer as an antecedent for authentic leadership, the cultural values associated with resiliency would be expected to become normative, replacing negative values, such as cynicism and political maneuvering. This transformational leadership development combined with a definition of authentic leadership that contains resiliency as a part of its core (Luthans & Avolio, 2003), makes such leadership optimal for creation of a resilient organizational culture and environment.

The Mediating Role of Buffering Processes for Organizational Resiliency Development

According to Cowan and colleagues (1996), a buffer acts as a protective mechanism that is similar to immunization in that it allows for exposure to a small dose

of the disease, but it reduces the probability of the negative or undesirable outcomes, despite the presence of risk factors. In other words, the organization's buffering processes can help shape the perceptions and consequences of assets, risk factors and values.

Building on the limited research in this area, buffering can be accomplished through the dynamic interaction of three processes proposed by Worline et al. (2002): strengthening, replenishing, and limbering; and four processes proposed by Horne and Orr (1998): strategic planning, organizational alignment, organizational learning, and corporate culture awareness. These processes, along with an organization's structures and practices, combine in dynamic ways to allow for the emergent effective utilization and management of assets, risk factors and values.

Strengthening, replenishing, and limbering all build resiliency in an analogous way that is similar to how various resistance exercises such as weight-lifting are applied to create muscle mass in the body. Weights (risk factors) are gradually and specifically increased in combination with nutrition (strengthening), proper rest (replenishing) and stretching (limbering). Over time, more muscle mass (resiliency) is created. In the proper combination, strength and balance are increased. Adversities and setbacks are less likely to cause permanent damage for an organization that consistently applies such buffering processes as it becomes more capable of recovering more swiftly. In other words, as Rutter (1987) notes, resiliency is a product of buffering processes, which do not eliminate risk, but rather encourage the effective engagement of risk taking.

Strategic planning allows resiliency to be built-in as a priority and an integral part of the organization's purpose. It can facilitate the construction and development of response mechanisms that permit sustainable growth and the effective achievement of

further goals. Aligning organizational units encourages the support and mentorship by exemplary units for low-resiliency units. Organizational learning not only facilitates this alignment and knowledge sharing process, but also allows for the combinatory nature of knowledge to operate and facilitate the generation of new knowledge that enhances adaptability and flexibility. Finally, corporate culture awareness permits the uncovering of priorities and competencies (assets and values), as well as rigidities and areas of vulnerability (risk factors) (Horne & Orr, 1998). Organizational culture is a powerful double-edged sword. If not carefully analyzed, frequently challenged, and consciously refined, organizational culture not only can be a force for achievement and growth (e.g., Southwest Airlines), but also can build momentum and limit the trajectories for proactive exploration and innovation, hindering the resiliency development process (Reivich & Shatte, 2002).

The interaction between assets, risk factors and values, as well as buffering mechanisms, is dynamic and ongoing. Layers of buffering are continuously created for the organization. These buffers affect organizational members in multiple domains, targeting their physical, mental and emotional responses in a positive trajectory towards situations involving uncertainty and risk-taking. Unknown outcomes and lack of precedent are anticipated and engaged in with self-confidence, rather than avoided as threats. Effort is anticipated to eventually lead to success, and setbacks are viewed as learning experiences.

Buffering should not be viewed as a “magic bullet” or one-time pursuit. It is not a simple approach that eliminates risk factors or steers effort away from engagement with risk. Rather, the buffering process is a way to incorporate risk factors as an input for

discovery, innovation, and sustainability. Buffering helps organizations soften the distraction caused by the often negative and reactive nature of risk. Buffering processes can be viewed as “values in action,” operationalizing the synergy between assets, risk factors and values in a practical fashion. Unless buffering processes bring values to life, they can be reduced to ink on paper.

A Snapshot of the Resilient Organization

Although organizational resiliency is a dynamic, continuously evolving process, a general description of what constitutes a resilient organization would be helpful, but to date is very vague in the resiliency literature (Sutcliffe & Vogus, 2003). Observable characteristics of resilient organizations would facilitate effective benchmarks, as well as assist organizational diagnosis preceding planned change and for subsequent intervention assessment. Examples of the most widely recognized characteristics of resilient organizations include community, competence, connections, commitment, communication, coordination, and consideration (Horne & Orr, 1998). Clearly, some of these characteristics are strongly based on an organization’s assets. For example, the pool of knowledge and skills available for an organization enhances competence, while relationships and networks contribute to connections. Open channels and effective structure and design are necessary for communication and coordination. On the other hand, some of these characteristics are more related to organizational values. For example, a sense of community is generated when organizational members collectively internalize the organization’s vision, mission, values and goals. Commitment is based on the value of trust in established but flexible psychological contracts. Consideration is

based on valuing and appreciating the human factor, the uniqueness of employees, and the integrated and reciprocal nature of their life domains.

A final organizational level linkage that should not be overlooked is the feedback loop in which organizational resiliency development is likely to enhance organizational assets, enrich risk management strategies, and nurture more mature organizational values and culture. This allows for a broader perspective that equips the organization to take on its next phase of resiliency development.

With this background regarding organizational level resiliency development serving as a theoretical foundation and point of departure, a shift to leader resiliency development, including the hypotheses of the study, is presented next. This deductive conceptual framework for multi-level resiliency development is based on the fact that leaders always operate and function in a social context, or they are not leading. Especially relevant to the development of organizational leaders is the organizational context (Avolio, 2002; Day, 2001; Luthans & Avolio, 2003) and it follows that the resilient organization just described is critical to the development of resilient leaders. Since this study focuses on testing the individual-level resiliency development process (discussed next), organizational-level factors that can contribute to organizational resiliency are treated as control variables.

RESILIENT LEADER DEVELOPMENT

Resiliency is not only a favorable final product that enriches people's lives and increases chances of success and fulfillment. Resiliency is also a life-long journey, an elaborate process that develops competence, over time, in the face of adversity, and in the context of interactions between the person and his/ her environment (Egeland, Carlson, &

Sroufe, 1993). As identified in the proposed resilient organization development model, the antecedents of organizational resiliency are assets, risk factors and values. As shown in Figure 1, the same antecedents are offered for the next level of resiliency development: the leader level. It is simpler to perceive assets, risk factors and values as externally determined by contextual factors, as established in the child psychotherapy literature (e.g. Masten, 2001; Masten & Reed, 2002), and, in the context of organizational resiliency, by organizational level strategic, structural and processual variables (Klarreich, 1998; Worline et al., 2002). However, the individual leader level assets, risk factors and values are also proposed as salient antecedents, both for developing and maintaining leader resiliency, and for input into the proposed mediators (hope, optimism and self-efficacy) that contribute to leader resiliency development.

The Role of Leader-Level Assets and Risk Factors

Leaders bring into their organizations various positive and negative aspects of themselves, such as their personal characteristics, backgrounds, strengths, vulnerabilities, insights, and perceptual biases. As discussed in Chapter One, Trait theories of leadership give emphasis to these individual differences and view them as antecedent assets and risk factors for leadership success and effectiveness (e.g., Fleishman, Zaccaro, & Mumford, 1991; Judge, Ilies, Bono, & Gerhardt, 2002). The positive psychology and positive organizational scholarship literature are also rich with dispositional traits and virtues that can enhance people's success and satisfaction, and, if absent or deficient, can hinder them from achieving their full potential (Cameron et al., 2003; Snyder & Lopez, 2002). These traits or assets include general efficacy (e.g., Judge & Bono, 2001), dispositional hope (Snyder et al., 1991), trait optimism (Peterson, 2000; Scheier & Carver, 1992), positive/

negative affectivity (e.g., Chemers, Watson, & May, 2000; Staw & Barsade, 1993), and others. The human and social capital streams of research also emphasize the uniqueness and strategic importance of the educational background and experience that individuals bring as assets into an organization, and their relationships and networks that lead to value-creation and action facilitation, respectively (e.g., Adler & Kwon, 2002; Coleman, 1988; Hitt & Ireland, 2002). Research on managerial activities has also found networking as related to managerial success (e.g. Luthans, 1988).

In clinical psychology, Masten (2001) presents various personal assets that act as antecedents for resiliency. These include cognitive abilities, temperament, positive self-perceptions (self-efficacy), faith, a positive outlook on life, emotional stability and self-regulation, a sense of humor, and general appeal or attractiveness. She also discusses several relationship-based assets applicable to children and youth such as care-giving adults, effective parenting, pro-social and rule-abiding peers, and collective efficacy in the community. Holaday and McPhearson's (1997) study of sever burns survivors also supports that assets such as community, personal and familial support, intelligence, locus on control, and social competence contribute to resiliency. A direct connection can be made between the presence (or lack of) these personal and relationship-based assets in the child and adolescent psychotherapy context and that of individual differences, dispositional positive psychology traits, and human and social capital in the leadership context. In the same way that the presence of assets and/ or the absence of risk factors can foster a child's resiliency, leaders who possess personal characteristics, traits, knowledge, skills, and relationships that predict success are likely to be resilient.

On the other hand, individual-level risk factors, also referred to as “vulnerability factors” (Kirby & Fraser, 1997), that have been discussed in the resiliency literature include alcoholism and drug use (e.g., Johnson, Bryant, Collins, Noe, Strader, & Berbaum, 1998; Sandau-Beckler, Devall, & de la Rosa, 2002), stress (e.g., Baron, Eisman, Scuello, Veyzer, & Lieberman, 1996; Smith & Carlson, 1997), poor health, under-education, unemployment (e.g., Collins, 2001), and exposure to traumatic experiences such as political violence (Qouta, El-Sarraj, & Punamaki, 2001). Although primarily discussed within the context of children and youth, leaders are also exposed to similar risk factors. Stress and burnout are becoming commonplace in today’s fast-paced work environment (e.g., Edwards, 1992; Maslach, Schaufeli, & Leiter, 2001; Nelson & Sutton, 1990; Zunz, 1998). Workaholism is on the rise as Americans and others extend their working hours, at the expense of personal and family time (e.g., Greenhouse, 2001; Koretz, 2001). Alcohol and drug use are not without workplace consequences (e.g., Feinauer, 1990; Harris & Heft, 1992; Schweitzer, 2000; Sell & Newman, 1992). In this post 9-11 era, organizational and personal traumatic experiences have been accumulating at faster pace, making organizational members more vulnerable (e.g., Brown, 1997).

It is important to note the non-linear nature of assets and risk factors. Assets are not simply the sum of resources and capabilities available to an individual, although the larger that sum, the more *likely* a person is to be resilient. Moreover, resiliency is not entirely predicted by the number and amount of the above-mentioned assets an individual has been endowed with, less the number and amount of risk factors present in his/ her life. Assets and risk factors are both cumulative and interactive in nature, and the

particular “sequence” in a “risk chain” is an integral factor in determining a person’s resiliency level (Sandau-Beckler et al., 2002).

The Role of Leader-Level Values

Values and beliefs provide a source of meaning, making a sometimes overwhelmingly difficult present more manageable, and linking it to a more fulfilling future. Resiliency develops in the face of adversity when people can elevate themselves over their painful present, and values play a salient role in presenting different approaches for interpreting and shaping events. Most importantly, the role of values in enhancing resiliency is largely based on the stability of those values as a source of meaning. In other words, for values to serve a survival function, they must be strong enough to warrant a stable source of meaning (Coutu, 2002; Kobsa, 1982). Research shows the role of meaning-providing values and beliefs in enhancing resiliency through extreme physical (e.g., Holaday & McPhearson, 1997) or psychological (Wong & Mason, 2001) challenges. Moreover, the relationship has been established between religiosity and mental health (e.g., Bergin, 1983; Larson, Pattison, Blazer, Omran, & Kaplan, 1986; Ness & Wintrob, 1980), and even coping with traumatic experiences (Baron et al., 1996; Gibbs, 1989; Tebbi, Mallon, Richards, & Bigler, 1987)

In a similar way that stable organizational values can enhance organizational resiliency, the presence of stable leader values and beliefs can foster leaders’ resiliency. This is done by presenting a steady framework for dealing with the level of stress, change and uncertainty that leaders face in a crisis or just every day on the job. The stability of values and beliefs can enable the leader to build consistent experiences and heuristics for problem handling, decision-making, and crisis management. Without at least a threshold

level of consistency, the leader is likely to resort to a reactionary, fire-fighting approach. Besides overwhelming the leader with constantly bombarding new situations, an inconsistent leader can also be overwhelming for followers, who look up to the leader for balance, meaning and direction.

As discussed earlier, the focus of this study is on developing individual (leader and employee)-level resiliency. Since assets, risk factors and values are predominantly stable and trait-like, in this study they are treated as control variables. Emphasis is given to testing hypotheses related to positive psychological states that are open to development and management. These hypotheses are conceptualized and supported in the remaining sections of this chapter.

The Role of the Leader's Hope

Prior to the positive psychology movement, hope has been traditionally viewed as synonymous to positive or wishful thinking. In everyday language, people tend to use hope as a loosely defined concept for focusing on favorable expectations (e.g., let's hope for the best). Hope is sometimes even used to imply doubt or uncertainty (e.g., hopefully I will be able to do this). However, based on the theory-building and research of Snyder (2000) and his colleagues (1991, 1996), hope is "a positive motivational state that is based on an interactively derived sense of successful (1) agency (goal-directed energy) and (2) pathways (planning to meet goals)" (Snyder, Irving, & Anderson, 1991: 287). Snyder's theory posits that there are two essential factors for goal-directed humans to achieve their goals: agency (willpower) and pathways (waypower). Agency is the internalized determination, investment and energy exerted towards goal achievement. When one starts to view him/herself as the "author of causal chains of events," this is

when agency thoughts are developed (Snyder, Rand & Sigmon, 2002: 259). Pathways are the capability to generate ways to achieve goals, and to create alternative routes if the original ones are blocked. Pathways thoughts develop through the systematic observation and refinement of “lessons of correlation/ causality” (Snyder et al., 2002: 259). When one can predict and explain events that are related in time and logical sequence, pathways thoughts are developed.

Research shows that hope is positively related to success in academic and athletic achievement, mental health, survival and coping beliefs, and other desirable positive outcomes (Bavley, 2000; Curry, Snyder, Cook, Ruby, & Rehm, 1997; Kwon, 2000; Onwuegbuzie & Snyder, 2000; Range & Pentin, 1994). Recent research gives initial support for the positive relationship between organizational leaders’ level of hope and the profitability of their units and the satisfaction and retention of their employees (Peterson & Luthans, 2003). Exploratory findings have also supported a significant relationship between hope and profitability (Adams et al., 2002), and between entrepreneurs’ hope levels and expressed satisfaction with business ownership (Jensen & Luthans, 2002).

Moreover, Snyder’s research shows that hope can be both a dispositional trait (Snyder et al., 1991) and a developmental state (Snyder et al., 1996). Emerging literature presents various approaches to developing hope (Luthans & Jensen, 2002; Snyder, Tran, Schroeder, Pulvers, Adams, & Laub, 2000b). Snyder and Shorey (2003) emphasize the integral role of leaders in creating an environment of hope through conceptualizing and articulating goals, and breaking them down into more manageable and temporally close sub-goals. Although hope is correlated with other positive psychological states, research

supports its uniqueness, independence and discriminant validity (Magaletta and Oliver, 1999; Scioli et al., 1997).

In this study, it is hypothesized that the more hopeful leaders are, the more self-efficacious they will be. Recall that self-efficacy entails accepting and welcoming challenging tasks, extending effort and motivation to successfully accomplish them, and persevering in the face of the obstacles. The agency component of hope implies that a leader who is determined to achieve his/ her goals will exert the necessary investment and energy to accomplish those goals. Bandura (1997) asserts that the “efficacy expectancies”, implied in one’s sense of agency and control (Snyder, 2000), are strong predictors of behavior. According to Bandura (2001), social cognitive theory and self-efficacy are “rooted in an agentic perspective in which people function as anticipative, purposive, and self evaluating proactive regulators of their motivation and actions” (Bandura & Locke, 2003: 87). Snyder’s (2000) notion of agency incorporates the assertiveness to “stick to” one’s goals, and not giving up, i.e., persistence. Since hopeful leaders know that they are personally capable of generating alternative routes toward their goals, the pathways component of hope can be compared to the fuel that energizes persistence in the face of obstacles. The more pathways leaders are able to generate, the more motivated and persistent they are likely to be, since they know there are still uncharted routes that are yet to be explored. In other words, willpower and waypower can make a leader believe he/ she is better capable of employing his/ her capabilities toward goal accomplishment. Based on this conceptualization, it follows that:

Hypothesis 1a. Leaders' level of hope is positively related to their self-efficacy.

Moreover, the hypothesized relationship between leaders' hope and self-efficacy is not only correlational, but also causal. Among the established approaches of building self-efficacy are mastery experiences (repeated experiences of success over time) and vicarious learning (observing the successful experiences of relevant role models) (Bandura, 1997). Leaders with the agency and pathways components of hope by definition possess the determination and invest the energy to achieve their goals, and invent new pathways when faced with obstacles. Such leaders are likely to experience success more frequently than those with low hope levels (less determination, energy, perseverance and waypower). Over time, more frequent success experiences are conducive to higher self-efficacy. In addition, since mastery and vicarious experiences are primarily perceptual (Maddux, 2002), without a sense of agency and waypower these experiences are less likely to be internalized, reducing the chances that they can contribute to self-efficacy. Therefore, it can be hypothesized that:

Hypothesis 1b. A higher level of hope in leaders will lead to a higher level of self-efficacy.

The Role of the Leader's Optimism

Similar to the literature on hope, earlier conceptualizations of optimism have emphasized its emotional, and even illusional nature (e.g., Taylor, 1989; Tiger, 1979). However, as a leading construct in the positive psychology movement, and drawing from attribution theory, Seligman (1998a) differentiates between optimists and pessimists based on their explanatory styles of and causal attributions for favorable or negative outcomes. People who have an optimistic explanatory style attribute positive events to

personal, permanent, and pervasive causes and attribute negative events to external, temporary, and situation-specific ones. Pessimists do exactly the opposite. They attribute positive events to external, temporary, and situation-specific causes, and attribute negative events to personal, permanent, and pervasive ones.

Seligman (1998a) emphasizes that an optimistic explanatory style is a teachable, developable capacity, and emerging research supports the state-like nature of optimism (e.g., Shifren & Hooker, 1995). He and others (e.g., Schneider, 2001) highlight the importance of “realistic optimism,” which does not take an extreme in externalizing and eliminating personal responsibility for poor choices. He and others (e.g., Peterson, 2000) also recommend “flexible optimism,” which can adapt and use alternative explanatory styles depending on the situation at hand. Research shows that optimism is related to psychological health, success, satisfaction, and “authentic happiness” in various life domains, including work, education, sports, politics, and health (Schulman, 1999; Seligman, 1998a, 2002; Wandburg, 1997; Wunderley et al., 1998). The uniqueness, independence and discriminant validity of optimism have also been established (Magaletta and Oliver, 1999; Scioli et al., 1997).

In this study, it is hypothesized that the more optimistic leaders are, the more self-efficacious they will be, and that the relationship between leaders’ optimism and their self-efficacy is not only correlational, but also causal. An optimistic explanatory style is likely to act as a buffer against depression and learned helplessness (Seligman, 1998a). Optimistic leaders have an attributional style that shields them from a sense of despair and enhances their persistence when faced with obstacles. Bandura (1997) believes that “efficacy expectancies,” one’s belief in his/ her ability to successfully perform a certain

task, are even stronger predictors of behavior than “outcome expectancies,” one’s confidence that performance of a specific task will lead to the desired outcome(s). As mentioned earlier, Maddux (2002) views success as a subjective perceptual experience. Since people tend to discount information that conflicts with their pre-established self-view, success experiences (positive outcomes) may not be automatically translated into self-efficacy beliefs for those who are accustomed to failure. In order for success to be interpreted as mastery experiences, and thus contribute to enhancing self-efficacy, it should be attributed to one’s own effort and ability, rather than to external causes.

