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Potential Added Value of Psychological Capital in Predicting Work Attitudes

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Abstract

Meeting the challenge of effectively managing human resources requires new thinking and approaches. To extend the traditional perspective of economic capital, increasing recognition is being given to human capital and more recently social capital, this article proposes and empirically tests the potential added value that psychological capital may have for employee attitudes of satisfaction and commitment. After first providing the background and theory of PsyCap, this article reports a study of manufacturing employees ($N = 74$) that found a significant relationship between PsyCap and job satisfaction ($r = .373$) and organization commitment ($r = .313$). Importantly, the employees' PsyCap had a significant added impact over human and social capital on these work attitudes. Future research and practical implications conclude the article.

Although work environments have always experienced change, most outsiders and insiders would agree that today's workplace is changing at a much faster and more dramatic pace than ever before. Work in today's organizations is becoming more fluid and less bound by space and time thanks to information technology and globalization (i.e., see Friedman, 2005). Also, changing demographics, growing two-income families, and an educated workforce that is insisting on more control over their careers is creating an unprecedented environment (Pearce & Randel, 2004).

In this new environment, the rules and boundaries of the playing field for organizations and employees alike are undergoing paradigmatic change. For example, mega-mergers, acquisitions, reorganizations, and ethical scandals have altered the identity of “who we are.” What used to be distinctive attributes such as organizational culture or core values are being questioned and the consequence is that we have gone from the 1980’s “Me Decade” to what Feldman (2000) has called the “Flee Decade” of the new century. What he means by this is that there is now a perceived need to always be ready to move in order to stay employed—ultimately leading to a drastic change in the way people manage their careers and how they identify with their organizations. Organizational identification requires members to adopt strategies that allow them to preserve their psychological well-being and organizational success (Johnson, Smith, & Gambill, 2000).

Although these complex workplace changes are very difficult to unravel, many managers still subscribe to a mechanistic perspective of organizations as simply being predictable entities – one in which members can be easily programmed as if they were machines. However, academics and an increasing number of practitioners, recognizing the complexity of today’s environment, now subscribe to the reality that work, and how it is carried out in organizations, is fundamentally about relationships – most notably the relationships between organizations and employees. This relationship perspective changes many assumptions. For example, flexibility and fluidity becomes a new regulator for organizations to instill in their managers and employees, which in turn results in a heightened sense of insecurity. Even employees who are able to hold on to their jobs, still view their employment as unstable and fear the future (Mack, Nelson, & Quick, 1998). Although the classical change model of unfreezing-moving-refreezing remains a way to deal with today’s constantly changing environment, as one employee recently observed, the constancy of change has resulted in a state of “slush: never refrozen, always in an uncertain state” (Mack, et al., 1998: 220). In this “slush” environment, numerous solutions to cope and effectively manage and change are possible. However, we would argue the only constant, beside the old cliché of change itself, is the important role human resources play in competitive advantage. Although obvious and recognized to a degree through the ages, only very recently have human resources been proposed as a form of capital to be developed and leveraged for a return on human investment.

The purpose of this article is two-fold. First, give a brief overview of both human and social capital, and then provide the meaning and

theoretical foundation for the newly emerging psychological capital. Second, report the results of an exploratory study that analyzed the relationships between a sample of manufacturing workers' psychological capital and their attitudes of job satisfaction and organizational commitment. Besides examining the relationship between psychological capital and worker attitudes, particular attention is given to whether psychological capital can go beyond more traditional measured human and social capital in predicting worker attitudes.

An Overview of Human Capital

The recognized value of organizations is slowly undergoing a change in perspective. For example, twenty years ago the largest recorded value of the firm was tied to inventory levels, including raw materials, work-in-process, and finished goods. During the 1980's and 1990's, lean, just-in-time manufacturing practices eliminated the luxury of having stock piles of inventory laying around and, therefore, reduced the "value of the firm" considerably (Leana & Rousseau, 2000). While inventory levels were shrinking, organizations became fixated on lowering variable and fixed costs (e.g., cutting pay and numbers of employees and plant closings) as much as realistically possible.

In light of this "assetless" organization, accountants then turned to other factors to represent the value of an organization. Almost by default, some of the debate and public policy initiatives turned to a focus on human assets as the value of an organization (Cascio, Young, & Morris, 1997). For example, formal education was a fairly quantifiable value, but this caused some problems because there are many occupational groups where qualified training programs occur on-the-job and thus were not recorded in the value of human assets. Another controversy arose in valuing organizations as human assets with accounting principles and assumptions. In particular, accountants traditionally have viewed the world as assets or liabilities (expenses). As such, accounting practices could influence the "dispensability" of human assets and result in a short-term, rather than long-term, view. For example, there is considerable supporting empirical evidence that the downsizing rage of recent times supports such a short-term rather than a long-term view of the value of an organization (Morris, Cascio, & Young, 1999).

A response to this seeming difficulty in valuing human assets is the reality that most of today's organizations still do not understand the capital

investment approach to human resources—called by Pfeffer and Sutton (2000) as the knowing-doing gap. Unfortunately, human capital management remains quite rare as proactive strategy for developing a competitive advantage for today's organizations (Pfeffer, 1998). However, a working definition of human capital management could be a blend of the traditional aspects of human resource management (e.g., selecting and developing employee skills, knowledge, abilities, and experience) with the traditional economic principles of capital accumulation, investment, deployment, and value creation (Wright & Snell, 1999).