Clearly, an optimistic explanatory style that attributes positive events to personal, permanent and pervasive causes is likely to enhance a leader’s efficacy expectancies. This is because such optimism will allow the leader to (legitimately) take credit for achievements and success, and thus enhance the perceptions and impact of mastery experiences. However, even when negative outcomes occur, leaders with an optimistic explanatory style will attribute them to external, temporary and situation-specific causes. It follows that the negative outcomes do not counterbalance previously built efficacy beliefs. This is also in line with Bandura’s assertions about the superiority of efficacy expectancies over outcome expectancies. Even when outcomes are negative, internalized efficacy expectancies can offset the unfavorable impact of adversities and produce persistence. In other words, realistic, flexible optimism can boost the impact of the leader’s successes and buffer the impact of failures on the leader’s self-efficacy. Thus, based on this conceptual support we propose the following.

Hypothesis 2a. Leaders' level of optimism is positively related to their self-efficacy.

Hypothesis 2b. A higher level of optimism in leaders will lead to a higher level of self-efficacy.

The Role of the Leader's Self-Efficacy

Self-efficacy can be defined as “one’s belief about his or her ability to mobilize the motivation, cognitive resources, and courses of action necessary to execute a specific action within a given context” (Stajkovic & Luthans, 1998b: 66). People who are self-efficacious are likely to select and welcome challenging endeavors, invest the effort and motivation necessary to successfully accomplish them, and persevere in the face of obstacles throughout the process. A meta-analysis of 114 studies (Stajkovic & Luthans, 1998a) found a stronger relationship between self-efficacy and work-related performance than goal setting (Wood, Mento & Locke, 1987); feedback (Kluger & DeNisi, 1996); job satisfaction (Judge & Bono, 2001); the Big Five personality traits, including conscientiousness (Barrick & Mount, 1991); and organizational behavior modification (Stajkovic & Luthans, 1997, 2003). Self efficacy can be developed through mastery experiences (performance attainments), vicarious learning (modeling), social persuasion, and psychological and physiological arousal (Bandura, 1997).

In this study, it is hypothesized that efficacious leaders are likely to be more resilient than their less efficacious counterparts, and that the relationship between leaders’ self-efficacy and their resiliency is not only correlational, but also causal. Although the linkages between self-efficacy and resiliency are just emerging in the literature (e.g., Holaday & McPhearson, 1997; Masten & Reed, 2002), extensive empirical and meta-analytical support exists for the relationship between self-efficacy and psychsocial and

health functioning (Holden, 1991; Holden, Moncher, Schinke, & Barker, 1991). Moreover, in their response to recent research findings that self-efficacy built on past performance may have a negative impact on subsequent performance (Vancouver, Thompson, & Williams, 2001; Vancouver, Thompson, Tischner, & Putka, 2002), Bandura and Locke (2003) cite a substantial number of empirical studies utilizing interventions, pre-post measures, and multiple controls, thus establishing the direction of causality. The studies that they cite, which span more than three decades of research (Averill, 1973; Geer, Davison, & Gatchel, 1970; Glass, Singer, Leonard, Krantz, & Cummings, 1973; Levine & Ursin, 1980; Litt, Nye, & Shafer, 1993; Miller, 1980; Sanderson, Rapee, & Barlow, 1989), show that efficacy beliefs result in increased perceptions of personal control, which significantly contribute to effective management of stressful factors, fear-inducing environments, and challenging situations. In other words, self-efficacy equips people with better capacities to deal with adversity and setbacks, i.e., resiliency.

Thus, the more efficacious leaders are, the more resilient they are likely to be. When faced with obstacles, they persist. When faced with challenges, they welcome them, because they are confident of their ability to “mobilize the motivation, cognitive resources, and courses of action necessary” (Stajkovic & Luthans, 1998b: 66) to overcome adversity and achieve their goals. When faced with negative outcomes, they fall back on their efficacy beliefs. Bandura and Locke (2003: 92) support this idea as they assert: “In the pursuit of difficult challenges, people have to override a lot of dissuading negative feedback if they are to realize what they seek. Resilient belief that one has what it takes to succeed provides the necessary staying power in the face of repeated failures,

setbacks, and skeptical or even critical social reactions that are inherently discouraging. Those beset by self-doubts become early quitters rather than successful survivors.”

Without self-efficacy, the mere possession of assets or lack of risk factors may not contribute building resiliency. A leader who lacks self-efficacy will rarely employ all the resources in his/ her possession, let alone welcome challenges and take risks, because “those of high self-efficacy focus on the opportunities worth pursuing, whereas the less self-efficacious dwell on the risks to be avoided (Krueger & Dickson, 1993, 1994)” (cited in Bandura & Locke, 2003: 97). Moreover, setbacks and uncertainty are givens in any leadership role. A leader who lacks self-efficacy is less likely to persevere, motivate him/herself, and get back on track. Based on the above conceptual support, the following is hypothesized.

Hypothesis 3a. Leaders’ level of self-efficacy is positively related to their resiliency.

Hypothesis 3b. A higher level of self-efficacy in leaders will lead to a higher level of resiliency.

Although arguments can be made for the direct relationships between hope and resiliency, and optimism and resiliency, in line with the view of resiliency development as a long-term reiterative process, a gradual upward spiral is proposed, in which the cognitive and affective dimensions of hope and optimism contribute to the development of self-efficacy. This input of hope and optimism into self-efficacy in turn gradually enhances and enriches leader resiliency. Thus, the self-efficacy is expected to act as a full mediator between leaders’ hope and optimism and their self-efficacy.

Hypothesis 3c. Leaders' self-efficacy fully mediates the relationship between their hope and optimism and their resiliency.

The Relationships between the Leader's Assets, Risk Factors and Values and Their Hope, Optimism and Self-efficacy

As shown in Figure 1, in the multi-level model of resiliency development, linkages are expected to exist between leaders' assets, risk factors and values on one hand, and hope, optimism and self-efficacy on the other. For example, leaders who possess assets such as success-predicting personal characteristics, traits, knowledge, skills, abilities, and relationships, are likely to have wider choices of alternative pathways toward the achievement of their goals. They have a richer variety of resources to allocate and combine. These leaders are also likely to have a more optimistic explanatory style, at least with respect to positive events, since they possess more internal, permanent, and pervasive assets to which they can attribute success.

Moreover, other things being equal, the higher the leader's success-predicting assets, the more likely the leader will experience success and performance attainments. Mastery experiences have been established in the self-efficacy literature as the most effective approach to building self-efficacy (Bandura, 1997). In addition, the higher the leader's social capital, such as a sound network of relationships, the more likely the leader will be successful (e.g., Luthans, 1988), again enhancing the leader's self-efficacy. Leaders who have higher social capital are also likely to have significantly more opportunities for finding relevant role models, increasing their opportunity for vicarious learning, another contributing factor in building self-efficacy. Social capital is also likely to increase the leader's sources of social persuasion, which contributes to fostering self-

efficacy. Finally, assets such as physical and psychological health are salient contributors to physiological and psychological arousal, which in turn contributes to enhancing self-efficacy.

On the other hand, asset deficiencies and risk factors are predictors of failure, setbacks, and negative outcomes in general (Masten & Reed, 2002), which can reduce mastery experiences, the most salient factor in building self-efficacy. The idea of risk factors as opportunities and areas for development is of particular relevance here. Although risk factors increase the probability of failure, when viewed positively, they can become welcomed as challenges, which can contribute to the leader's efficacy. When balanced with the appropriate assets, leaders are likely to persevere when faced with obstacles, and pursue success despite setbacks, which also plays a part in subsequently increasing self-efficacy.

Leaders who possess stable values and beliefs, and who consequently find meaning in life despite adversity (Coutu, 2002), are also likely to be more determined to achieve their future goals that can raise them above their less desired present situation. Instead of being viewed as the misfortunate lack of necessary assets and values, personal risk factors and deficiencies may be viewed as open to development, rather than adversities that should be eliminated. In this alternative paradigm, risk factors may even enrich hope, since they provide continuous challenges and opportunities for the generation and testing of alternative pathways, and hence the enhancement of waypower.

With respect to realistic, flexible optimism, Seligman (1998a: 282) warns that two of the primary causes of depression and helplessness in the lives of multitudes of people today are "the waxing of the self and the waning of the commons." In the past, people

drew meaning for their lives from values that provided the self with a context that is larger than itself (which Seligman calls “the commons”). When faced with adversity, people used to stop and reflect on their “spiritual furniture”, including values and beliefs in their country, God, family, or purposes that surpass their own selves and lives.

Today, Seligman (1998a, 2002) maintains these fundamental sources of meaning are losing their significance. Divorce, mobility, the erosion of national and religious commitment, and other risk factors that have caused the demise of many similar stable foundations of life are obvious manifestations of the waning of the commons. Moreover, individualism and the tremendously increased scope for choice and personal control, for example as evidenced by the millions of products and brands in the consumer market, have resulted in a “maximal self” with too much focus and energy directed toward pleasing this exalted self. Consequently, the loss of values and beliefs that give meaning to life beyond the self has led to extensive personalization of pleasures and pains. There is an exponential increase in experiences of helplessness as the self strives for more fulfillment of whims and personal control in search for meaning (Seligman, 1998a).

Based on this argument, leaders who are armed with meaning-providing stable values and beliefs are likely to possess a more optimistic explanatory style. This is because their “spiritual furniture” allows them to view causes for negative events that are beyond themselves, and thus permits them to attribute failures to external, temporary and situational reasons when necessary. In other words, they will be able to view risk factors and their lack of full control as their “expected and accepted lot in life” that they should make the best out of, rather than dealing with setbacks as “something to remedy” (Seligman, 1998a: 282). Stable values and a sense of meaning and purpose are also likely

to increase leaders' acceptance of challenges, effort to achieve goals, and persistence when faced with obstacles, i.e. their self efficacy.

As leaders' resiliency develops, it is expected to positively impact their reservoir of experiences, successes, and adaptive mechanisms, further enhancing their assets and risk management strategies, and refining their values and beliefs. This is depicted in Figure 1 through the feedback loop between the resilient leader and his/ her assets, risk factors and values. From this brief discussion it is clear that leaders' assets, risk factors and values are likely to have a substantial impact on and to be strongly affected by the variables of this study. Thus, it is important to control for as many as possible of these factors, in order to assess the causal linkages between leaders' hope and optimism, self-efficacy, and resiliency.

THE CASCADING EFFECT OF RESILIENCY

Earlier the case has been made that an organization does not become resilient by just being staffed with resilient managers and employees. However, it can also be argued that although a collective of resilient employees do not necessarily create a resilient organization, organizational resiliency can cascade from the top down, even to operating level employees. In other words, a resilient organization will enhance the resiliency of its leaders and employees. An earlier example may be helpful to also illustrate this point. Leaders who work for strength-based organizations are more likely to develop resiliency since they are provided with opportunities to utilize and enhance their assets every day (Buckingham & Coffman, 1999). Their risk factors (lack of certain talents) are not likely to hinder their growth, since they can manage around them through emphasizing and utilizing other areas of strength that they possess. The social support that they receive

through strong interpersonal relationships can buffer against various dysfunctional beliefs about inadequacy and behaviors of disengagement. Strength-based organizations are likely to provide cultures that support community, connections, commitment, communication, and consideration (Horne & Orr, 1998). In turn, such nurturing cultures can enhance leaders' resiliency directly, as well as indirectly through helping them discover and refine their assets, manage around their risk factors, buy into stable, meaning-providing values, and build their hope, optimism and self-efficacy.

The individual level of analysis utilized to describe the leader resiliency development process can lend itself to application at any level (top management, middle management, supervisors, or front line employees). Resilient leaders, committed to such strong organizational values of caring appreciation of others' talents and capacities, are likely to be effective mentors for their associates through a similar journey of self-discovery. However, a direct cascading, trickle down effect of resiliency is hypothesized in this study. As leaders exhibit increasing levels of resiliency, flexibility, responsiveness, and adaptive ability, they can model resiliency for followers who may be new to the organization, have not yet been fully socialized into the organization's culture and values, and have not had the chances to enrich their assets, nor build their hope, optimism and self-efficacy. Instead of capitalizing on their own resources, those followers may initially draw their agency, pathways, optimism and efficacy from what they believe the leader can do, even though they may doubt their own capacities. This will allow them to bounce back from initial failures and setbacks. With time, such followers are likely to start their own resiliency development journey, supported by the modeling and mentorship of

resilient leaders and the values, resources and support of resilient organizations. Thus, the following hypothesis is offered.

Hypothesis 4a. Leaders' level of resiliency is positively related to their employees' level resiliency.

Hypothesis 4b. A higher level of resiliency in leaders will lead to a higher level of resiliency in their associates.

PERFORMANCE IMPLICATIONS

To complete the model in Figure 1 and keep the theory building within the domain of workplace development, the expected impact of resiliency on desirable outcomes such as performance, job satisfaction, work happiness and organizational commitment needs to be examined. Over the years, under the psychotherapeutic model, resiliency has been limited to a reactive capacity, allowing people to cope and survive in the face of trauma and adversity. Emphasis was placed on bringing the deficiencies of those performing under adverse conditions up to average (Masten, 2001; Masten & Reed, 2002). However, today's organizations cannot afford to have average performers. They are seeking "better than OK" (Sutcliffe & Vogus, 2003) performers that can not only survive, cope and recover, but also thrive and flourish through difficult and uncertain times (Ryff & Singer, 2003). Moreover, in today's loose labor market, only managers and employees who can achieve excellence and constantly excel under pressure are likely to be successful. In this study, the case is being made that resiliency can also be a proactive capacity, and that resilient people can "bounce back" not only to their performance level prior to an adversity, but to consistently higher levels. The scope of resiliency would be

far too limited if it is viewed as only a maintenance mechanism with a zero net gain, when substantial positive gains can be achieved.

Reivich and Shatte (2002) make a similar argument as they present resiliency as a capacity to overcome, steer through, bounce back, and, most importantly, reach out and commit oneself to the pursuit of new knowledge and experiences, deepening relationships with people, and finding meaning in life. Research in the area of Posttraumatic Growth (PTG), as opposed to Posttraumatic Stress Disorder (e.g., Tedeschi, Park & Calhoun, 1998), clearly reveals the idea that resilient people “springboard” out of adversities with “increased self-reliance and self-efficacy; heightened awareness of one’s own vulnerability and mortality; improvement in ties to others - greater self-disclosure and emotional expressiveness, more compassion and capacity to give to others; clearer philosophy of life – renewed sense of priorities and appreciation of life, deeper sense of meaning and spirituality” (Ryff & Singer, 2003: 24). In other words, resiliency implies growth and increased toughness through trauma, adversities and troubled times.

Bandura and Locke’s (2003) authoritative discussion of the role of self-regulation in creating resilient self-efficacy provides useful insights regarding the proactive nature of resiliency. They assert that people are not only motivated by discrepancy reduction. In fact they proactively create discrepancies through setting progressively challenging goals and higher performance standards, and then extend the effort, resources and motivation in the anticipation of achieving them. Bandura and Locke pose the challenge of explaining why and how people pursue growth, rather than complacency. In line with their research, this dissertation offers resiliency, in its proactive manifestation, as a possible venue for personal and professional growth, increased performance and effectiveness.

Applied to the workplace, this positive, proactive view of resiliency, trickling down through an organization-wide system of resiliency, is expected to lead to performance improvement. Resilient organizations have assets, risk management strategies, values, and buffering processes in place that contribute to performance. For example, organizational values that place employees first, assets such as high performance work practices, and buffering mechanisms such as strategic and strength-based initiatives have a wealth of research through the years supporting a positive impact on performance (e.g., see Locke 2000 for research-based summary articles on these areas). Besides contributing to organizational resiliency, such dimensions also enhance leader and employee resiliency, which leads to employee performance enhancement. This is because these organizational practices provide opportunities for developing leader and employee level assets, risk management strategies, and values. They allow for higher internal self-set standards to develop based on strong foundations of clear awareness of personal capacities and areas of vulnerability. Most importantly, they nurture the capacity for forethought, allowing organizational members to enhance their self-efficacy, hope and optimism, even in times of adversity and uncertainty.

The effective management of assets, risk factors, values, and buffering processes that characterizes resilient organizations does not only enhance performance through increasing the frequency of employee productive behaviors, but also through the cognitive components of engagement, which are documented to contribute to job satisfaction, as well as business-unit productivity and profitability (Harter, Schmidt, & Hayes, 2002; Judge & Bono, 2001). Such practices are also likely to lead to work happiness in general (Diener, 2000), as well as to organizational commitment (Allen &

Meyer, 1990). In particular, affective commitment is likely to be related to the relationship-based support and sense of community that resilient organizations provide. Based on this conceptual support, the following set of hypotheses can be drawn.

Hypothesis 5a. The more the cascading, trickle-down effect of resiliency takes place, the higher employee performance, job satisfaction, work happiness and organizational commitment will be.

Hypothesis 5b. A higher level of resiliency in employees will lead to higher levels of employee performance, job satisfaction, work happiness and organizational commitment.

Hypothesis 5c. Employees' resiliency fully mediates the relationship between leaders' resiliency and employee performance, job satisfaction, work happiness and organizational commitment.

In summary, this study seeks to expand our understanding of the resiliency development process, as well as its outcomes in terms of performance, job satisfaction, work happiness, and organizational commitment. Developing resilient organizations, leaders and employees is a difficult but attainable journey that takes proactive effort and persistence on the part of the organization as a whole, as well as its members. The organizational level of resiliency development is essential in order to provide the proper environment necessary for developing resilient leaders and employees. However, without the active involvement of the developing organizational members themselves, especially leaders, in terms of drawing from this positive organizational context, as well as proactively operating on their assets, risk factors and values, as well as their hope, optimism and self-efficacy, a resilient organization may not necessarily have resilient

members. In other words, although resiliency is expected to cascade from top to bottom, blockages at the any level may prevent individual level resiliency from being effectively developed. Therefore, both organizational and individual level resiliency need to be proactively developed. Chapter Three describes the setting and sample characteristics, the variable measures, and the methodology used in this study.

CHAPTER THREE: STUDY DESIGN AND METHODOLOGY

In the previous chapter, causal relationships were hypothesized between leaders' hope, optimism, and resiliency; employees' resiliency; and employees' performance, job satisfaction, work happiness, and organizational commitment. Moreover, self-efficacy was proposed as a full mediator of the relationship between leaders' hope and optimism and their resiliency, and employee resiliency was proposed as a full mediator between leaders' resiliency and employees' performance, job satisfaction, work happiness, and organizational commitment. This chapter discusses the study design, including the research participants, data collection methods, variable measures, control variables, and the correlational, hierarchical regression, and path analytical methodology used in this study.

RESEARCH DESIGN

Data collection for the study was conducted via questionnaires distributed to managers and employees primarily in Midwestern business organizations. The same survey was used for both managers and employees, with the last section designated "for managers only." Managers also filled an additional "Company Information Sheet." A copy of the survey and the company information sheet are included in the Appendix. The study utilized a convenience sample. Contacts were established with organizational members through faculty, colleagues, friends, and students. For purposes of this study, a manager was defined as any organizational member with three or more direct reports. Managers and leaders are used interchangeably. A group of one manager and three employees is referred to as a unit. All units that could be accessed were invited to

participate in the study, and all the units that accepted to complete the surveys were included in the study sample.

Printed copies of the informed consent forms and surveys were provided to all participants via the contact persons who referred them. Data was collected in two consecutive waves. The first wave constituted 121 units (121 managers and 363 employees) and was completed during the spring of 2003. The second wave constituted 137 different units (137 managers and 411 employees) and was completed during the summer of 2003. There are no material differences between the two waves, particularly due to the limited period of time between them. However, the two samples were kept separate so that one can be used to test the hypotheses and the other can be used to confirm the findings, or to test an alternative model if necessary. A decision was made to use the larger sample first, in order to increase the power of the initial test of the theory. None of the surveys were completely unusable due to missing data. However, cases with missing data were excluded on a per-analysis basis (casewise), maintaining the smallest N for each analysis, as detailed in Chapter 4.

All participants were informed that participation was voluntary. To protect anonymity, informed consent forms were provided and collected before surveys were provided. Participants were asked to return their consent forms, and subsequently their surveys, directly to the contact persons, who were instructed to compile the forms and surveys of the whole unit, or even several units whenever possible, before submitting them to the researcher. In cases when a manager supervised more than three employees that were willing to participate in the study, all those who accepted to participate were provided with questionnaires, and three employees were randomly selected for the study.

In order to avoid response biases, participants were initially informed that the purpose of the study is “assessing employees’ feelings and thoughts, and how they affect their performance.” After filling the questionnaire, they were briefed about positive organizational behavior and thanked for their participation in the study.

As an incentive, summary findings were promised at the conclusion of the study. Managers were also asked to report their contact information if they would like to be contacted for further research and/ or free training opportunities for themselves and/ or their staff. Information regarding those who were welcoming for such an opportunity was compiled for possible future studies and/ or interventions.

SURVEY MEASURES

The instruments used in this field study are widely recognized, research-based, standardized measures.

Dependent Variables and Measures

In order for resiliency to qualify as an integral constituent of positive organizational behavior (POB), and to matter to organizational stakeholders and decision makers, resiliency has to offer positive prospects in terms of performance and effectiveness. The dependent variables in this study are employee performance, job satisfaction, work happiness, and organizational commitment. This approach is more likely to capture overall performance and effectiveness in the broader, holistic and all-encompassing approach recommended by Luthans and Avolio (2003) in their authentic leadership model. Furthermore, when objective performance measures are inaccurate, unavailable, or simply undisclosed, using multiple measures is likely to compensate for this inevitable deficiency, even if some of these measures are subjective (Chakravarthy,

1986; Dess & Robinson, 1984). Therefore, in this study, a broader perspective is taken, in which several favorable attitudinal outcomes that have established measures in the literature are assessed, in addition to self-reported performance.

Employee performance was assessed using four measures. The first measure was each manager's three associates' self-reported approximate performance evaluation percentage in the previous year. Owing to the diverse industries, organizations, functions, and levels in the study sample, some employees had a more accurate understanding of their performance evaluation than others. The second measure was each manager's three associates' perception of the rank of their performance relative to people they know in similar positions on a scale of 1 – 10. The third measure was each manager's three associates' perception of the rank of their salaries relative to people they know in similar positions on a scale of 1 – 10. The fourth measure, which was also used as a consistency check, was the manager's self-reported assessment of the approximate percentage achievement of the group's target(s) in the previous year.

Job satisfaction is strongly related to performance (see Judge et al., 2001, for a qualitative and quantitative review). Moreover, Chakravarthy (1986) shows that traditional performance measures are insufficient, and highlights the utility of incorporating satisfaction measures of all stakeholders, including employees. In this study, a three-item scale, adapted from Oldham and Hackman's (1980) work design measure, was used to assess employee job satisfaction. This approach is also in line with Timothy Judge's extensive research on job satisfaction, and is consistent with the measures utilized in all his studies. Again, job satisfaction was measured as each manager's three employees' reported job satisfaction. The manager's ranking of his/ her

associates' average job satisfaction level on a scale of 1 – 10 was also utilized as a consistency check.

Happiness is a broader construct than job satisfaction. It encompasses positive cognitions, as well as emotions, which result in a subjective sense of well-being and general life satisfaction (Diener, 2000). As indicated earlier, subjective well-being is related to the perception, emotional interpretation, and cognitive processing of events and situations, rather than to actual conditions and happenstances (Luthans, 2002b). Happiness and life satisfaction are related to physical and mental health, personal striving, coping with stress (Diener & Fujita, 1995; Emmons, 1992; Folkman, 1997; Fordyce, 1988), and satisfaction with important life domains (Diener, 2000; Diener et al., 1999), including being a predictor of job satisfaction (e.g., Judge & Hulin, 1993; Judge & Watanabe, 1993; Tait, Padgett, & Baldwin, 1989). This research evidence supports the utility of including work happiness as a component in the broad definition of performance adopted in this study. Fordyce's (1988) standardized measure of happiness, which measures the magnitude (on an anchored scale of 1-10), as well as the frequency (percentage of time) of happiness, was used in this study. The scale was slightly adapted by adding the words "at work" where relevant, in order to capture work happiness, rather than general well-being. Again, work happiness was measured as each manager's three employees' reported work happiness.

Organizational commitment is also significantly related to performance, as shown through several recent meta-analyses (e.g., Ricketta, 2002; Mathieu & Zajac, 1990; Wright & Bonett, 2002). Employees' organizational commitment was assessed using Allen and Meyer's (1990) commitment measure. The scale has established validity and

reliability (Meyer, Allen & Gellatly, 1990). Although the scale captures three components of organizational commitment: affective, continuance, and normative, only the affective component was utilized in this study, as research supports its sufficiency in capturing the construct and its high correlation with the other commitment dimensions (e.g., Bono & Judge, 2003; Schaubroeck & Judge, 1998). According to Allen and Meyer (1990), employees with a strong affective commitment remain with an organization because they want to, but those with a strong continuance commitment stay because they need to, and those with strong normative commitment stay because they feel they ought to. Again, organizational commitment was measured as each manager's three employees' reported affective commitment, and the manager's ranking of his/ her associates' average commitment level on a scale of 1 – 10 was utilized as a consistency check. Since the same survey was administered to managers and employees, managers' performance, job satisfaction, work happiness, and organizational commitment were also assessed.

Independent Variables and Measures

The independent variables proposed to trigger the resiliency development process in this study are managers' state hope and state optimism.

State hope was measured using Snyder's established State Hope Scale (Snyder et al., 1996). Snyder asserts that while state hope is variable and developmental, dispositional hope is relatively stable and trait-like (Snyder et al., 1991). However, over time, increasing state hope through training interventions and other related developmental efforts has been found to impact the more enduring dispositional hope level (Snyder, 2000). In other words, based on Snyder's hope theory, dispositional and state hope are expected to be correlated. Therefore, in this study, both of Snyder's State Hope Scale and

Adult Dispositional Hope Scale were included, in order to assess the consistency of the hope levels reported by managers. Since the same survey was administered to managers and employees, employee dispositional and state hope were also assessed.

State optimism was measured using Scheier and Carver's (1992) Life Orientation Test, as modified by Shifren and Hooker (1995) to reflect the state-like nature of optimism. Similar to the two hope scales, the state-oriented scale simply adds words such as "here and now" and "right now" in order to emphasize psychological states, rather than dispositional traits. The scale has established validity and reliability (Burke, Joyner, Czech, & Wilson, 2000; Snyder, 1994). Since the same survey was administered to managers and employees, employee optimism were also assessed.

Mediating variables and Measures

The mediating variables proposed throughout the resiliency development process in this study are managers' self-efficacy, managers' resiliency, and employees' resiliency, in that causal sequence.

Self-efficacy is a domain-specific construct. Bandura (1986, 1997) emphasizes that self-efficacy regarding a particular domain constitutes three dimensions: magnitude, strength and generality. The magnitude dimension of self-efficacy is the level of task difficulty in which a person expects to be able to perform. It is measured by the respondent's yes/no answer to a question of whether or not he/ she can perform a specific task at a certain level, with the level gradually increased. The strength dimension of self-efficacy is the degree of certainty that a person possesses about the ability to perform at each level of difficulty, measured by the respondent's reported percentage of confidence at each level (Bandura, 1997; Locke, Frederick, Lee, & Bobko, 1984; Stajkovic &

Luthans, 1998b). Although generalized efficacy is a dispositional trait, Bandura's conceptualization of self-efficacy incorporated the generality dimension to reflect efficacy beliefs regarding similar or relevant situations within the same domain. This does not contradict with the state-like, domain-specific nature of self-efficacy.

In this study, self-efficacy was measured using Parker's (1998) Role Breadth Self-Efficacy Scale. This scale was selected for several reasons. First, it is specific to tasks within the domain of the workplace, and thus consistent with Bandura's conceptualization of self-efficacy as a domain-specific construct. Second, owing to the diversified nature of the study sample, it would have been impossible to create a task-specific self-efficacy scale for every participant/ job. Parker's (1998) scale strikes the balance of utilizing a single instrument for all participants without sacrificing the emphasis on the workplace domain. Third, recent research supports that Likert-type scales are comparable to scales that use the magnitude-strength approach in measuring self-efficacy, in terms of yielding similar factor structures, validity and reliability (Maurer & Pierce, 1998). Parker's (1998) instrument utilizes a 5-point Likert scale, which is simpler to use and more consistent with the other scales included in the survey. Since the same survey was administered to managers and employees, employee self-efficacy were also assessed.

Resiliency was extensively discussed in previous chapters. In this study, resiliency was measured using Block and Kremen's (1996) Ego-Resiliency Scale (ER89). The scale has established psychometrics and over more than two decades of empirical support (see Klonhlen, 1996). Again, employee resiliency was measured as each manager's three employees' reported resiliency.

Control Variables

As indicated earlier, the proposed multi-level resiliency development theoretical model incorporates organizational-level variables, as well as individual-level antecedents that are beyond the scope of this study, but that are likely to impact and be impacted by the variables of the study. In order to isolate the study variables and test the hypothesized causal relationships, it is necessary to incorporate numerous control variables.

Data was collected for organizational and business unit control variables such as industry sector, organization size (measured by the number of employees in the whole organization), branch size (measured by the number of employees in the surveyed branch/location), work unit size and managerial span of control (measured by the number of employees directly reporting to the manager surveyed). Individual-level control variables included age, gender, ethnic background, education, and tenure in the organization. These factors are likely to be a reflection of individual-level assets and risk factors. Moreover, social desirability was also controlled for, both in order to enhance the internal validity of the study, and because social desirability may be a reflection of an individual's values and beliefs. Social desirability was measured using Reynold's (1982) short version of the Marlowe-Crowne Scale (Crowne & Marlowe, 1960), which has been supported by recent research (Loo & Thorpe, 2000) to be even more valid and reliable than the original long version.

ANALYSIS METHODOLOGY

Measures of the dependent, independent, and mediating variables were obtained through integrating the relevant items from the survey questionnaires, as instructed by the creators of each of these standardized scales, cited earlier. The internal reliability

(coefficient alpha) of each of these standardized measures was assessed, as reported in Chapter 4. Integrated scores were converted to Z-scores. In cases where several measures were utilized, as in the case of employee performance, Z-scores were averaged. Consistency between managers and associates was verified where relevant, as in the case of employee performance, job satisfaction and organizational commitment.

The types of methodology analysis used in this study include correlational analysis, hierarchical regression and path analysis. Correlation does not imply causation. However, path analysis permits the testing of theory-driven causal hypotheses without necessarily manipulating the cause(s) through interventions (Carey, 1998; Ender, 1998; Pedhazur, 1997). By utilizing standardized regression weights, conceptualized causal linkages can be supported, and correlations that are not due to causal connections can also be revealed, so that a theorized causal model can be tested not only for predictive and explanatory power, but also for parsimony.

Correlational and path analysis also go hand-in-hand in assessing the conceptual and empirical fit of a proposed causal model, providing useful insights for model modifications and future testing. Since this study utilizes two separate data sets, a partially supported model need not be the end of the story. The informative value of supported, as well as unsupported causal paths, when integrated with the correlations revealed using the first data set, can be utilized to test an alternative, more informed theory.

Finally, hierarchical regression is the most popular and effective approach to test for mediation (Kenny, 2003). In this study, hierarchical regression is used to test for the mediating role of self-efficacy, manager resiliency, and employee resiliency.

CHAPTER 4: RESULTS

This chapter describes the results of the statistical analysis used in testing the proposed model and hypotheses; deriving an alternative, better-fitting model; and testing the alternative model using a different data set. In the first section, the larger data set (referred to as Sample A) is used to test the initial model, and findings are reported and discussed. Since the model was partially supported, additional post-hoc analyses are performed. In the second section, the alternative model derived from the post-hoc analyses is conceptually supported. In the third section, the smaller data set (referred to as Sample B) is used to test this alternative model, and findings from that analysis are reported. A summary of the findings ends this chapter, and a general discussion of the results of both phases of the study is presented in Chapter 5.

PHASE 1: TESTING THE MODEL

As reported in Chapter 3, sample A constituted 137 different units (137 managers and 411 employees) and was collected during the summer of 2003. Data was collected from various units in 90 different, primarily Midwestern organizations, and four different sectors: private services (70.1%), public services (19.7%), manufacturing (5.8%), and other (4.4%). Organizational size varied from 4 to 192,000 employees (mean=7,369). Branch size varied from 2 to 2000 employees (mean=83). The number of employees directly reporting to participating managers ranged from 2 to 100 (mean=16). These organizational variables were controlled for in this study.

Descriptive Statistics of Study Participants

The descriptive statistics of the participants in sample A are presented in Table 1. As shown, 60% of managers were male and 40% were female. Associates were 38%

male and 62% female. 89.7% of managers and 86.5% of employees identified themselves as Caucasian, but other ethnic groups were also represented at both levels. Manager ages ranged from 21 to 69 years (mean=37.3), with 12 to 23 years of education (mean=16.7) and .1 to 38 years tenure with the organization (mean=8.2). Employee ages ranged from 19 to 74 (mean=31), with 5 to 26 years of education (mean=15.7) and 0 (just starting) to 41 years tenure with the organization (mean=4.6). These individual variables were controlled for in this study, in addition to social desirability.

Scale Reliabilities & Factor Analysis

Study variables that were measured using standardized scales were calculated by reverse coding reverse scored items and then summing the relevant items (excluding fillers). These variables included self-efficacy, hope, optimism, resiliency, job satisfaction, work happiness, and organizational commitment. Reliabilities of these scales are reported in Table 2. As shown, in this study, the standardized scale reliability coefficients of the study variables had an impressive range of .78 to .9 (Kline, 1998).

In addition, a Principal Component Factor Analysis with Varimax rotation was performed on the items constituting the four scales that measure self-efficacy, hope, optimism, and resiliency. As shown in Table 3, when four factors were extracted, most of the scale items loaded on their respective factors, supporting the uniqueness of the underlying constructs. In addition, as shown in Table 4, the first-order correlations between these variables did not exceed 0.6 (Kline, 1998).

Consistency Checks and Variable Calculations

For dependent variables, the various measures delineated in chapter 3 were correlated to ensure consistency. As shown in Table 5, each of the dependent variables of

the study was highly correlated at the 0.01 level with its relevant alternative measures, including those that were collected from managers to avoid single-source bias. In the case of performance, Z-scores of the four performance indicators (employee self-reported performance, performance rating and salary rating; and manager rating of associates' performance) were averaged to create a performance index, which is also highly correlated with each of the individual indicators. In addition, an overall index of outcomes was created by adding the z-scores of the various individual outcomes (the above performance index, employee job satisfaction, employee work happiness, and employee affective commitment). Another overall index was created for Positive Psychological Capital (PPC) by adding the z-scores of self-efficacy, hope, optimism, and resiliency of managers and employees.

Assessment of Data Normality

In addition to the descriptive statistics of the study variables, Table 6 provides an assessment of the data normality of these variables. As shown, none of the skewness or kurtosis standard errors exceeded ± 2 , indicating that all the study variables are likely to be normally distributed.

Correlational Analysis Results

As shown in Table 4, the first-order correlations provide initial support for hypotheses 1, 2, and 3, as the correlations between managers' self-efficacy, hope, optimism, and resiliency are significant at the .01 level. Moreover, there is also initial support for hypothesis 5, as the correlations between the employees' resiliency and their performance, job satisfaction, work happiness, and organizational commitment are also all significant at the 0.01 level.

Path-Analytical Results

In this study, path-analysis was performed using a series of regression analyses, in which each variable was regressed on all the variables in the layers that preceded it, including control variables. Figure 3 reports the significant path (standardized regression) coefficients, as well as the squared multiple correlation coefficients (R^2) of each step. As shown, Hypothesis 1 was supported, as the path from leaders' hope to their efficacy was significant. Hypothesis 2 was not supported, as the path from leaders' optimism to their efficacy was not significant. Hypothesis 3 was partially supported. While self-efficacy was hypothesized to fully mediate the relationship between leaders' hope and optimism and their resiliency, significant paths to leaders' resiliency exist from both hope and self-efficacy, suggesting that self-efficacy only partially mediates the relationship between leaders' hope and resiliency. Hypothesis 4 was not supported, as the path from leader to employee resiliency was not significant, although the squared multiple correlation coefficient was significant. However, most of the variance explained at this step can be attributed to control variables (e.g., employee education, unit size). Hypothesis 5 was mostly supported, as employee resiliency was the sole predictor of employee performance, job satisfaction, work happiness and organizational commitment in the model. However, due to the lack of support for hypothesis 4, the mediating role of employee resiliency (the cascading effect) was not supported.

Figure 4 presents the path coefficients and squared multiple correlation coefficients of the reduced model, which is the hypothesized model after including the additional direct path from managers' hope to their resiliency. Calculations of the overall fit of the reduced model in relation to its full model are as follows:

Full Model Goodness-of-Fit:

$$1 - [(1-.371)*(1-.356)*(1-.190)*(1-.175)*(1-.199)*(1-.244)*(1-.147)] = .860$$

Reduced Model Goodness-of-Fit:

$$1 - [(1-.371)*(1-.354)*(1-.187)*(1-.162)*(1-.184)*(1-.238)*(1-.145)] = .852$$

$$Q = (1-.86)/(1-.852) = .946$$

$$W = - (N-d) \ln Q = - (341-20) \ln .946 = 17.8 < 31.41 \text{ (critical value at } P=.05)$$

Thus, it can be concluded that although some of the hypothesized causal paths were not supported, the overall reduced model is a parsimonious depiction of the causal model among the study variables, and that it exhibits no significant differences compared to the full model.

Hierarchical Regression Results

Since the only indirect path supported was that between leaders' hope and resiliency, mediated by their self-efficacy, hierarchical regression was used to test this mediation. As shown in Table 7, managers' self-efficacy was supported as a partial mediator of the relationship between their hope and their resiliency, as indicated by the significant R^2 change, the significant standardized regression coefficient of self-efficacy, and the decreased but still significant standardized regression coefficient of hope after including self-efficacy, all at the 0.01 level.

Post-Hoc Follow-Up Analysis

Despite the partial support of the hypothesized model, as well as its overall fit, several additional analyses were performed on the data in order to derive a stronger, better-supported model that can then be tested using Sample B. Initially, an attempt was made to utilize an average leadership approach, in which responses were averaged across

each manager's three employees, and the path analytical process outlined above was repeated. However, the results were very similar to those delineated in Figures 3 and 4, with the same significant (and non-significant) paths, indicating that a better model can only be reached by altering the causal sequence or introducing new variables.