Core human capital seems vital to the competitive advantage of the organization because the profile of the workforce is unique to that organization and, therefore, cannot be imitated or easily duplicated/purchased. According to Lepak and Snell (1999), these core human capital assets should not be outsourced because outsourcing these skills might jeopardize the competitive advantage of the organization. Also, practical guidelines to human capital management have been offered that includes: a) careful selection in hiring the right people with strong potential to help the organization, b) reaching the delicate balance between internal, customized training, and external, off-the-shelf training programs, and c) building tacit knowledge within the organization (Luthans & Youssef, 2004).

Importantly, there should be a distinction in both perspective and actual practice between traditional human resource management and the newly emerging human capital management. Human capital management involves more of a dialogue, an interactive communication between the employee and organization (Van Marrewijk & Timmers, 2003).

Rather than merely explaining or just telling what employees are supposed to do, today's organizational leaders need to value and leverage the knowledge and skills of their people. They are partners with whom a professional dialogue about costs and output needs to take place. In the end, "human capital management is values-driven, striving to bring about dedication, motivation, and commitment of employees" (Van Marrewijk & Timmers, 2003: 178). Clearly, human capital management seems to have arrived. There is not only acceptance from academics and at least enlightened human resource management practitioners, but also a growing research agenda leading to the better understanding of the relationship between employees and organizations. With the emphasis on the employee's knowledge, skills, and abilities (KSA's) and experience/tacit knowledge, impact on performance and attitudinal outcomes are being demonstrated and acknowledged. However, this seems to be only the beginning, not the

end, in which to view employee-employer relationships. Although human capital has become an accepted lens to use in the “first generation” of the new environment of valuing and managing human resources, an emerging second generation of research, social capital, is now contributing even greater understanding.

Social Capital: The Second Generation of Valuing and Managing Employees

Both economics (e.g., Coleman, 1988) and human resource management now recognize that physical capital can be applied to the notion of human capital. Just like changes to and investment in physical capital – represented by facilities, technological processes, machines, and other equipment – can improve the competitiveness of a business, improvements to and investment in human capital, through developing skills, knowledge, and abilities, can also enhance competitiveness (Luthans & Youssef, 2004; Wright & Snell, 1999). Although continuous improvement can apply to human capital management as well as physical capital management, does acquiring say new technical skills satisfy the changing needs of today’s environment and be the only major contributor to competitive advantage? Is what employees know a complete picture of the value of human resources?

In recent years in the organizational literature, social capital has been introduced as an extension to physical and human capital. Although originally coming out of sociology (e.g., see Portes, 1998), social capital is receiving increased attention as it applies to strategy and organizations (e.g., Alder & Kwon, 2002; Florin, Lubatkin, & Schulze, 2003; Pennings & Lee, 1999); human and intellectual capital (e.g., Coleman, 1988; Luthans, Luthans, & Luthans, 2004; Luthans & Youssef, 2004; Pennings, Lee, & Witeloosttuijin, 1998); and competitive advantage (Kostova & Roth, 2003; Luthans & Youssef, 2004; Nahapiet & Ghoshal, 1998).

Especially relevant to social capital management is the focus on how much of it exists and at what level it exists – individual, firm, community, nation, or economy (Burt, 2000; Coleman, 1988; Leana & Van Buren, 1999; Wright & Snell, 1999). Although there are many definitions, Portes (1998:6) gives one of the more comprehensive, at the individual level, meaning of social capital as “ability of actors to secure benefits by virtue of membership in social networks or other social structures.” A working definition for an alternative to valuing physical assets would be that social capital is the value of relationships between people and the value

of different networks individuals are included in and develop over time. These social relationships are formed through connections, norms, and trust (Luthans, et al., 2004).

The delineation of scholars who study social capital comes from their focus on internal networks, external networks, or both. At the core of all definitions is “that the goodwill others have toward us is a valuable resource” (Adler & Kwon, 2002: 18). The importance of social capital is that it creates a contextual. Without social capital, organizations would be greatly diminished because all employees directly or indirectly work with others. When there is a task to accomplish or a problem to solve, people turn not just to authority figures, but more often to friends, family, colleagues, and others for help. Wright and Snell (1999) state, “the first rule of organizations is people don’t work alone, they combine their talents and energies to accomplish their goals.” Therefore, social capital as used in the present study is at this more micro social level, individuals interacting with others, rather than at the organizational, community, national, or economic levels of analysis (Burt, 2000; Coleman, 1988; Leana & Van Buren, 1999; Wright & Snell, 1999). So, from this perspective, social capital is embedded in individuals and their networks and relationships with others. The perceived value stems from the ability to broker opportunities (Wright & Snell, 1999).

There is growing research on this view of social capital. For example, Meyerson (1994) studied 111 executives and found that social capital influenced their incomes and found it was developed through strong network ties and not weak network ties. In a similar study, Belliveau, O’Reilly and Wade (1996) found that social status had a greater effect on CEO pay than did social similarity. This study also advises that earlier human capital research has not controlled for social capital and therefore much of the relationships found between human capital and performance or pay could be confounded by not accounting for social capital. For example, although CEO’s with an MBA have high human capital (education, skill, and knowledge), this background may have provided the opportunity for them to access new social networks. Thus, their improved effectiveness as a CEO is because of the social capital gained and not the human capital per se (Belliveau, et al., 1996). Moreover, Podolny and Baron (1997) did find employee mobility is enhanced by having a large, thin network of informal ties.

Fernandez and colleagues have considerable research on the relationship between social capital and the hiring process. For example, in the

banking industry, Fernandez and Weinberg (1997) found applicants who had been referred by another employee have advantages of getting hired over applicants who were not so referred. Fernandez, Castilla, and Moore (2000) followed-up and found referrals were useful to employees working in a call center. By using employee referrals, organizations were able to reduce their hiring process costs because of reduced screening, hiring, and training costs (Fernandez, et al., 2000).

In summary, this social capital perspective of valuing and managing human resources covers a wide variety of disciplines and relates to other forms of capital in a number of different ways. As Adler and Kwon (2002: 22) note: "social capital falls squarely within the broad family of resources called capital." Social capital is "appropriable" (Coleman, 1988) or convertible in the sense that a network of friends can be used in other ways, such as information gathering or for economic gain. In any of its unique uses, social capital needs to be nurtured so it can grow in value. In the end, no one person has exclusive ownership rights to social capital, when someone withdraws from the relationship, social capital also dissolves (Adler & Kwon, 2002). Naturally, one could argue that any type of capital that has the potential to "dissolve" creates a concern and risk for investment purposes. Is there a way to limit the loss of losing your investment? Recently proposed positive psychological capital seems to potentially offer a new approach to minimizing the melting away and inherent risk of social capital, while at the same time potentially enhancing the durability of overall human capital.

Positive Psychological Capital (Psycap): The Next Generation of Valuing Employees

While human and social capital are now widely recognized and have increasing research, psychological capital (PsyCap) as a way to value and manage human resources is just emerging. For example, a recent search using PSYCHINFO, *Business Source Premier*, and Google found very limited sources where the term was even used. The term psychological capital has only been used in passing in the economics literature where it has been investigated in terms of its relationship to wages (Goldsmith, Darity, & Veum, 1998; Kossek, Huber, & Lerner, 2003). Goldsmith and a few other economists believe the influence of personality is detectable and is rewarded by employers. Thus, this research has introduced psychological capital into an economic formula that measures productivity. According to

Goldsmith, et al. (1998: p.15), “psychological capital encompasses a host of personal attributes expected to influence productivity. Many features of a person’s psychological capital are reflected in a person’s self-view or sense of self-esteem.”

Although Goldsmith’s view of psychological capital is most closely associated with self-esteem, this study adopts the newly proposed psychological capital approach of Luthans and colleagues (Luthans, Avolio, Walumbwa, & Li, 2005; Luthans, et al., 2004; Luthans & Youssef, 2004; Luthans, Youssef, & Avolio, 2006, 2007). This approach defines PsyCap as “an individual’s positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success” (Luthans, Youssef, & Avolio, 2007, p. 3).

Under this view, psychological capital or simply PsyCap goes beyond human and social capital to gain a competitive advantage through investment/development of “who you are” and “what you can become” (Luthans & Avolio, 2003; Luthans, et al., 2006, 2007). The theoretical foundation for this PsyCap is based on positive psychology and positive organizational behavior.

Drawing from Positive Psychology and Positive Organizational Behavior

Psychological capital has its roots in positive psychology. During the late 1990’s, positive psychology emerged with a renewed emphasis on what is right with people, rather than the almost total preoccupation psychology has had over the years with what is wrong with people (Seligman & Csikszentmihalyi, 2000; Snyder & Lopez, 2002). This change in direction focusing on positivity and people’s strengths and virtues (Peterson & Seligman, 2004), rather than dysfunctions and weaknesses was specifically initiated by Martin Seligman (1998b) in his presidential address at the American Psychological Association in 1998 and was given momentum in back-to-back special issues focused on positive psychology in the *American Psychologist* (January 2000 and March 2000), and the Winter 2001 *Journal of Humanistic Psychology*.

Although positive psychology does not completely ignore the workplace (e.g., one out of 55 chapters in the *Handbook of Positive Psychology*, Snyder & Lopez, 2002), giving more specific focus and application to organizations and human resource performance have been two recent developments: the more macro-oriented positive organizational scholarship or POS movement (Cameron & Caza, 2004; Cameron, Dutton, & Quinn, 2003) and the more micro-oriented, state-like positive organizational behavior or POB approach (Luthans, 2002a, 2002b, 2003; also see Cooper & Nelson, 2006; Wright, 2003). Positive organizational behavior (POB) is specifically defined as the “study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance in today’s workplace” (Luthans, 2002b: 59).