An intriguing finding was that when employee self-efficacy, state hope and optimism were included in the analysis as control variables, various positive psychological states exhibited differential importance depending on the dependent variable being investigated. For example, in the case of performance, the path from employee hope was the only significant causal path. Hierarchical regression supported that employee hope is a full mediator of the relationship between employee resiliency and performance. In the case of job satisfaction, both hope and self-efficacy fully mediated the relationship between employee resiliency and job satisfaction. In the case of work happiness, hope, optimism and resiliency exhibited direct causal paths, fully mediating a relationship between employee self-efficacy and work happiness. Finally, in the case of organizational commitment, only employee hope had a significant direct causal path, mediating the relationships of the three other psychological states with commitment.

Since managers responded to the same survey that employees responded to, similar analysis was performed on managers' positive psychological capacities in relation to their own performance. Although slightly different from the results briefly discussed in the previous paragraph, the results of this analysis were equally intriguing. Various positive psychological states exhibited differential significance depending on the dependent variables being analyzed. In all cases, positive psychological states that did not

exhibit direct causal paths to independent variables still exhibited indirect (fully mediated) paths.

The next step was an extensive series of post-hoc tests for variables that could possibly act as moderators (interactions). None of these analyses yielded any significant two-way, three-way, or four-way interactions. Moderators tested included sector, organization size, unit size, tenure, education, and age. Interactions were also tested between the four positive psychological capacities, as well as between manager and employee variables. Again, no significant interactions were detected.

Such findings support that despite their different impact on different outcomes, each of the four psychological states exhibits a unique contribution, both at the managers' and employees' levels. To test this concept, managers and employees in Sample A were integrated into a single group, and attempts were made to create alternative causal models for various outcomes. The results of this extensive series of path-analyses are summarized in Figure 5. Different causal structures were exhibited across various outcomes. Each of these path-analytical models was supported as a parsimonious causal model in relation to its own full model. Moreover, these alternative causal models explained more variance in each of the dependent variables than the variance that was explained by the hypothesized model.

The final post-hoc analysis that was performed on Sample A was to simplify the model into one causal path, from positive psychological capital, the composite index created earlier by adding the z-scores of self-efficacy, state hope, optimism, and resiliency; to the outcomes index, the composite measure created earlier by adding the z-scores of performance, job satisfaction, work happiness, and organizational commitment.

As shown in Figure 6, testing this simple, yet informative model (while controlling for the same organizational and individual variables described earlier) results in an R^2 of .326 ($p=.000$), which is higher than the variance explained in any of the individual dependent variables by any subset of the components of positive psychological capital.

Since the model presented in Figure 6 appears to be the most parsimonious model and provides the highest explanatory power, in the next section, conceptual support is presented for this model in relation to other alternative models. This alternative model is then tested on Sample B to confirm the results of the above post-hoc analyses, as well as the modified hypotheses presented below, using a new sample.

CONCEPTUAL SUPPORT FOR THE ALTERNATIVE MODEL

Although the resiliency development causal model proposed in this dissertation and tested using Sample A was partially supported, and despite the overall fit of the model, the results support several alternative models and causal structures. As a capacity to bounce back from adversities, uncertainty, and even positive but overwhelming change, resiliency seems to exhibit a more indirect influence on most of the performance and attitudinal outcomes in the work place. This is also in line with the concept of resiliency development as a life-long journey, often emphasized in the resiliency literature (e.g., Egeland, Carlson, & Sroufe, 1993; Klarreich, 1998). Unlike the direct, proactive impact of self-efficacy (Bandura, 1997; Stajkovic & Luthans, 1998a), hope (Snyder, 2000), and possibly optimism (Seligman, 1998a) on performance and attitudinal outcomes, resiliency as a reactive capacity seems to serve a cushioning or contingency function, which is primarily manifested in times of adversity. As various asset-focused, risk-focused, and process-focused strategies are used to enhance resiliency (Masten,

2001; Masten & Reed, 2002), this strong foundation of psychological capacities and resources is likely to not only enhance people's long term abilities to adapt to change, but to also operate on their mastery experiences, vicarious learning opportunities, social persuasion, physiological and psychological arousal, agency and pathways thoughts, and explanatory styles. These developmental factors from self-efficacy, hope and optimism are likely to operationalize the impact of the long-term process of resiliency development into enhanced everyday performance and desirable workplace positive attitudes.

Importantly, the long-term nature of resiliency development still should not discount its integral role as a state that is open to everyday enhancement, and its utility for continuous performance improvement in the workplace. In times of adversity or uncertainty, resiliency is likely to complement the motivation, effort and perseverance of self-efficacy (Stajkovic & Luthans, 1998a). Resiliency will allow for bouncing back with confidence in one's future prospects, manifested in self-efficacy's cognitive capacity of forethought (Bandura, 1997). Resiliency will also channel past personal or vicarious experiences of success through the self-reflective and observational capacities of self-efficacy, and will motivate perseverance in the present through the self-regulatory capacity of self-efficacy (Bandura, 1997; Bandura & Locke, 2003). The outcome is likely to be a person who is not only passively tolerant or one who can just adapt to change, but one who is capable of translating past successes into practical everyday actions and proactive disciplined effort that can enhance self-confidence about the future. Without resiliency, self-efficacy as a domain-specific state will tend to be constantly challenged as new pursuits are attempted and failures are possibly experienced at initial stages. On the other hand, without the cognitive processes that enhance confidence, perseverance

beyond these initial stages toward success and long term growth is likely to prematurely wither.

With resiliency, as well as its antecedent assets, risk management strategies, and adaptational processes, acting as cushioning mechanisms against failure, despair, other overwhelming cognitions and emotions, individuals are likely to be more determined to overcome the obstacles they face, and prepared to take the necessary actions to accomplish their goals. Risks involved in pursuing new strategies and contingency plans are likely to be viewed as opportunities for accomplishment and success, instead of threats and fear factors. Obstacles are likely to be perceived as milestones, and intermittent failures are likely to be perceived as turning points and road signs on the way to long-term success. In other words, the developmental process of resiliency is likely to also complement the agency and pathways components of hope.

On the other hand, when faced with detrimental failures that can take their toll on managers' and employees' performance and morale, as well as their self-efficacy and hope, an optimistic attributional style seems to be one of the very few final resorts for taking the sting out of failure, allowing these situations to be viewed as external, temporary and non-pervasive. Such attributions permit individuals to get past their failures, viewing them as unconquered battles, rather than terminally lost wars. Resiliency is likely to play an integral role in sustaining these attributions long enough for the bitterness of failure to be mitigated, which then gives room for the objective analysis of the causes for failures in the future. This in turn increases the chances of failures to become causes for long-term growth and development, i.e., bouncing back to

higher levels of veritable performance and sustained success (Reivich and Shatte, 2002; Sutcliffe & Vogus, 2003).

When viewed in light of these conceptual foundations, the role of resiliency as a foundational and complementary positive psychological capacity for self-efficacy, hope and optimism becomes apparent. In order to test these theory-driven propositions, several hypotheses need to be derived. If resiliency indeed plays a role that is additive and of a complementary nature to self-efficacy, hope and/ or optimism, resiliency needs to contribute unique variance in performance and attitudinal outcomes, over and above that which is contributed by each of the individual positive psychological capacities, after controlling for various organizational and individual exogenous variables. Therefore, the following set of hypotheses is derived:

Hypothesis 6a. Resiliency will significantly contribute to the variance explained by self-efficacy in performance and attitudinal outcomes.

Hypothesis 6b. Resiliency will significantly contribute to the variance explained by state hope in performance and attitudinal outcomes.

Hypothesis 6c. Resiliency will significantly contribute to the variance explained by optimism in performance and attitudinal outcomes.

As discussed earlier in this section, the various positive psychological capacities seem to have related, yet conceptually unique contributions to managers' and employees' much-needed positivity, and to exhibit differential impact on various performance and attitudinal outcomes. This is in line with the positive psychological capital model, recently proposed to be integral for sustainable competitive advantage in today's workplace (Luthans et al., 2004, Luthans & Youssef, 2004). Sustainable competitiveness

necessitates adopting the broader perspective that integrates the multiple facets of performance, including productivity, as well as attitudinal outcomes such as job satisfaction, work happiness and organizational commitment. In other words, organizations that pursue long-term success and effectiveness, or even sound, unshaken survival prospects, will need to ensure that their managers' and employees' contributions are warranted not only in terms of higher current performance, but also in terms of future performance indicators such as job satisfaction, work happiness, and organizational commitment. To operationalize this perspective, in this phase of the analysis, the composite index of performance and attitudinal outcomes is consistently used.

Moreover, for that broader perspective to be supported, an all-encompassing view of people's positive psychological capacities is also necessary. The unique contribution, differential effect, and complementary nature of each of the positive psychological capacities is vital for explaining the broad, integrated set of outcomes proposed above. This implies that when attempting to analyze a broadly conceived set of performance and attitudinal outcomes, a holistic view of positive psychological capital is necessary and warranted. Based on this argument, the following hypothesis is derived:

Hypothesis 7. The variance explained by the positive psychological capital index of the composite outcomes will be higher than that explained by any of the above-tested individual or paired positive psychological capacities.

Finally, in order to test the foundational nature of resiliency for the development of self-efficacy, hope and optimism, as well as their impact on performance and attitudinal outcomes, resiliency needs to exhibit an indirect relationship with those

outcomes, while self-efficacy, hope and optimism need to exhibit a more direct, proximal relationship. Based on these propositions, the following hypothesis can be derived.

Hypothesis 8. The relationship between resiliency and performance and attitudinal outcomes will be fully mediated by self-efficacy, hope, and optimism.

PHASE 2: TESTING THE ALTERNATIVE MODEL

As reported in Chapter 3, sample B constituted 484 individuals (121 managers and 363 employees) and was completed during the spring of 2003. For this analysis, managers and employees were combined into one sample. Data was collected from various units in 45 different, primarily Midwestern organizations, and four different sectors: private services (52.9%), public services (39.7%), manufacturing (5%), and other (1.7%). Organizational size varied from 6 to 700,000 employees (mean=16,156). Branch size varied from 4 to 2000 employees (mean=133). The number of employees directly reporting to participating managers ranged from 4 to 200 (mean=18). These organizational variables were controlled for in this study.

Descriptive Statistics of Study Participants

The descriptive statistics of the participants in sample A are presented in Table 8. As shown, 45% of the participants were male and 55% female. 87% of the participants identified themselves as Caucasian, but other ethnic groups were also represented. Participant ages ranged from 19 to 72 years (mean=29.3), with 4 to 24 years of education (mean=15.7) and .04 to 40 years tenure with the organization (mean=4.8). These individual variables were controlled for in this study.

Scale Reliabilities & Factor Analysis

Study variables that were measured using standardized scales were calculated by reverse coding reverse scored items and then summing the relevant items (excluding fillers). These variables included self-efficacy, hope, optimism, resiliency, job satisfaction, work happiness, and organizational commitment. Reliabilities of these scales are reported in Table 9. As shown, in this study, the standardized scale reliability coefficients of the study variables had an impressive range of .76 to .89 (Kline, 1998).

In addition, a Principal Component Factor Analysis with Varimax rotation was performed on the items constituting the four scales that measure self-efficacy, hope, optimism, and resiliency. As shown in Table 10, when four factors were extracted, most of the scale items loaded on their respective factors, supporting the uniqueness of the underlying constructs. In addition, as shown in Table 11, the first-order correlations between these variables did not exceed 0.6 (Kline, 1998).

Variable Calculations and Consistency Checks

An overall index of outcomes was created by adding the z-scores of the various individual outcomes (performance, employee job satisfaction, employee work happiness, and employee affective commitment). Another overall index was created for Positive Psychological Capital (PPC) by adding the z-scores of self-efficacy, hope, optimism, and resiliency of the participants. Before integrating the components of the outcomes index, the various measures of each component delineated in chapter 3 were correlated to ensure consistency in the same way presented in Table 5 for Sample A, and again were found to be highly correlated at the 0.01 level, as shown in Table 12.

Assessment of Data Normality

In addition to the descriptive statistics of the study variables, Table 13 provides an assessment of the data normality of these variables. As shown, none of the skewness or kurtosis standard errors exceeded ± 2 , indicating that all the study variables are likely to be normally distributed.

Testing of Hypotheses

In order to test hypotheses 6a – c, three hierarchical regression analyses were used, in which each of the positive psychological capacities (except resiliency) was entered in step 1 of each analysis, along with the control variables. Resiliency was then entered in step 2, to test whether it adds unique variance. As shown in Table 14, in each case, resiliency explained significant additional variance over and above that explained individually by self-efficacy, hope and optimism. Therefore, hypotheses 6a, 6b and 6c were fully supported.

To test hypothesis 7, the composite index of positive psychological capital was regressed on the composite measure of performance and attitudinal outcomes, as well as the organizational and individual control variables. As shown in Figure 6, similar to the post-hoc findings from Sample A, testing this model (while controlling for the same organizational and individual variables described earlier) using Sample B results in an R^2 of .309 ($p=.000$), which is higher than the variance explained in any of the individual or paired components of positive psychological capital tested earlier. Therefore, hypothesis 7 was fully supported.

Finally, to test for the foundational nature of resiliency and thus the mediation of self-efficacy, hope and optimism for the relationship between resiliency and outcomes

(hypothesis 8), another hierarchical regression analysis was performed, in which resiliency was entered in the first step, and self-efficacy, hope and optimism were entered in the second step. As shown in Table 15, self-efficacy, hope and optimism were supported as a full mediators of the relationship between resiliency and outcomes, as indicated by the significant R^2 change, the significant standardized regression coefficient of resiliency in step 1, and the non-significant standardized regression coefficient of resiliency after including self-efficacy, hope and optimism in step 2, which all had significant standardized regression coefficients. Thus, hypothesis 8 was fully supported. To keep this analysis in line with the path-analytical approach adopted in this dissertation, the path coefficients of this model were also assessed, and are depicted in Figure 8.

SUMMARY OF RESULTS

In this two-phased study, alternative path models were tested using two samples. When the initial model was tested using Sample A, the overall fit of the model was supported, but the hypothesized paths were partially supported. To summarize the findings of the first phase of this study, hypothesis 1 was fully supported, as the path from leaders' hope to their efficacy was significant. Hypothesis 2 was not supported, as the path from leaders' optimism to their efficacy was not significant. Hypothesis 3 was partially supported. While self-efficacy was hypothesized to fully mediate the relationship between leaders' hope and optimism and their resiliency, significant paths to leaders' resiliency exist from both hope and self-efficacy, suggesting that self-efficacy only partially mediates the relationship between leaders' hope and resiliency. Hypothesis 4 was not supported, as the path from leader to employee resiliency was not significant,

although the squared multiple correlation coefficient was significant. However, most of the variance explained at this step can be attributed to control variables (e.g., employee education, unit size). Hypothesis 5 was mostly supported, as employee resiliency was the sole predictor of employee performance, job satisfaction, work happiness and organizational commitment in the model. However, due to the lack of support for hypothesis 4, the mediating role of employee resiliency (the cascading effect) was not supported.

To summarize the findings of the second phase of this study, Hypothesis 6 was fully supported, as resiliency was found to explain additional variance in outcomes beyond that explained by self-efficacy, hope and optimism. Hypothesis 7 was fully supported, as the positive psychological capital index explained more variance in outcomes than that explained by any of the individual or paired positive psychological capacities. Hypothesis 8 was supported, as self-efficacy, hope and optimism were found to fully mediate the relationship between resiliency and outcomes.

Overall, the findings of this study support the unique contribution of resiliency in enhancing manager and employee performance, job satisfaction, work happiness and organizational commitment. Resiliency is also shown to perform additive, synergistic and foundational functions, which, when combined with the roles of self-efficacy, hope and optimism, lead to higher levels of performance and attitudinal outcomes.

CHAPTER 5: DISCUSSION AND IMPLICATIONS

Due to the rarity of established resiliency literature and the lack of a coherent conceptual model for resiliency development in organizational settings, the first purpose of this dissertation was to conceptually build a multi-level resiliency development theory that ties organizational resiliency development to managers' and employees' positive psychological capacities, which in turn would impact various performance and attitudinal outcomes. The second purpose of this dissertation was to empirically test alternative causal models that can explain the resiliency development process and the role of resiliency in contributing to performance and attitudinal outcomes at the individual level.

To operationalize these broad goals, this dissertation attempted to answer several specific questions. These included whether resiliency can be developed, how it can be developed, and what the outcomes of the development of resiliency, as well as other positive psychological capacities such as self-efficacy, hope and optimism, can be in terms of performance and attitudinal outcomes. A question regarding a contagion effect for resiliency was also explored.

This chapter presents a general discussion of the results of this two-phased study. This is followed by an analysis of the strengths and limitations of the study, as well as its implications for future research and management practice.

DISCUSSION

Resiliency is “the positive psychological capacity to rebound, to ‘bounce back’ from adversity, uncertainty, conflict, failure or even positive change, progress and increased responsibility” (Luthans, 2002a: 702). The results of both phases of this study provide strong support for the important role that resiliency at the individual level plays

in enhancing performance, job satisfaction, work happiness, and organizational commitment. This linkage is evident in both phases of the study, as well as in the numerous alternative models tested in this dissertation on two, relatively large and diversified samples.

The partial support and overall fit of the initially proposed causal model for resiliency development at the individual level (Figures 2, 3 and 4) indicates that leaders' self-efficacy and hope are strongly related to their resiliency. Theory-based developmental approaches for self-efficacy are highly established, and many of them have been successfully implemented in organizational settings (e.g., Bandura, 1997; Stajkovic & Luthans, 1998a), as discussed in the implications section of this chapter. This would facilitate the transition from developing self-efficacy for various workplace tasks and situations as a context-specific state, to also developing a strong, resilient psychological foundation that can enhance people's abilities to deal with and grow through adversities, change and uncertainty, across various situations over time.

Similar to resiliency, hope is just emerging in the management literature (e.g., Adams et al., 2002; Jensen & Luthans, 2002; Luthans & Jensen, 2002). However, with its two components of agency and pathways, the conceptual linkage and complementarity between hope and self-efficacy is evident. If hope encompasses both "efficacy expectancies" and "outcome expectancies," (Bandura, 1997; Luthans, 2002a, 2002b; Snyder, 2000), this implies that building hope would also enrich self-efficacy, a relationship that was empirically supported in this study. Moreover, agency and pathways seem to be necessary for the perseverance, sustenance, and eventual "bouncing back" that constitutes resiliency.

These findings reinforce recent conceptualizations of the additive and synergistic nature of the positive psychological capital model (Luthans et al., 2004; Luthans & Youssef, 2004; Stajkovic 2003). Especially evident from the post-hoc results of Phase 1, as well as the results of Phase 2 of this study (Figures 6 and 7), the variance explained in performance and attitudinal outcomes by the self-efficacy, hope, optimism, and resiliency combined (32.6% in Sample A, 30.9% in sample B) is higher than that explained by any subset of these positive psychological capacities. This implies that positive psychological capital may have a similar or even higher impact on performance, job satisfaction, work happiness, and organizational commitment than established performance enhancement initiatives such as goal-setting (Locke, 2000) and behavior modification (Stajkovic & Luthans, 1997, 2003), as well as widely recognized personality traits such as conscientiousness (Barrick & Mount, 1991).

A key finding in this study is the differential impact of the positive psychological capacities of self-efficacy, hope, optimism, and resiliency on various performance and attitudinal outcomes. The post-hoc analyses of Sample A (Figure 5) demonstrate that while all four positive psychological capacities are impactful on all four outcomes, self-efficacy and hope seem to exhibit a more direct impact on performance. Moreover, self-efficacy, hope and optimism exhibit a more direct impact on job satisfaction and organizational commitment. On the other hand, resiliency, hope and optimism are more directly related to work happiness. These findings provide insightful guidelines for management researchers and practitioners as to which variables seem to be more relevant for manipulation, contingent upon the desired outcomes, as determined by the organization's strategic orientation. However, for building sustainable competitive

advantage, the role positive psychological capital as an integrated social cognitive composite is supported, although the above findings may provide guidelines regarding prioritizing the developmental initiatives of the various positive psychological capacities, which again should be in line with the immediate and long-term goals of the organization.