What separates POB from the positively oriented, self development best-sellers and previous organizational behavior literature, and the recent POS movement in particular, includes the following specific inclusion criteria: (1) based on theory, research, and valid measures, which differentiates POB from the positive best-sellers; (2) unique, which differentiates POB from the previous OB literature such as positive self-evaluations (Judge & Bono, 2001), positive affectivity, and positive reinforcement; (3) state-like and thus open to development, which differentiates POB from most of positive psychology, OB, and POS; and (4) manage for performance improvement in the workplace, which differentiates POB from the popular positivity literature on self-development positive psychology, and much of POS (see Luthans, 2002a, 2002b, 2003; Luthans, et al., 2006, 2007). The positive psychological capacities that have been determined to best meet these POB criteria include confidence/self-efficacy, hope, optimism, and resiliency (Luthans, 2002a; Luthans, et al., 2006, 2007).

Confidence/Self-efficacy — This best fit to the POB criteria is defined as “an individual’s convictions (or confidence) about his or her abilities to mobilize the motivation, cognitive resources, and courses of action needed to successfully execute a specific task within a given context” (Stajkovic & Luthans, 1998b: 66). Before selecting and initiating a course of action, employees weigh, process, and compile information about their abilities. Confident, highly efficacious individuals are likely to choose challenging tasks, invest in the effort to accomplish the tasks, and persevere in the midst of adversity. Important as a POB state, confidence/self-efficacy can be developed (through enactive mastery, modeling and vicarious learning,

social persuasion and positive feedback, and physiological and psychological arousal, see Bandura, 1997) and has been shown to strongly relate to work-related performance (Stajkovic & Luthans, 1998a).

Hope – This POB state is commonly used in everyday conversations for wishful thinking – i.e., “I hope we can get done with this” or “I hope to see you again soon.” Additionally, in some instances, hope is used to imply doubt such as, “I hope this works.” Although these casual expressions of hope abound in our language, as a positive psychology construct, hope has a very precise meaning based on a theoretical foundation with valid measures and considerable research support (Snyder, 2000). In particular, Snyder, et al. (1991: 287) define hope as “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).” From this definition, hope involves both willpower and “waypower.”

The agency or willpower is an important dimension of hope theory for POB because it is the driving motivational force that keeps a person energized to reach a goal. This willpower is necessary for goals to be reached successfully; however, it becomes even more critical to have such agency thinking when obstacles are encountered in pursuing a desired goal. As Snyder (2002: p. 251) suggests, “with such blockages, agency helps people to channel the requisite motivation to the best alternative pathway.”

The second component of hope theory is waypower or alternative pathways thinking. The core of this thinking can be in reference to time (i.e., how a person will get from the “present” to the “future” – from point A to point B) as well as alternative pathways around obstacles (Snyder, 2002). In his research, Snyder (2000) has found high hope individuals develop a decisive plan with a high probability of success because of their confidence with the chosen plan. In addition to the primary plan, high-hope individuals also have proactively developed alternative plans in case the original one does not work (Snyder, 2000, 2002; Snyder, et al., 1991; Snyder, et al., 1996). For the low-hope individual, however, pathways thinking is much more grueling and the primary path is not well articulated and alternative paths are not proactively established.

The positive impact of hope has received considerable support through empirical research in numerous settings. For example, a number of studies have found that hope relates strongly to academic and athletic success, mental and physical health, and the ability to cope with hardship (Curry, Snyder, Cook, Ruby, & Rehm, 1997; Snyder, 2000; Snyder, et al., 1991).

Although just emerging, there is also beginning evidence that hope also has a positive impact in the workplace. Snyder and Shorey (2003) suggest effective organizational leaders create environments of hope and high-hope leaders are stronger leaders because of their ability to set goals, create pathways, and think of alternatives (agency thinking). In preliminary empirical research, findings suggest that managers with higher levels of hope have correspondingly higher work unit performance as well as better retention rates and more satisfied employees (Peterson & Luthans, 2002). Luthans and Jensen (2002) have also found a positive link between entrepreneurs' hope levels and their satisfaction of business ownership. From these findings, as well as the underlying premise of Snyder's theoretical model (Snyder, 2000, 2002), hope has been shown to meet the POB inclusion criteria (Luthans, 2002a; Luthans, et al., 2006, 2007).

Optimism – Similar to hope, optimism is used in common, everyday conversations and has a long tradition in clinical psychology (Peterson, 2000; Seligman, 1998a). On the surface, and as commonly used, confidence, hope, and optimism appear very similar and would seem to be interchangeable positive words. However, there is considerable theoretical and empirical work that clearly demonstrates the conceptual independence and empirical discriminant validates among efficacy, hope, and optimism (e.g., see Bryant & Cvengros, 2004; Luthans & Jensen, 2002; Magaletta & Oliver, 1999; Snyder, 2000, 2002; Snyder, et al., 2001). Like confidence and hope, optimism has a specifically distinctive meaning as a positive psychology construct. Specifically, optimism is defined in terms of one's attributional, explanatory style (Carver & Scheier, 2002; Peterson, 2000; Seligman, 1998a; Seligman & Csikszentmihalyi, 2000). Optimists interpret bad events as external (not my fault), unstable (it just happened this one time), and specific (this event only), while pessimists make the opposite attributions of internal, stable and global (Buchanan & Seligman, 1995; Peterson, 2000; Seligman, 1998a).

Although like the other positive capacities such as hope, optimism has been portrayed as trait-like (Carver & Scheier, 2002), however, with Seligman's (1998a) influence (i.e., "learned optimism"), optimism has also been theoretically and empirically supported as a state-like construct that is open to development (Schneider, 2001; Seligman, 1998a). As to performance impact, Seligman (1998a) found optimistic sales agents sold significantly more life insurance than those who were less optimistic. Another finding from this insurance study was that the more optimistic sales

agents also had better retention rates. In other studies, optimists have been found to achieve more at work, school, and on the athletic field (Buchanan & Seligman, 1995; Carver & Scheier, 2002; Peterson, 2000) and rated higher by their supervisors in Chinese factories (Luthans, Avolio, et al., 2005). In the leadership literature, studies have also found optimism levels are associated with leaders' positive impact on their followers' optimism, satisfaction, stress, and retention (Wandberg, 1997; Wunderly, Reddy, & Dember, 1998). In other words, optimism meets the inclusion criteria for POB (Luthans, 2002a; Luthans, et al., 2006, 2007).

Resiliency — Especially relevant to the times is resiliency. Like hope and optimism, it is a commonly used term, but drawing from its clinical psychology foundations, resiliency as a POB state is specifically 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 a more reactionary (rather than proactive) state when people are faced with change, adversity, or uncertainty (Block & Kremen, 1996). Resilience research has been approached from either a variable-focused approach or a person-focused approach (Masten, 2001).

The variable-focused approach examines the link between competence, adversity, and a host of protective factors. This perspective of resiliency is important because it serves as a conceptual model for development interventions. For example, positive psychologist Ann Masten's (2001; Masten & Powell, 2003) work has focused on the role of competence and resilience in parenting quality, intellectual functioning, and family socioeconomic resources. Regardless of adversity levels, key protective resources have been consistently associated with competence and resilience. In other variable-focused approaches to resiliency, the parenting quality has been observed as a moderating variable – e.g., the parenting quality reduces adversity exposure (Masten & Powell, 2003).

In contrast to the variable-focused approach to studying resilience, person-focused approaches have also been used (Masten, 2001). Here the focus has been on identifying people who are resilient and comparing them to people who are not resilient. The relative value to this method of investigating resiliency is that the studies tend to be longitudinal and focused on unique cases of specific resilient individuals. In many instances, these findings offer a humanistic perspective to the more quantitative, variable-focused approach.

Resilience is influenced by three sets of factors: assets, risks, and adaptational processes (Block & Kremen, 1996; Garmezy, Masten, & Tellegen, 1984; Glantz & Johnson, 1999; Masten, 2001; Masten & Reed, 2002). In these times, where there are many risks and resources are limited, positive psychologists are committed to understanding what most effectively promotes resilient adaptations. For example, Luthar (2003) suggests resilience is a dynamic process involving shifting balances of protective and vulnerability forces in different risk contexts. From the early pioneering work of Garmezy (Garmezy, et al., 1984) to the more recent resiliency researchers in positive psychology (Masten & Powell, 2003; Masten & Reed, 2003), consistent results point to the important role of at least one support person. The earlier this support person becomes involved, the more effective he or she is at building resiliency in others.

Recent analysis of resilient employees largely echoes the work from clinical and positive psychology. For example, Coutu (2002: 48) states that elements of resilience 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." Additionally, Maddi (1987, 2002) has found that hardiness is a key to resiliency for not only surviving, but also thriving, under stress. He studied 13,000 employees that were downsized in one year from Illinois Bell Telephone (IBT). The IBT downsizing decision created enormous adversity for many employees and for one manager it resulted in having 10 different supervisors in one year (Maddi, 1987, 2002). Moreover, while two-thirds of the employees suffered significant performance, leadership, and health declines as a result of the downsizing, the other one-third actually thrived during the upheaval despite the same disruption and stress. These resilient employees maintained their health, happiness, and performance and even experienced renewed enthusiasm (Maddi, 1987).

In recent work-related analysis on resiliency, emphasis has been placed on managers and leaders (Luthans, Luthans, Hodgetts, & Luthans, 2002), organizations (Cameron, Dutton, & Quinn, 2003; Youssef & Luthans, 2003), and work motivation (Stajkovic, 2003). The study of Chinese factory workers found their level of resiliency had a relatively higher relationship with supervisory rated performance than did their hope and optimism (Luthans, Avolio, et al., 2005) and attention has been given to developing the resilience of human resources (Luthans, Vogelgesang, & Lester, 2006).

The above provides support that each of the POB criteria meeting positive constructs of confidence/self-efficacy, hope, optimism, and resiliency

seem to be related to performance outcomes. Since work attitudes such as job satisfaction and organizational commitment have been shown to relate to performance (e.g., see Judge, Thoresen, Bono, & Patton, 2001; Riketta, 2002), it follows that the POB constructs can be hypothesized to relate to these work attitudes. However, as a follow-up to both the conceptual (e.g., Luthans, et al., 2006, 2007) and preliminary research (Luthans, Avolio, et al., 2005) that when the POB variables are combined into a core construct, PsyCap may be a stronger predictor than any one of the four individually. Thus, for this study we hypothesize the following:

Hypothesis 1A: Overall psychological capital (PsyCap) will have a stronger relationship with work attitudes than confidence/self-efficacy.