Clearly, in most cases, the role exhibited by resiliency seems to be more foundational in nature. As a long-term developmental process (e.g., Egeland, Carlson, & Sroufe, 1993; Klarreich, 1998), the impact of resiliency on performance and attitudinal outcomes seems to be indirect in comparison to that of self-efficacy, hope and optimism (Figures 5 and 8). Resiliency is operationalized into day-to-day actions through the role that the resiliency development process plays in enhancing managers' and employees' self-efficacy, hope and optimism. Utilizing asset-focused, risk-focused and process-focused strategies (Masten, 2001; Masten & Reed, 2002), resilient organizations can enhance their members' resiliency over time. An upward spiral of positivity despite adversities and uncertainty accompanies the resiliency development process (Reivich and Shatte, 2002; Sutcliffe & Vogus, 2003). This upward spiral is likely to translate into daily experiences of success, enhanced adaptational and contingency planning capacities, and positive perceptions and attributions, supported by effective social and psychological support, which are all necessary factors for the development of self-efficacy, hope and optimism, which in turn exhibit a direct impact on performance and attitudinal outcomes.

ANALYSIS OF STUDY STRENGTHS AND LIMITATIONS

Overall, this study has provided strong and compelling support for the integral role of the often-neglected positive psychological capacity of resiliency in organizational

settings. Furthermore, in line with the positive spirit of this dissertation, a proactive initiative is taken to construct for the first time a multi-level resiliency development model that focuses explicitly on organizational settings, and adopts a multidisciplinary perspective that reflects the complexity of the long-term journey for developing resiliency. In conjunction with the path-analytical methodology utilized, the approach adopted for this dissertation is optimal for conceptualizing and testing complex theory-driven causal models, while maintaining parsimony. The variety of statistical methods utilized, as well as the use of two separate data sets, permitted for alternating between several simpler and more complex models, allowing for the best-supported model to prevail.

Internal validity of this study is relatively high for several reasons. First, the conceptual models utilized in this study are all theory-driven. The multidisciplinary perspective adopted allowed for the extrapolation of the established research on resiliency in the child and adolescent psychology literature, along with the strong research support for self-efficacy, and the emerging research on hope and optimism. In addition, the utilization of path-analysis provides initial support for the direction of causality across the study variables. The use of established standardized scales to measure the study variables also reduces the chances for the instrumentation threat of internal validity. Although randomization (selection/ assignment) was not possible in this study, the consistency of the study findings across the two phases despite being collected from different organizations and at different (but relatively close) time periods reduces the chances for several threats to internal validity, including history and selection.

Finally, the cross-sectional design of this study precludes various threats to internal validity such as testing, maturation, attrition, and statistical regression.

On the other hand, although path-analysis permits the testing of theory-driven causal models, only findings of longitudinal, experimental and/ or quasi-experimental research, repeated over time and across samples, can fully support causal relationships. This is also evident from the relatively unstable nature of the causal relationships across the positive psychological capacities (Figure 5), which in this dissertation was attributed to differential causal structures across dependent variables, but which can arguably be attributed to the high correlations between the study variables, masked into significant “causal” paths. In that respect, the internal validity of this individual study can only provide two supporting points along the continuum of confirming evidence for the relationship between positive psychological capital and performance and attitudinal outcomes. The utility of these cross-sectional findings is in the valuable insights they provide for future longitudinal and experimental research.

External validity of this study is also enhanced by several factors. The diverse nature of the two samples utilized in this two-phased study, in terms of industry, company, branch and unit size, as well as participant characteristics, allows for generalizability across a wide range of organizational populations. The consistency of the findings across the two samples also supports the external validity of the study. On the other hand, the utilization of a convenience sample, as well as the sampling process of selecting (mostly non-randomly) only three associates for each manager (rather than surveying all or a random sample of associates per manager), pose threats to external

validity. This is especially true if generalizations are to be made across cultures, or even if extrapolations are to be made to non-Midwestern organizations.

Construct validity of this study was highly enhanced by the utilization of standardized measures for most of the study variables. The high reliabilities of these scales, which are consistent with the established literature and track record of these measures, significantly increase the construct validity of this study. Moreover, controlling for social desirability, especially with constructs that are as positive in nature as the independent variables in this study, also enhance construct validity. In addition, research supports the convergent and discriminant validity of the various positive psychological capital components (Magaletta & Oliver, 1999), and the empirical evidence from this study supports this simultaneous convergence and divergence. On the other hand, the relatively high (although acceptable) correlations between self-efficacy, hope, optimism, and resiliency, still necessitate future measures to ensure the construct validity of each of these variables, as well as that of positive psychological capital as an integrated construct.

Attempts were made to mitigate the various method biases, commonly evident in survey research. Through the consistency checks across managers and employees, especially with respect to the dependent variables, single-source bias was reduced. Moreover, several items on the survey were used to collect the data related to performance, which was not measured using a standardized scale, and for which no objective data was available. This was also supplemented by the utilization of the broader perspective that incorporates a wider range of performance and attitudinal outcomes (Dess & Robinson, 1984), some of which were measured using standardized scales.

However, the exclusive use of surveys implies that the study results may incorporate single-method biases.

Statistical conclusion validity in this study is also relatively high. With two relatively large samples (N=522 for sample A and N = 484 for sample B), the acceptable statistical power of .8 (Cohen, 1988) can be achieved, which enhances the ability of this study to detect even effect sizes as small as $.18\sigma$ (Lipsey, 1990). These “small” effect sizes are common, but they usually go undetected in underpowered research, especially in management (Mazen, Graff, Kellogg, & Hemmasi, 1987), applied psychology (Chase & Chase, 1976), and social psychology (Cohen, 1962). Moreover, the high reliability of the measures utilized in this study also enhances statistical conclusion validity. In addition, many possible extraneous sources of variation have been controlled for, which further increased the statistical conclusion validity of the study.

On the other hand, the partial support of the proposed model, especially the lack of support for the contagion or trickle down effect of resiliency from leaders to associates (Hypothesis 4), may be attributed to at least two causes that imply limitations on statistical conclusion validity. First, the overall fit of the model, as well as the significant squared multiple correlation coefficient (R^2) for the causal linkage between leaders' and employees' resiliency indicates that there is likely to be one or more mediating or moderating factors for this relationship. Since two-way, three-way and four-way interactions between the various study and control variables were explored and found not to be significant, this implies that there could be other mediating and/ or moderating variables that were not incorporated in this study. Without exploring this possibility, the cascading effect of resiliency cannot be excluded.

Another possible reason for the partial support of the model can also relate to statistical power. When distinction was initially made between managers and employees, and their variables were connected as shown in the proposed model, this has resulted in a valid N of 341 “dyads” (N=136 units in case an “average leadership style” is used). With 341 cases, and to achieve Cohen’s acceptable statistical power of .8, only an effect size of $.22\sigma$ or larger can be detected. With 136 cases (if the “average leadership style” approach was used) only an effect size of $.35\sigma$ or larger can be detected. In other words, the linkage between leaders’ and employees’ resiliency may have been supported with a larger number of dyads or units.

The last potential statistical conclusion validity limitation of this study is possible violation of some statistical test assumptions. Path-analysis assumes that residuals are uncorrelated with the variables in the model or with each other (Kline, 1998), which is rarely the case in social research. Moreover, path-analysis also assumes perfect reliability, i.e., variables are measured without error. Owing to the nature of the data collection approach of the study (surveys), as well as the high correlations between the study variables, the potential exists for these assumptions to have been violated. This threat may explain the lack of support for the linkage between leaders’ optimism and their self-efficacy (Hypothesis 2). Most importantly, this threat may also challenge the foundational nature of resiliency, conceptually and statistically supported in this study (Figures 5 and 8), in favor of the also-supported positive psychological capital model (Figures 6 and 7), with resiliency playing an additive, complementary and synergistic role along with self-efficacy, hope and optimism. In the next section, recommendations are

presented for future research that can help refine the conceptual understanding and empirical assessment of the role that resiliency truly plays in the workplace.

IMPLICATIONS FOR FUTURE RESEARCH

This study represents an enormous first step on the long journey to resiliency development, and on the long road to conceptualizing and testing the resiliency development process for organizations, leaders and employees. Conceptualized in this study is the first multi-level multi-disciplinary resiliency development theory, which presents an immense number of opportunities for future research. Moreover, at least three alternative theory-based conceptual frameworks were empirically tested using relatively large samples of practicing managers and their associates in real organizational settings, and utilizing several statistical analysis techniques.

It is evident that in line with the social cognitive theory (Bandura, 1986, 1997), a comprehensive understanding of the interaction between the person, behavior, and social context (organization) is necessary for explaining human behavior in organizations. Along with the foundational research in developmental psychology, this indicates the priority that should be placed on understanding and testing resiliency at the organizational level, which was conceptually supported but not empirically tested in this study. The conceptual framework depicted in Figure 1 can be utilized as a starting point.

This model lends itself to both quantitative and qualitative research methodologies. Quantitatively, aggregation methods such as WABA and Hierarchical Linear Modeling can be utilized to study the multi-level nature of resiliency. Qualitatively, studying the various organizational assets (structural, technological, human, and social), risk management techniques, organizational values, and adaptational

processes that organizations utilize to enhance their flexibility and ability to deal with change and uncertainty, can enhance the understanding in the field about the characteristics of organizational contexts that are conducive to resiliency development, as well as the dynamics of the resiliency development process.

Importantly, the various conceptual models supported and tested in this dissertation present notable opportunities for quasi-experimental interventions. Owing to the state-like and thus developmental nature of self-efficacy, hope, optimism, and resiliency, as well as the presence of established approaches for developing each of these positive psychological capacities, the documented support for the relationship between positive psychological capital and performance and attitudinal outcomes warrants the need for workplace interventions. These interventions should focus on developing one or more, but preferably all of these positive psychological capacities, and assessing the real impact on performance and attitudinal outcomes. Guidelines for developing each of these capacities are presented in the next section.

Workplace interventions are not limited to the individual level of analysis. Opportunities are also presented for macro researchers to design and test interventions at the organizational level. These interventions can test the impact of various organizational interventions, including strategic management initiatives, as well as organizational development approaches that can enhance organizational learning and enrich organizational values and culture.

Furthermore, the scope is unlimited for studying additional positive psychological capacities that can contribute to workplace performance and effectiveness. The demand for positivity is likely to exponentially increase in the years to come, as adversities and

uncertainties continue to pull our business environment toward negativity and fear of failure. This presents a wide set of opportunities for researchers who are interested in diverting their focus away from the predominantly negative orientation of the field, toward a more positive perspective that enriches the understanding of human capacities, cognitions, emotions, and behaviors in organizations.

Additional research is consistently needed to enhance the generalizability of the findings in this study. Similar survey research replications, utilizing established standardized scales and appropriate controls, can provide very useful insights for testing the role of positive psychological capital in various contexts. For example, both samples utilized in this study were predominantly Caucasian managers and employees from Midwestern service organizations. Further research can explore the possibilities of extrapolating the findings of this study to more diverse organizational populations, to non-Midwestern organizations, to manufacturing and other contexts, and, most importantly, to cross-cultural contexts. These replications may then guide further interventional research in different contexts, taking into consideration the convergence and divergence of study findings.

Finally, alterations to the research design can be performed when replicating this study, taking into consideration the various strengths and limitations analyzed earlier. For example, additional control variables can be incorporated, and their mediating and/ or moderating roles for the various causal linkages can be assessed. Moreover, alternative statistical methodologies can be implemented to better understand the unique contribution of the various positive psychological capacities, both individually and in combination as positive psychological capital. For example, structural equation modeling permits the

testing of variables with correlated error terms, and allows for empirically assessing the possibility that self-efficacy, hope, optimism, resiliency, and possibly other positive psychological capacities, may in fact be subconstructs that load of a latent variable, which in this situation may be positive psychological capital. The same approach can be applied to various workplace outcomes. This will allow for testing the contribution of positive psychological capital to workplace outcomes, while controlling for the high correlations between the variables and their residuals. Results of such studies can enhance understanding of the role of positive psychological capital in the workplace, as well as the causal mechanisms that connect the various positive psychological capacities to workplace outcomes.

IMPLICATIONS FOR MANAGEMENT PRACTICE

This dissertation has numerous implications for the actual practice of developing resiliency in the workplace. These implications can be classified into at least two major developmental levels. The first emphasizes the salience of organizational-level resiliency as the context within which the resiliency of leaders and employees can be developed. The second is a proposed program for developing resiliency at the individual level, emphasizing the leader resiliency development process, but which can also be transferred to members at various levels of the organization.

The Salience of the Context: Organizational-Level Resiliency

A point to again emphasize here is that resilient organizations are key to developing resilient leaders and employees. The opposite, however, may not be true. Merely selecting resilient leaders and employees on the basis of their assets and values is not sufficient to create and maintain resiliency at the organizational level. On the other

hand, organizational assets, risk factors, values, and buffering processes are all important antecedents for organizational resiliency, which in turn is a contextual precondition for leaders' and employees' resiliency. Many of the organizational assets discussed earlier, such as structural capital, knowledge management, communication and various best practices, as well as buffering processes such as organizational learning, strategic renewal and organizational alignment, can enhance individual level resiliency. These organizational factors can help compensate for individual level deficiencies and risk factors.

Organizational risk factors that can curtail organizational resiliency can also hinder the development of its members' resiliency. For example, lack of effective placement and succession planning systems can result in poor matching between people and positions, which, particularly in leadership positions near the top of the organization, can both threaten organizational resiliency and effectiveness, and reduce individual level satisfaction, commitment, and performance. This in turn can reduce leaders' and associates' hope, optimism and self-efficacy. For example, organizational contexts with a high, unmanaged emotional labor content can result in stress, emotional dissonance, and burnout (e.g. Morris & Feldman, 1996). These dysfunctional outcomes all exert negative influences on leaders' and associates' physiological and psychological health with resulting deterioration of their resiliency. However, sufficient buffering processes such as social support, sense of mission, and recognition, have been shown to enhance managers' resiliency, even in such high-pressure, stressful contexts (Zunz, 1998).

Organizational values are also of major importance in enhancing resiliency, not only at the organizational, but also at the individual level. Since values and beliefs draw

their significance from their stability and the fact that they are larger than one's self (Seligman, 1998a), it follows that organizational values may have a stronger impact on leaders' resiliency than their own, self-constructed values and beliefs. The visions, missions, and values of resilient organizations "change very little over the years and are used as scaffolding in times of trouble" (Coutu, 2002: 52). They tend to go beyond any one single person or situation, offering ways for interpreting and shaping life situations.

Developing and Managing Leaders' Assets, Risk Factors and Values

One of the primary criteria of the positive organizational behavior approach is that the psychological capacities such as resiliency must be developable states (Luthans, 2002a, b). The antecedents shown in Figure 1 are the foundation upon which leaders' resiliency is built. Many well-established approaches such as training, coaching and mentoring for the enhancement of knowledge, skills, and abilities (and the consequent reduction of risk factors and deficiencies) exist. However, some of the assets and risk factors discussed earlier (e.g., individual differences in personal characteristics and dispositional traits) are hard to change, implying the importance of careful selection and placement. On the other hand, research shows that individual values are possible to alter and align to organizational values through varying perceptions of contextual factors such as the magnitude of consequences (Flannery & May, 2000), interests of group members, and role responsibility (Trevino & Victor, 1992).

Developing and Managing Leaders' Self-Efficacy

Drawing from Bandura's (1997) four approaches of mastery experiences (performance attainments), vicarious learning (modeling), social persuasion, and psychological and physiological arousal, Luthans and colleagues (2002) present specific

recommendations for developing leaders' self-efficacy. With respect to mastery experiences, they recommend that leadership training exercises and on-the-job training should focus on allowing leaders to experience success. Career planning should also be carefully designed to lead to mastery and success. However, they warn that success should be a challenging, rather than an easy accomplishment, so that it can accomplish its purpose of building efficacy. Maddux (2002) also emphasizes the importance of concrete, specific and proximal goals and strategies. He suggests the use of "guided mastery," as would be found in effective coaching of developing leaders.

Regarding modeling and vicarious learning from successful others, Luthans and his colleagues (2002) recommend that the developing leader be assigned to shadow a successful mentor, and/ or that they watch relevant models effectively handling and solving realistic leadership situations in the context of experiential training sessions. Bandura (1997) also emphasizes the importance of the perceived relevance of the model and the situation for the development of efficacy. In other words, the model should be viewed by the leader being developed as similar to him/herself, and as dealing with situations that are similar to those likely to be encountered. Maddux (2002) also suggests that when actual models and vicarious learning opportunities are not available, "imaginal experience," in which the individual can imagine him/herself succeeding in effectively dealing with difficult situations and challenges, can be used. This can substitute for actual modeling, with the successful self acting as the relevant model.

Another way to build efficacy is through social persuasion and the use of contingent reinforcement (e.g., positive feedback). Again, coaches and mentors can provide such positive feedback and reinforce perseverance and progress. Finally, with

respect to physiological and psychological arousal, Luthans and his colleagues (2002) draw attention to the importance of the physical and psychological fitness of developing leaders, which can be achieved through comprehensive wellness programs, as well as stress management approaches.

Maddux (2002) extends the developmental approaches of self-efficacy to include two additional techniques, namely enhancing the impact of success and collective efficacy. In order for performance attainments to be interpreted as success, competence should be viewed as incremental and developable, rather than fixed. Success should be attributed to one's own effort and ability, rather than to external causes. Finally, in cases of severe discouragement, encouragement of "minor distortions in the perception of control" may be necessary, since they can lead to self-confirming efficacy beliefs (Maddux, 2002).

Collective efficacy emphasizes the "social embeddedness of the individual" (Maddux, 2002: 284). This is a case where the resilient organization can be contextually important to building collective efficacy. For example, a resilient organization where goals are mostly shared and accomplished through collaborative thinking, decision making, and effort of groups and teams can result not only in increased collective efficacy, but also contribute to organizational, leader, and associate resiliency.

Developing and Managing Leaders' Hope

As discussed earlier, Snyder, Rand and Sigmon's (2002) recent "full hope model" provides many useful insights into the development of leaders' hope. In particular, leaders' hope can be developed in the same way as suggested by developmental psychology. By rewarding appropriate performance outcomes, as well as the means

utilized to achieve those outcomes, the correlation and causal relationship between individual and organizational goals become established. Rewarding the right means (pathways) and ends (agency) can help in consistently aligning individual goals to the organizational vision, mission, values and objectives, thus resulting in increased hope and in turn work attitudinal and performance outcomes. Veninga's (2000) notion of an organizational "dream" that can capture everyone's enthusiasm and enlist support to build hope seems particularly relevant here. More pragmatically, however, reinforcement should be contingent upon such hope-related behavior (Stajkovic & Luthans, 1997).

Agency thoughts for hope development can be facilitated through delegation and empowerment. Such thoughts are also related to self-awareness, since the individual leader is the "author" of his/ her own decisions, goals, pathways, and outcomes. Finally, through selecting the rewards that are valuable to the leader whose hope is being developed, the valence of desired behaviors and outcomes can be increased and enhance the leader's motivation (Vroom, 1964). Consequently, the continuous iteration of agency and pathways thoughts is triggered and maintained, increasing hope level over time (Snyder, 2000).