Hypothesis 1B: Overall psychological capital (PsyCap) will have a stronger relationship with work attitudes than hope.

Hypothesis 1C: Overall psychological capital (PsyCap) will have a stronger relationship with work attitudes than optimism.

Hypothesis 1D: Overall psychological capital (PsyCap) will have a stronger relationship with work attitudes than resiliency. In addition, based on the introductory discussion of the potential added value that psychological capital may have beyond human and social capital, the following hypothesis is also tested in this study.

Hypothesis 2A: Psychological capital (PsyCap) will add variance to the relationship with work attitudes beyond that accounted for by human capital.

Hypothesis 2B: Psychological capital (PsyCap) will add variance to the relationship with work attitudes beyond that accounted for by social capital.

Study Methodology

Data was collected from 74 production workers in a small Midwestern medium-tech manufacturing company. The average age of the participants was 34.8, average years of education was 12.1 years, and the average years employed with the organization was 6.4. Other demographics are that 94.5% of the participants were male, 68.9% Caucasian, 9.5% Hispanic, 4.1% Asian, and 2.7% African American. As to work schedule, 36% of the participants worked the first shift, 24.3% worked the second shift, 14.9% worked during the third, and 24.3% worked on a rotating shift basis. To minimize common source bias, the attitudinal dependent variables were collected on a different day than the measured independent variables (Podsakoff, MacKenzie, Podsakoff, & Lee, 2003). All participants were informed that participation was voluntary and to protect anonymity, informed consent forms were distributed and collected before participants completed the survey.

To minimize response bias the participants were informed that the purpose of the confidential survey was to assess their insights of work attitudes and that information would be accumulated in aggregate form, no individual responses would be singled out. As an incentive, respondents were promised a brief summary of the study findings.

Independent Variables and Measures: Human, Social, and Psychological Capital

The measures used to gather data in order to test the hypotheses were widely recognized, research-based, standardized questionnaires. The independent variables measured in this study are human capital, social capital, self-efficacy, hope, optimism, resiliency, and the four POB constructs bundled into overall psychological capital.

Human Capital — This construct was directly measured using the participants' "years of education" and "years of service to the organization." These two items of education and experience are consistent with how human capital has been measured in human resource management research (Hitt, et al., 2001; Wright & Snell, 1999) and entrepreneurship research (Chandler & Hanks, 1994; Cooper, Gimeno, & Woo, 1994; Gimeno, Folta, Cooper, & Woo, 1997).

Social Capital — This construct was measured by a three-item scale by Pearce and Randel (2004) used in research on workplace social inclusion (WSI). This scale measures the sense of social inclusion, which is a recognized component of social capital described by Leana and Van Buren (1999). A sample item is: “I feel included in most activities at work.” Although the social capital measurement is often associated with extensive network analysis and multi-level assessment, the WSI is consistent with the other individual-level scales used in social capital research. The discriminant validity and scale reliability of this WSI measure have been supported in previous research (Pearce & Randel, 2004).

Confidence/Self-efficacy — The measure of confidence/self-efficacy used in this study follows Bandura’s (1997) notion of specificity. The measure used in this study is Parker’s (1998) efficacy scale that is specific to the workplace domain. Previous research has supported factor structures, validity, and reliability of this measure of efficacy (Maurer & Pierce, 1998). A sample item is: “How confident would you feel designing new procedures for your work area?”

State Hope — The State Hope Scale (Snyder, et al, 1996) was used to measure hope. Because of the state-like criterion for psychological capital, this widely recognized, reliable, valid scale was used. A sample item is: “If I should find myself in a jam, I could think of many ways to get out of it.”

State Optimism — Scheier and Carver’s (1985) Life Orientation Test (LOT), as revised by Shifren and Hooker (1995), was used to measure state optimism. The twelve-item measure includes eight outcome expectancy items and four distracter items. Shifren and Hooker (1995) tailored the original trait-like, dispositional LOT scale developed by Scheier and Carver to demonstrate the state-like properties of optimism. Statistical analyses have demonstrated that both the original LOT and this revised state-based LOT scale have acceptable reliability and validity properties (Shifren & Hooker, 1995). A sample item is: “In uncertain times, I usually expect the best.”

Resiliency — For this study, the 14-item resiliency measure based on the research of Block and Kremen (1996) and Klonhlen (1996) was used. The items have strong validity and reliability properties, as demonstrated in Block and Kremen’s work (1996). A sample item is: “I quickly get over and recover from being startled.”

Positive Psychological Capital – Consistent with Judge and colleagues work with core self-evaluations (Judge & Bono, 2001; Judge, et al., 2003), Stajkovic's (2003) work on a core confidence factor for work motivation, and Luthans and colleagues (Luthans, Avolio, et al., 2005; Luthans, et al., 2004; Luthans & Youssef, 2004; Luthans, et al., 2006, 2007) proposal for positive psychological capital, the individual POB criteria meeting states (confidence/self-efficacy, hope, optimism, and resiliency) were combined as a measure of positive psychological capital. This measure was formulated by summing the standardized z-scores of each of the individual POB measures. This approach has been used in recent research with positive findings (Luthans, Avolio, et al., 2005).

Dependent Variables and Measures: Satisfaction and Commitment

The dependent variables used to measure the workers' attitudes were organizational commitment and job satisfaction.

Employee Commitment – Organizational commitment was assessed using the 24-item commitment measure developed by Allen and Meyer (1990). This measure includes three dimensions of organizational commitment – affective, continuance, and normative. Using this multidimensional measure can better identify the relationship between employees and the organization. For instance, Allen and Meyer (1990) explain that while employees with a strong affective commitment may stay with an organization because they *want* to, those with strong continuance commitment stay with the organization because they *need* to. Employees with strong normative commitment, however, remain with the organization because they feel they *ought* to. The validity and reliability of this measure has been established through rigorous psychometric analysis (Meyer, Allen, & Gellatly, 1990). Through recent meta-analyses, organizational commitment has been shown to have a significant relationship with performance (Ricketta, 2002).

Job Satisfaction – Judge and colleagues have identified a strong relationship between job satisfaction and performance through their extensive work in this area (Judge & Bono, 2001; Judge, Heller, & Mount, 2002; Judge, et al., 2001). Following their approach, a three-item scale, originally adapted from Hackman and Oldham's (1980) satisfaction measure, was used in this study.

Control Variables

In order to minimize the possibility of confounds, age was controlled in the analysis. In addition, even though the human capital used direct measures of years of education and job experience, for the various questionnaire measures, to help control for common method bias, as suggested by Podsakoff, et al. (2003) a “target variable” was included in the study. As Podsakoff, et al. (2003) indicate, a target variable can be identified that is theoretically unrelated to the variables under investigation. For this study, a measure of polychronicity (Slocombe & Bluedorn, 1999) was used as the target variable because polychronicity and psychological capital were deemed to be theoretically different. This target variable was found to be unrelated to either the independent or dependent variables in this study.

Results of the Study

The Cronbach alpha reliability estimates for the scales used in this study ranged from .64 to .92. With respect to the optimism scale, it should be noted that initially it was noticeably low ($\alpha = .54$). In order to increase the reliability of the optimism scale for this sample, a reduced optimism scale (items 3, 8, 9, and 12) was used in the analyses. The resulting reliability of this 4-item optimism scale became an acceptable .70. Although the .64 for workplace social inclusion is also relatively low, it is still above what is considered reasonable (Peterson, 1994; Slater, 1995) and all the others were within the acceptable range.

A principal component factor analysis was used with Varimax rotation on the items included with the five independent scales measuring the social capital variable and the psychological capital states of self-efficacy, hope, optimism, and resiliency. Although the common cutoff (eigenvalue ≥ 1.00) for determining the reasonable number of factors to extract suggested 11 factors, only 5 factors (eigenvalues ≥ 1.7) were used to assess the item loadings onto their respective factors. Most of the scale items loaded on their respective factors, thus providing support for the uniqueness of the underlying constructs.

The first hypothesis focused on whether or not psychological capital explained unique variance beyond the individual POB states of confidence/self-efficacy, hope, optimism, and resiliency. As discussed by Luthans and colleagues (Luthans, et al., 2004; Luthans & Youssef, 2004; Luthans, et al., 2006, 2007), psychological capital (PsyCap) is the composite of these

four. Table 1 shows that hypotheses 1A and 1C stating PsyCap has a stronger relationship with work attitudes than confidence/efficacy and optimism are supported. PsyCap is significantly correlated with job satisfaction ($r=.373$, $p=.002$) and organizational commitment ($r=.313$, $p=.009$) while self-efficacy and optimism are not significantly correlated with these work attitudes. Although resiliency is significantly related to job satisfaction ($r=.253$, $p=.036$) and organizational commitment ($r=.251$, $p=.038$), it is not as relatively high as overall PsyCap. Hope, on the other hand, is significantly related to job satisfaction ($r=.381$, $p=.001$) and organizational commitment ($r=.378$, $p=.001$) at a slightly higher level than overall PsyCap. Therefore, with the exception of the hope hypothesis 1B, hypotheses 1A, 1C, and 1D that overall PsyCap is more predictive of work attitudes than the individual states are supported.

The second hypothesis focused on whether positive psychological capital added to the relationship with workers' attitudes beyond what could be explained by human and social capital. To test this hypothesis, the first analysis included a review of the bivariate correlations between human capital, social capital, and psychological capital, and the two dependent attitudinal variables of satisfaction and commitment. As shown in Table 2, PsyCap is significantly correlated with job satisfaction ($r=.373$, $p=.002$) and organizational commitment ($r=.313$, $p=.009$), while human capital is significantly related to commitment ($r=.319$, $p=.008$) but not satisfaction and the reverse is true of social capital ($r=.319$, $p=.008$ with satisfaction, but not related to commitment). Also, PsyCap is related to the social capital measure ($r=.422$, $p=.000$), but not human capital.

The second analysis for hypothesis 2 used hierarchical regression to compare the added variance explained by PsyCap. Step one of the regression analysis loaded the control variable, human capital, and social capital. Step two added the PsyCap variable to see if the adjusted R^2 was significant. The first regression model with organizational commitment as the dependent variable was not significant $R^2 = .114$, $F(4,63)=2.035$, $p=.100$. When PsyCap is added to the model, however, the R^2 change ($\Delta R^2 = .043$) is significant and the regression model becomes significant [$R^2 = .172$, $F(1,62)=2.569$, $p=.035$]. The first regression model with job satisfaction as the dependent variable was significant $R^2 = .154$, $F(4,63)=2.681$, $p=.039$. When PsyCap is added to the model, the R^2 change ($\Delta R^2 = .018$) is significant ($R^2 = .219$, $F(1,62)=3.484$, $p=.008$).