One of Snyder's (1995b) practical recommendations for increasing hope in the workplace is through shared goals. For leaders' hope to develop, they should be able to create and share their own groups' goals, rather than simply being tools for making the overall organization's goals happen. Sharing also implies that goals should be negotiated and compromises achieved in order for cooperation to be directed toward agreed upon objectives. Moreover, open lines of communication are vital for sharing both hope and fears. Goals that can help build hope should be clearly defined, realistic, measurable, and

challenging (i.e., stretch goals). In addition, throughout the process of hope development, leaders should be provided with a fair opportunity to achieve their goals, and should be treated “as if they are going to succeed” (1995b: 7). Snyder et al. (2000b) also stress the importance of matching goals to talents and areas of strength.

Snyder and his colleagues (2000a) recommend that even though goals should be slightly high to be challenging, “stepping,” which they define as “breaking down complex long-term goals into several substeps,” is a useful approach to focus attention on “temporally close” goals, and away from “maladaptive preoccupation with unattained long-term goals” (2000a: 138). When progress can be observed, reinforced and celebrated, hope is incrementally, but effectively built. Moreover, through more frequently experiencing success (and getting reinforced for it by self or others), self-efficacy is enhanced as well.

Another approach to building hope that is particularly relevant is “mental rehearsals” (Snyder et al., 2000a). This involves the visualization of important expected events, forecasting of potential obstacles, and mentally picturing possible alternate pathways to overcome those obstacles. Leaders who learn to engage in mental rehearsals are likely to be more prepared to handle blockages, since this type of mental exercise enhances their pathways component of hope. Action planning and what-if analysis are other effective approaches to the development of the pathways component of hope (Luthans & Jensen, 2002; Luthans et al., 2002). Related to this idea is the importance of viewing obstacles as challenges and as a natural part of everyday life that should be anticipated and managed, rather than avoided (Snyder et al., 2000b). Recalling one’s past

successes, as well as the success stories of other role models, can be very helpful, particularly when faced with blockages (Snyder, 1995a).

Snyder does also warn against several pitfalls in the hope development process. A major problem that can result in diminishing hope is overplanning (Snyder, 1995b). Another critical factor is the enjoyment of the journey of trying and learning, not just the outcomes (Snyder et al., 2000b). “Regoaling” when faced with “absolute goal blockage” is also necessary to avoid false hope (Snyder, 1995a).

Developing and Managing Leaders’ Optimism

Schneider (2001) proposes at least three forms of realistic optimism applicable in the context of leadership development. The first form is “leniency for the past.” Leaders should be able to reframe and accept their unchangeable failures and setbacks, giving themselves the benefit of the doubt, and resisting their perfectionist tendencies. The second form is “appreciation for the present,” i.e., contentment and thankfulness about the positive aspects of the current situation, which is particularly relevant to the idea of enjoying the long development journey. The third form is “opportunity-seeking for the future,” which is particularly relevant to the idea of viewing risks as opportunities and challenges, rather than just threats and problems.

Similar to Seligman’s (1998a) view about the importance of meaning (i.e., providing stable values and beliefs), Peterson (2001: 49) highlights the importance of “big optimism,” an optimistic explanatory style with respect to large, general, less well-defined expectations, at higher levels of abstraction, in producing “a general state of vigor and resilience.” He asserts that big optimism can be “cultivated” by finding ways “to harness [it] to a concern with the commons” (2001: 51). For example, he proposes a

return to the emphasis on religion, since religion provides more certainty and value stability. In fact, the relationship has even been established between religiosity and mental health (e.g., Bergin, 1983; Larson, Pattison, Blazer, Omran, & Kaplan, 1986; Ness & Wintrob, 1980), and coping with traumatic experiences (Baron et al., 1996; Gibbs, 1989; Tebbi, Mallon, Richards, & Bigler, 1987). Although these may be beyond the scope of organizational leadership development, recognizing that leaders with spiritual tendencies may have positive outcomes such as optimism may have implications for future exploration and study (Pargament & Mahoney, 2002; Watson, 2000).

Another recommendation by Peterson (2001) is lifestyle change toward reduced stress. Work-life balance, wellness programs, employee assistance programs, and other approaches that aim to reduce risk factors at the individual and the organizational level can be helpful in developing optimism. Peterson (2001) also discusses the role of social learning and vicarious modeling in the acquisition of optimism. This approach was given attention in the context of developing and managing self-efficacy.

Developing and Managing Leaders' Resiliency

There is a general misconception that resiliency is an extraordinary gift; a magical, mystical, rare capacity; a trait that results only from genetic or long term environmental variables (Masten, 2001); or a "super material" that distinguishes survivors from failures (Sutcliffe & Vogus, 2003). Often times resiliency is viewed as an after-the-fact passive adjustment process, manifested in terms of freedom of pathological symptoms subsequent to exposure to otherwise devastating adversities. However, as emphasized in this dissertation, resiliency is a lifelong developmental journey that people

undertake in daily, progressive steps. In other words, resiliency is a process, rather than an end goal (Egeland et al., 1993).

In order to develop resiliency, organizations can adapt the three strategies recommended by Masten and Reed (2002): asset-focused, risk-focused, and process-focused. Risk-focused strategies concentrate on reducing the risks and stressors that can increase the probability of undesired outcomes. For example, organizations provide healthcare benefits, wellness programs and employee assistance programs in order to reduce the probability of physical and psychological risks such as health problems, stress, burnout, alcohol and drug abuse. In production and construction settings elaborate safety regulations aimed at reducing the chances of accidents and injuries are set up.

However, since no organization can shield its employees from all the possible risk factors that they might encounter throughout their personal and work lives, asset-focused strategies emphasize and enhance resources that increase the probability of positive outcomes despite the presence of risks. For example, the development of human, social and positive psychological capital of managers and employees can better equip them to deal with setbacks, both at the personal and at the organizational levels. Effective leadership and adequate resources can also mitigate the impact of adversities. Finally, process-focused strategies involve the mobilization of the power of the adaptational systems necessary for the utilization of one's inventory of assets to manage emerging risk factors. For example, strategic planning and organizational learning can enhance an organization's preparedness to deal with crises through effectively capitalizing on its material and human resources to flexibly and swiftly adapt to new realities.

CONCLUSION

There is no doubt that self-efficacy, hope, optimism, and resiliency, as well as positivity in general, are much needed in today's ever-changing workplace. This study offers initial, well-supported steps towards building, refining and testing a multi-level multi-disciplinary resiliency development theory. Overall, this dissertation supports the integral role of resiliency in organizational settings, and its unique contribution in enhancing manager and employee performance, job satisfaction, work happiness and organizational commitment. Resiliency is shown to perform foundational, additive, complementary, and synergistic functions, which, when combined with the roles of self-efficacy, hope and optimism, lead to higher levels of performance and attitudinal outcomes. These findings highlight the salience and priority that positive psychological capital in general, and resiliency in particular, should receive on the part of management researchers and practitioners aiming to enhance the performance and effectiveness of today's and tomorrow's organizations, leaders and employees.

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APPENDIX

COMPANY INFORMATION SHEET

Company Name:	_____
Industry:	_____
Branch/ Location:	_____
Number of Employees:	
	In the whole company (approx.): _____
	In this branch (approx.): _____
	In this work unit (reporting to the manager surveyed): _____
Contact Person:	_____
Date Surveyed:	_____
Comments:	_____ _____ _____ _____ _____ _____

Directions: Use the list below to answer the following question:

IN GENERAL, WHEN AT WORK, HOW HAPPY OR UNHAPPY DO YOU USUALLY FEEL?

Check the one statement below that best describes your average happiness while at work. Check only one box!

- ? 10. Extremely happy (feeling ecstatic, joyous, fantastic!)
- ? 9. Very happy (feeling really good, elated!)
- ? 8. Pretty happy (spirits high, feeling good)
- ? 7. Mildly happy (feeling fairly good and somewhat cheerful)
- ? 6. Slightly happy (just a bit above neutral)
- ? 5. Neutral (not particularly happy or unhappy)
- ? 4. Slightly unhappy (just a bit below neutral)
- ? 3. Mildly unhappy (just a little low)
- ? 2. Pretty unhappy (somewhat "blue", spirits down)
- ? 1. Very unhappy (depressed, spirits very low)
- ? 0. Extremely unhappy (utterly depressed, completely down)

Work Happiness

Fordyce, M. (1988). A review of research on the happiness measures: A sixty second index of happiness and health. *Social Indicators Research*, 20:355-381.

Now consider your emotions a moment further. On the average, what percent of the time do you feel happy at work? What percent of the time do you feel unhappy at work? What percent of the time do you feel neutral (neither happy nor unhappy)? Write down your best estimates, as well as you can, in the spaces below. Make sure the three figures add up to equal 100%.

ON THE AVERAGE:

The percent of time I feel happy while at work _____ %
 The percent of time I feel unhappy while at work _____ %
 The percent of time I feel neutral while at work _____ %
 TOTAL: _____ 100 %

Directions: There are no correct or incorrect answers to the following questions. Please be as accurate and honest as you can throughout, and try not to let an answer to one question influence your answers to other questions. Indicate the extent to which you agree with each of the following items using the following response format:

- Scale: 1 = Does not apply at all to me**
2 = Applies slightly to me
3 = Applies somewhat to me
4 = Applies very strongly to me

Resiliency

Block, J., & Kremen, A. M. (1996). IQ and ego-resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*, 70: 349-361.

- _____ 1. I am generous with my friends.
- _____ 2. I quickly get over and recover from being startled.
- _____ 3. I enjoy dealing with new and unusual situations.
- _____ 4. I usually succeed in making a favorable impression on people.
- _____ 5. I enjoy trying new foods I have never tasted before.
- _____ 6. I am regarded as a very energetic person.
- _____ 7. I like to take different paths to familiar places.
- _____ 8. I am more curious than most people.
- _____ 9. Most of the people I meet are likable.
- _____ 10. I usually think carefully about something before acting.
- _____ 11. I like to do new and difficult things.
- _____ 12. My daily life is full of things that keep me interested.
- _____ 13. I would be willing to describe myself as a pretty "strong" personality.
- _____ 14. I get over my anger at someone reasonably quickly.

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

Scale: 1 = definitely false 5 = slightly true
 2 = mostly false 6 = somewhat true
 3 = somewhat false 7 = mostly true
 4 = slightly false 8 = definitely true

Dispositional Hope

Snyder, C.R. (2000). *Handbook of hope*. San Diego: Academic Press.

- _____ 1. I can think of many ways to get out of a jam.
 _____ 2. I energetically pursue my goals.
 _____ 3. I feel tired most of the time. F
 _____ 4. There are lots of ways around any problem.
 _____ 5. I am easily downed in an argument. F
 _____ 6. I can think of many ways to get the things in life that are most important to me.
 _____ 7. I worry about my health. F
 _____ 8. Even when others get discouraged, I know I can find a way to solve the problem.
 _____ 9. My past experiences have prepared me well for my future.
 _____ 10. I've been pretty successful in life.
 _____ 11. I usually find myself worrying about something. F
 _____ 12. I meet the goals I set for myself.

Directions: Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true (T) or false (F) as it pertains to you personally:

- (T) (F) 1. It is sometimes hard for me to go on with my work if I am not encouraged. R
 (T) (F) 2. I sometimes feel resentful when I don't get my way. R
 (T) (F) 3. No matter who I'm talking to, I am always a good listener.
 (T) (F) 4. There have been occasions when I took advantage of someone. R
 (T) (F) 5. I'm always willing to admit it when I make a mistake.
 (T) (F) 6. I sometimes try to get even rather than forgive and forget. R
 (T) (F) 7. I am always courteous, even to people who are disagreeable.
 (T) (F) 8. I have never been irked, even when people expressed ideas very different from my own.
 (T) (F) 9. There have been times when I was quite jealous of the good fortunes of others. R
 (T) (F) 10. I am sometimes irritated by people who ask favors of me. R
 (T) (F) 11. I have never deliberately said something that hurt someone's feelings.

Social Desirability

Reynolds, W. (1982). Development of reliable and valid short forms of the Marlowe-Crowne social desirability scale. *Journal of Clinical Psychology*, 38: 119-125.

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes how you think about yourself right now and put that number in the blank before each sentence. Please take a few moments to focus on yourself and what is going on in your life at this moment. Once you have this "here and now" set, go ahead and answer each item according to the following scale:

Scale: 1 = definitely false 5 = slightly true
 2 = mostly false 6 = somewhat true
 3 = somewhat false 7 = mostly true
 4 = slightly false 8 = definitely true

State Hope

Snyder, C.R. (2000). *Handbook of hope*. San Diego: Academic Press.

- _____ 1. If I should find myself in a jam, I could think of many ways to get out it.
 _____ 2. At the present time, I am energetically pursuing my goals.
 _____ 3. There are lots of ways around any problem that I am facing now.
 _____ 4. Right now, I see myself as being pretty successful.
 _____ 5. I can think of many ways to reach my current goals.
 _____ 6. At this time, I am meeting the goals that I have set for myself.

Directions: Listed below are a series of statements that represent possible feelings that individuals might have about the organization for which they work. With respect to your own feelings about the company for which you are now working, please indicate the degree of your agreement with each statement by using the following scale:

Scale: 1 = strongly disagree
2 = moderately disagree
3 = slightly disagree
4 = neither disagree nor agree

5 = slightly agree
6 = moderately agree
7 = strongly agree

Organizational Commitment

Allen, B. & Meyer, J. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63:1-18.

- _____ 1. I would be very happy to spend the rest of my career with this organization.
_____ 2. I'm not afraid of what might happen if I quit my job without having another one lined up. R
_____ 3. I think people these days move from company to company too often.
_____ 4. I enjoy discussing my organization with people outside it.
_____ 5. It would be very hard for me to leave this organization right now, even if I wanted to.
_____ 6. I don't believe that a person must always be loyal to his or her organization. R
_____ 7. I really feel as if this organization's problems are my own.
_____ 8. Too much in my life would be disrupted if I decided to leave this organization now.
_____ 9. Jumping from organization to organization does not seem at all unethical to me. R
_____ 10. I think I could easily become as attached to another organization as I am to this one. R
_____ 11. It wouldn't be too costly for me to leave this organization now. R
_____ 12. One of the main reasons I continue to work for this organization is that I believe loyalty is important and therefore feel a sense of moral obligation to remain.
_____ 13. I do not feel like "part of the family" at this organization. R
_____ 14. Right now, staying with this organization is a matter of necessity as much as desire.
_____ 15. If I got another offer for a better job elsewhere I would not feel it was right to leave here.
_____ 16. I do not feel "emotionally attached" to this organization. R
_____ 17. I feel I have too few options to consider leaving this organization.
_____ 18. I was taught to believe in the value of remaining loyal to one organization.
_____ 19. This organization has a great deal of personal meaning to me.
_____ 20. One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.
_____ 21. Things were better in the days when people stayed with one organization for most of their careers.
_____ 22. I do not feel a strong sense of belonging to this organization. R
_____ 23. One of the major reasons I continue to work here is that leaving would require considerable personal sacrifice – another organization may not match the overall benefits I have here.
_____ 24. I do not think that wanting to be "company man" or "company woman" is sensible anymore. R

Please provide the following information about yourself. Be assured that all responses will be kept strictly confidential, and will not be used for any purpose other than this study. Your complete and candid responses are vital to this project, and are greatly appreciated.

1. Your age: _____
2. Gender: (please circle one) Female Male
3. Ethnic background: (please circle one):
Asian Caucasian Hispanic African American Other _____
4. Total years of formal education completed (e.g., high school graduate=13 years) _____
5. Your position with this organization: _____
6. Your level in the organization (e.g. 1=CEO, 2=VP, etc.): _____
7. Number of levels in the organization (approximately): _____

FIGURE 1: A MULTI-LEVEL RESILIENCY DEVELOPMENT THEORETICAL MODEL

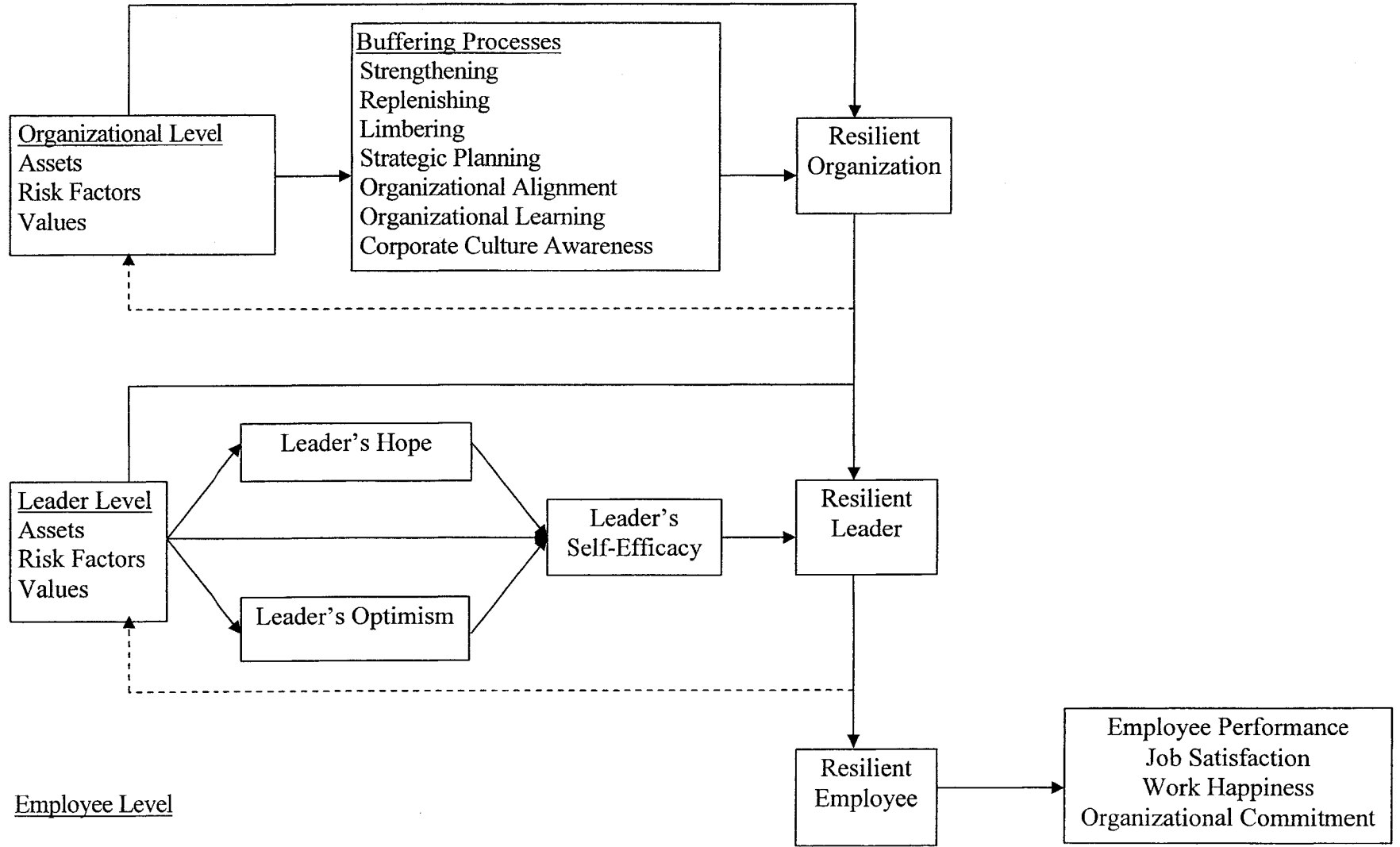


FIGURE 2: EMPIRICALLY TESTED CAUSAL MODEL

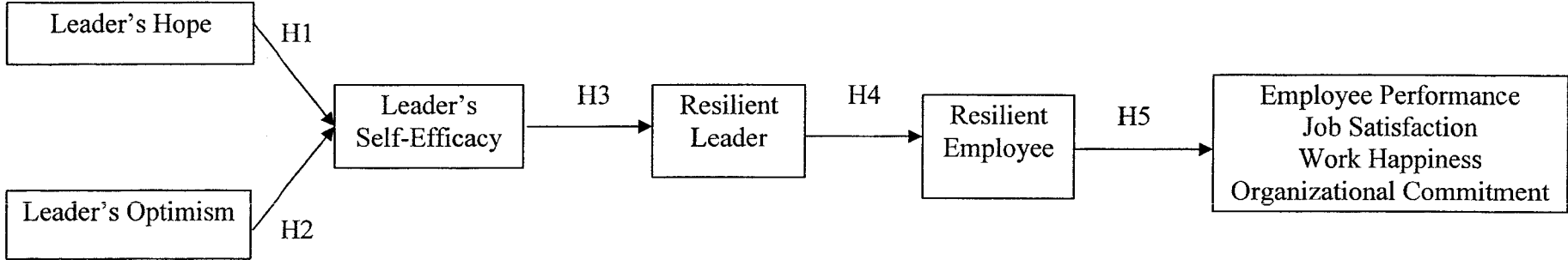


FIGURE 3: PATH ANALYSIS RESULTS - FULL MODEL

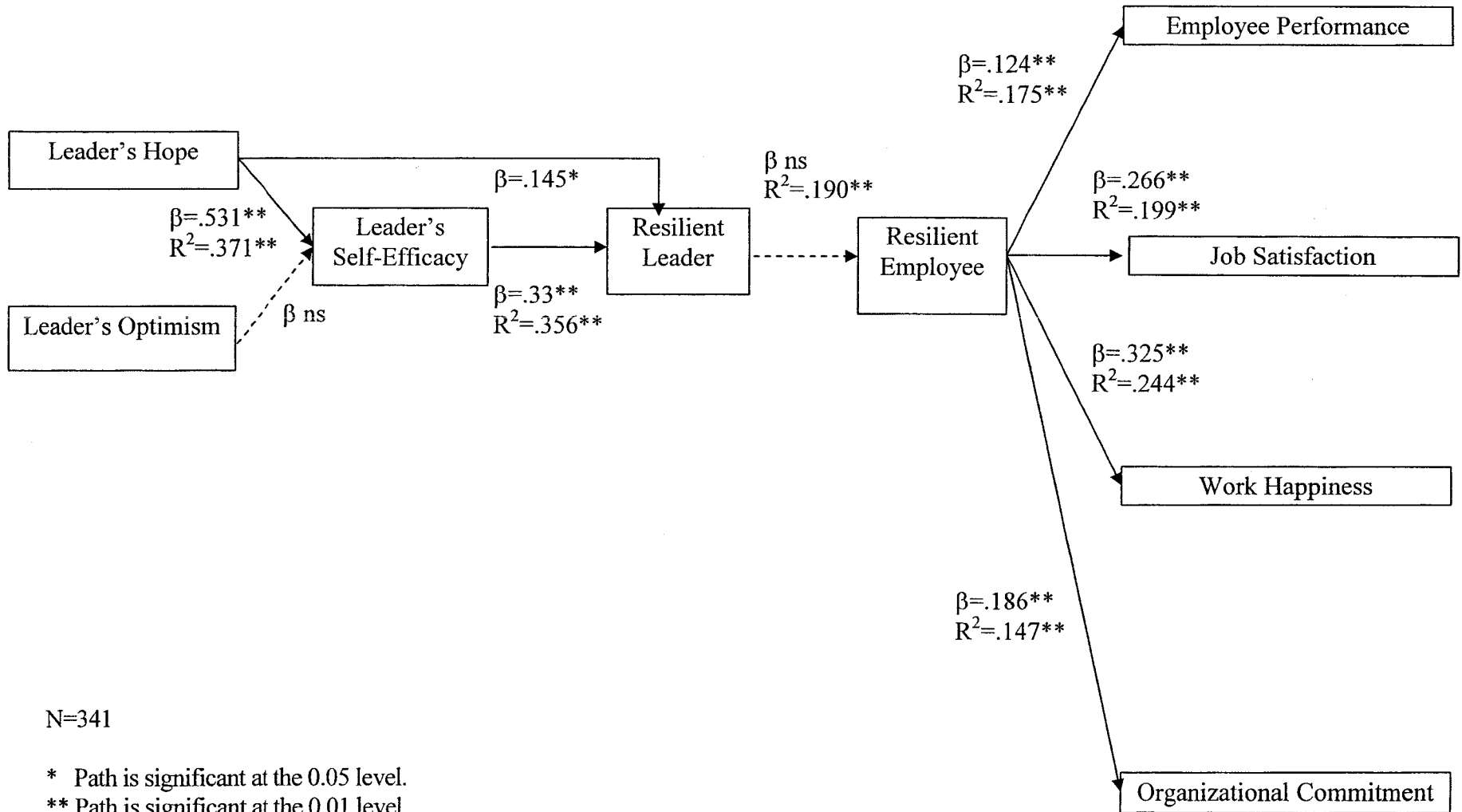
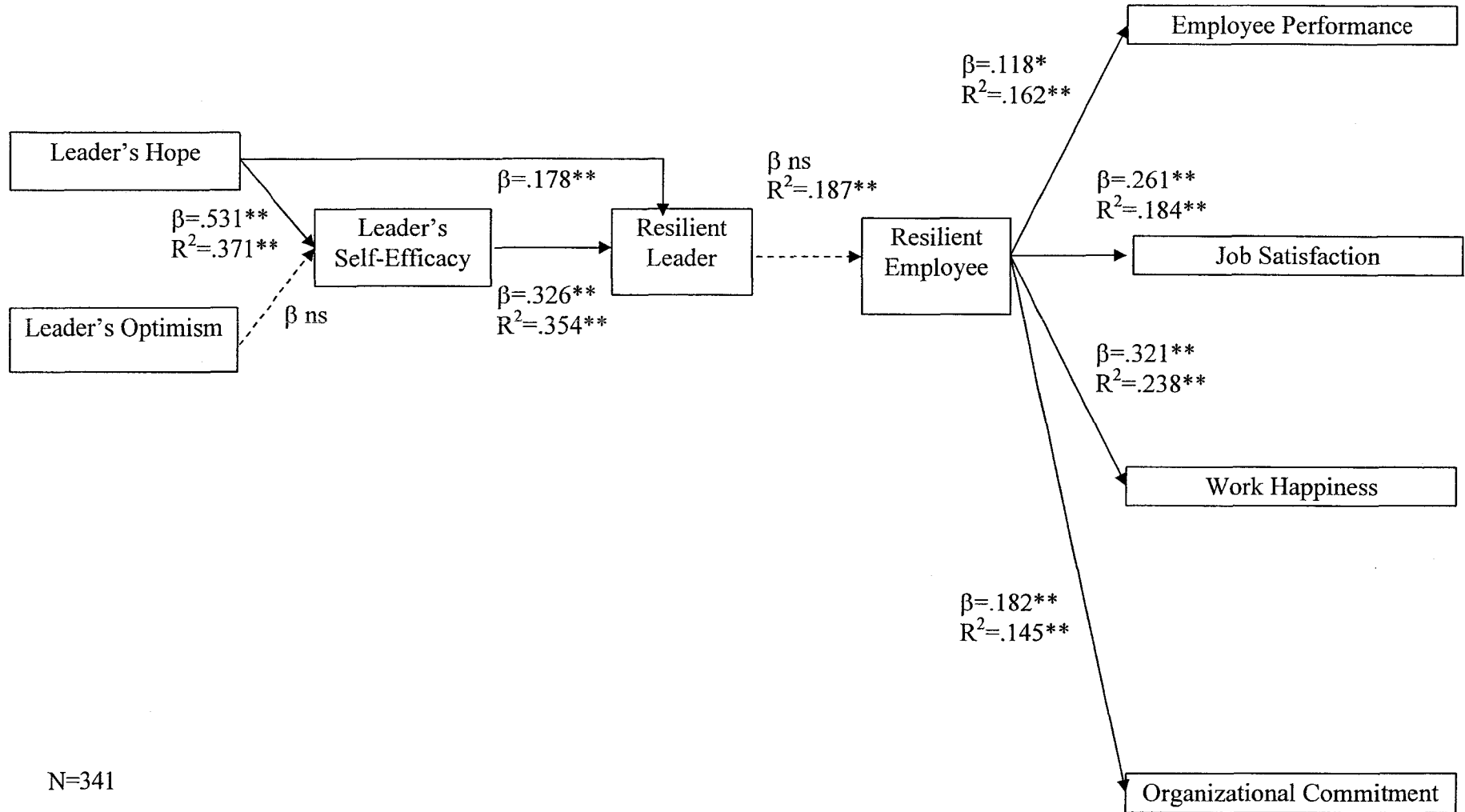


FIGURE 4: PATH ANALYSIS RESULTS - REDUCED MODEL

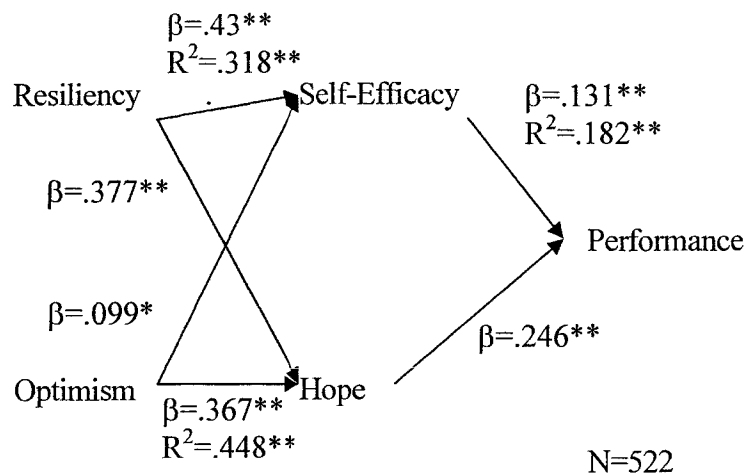


N=341

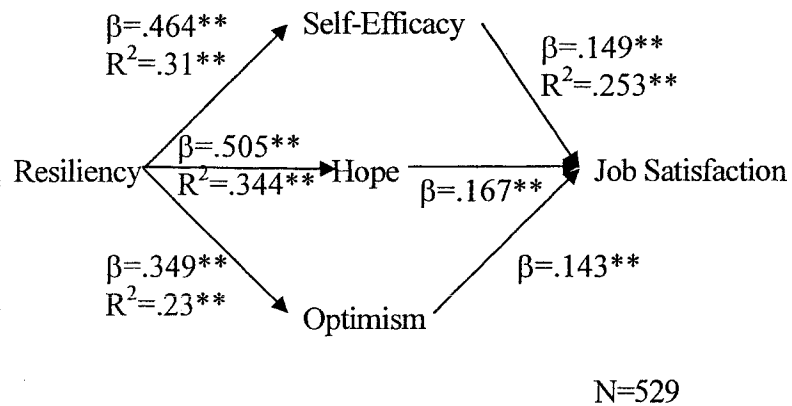
* Path is significant at the 0.05 level.
 ** Path is significant at the 0.01 level.

FIGURE 5: POST-HOC FOLLOW-UP PATH ANALYSES – Sample A

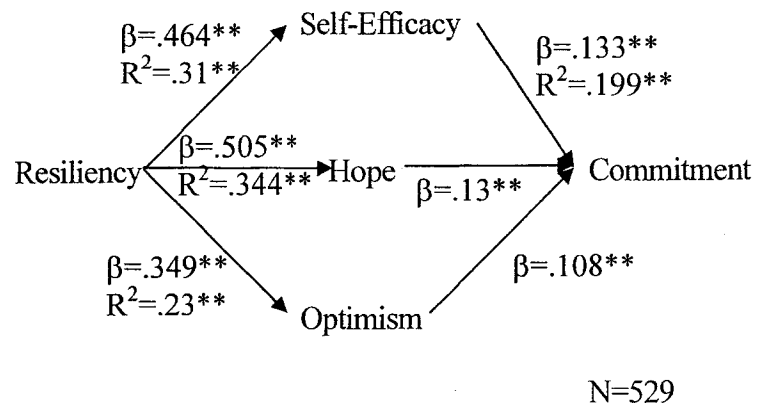
A. Performance:



B. Job Satisfaction:



D. Organizational Commitment:



C. Work Happiness:

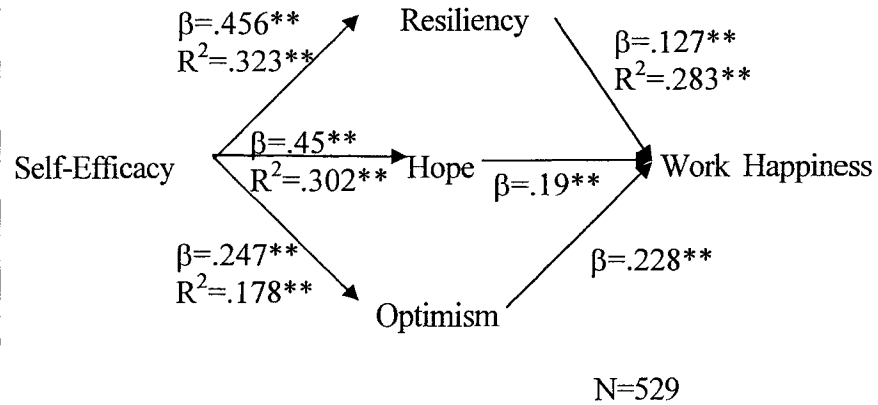
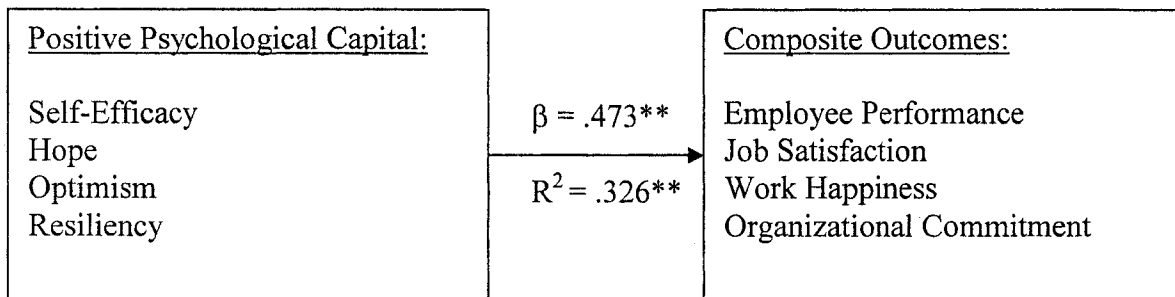
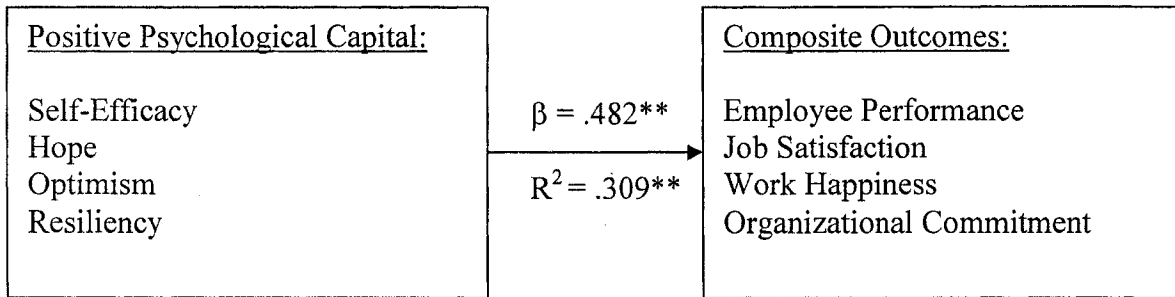


FIGURE 6: POST-HOC RESULTS WITH COMPOSITE VARIABLES – Sample A

N = 522

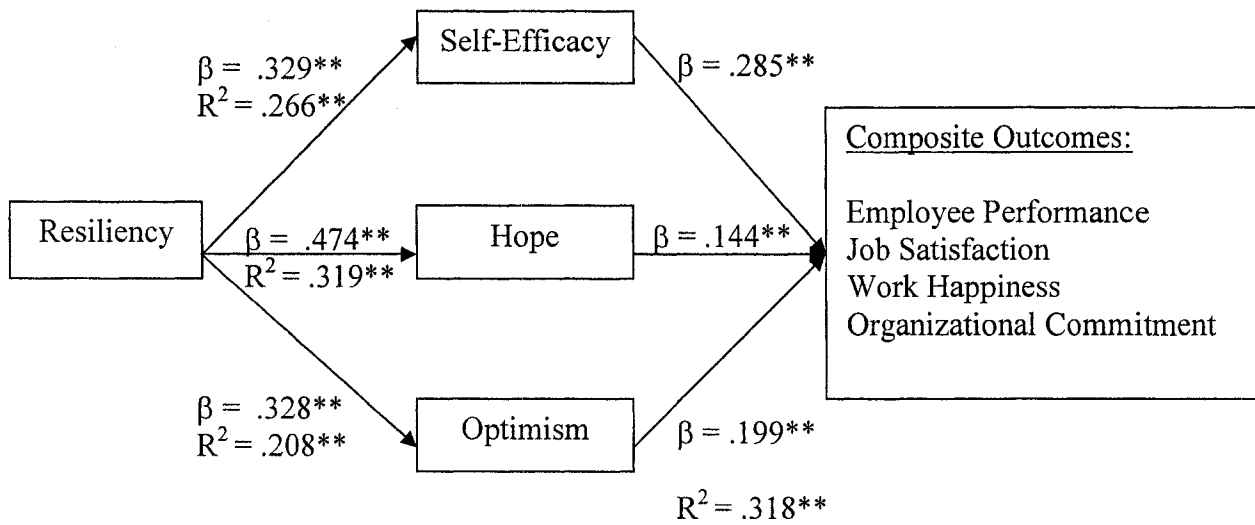
** Path is significant at the 0.01 level.

FIGURE 7: TESTING THE ALTERNATIVE MODEL – Sample B

N = 484

** Path is significant at the 0.01 level.

FIGURE 8: PATH ANALYSIS FOR RESILIENCY'S FOUNDATIONAL NATURE



N = 484

** Path is significant at the 0.01 level.

TABLE 1: DESCRIPTIVE STATISTICS OF STUDY PARTICIPANTS – Sample A

Characteristic		Frequency*	Min	Max	Mean	Std Dev
Organizations (Total=90):**						
Sector	Private Services	96				
	Public Services	27				
	Manufacturing	8				
	Other	6				
Organization Size (employees)			4	192,000	7,369	24,306
Branch Size (employees)			2	2,000	83	207
Unit Size (employees)			2	100	16	20
Managers (Total=137):						
Gender	Male	82				
	Female	54				
Ethnicity	Caucasian	122				
	Asian	7				
	Hispanic	3				
	African American	4				
Age (Years)			21	69	37.3	11.4
Education (Years)			12	23	16.7	2.3
Tenure (Years)			.1	38	8.2	8
Employees (Total=411):						
Gender	Male	155				
	Female	251				
Ethnicity	Caucasian	351				
	Asian	30				
	Hispanic	12				
	African American	8				
	Other	5				
Age (Years)			19	74	31	12.3
Education (Years)			5	26	15.7	2.4
Tenure (Years)			0	41	4.6	6.2

* Some numbers do not add to correct totals due to missing data points.

** Data was collected from more than one unit from some organizations.

TABLE 2: RELIABILITY ESTIMATES – Sample A

Scale	Standardized α
Self-Efficacy	.90
Hope	.87
Optimism	.80
Resiliency	.79
Job Satisfaction	.89
Work Happiness	.78
Organizational Commitment	.84

TABLE 3: FACTOR ANALYSIS FOR PPC SCALE ITEMS – Sample A

	Component			
	1	2	3	4
OPT1	.147	.237	.134	.371
OPT3	.112	.163	-7.E-02	.695
OPT4	-3.E-02	.171	.386	.489
OPT5	1.5E-02	.440	.124	.377
OPT8	9.4E-02	.143	-3.E-02	.780
OPT9	.179	.118	-2.E-02	.745
OPT11	-1.E-02	3.2E-02	.344	.531
OPT12	6.2E-02	.276	6.0E-02	.666
EFF1	.527	.237	.261	7.6E-02
EFF2	.729	.157	8.7E-02	4.9E-02
EFF3	.730	6.5E-02	.127	.102
EFF4	.725	9.3E-02	5.9E-02	.108
EFF5	.722	.248	8.1E-02	6.6E-02
EFF6	.706	.156	.127	8.6E-02
EFF7	.714	.154	7.8E-02	5.1E-02
EFF8	.648	.102	.179	6.0E-02
EFF9	.735	.129	.159	.106
EFF10	.704	8.8E-02	.202	4.2E-02
RES1	6.3E-02	8.8E-02	.391	8.1E-02
RES2	.180	.108	.345	.298
RES3	.330	7.6E-02	.634	9.0E-02
RES4	.108	.343	.406	.100
RES5	2.7E-02	3.5E-02	.441	3.0E-02
RES6	.134	.323	.470	8.9E-02
RES7	.125	2.0E-02	.638	-3.E-02
RES8	.172	8.9E-02	.578	-9.E-02
RES9	-2.E-03	.197	.448	9.1E-02
RES10	.146	.190	3.0E-02	2.8E-02
RES11	.294	7.0E-02	.671	1.2E-02
RES12	8.7E-02	.424	.382	.221
RES13	.293	.270	.444	-8.E-03
RES14	2.2E-02	3.8E-02	.408	.300
SHOPE1	.293	.444	.306	.160
SHOPE2	.188	.725	.214	.170
SHOPE3	.235	.520	.218	.221
SHOPE4	.170	.791	6.6E-02	.234
SHOPE5	.206	.782	.218	.164
SHOPE6	.194	.784	4.7E-02	.144

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

TABLE 4: CORRELATION MATRIX OF STUDY VARIABLES - Sample A

		Manager Self-Efficacy	Manager State Hope	Manager Optimism	Manager Resiliency	Employee Resiliency	Performance	Job Satisfaction	Work Happiness	Organizational Commitment
Manager Self-Efficacy	Pearson Correlation	1	.473**	.216**	.381**	-.060	.050	.051	.020	.013
	Sig. (2-tailed)	.	.000	.000	.000	.223	.318	.303	.686	.800
	N	411	411	411	411	411	405	410	411	410
Manager State Hope	Pearson Correlation	.473**	1	.569**	.404**	-.020	.009	.065	.045	.015
	Sig. (2-tailed)	.000	.	.000	.000	.691	.858	.192	.365	.755
	N	411	411	411	411	411	405	410	411	410
Manager Optimism	Pearson Correlation	.216**	.569**	1	.302**	-.014	.008	.098*	.098*	.024
	Sig. (2-tailed)	.000	.000	.	.000	.777	.877	.046	.047	.628
	N	411	411	411	411	411	405	410	411	410
Manager Resiliency	Pearson Correlation	.381**	.404**	.302**	1	-.037	.047	.066	.054	.017
	Sig. (2-tailed)	.000	.000	.000	.	.456	.341	.180	.275	.724
	N	411	411	411	411	411	405	410	411	410
Employee Resiliency	Pearson Correlation	-.060	-.020	-.014	-.037	1	.133**	.288**	.364**	.243**
	Sig. (2-tailed)	.223	.691	.777	.456	.	.007	.000	.000	.000
	N	411	411	411	411	411	405	410	411	410
Performance	Pearson Correlation	.050	.009	.008	.047	.133**	1	.173**	.117*	.138**
	Sig. (2-tailed)	.318	.858	.877	.341	.007	.	.000	.019	.005
	N	405	405	405	405	405	405	405	405	404
Job Satisfaction	Pearson Correlation	.051	.065	.098*	.066	.288**	.173**	1	.654**	.551**
	Sig. (2-tailed)	.303	.192	.046	.180	.000	.000	.	.000	.000
	N	410	410	410	410	410	405	410	410	409
Work Happiness	Pearson Correlation	.020	.045	.098*	.054	.364**	.117*	.654**	1	.456**
	Sig. (2-tailed)	.686	.365	.047	.275	.000	.019	.000	.	.000
	N	411	411	411	411	411	405	410	411	410
Organizational Commitment	Pearson Correlation	.013	.015	.024	.017	.243**	.138**	.551**	.456**	1
	Sig. (2-tailed)	.800	.755	.628	.724	.000	.005	.000	.000	.
	N	410	410	410	410	410	404	409	410	410

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TABLE 5: CORRELATION MATRIX OF ALTERNATIVE MEASURES OF DEPENDENT VARIABLES - Sample A

		Employee Self-Reported Performance	Employee Self-Reported Performance Rating	Employee Self-Reported Salary Rating	Manager Rating of Associates' Performance	Performance Index	Employee Job Satisfaction	Manager Rating of Associates' Job Satisfaction	Employee Commitment	Manager Rating of Associates' Commitment
Employee Self-Reported Performance	Pearson Correlation	1	.253**	-.060	-.005	.543**	.186**	.163*	.121	.188**
	Sig. (2-tailed)		.000	.369	.945	.000	.004	.015	.066	.005
	N	232	228	225	207	232	232	222	231	222
Employee Self-Reported Performance Rating	Pearson Correlation	.253**	1	.257**	.047	.720**	.147**	-.057	.094	-.011
	Sig. (2-tailed)	.000		.000	.404	.000	.003	.279	.062	.831
	N	228	393	380	318	393	393	367	392	370
Employee Self-Reported Salary Rating	Pearson Correlation	-.060	.257**	1	-.054	.613**	.119*	-.065	.114*	-.017
	Sig. (2-tailed)	.369	.000		.342	.000	.020	.221	.026	.748
	N	225	380	383	312	383	383	358	382	361
Manager Rating of Associates' Performance	Pearson Correlation	-.005	.047	-.054	1	.461**	.054	.143**	.041	.089
	Sig. (2-tailed)	.945	.404	.342		.000	.327	.010	.455	.105
	N	207	318	312	330	330	330	330	329	330
Performance Index	Pearson Correlation	.543**	.720**	.613**	.461**	1	.173**	.047	.138**	.077
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.358	.005	.134
	N	232	393	383	330	405	405	379	404	382
Employee Job Satisfaction	Pearson Correlation	.186**	.147**	.119*	.054	.173**	1	.173**	.551**	.173**
	Sig. (2-tailed)	.004	.003	.020	.327	.000		.001	.000	.001
	N	232	393	383	330	405	410	384	409	387
Manager Rating of Associates' Job Satisfaction	Pearson Correlation	.163*	-.057	-.065	.143**	.047	.173**	1	.193**	.656**
	Sig. (2-tailed)	.015	.279	.221	.010	.358	.001		.000	.000
	N	222	367	358	330	379	384	384	383	384
Employee Commitment	Pearson Correlation	.121	.094	.114*	.041	.138**	.551**	.193**	1	.196**
	Sig. (2-tailed)	.066	.062	.026	.455	.005	.000	.000		.000
	N	231	392	382	329	404	409	383	410	386
Manager Rating of Associates' Commitment	Pearson Correlation	.188**	-.011	-.017	.089	.077	.173**	.656**	.196**	1
	Sig. (2-tailed)	.005	.831	.748	.105	.134	.001	.000	.000	
	N	222	370	361	330	382	387	384	386	387

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TABLE 6: DESCRIPTIVE AND DATA NORMALITY STATISTICS OF STUDY VARIABLES - Sample A

	N	Minimum	Maximum	Mean	Std.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Manager Self-Efficacy	411	21.00	50.00	42.4161	5.86138	-.616	.120	.302	.240
Manager State Hope	411	16.00	48.00	38.2628	5.27341	-.568	.120	1.239	.240
Manager Optimism	411	11.00	40.00	31.2774	4.04981	-.828	.120	3.726	.240
Manager Resiliency	411	30.00	55.00	44.1350	5.05175	-.360	.120	-.285	.240
Employee Resiliency	411	17.00	56.00	42.5474	6.12349	-.399	.120	.230	.240
Employee Performance	232	20.00	110.00	87.3276	11.39627	-2.490	.160	10.933	.318
Employee Performance Rating	393	4.00	10.00	8.1170	1.09278	-.789	.123	1.094	.246
Employee Salary Rating	383	1.00	10.00	6.3081	1.92200	-.578	.125	.276	.249
Manager Rating of Associates' Performance	330	10.00	150.00	83.5591	18.51194	-.665	.134	5.560	.268
Employee Job Satisfaction	410	3.00	21.00	15.3366	3.50464	-.732	.121	.714	.240
Manager Rating of Associates' Job Satisfaction	384	3.00	9.00	7.2695	1.17230	-.678	.125	1.242	.248
Employee Work Happiness Rating	410	.00	10.00	7.2927	1.49888	-1.524	.121	3.618	.240
Employee Work Happiness	411	.00	100.00	61.6971	22.88015	-.587	.120	-.282	.240
Employee Commitment	410	12.00	56.00	35.3024	8.68274	-.034	.121	-.335	.240
Manager Rating of Associates' Commitment	387	2.00	10.00	7.2519	1.59068	-.709	.124	.484	.247

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TABLE 7: HIERARCHICAL REGRESSION RESULTS – Sample A

	Independent Variable (Manager Hope)	Mediator (Manager Self-Efficacy)	R ²	R ² Δ
Step 1	$\beta = .335^{**}$.287**	.287**
Step 2	$\beta = .178^{**}$	$\beta = .326^{**}$.354**	.067**

** Significant at the 0.01 level.

TABLE 8: DESCRIPTIVE STATISTICS OF STUDY PARTICIPANTS – Sample B

Characteristic		Frequency*	Min	Max	Mean	Std Dev
Organizations (Total=90):**						
Sector	Private Services	64				
	Public Services	48				
	Manufacturing	6				
	Other	2				
Organization Size (employees)			6	700,000	16,156	66,756
Branch Size (employees)			4	2,000	133	273
Unit Size (employees)			4	200	18	29
Participants (Total=484):						
Gender	Male	216				
	Female	264				
Ethnicity	Caucasian	421				
	Asian	29				
	Hispanic	16				
	African American	11				
	Other	4				
Age (Years)			19	72	29	11.1
Education (Years)			4	24	15.7	2.4
Tenure (Years)			.04	40	4.8	6.1

* Some numbers do not add to correct totals due to missing data points.

** Data was collected from more than one unit from some organizations.

TABLE 9: RELIABILITY ESTIMATES – Sample B

Scale	Standardized α
Self-Efficacy	.89
Hope	.87
Optimism	.77
Resiliency	.76
Job Satisfaction	.88
Work Happiness	.82
Organizational Commitment	.79

TABLE 10: FACTOR ANALYSIS FOR PPC SCALE ITEMS – Sample B

Rotated Component Matrix^a

	Component			
	1	2	3	4
OPT1	.263	.322	3.849E-02	.435
OPT3	9.756E-02	-6.82E-03	.167	.705
OPT4	8.151E-02	.327	8.621E-02	.569
OPT5	.118	.135	.245	.445
OPT8	.162	-4.72E-02	.156	.749
OPT9	.149	-4.14E-03	.165	.455
OPT11	.201	.200	7.329E-02	.449
OPT12	.141	-2.08E-02	.201	.683
EFF1	.513	.108	.275	.165
EFF2	.676	.126	.132	8.386E-02
EFF3	.756	8.324E-02	.155	6.719E-02
EFF4	.726	9.729E-02	7.576E-02	.183
EFF5	.741	9.151E-02	-4.65E-02	.142
EFF6	.675	.149	-2.58E-02	.106
EFF7	.664	6.412E-02	.166	8.994E-02
EFF8	.615	1.603E-02	.180	.128
EFF9	.666	.150	.123	.181
EFF10	.686	.149	.106	5.038E-02
RES1	.102	.289	.146	-3.85E-02
RES2	4.979E-02	.461	5.763E-02	.105
RES3	.286	.597	.114	5.584E-02
RES4	9.867E-02	.474	.176	6.477E-02
RES5	-5.46E-03	.434	-5.24E-02	3.449E-02
RES6	.106	.526	.208	.132
RES7	4.374E-02	.610	4.179E-02	-1.81E-02
RES8	.195	.641	.150	-8.18E-02
RES9	-9.20E-02	.372	9.880E-02	.265
RES10	-4.88E-02	.100	.126	5.051E-02
RES11	.201	.590	.139	8.023E-02
RES12	8.169E-02	.270	.308	.257
RES13	.188	.483	.249	6.420E-02
RES14	-2.15E-02	.372	6.009E-02	.250
SHOPE1	.287	.330	.526	7.218E-02
SHOPE2	.156	.223	.719	.169
SHOPE3	.118	.214	.651	.206
SHOPE4	.232	7.921E-02	.738	.267
SHOPE5	.175	.164	.738	.252
SHOPE6	.177	9.846E-02	.804	.190

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

TABLE 11: CORRELATION MATRIX OF STUDY VARIABLES - Sample B

		Self-Efficacy	Hope	Optimism	Resiliency	Outcomes Index
Self-Efficacy	Pearson Correlation	1	.442**	.420**	.373**	.449**
	Sig. (2-tailed)	.	.000	.000	.000	.000
	N	484	484	484	484	484
Hope	Pearson Correlation	.442**	1	.493**	.503**	.349**
	Sig. (2-tailed)	.000	.	.000	.000	.000
	N	484	484	484	484	484
Optimism	Pearson Correlation	.420**	.493**	1	.356**	.397**
	Sig. (2-tailed)	.000	.000	.	.000	.000
	N	484	484	484	484	484
Resiliency	Pearson Correlation	.373**	.503**	.356**	1	.303**
	Sig. (2-tailed)	.000	.000	.000	.	.000
	N	484	484	484	484	484
Outcomes Index	Pearson Correlation	.449**	.349**	.397**	.303**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.
	N	484	484	484	484	484

** . Correlation is significant at the 0.01 level (2-tailed).

TABLE 12: CORRELATION MATRIX OF ALTERNATIVE MEASURES OF DEPENDENT VARIABLES - Sample B

		Self-Reported Performance	Self-Reported Performance Rating	Self-Reported Salary Rating	Manager Rating of Unit Performance	Performance Index	Job Satisfaction	Manager Rating of Unit Job Satisfaction	Organizational Commitment	Manager Rating of Unit Commitment
Self-Reported Performance	Pearson Correlation	1	.241**	.069	.175	.651**	.250**	.120	.187*	.038
	Sig. (2-tailed)	.	.006	.440	.077	.000	.004	.183	.034	.671
	N	129	129	129	103	129	129	125	129	126
Self-Reported Performance Rating	Pearson Correlation	.241**	1	.256**	-.062	.683**	.257**	.127**	.196**	.020
	Sig. (2-tailed)	.006	.	.000	.248	.000	.000	.006	.000	.664
	N	129	479	471	355	479	479	456	479	459
Self-Reported Salary Rating	Pearson Correlation	.069	.256**	1	-.004	.672**	.294**	-.012	.222**	-.024
	Sig. (2-tailed)	.440	.000	.	.933	.000	.000	.801	.000	.609
	N	129	471	472	354	472	472	452	472	455
Manager Rating of Unit Performance	Pearson Correlation	.175	-.062	-.004	1	.504**	.038	.231**	.086	.284**
	Sig. (2-tailed)	.077	.248	.933	.	.000	.477	.000	.105	.000
	N	103	355	354	360	360	360	356	360	360
Performance Index	Pearson Correlation	.651**	.683**	.672**	.504**	1	.343**	.162**	.277**	.109*
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.000	.000	.019
	N	129	479	472	360	484	484	460	484	464
Job Satisfaction	Pearson Correlation	.250**	.257**	.294**	.038	.343**	1	.133**	.631**	.041
	Sig. (2-tailed)	.004	.000	.000	.477	.000	.	.004	.000	.376
	N	129	479	472	360	484	484	460	484	464
Manager Rating of Unit Job Satisfaction	Pearson Correlation	.120	.127**	-.012	.231**	.162**	.133**	1	.094*	.632**
	Sig. (2-tailed)	.183	.006	.801	.000	.000	.004	.	.043	.000
	N	125	456	452	356	460	460	460	460	460
Organizational Commitment	Pearson Correlation	.187*	.196**	.222**	.086	.277**	.631**	.094*	1	.099*
	Sig. (2-tailed)	.034	.000	.000	.105	.000	.000	.043	.	.032
	N	129	479	472	360	484	484	460	484	464
Manager Rating of Unit Commitment	Pearson Correlation	.038	.020	-.024	.284**	.109*	.041	.632**	.099*	1
	Sig. (2-tailed)	.671	.664	.609	.000	.019	.376	.000	.032	.
	N	126	459	455	360	464	464	460	464	464

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

TABLE 13: DESCRIPTIVE AND DATA NORMALITY STATISTICS OF STUDY VARIABLES - Sample B

	N	Minimum	Maximum	Mean	Std.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Self-Efficacy	484	12.00	50.00	36.6808	7.74836	-.378	.111	-.031	.222
Hope	484	9.00	48.00	36.5826	6.77556	-.626	.111	.453	.222
Optimism	484	10.00	40.00	28.9793	4.83513	-.301	.111	.243	.222
Resiliency	484	25.00	56.00	43.0826	5.70046	-.338	.111	-.138	.222
self-Reported Performance	129	37.00	100.00	87.2558	11.19939	-1.931	.213	4.682	.423
Self-Reported Performance Rating	479	4.00	10.00	8.0585	1.17493	-.505	.112	.250	.223
Self-Reported Salary Rating	472	1.00	10.00	6.3485	1.87588	-.481	.112	.246	.224
Manager Rating of Unit Performance	360	20.00	101.00	83.5222	14.46943	-2.106	.129	5.695	.256
Job Satisfaction	484	3.00	21.00	15.5888	3.75965	-.788	.111	.271	.222
Manager Rating of Unit Satisfaction	460	3.00	9.00	7.0783	1.22535	-1.035	.114	1.330	.227
Work Happiness rating	484	.00	10.00	7.3285	1.52194	-1.727	.111	4.040	.222
Work Happiness	484	.00	100.00	62.8926	21.92135	-.681	.111	-.158	.222
Commitment	484	13.00	56.00	35.9019	8.98902	-.152	.111	-.511	.222
Manager Rating of Unit Commitment	464	2.00	10.00	7.0388	1.56383	-.649	.113	.599	.226

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TABLE 14: THE UNIQUE CONTRIBUTION OF RESILIENCY – Sample B

	Resiliency Added to	R ²	R ² Δ
Analysis 1	Self-Efficacy	.279**	.022**
Analysis 2	Hope	.234**	.017**
Analysis 3	Optimism	.255**	.028**

** Significant at the 0.01 level.

TABLE 15: HIERARCHICAL REGRESSION RESULTS – Sample B

	Independent Variable (Resiliency)	Mediators (Self-Efficacy, Hope, Optimism)	R ²	R ² Δ
Step 1	β= .281**		.184**	.184**
Step 2	β= .074 ns	Self-Efficacy β= .273** Hope β= .116* Optimism β= .190**	.322**	.138**

* Significant at the 0.05 level.

** Significant at the 0.01 level.