These analyses support hypotheses 2A and 2B. Another interesting observation about the two model comparison is the social capital variable.

In the first model, social capital was a significant contributor ($p=.007$) to satisfaction, but in the second model the social capital becomes insignificant ($p=.102$). This seems plausible because of the significant correlation between social capital and PsyCap ($r= .422$).

Table 1. Correlation Matrix of Study Variables

	Job Sat	Org Commit	Self- Efficacy	Hope	Optimism	Resiliency	PsyCap
Job Satisfaction							
Organization Commitment	.584**						
Self- Efficacy	.033	.137					
Hope	.381**	.378**	-.051				
Optimism	.200	-.025	-.048	.274*			
Resiliency	.235*	.251*	-.181	.632**	.123		
PsyCap	.373**	.313**	.308**	.789**	.576**	.670**	

** Correlation is significant at the $p < 0.01$ level (2-tailed)

* Correlation is significant at the $p < 0.05$ level (2 tailed)

Table 2. Correlation Matrix of Study Variables

	Job Sat	Org Commit	Human Capital	Social Capital	PsyCap
Job Satisfaction					
Organization Commitment	.584**	1			
Human Capital	.078	.319**	1		
Social Capital	.319**	.140	-.174	1	
PsyCap	.373**	.313**	-.164	.422**	1

** Correlation is significant at the $p < .01$ level (2-tailed)

Discussion and Implications

This study found promising, although still very preliminary, empirical results for the positive impact that psychological capital may have on work attitudes. While human and social capital have arrived as recognized ways to understand the benefits of valuing today's "assetless" organizations (Leana & Rousseau, 2000), the recently introduced positive psychological capital assessed in this study suggests there is even more to understanding the value of today's complex human resources. Recapping the delineation

of human (what I know), social (who I know), and psychological capital (who I am and what I can become) makes it clear that to fully take advantage of the potential value and impact of human resources, organizations need to invest in and develop all three ways of valuing human resources. However, in the first attempt to test all three forms of capital in the same study, the relative, additive value of psychological capital's positive impact on workers' desired, performance-related attitudes was at least initially evident.

The correlational analysis, of course, does not permit the conclusion that the workers' PsyCap caused their desirable work attitudes. However, when PsyCap is compared to both human and social capital's impact on attitudes, more confident conclusions can be drawn. Specifically, from the regression models, PsyCap significantly increased the amount of variance explained beyond human and social capital. For job satisfaction, the full-model, that includes all three types of capital, the R^2 of .22 is a result that compares favorably with findings from how other well-established constructs such as goal setting, feedback, and core self-evaluations relate to similar attitudinal outcomes.

One finding that needs further explanation was the negative relationship between human capital and satisfaction and commitment. Although this would be contrary to the human capital literature (Lepak & Snell, 1999; Hitt, et al., 2001), it may support the reality that organizations have many competing pressures that often limit an organization's willingness to invest in its workforce and the resulting fallout (Harrel-Cook & Ferris, 1997). Thus, one interpretation is that the employees in this highly blue-collar environment perceive their growing human capital as having a negative impact on their attitudes, e.g., the more education and/or experience they obtain, the higher their expectations become, and the less satisfied they are with their current job and less committed they are with their organization. Regardless of the rationale for this negative relationship, it is one that deserves future investigation. Another interesting finding was the relationship between social capital and PsyCap. While social and psychological capital are significantly correlated, social capital is only significantly related to job satisfaction while PsyCap is related to both satisfaction and commitment. A possible explanation for this findings is the industry type and kind of job that was represented by the sample used in this study. The physical nature of the work being done by these employees was very intensive. The work environment was loud, physically demanding, and required independent working relationships rather than

dependent relationships. Since social capital may not be as important for these employees to get their jobs completed, this may be reflected in the insignificant relationship with organizational commitment.

Another possible insight for this finding could come from the job characteristics literature. Applying Hackman and Oldham's (1980) well known theory of work redesign, the type of work being done by the participants in this study would score a very low "motivating potential score" (MPS). The characteristics of task identity, skill variety, task significance, autonomy, and feedback would be perceived as relatively low in these jobs and thus may be a moderating effect on the relationship between social capital and organizational commitment. All these possibilities taken together, a better understanding of social capital's explanation of employee work attitudes and productivity certainly seem to warrant future research attention.

Conclusion

Although preliminary, a contribution of this study is the empirical investigation of the additive value of recently introduced psychological capital (Luthans, Avolio, et al., 2005; Luthans, et al., 2004; Luthans & Youssef, 2004; Luthans, et al., 2006, 2007) in relation to now widely recognized human and social capital. The preliminary results reveal that psychological capital may explain more of workers' desirable attitudes than is currently being recognized by human and social capital. Prior research has already demonstrated that human capital is important to understanding and managing human resources (Barros & Alves, 2003; Cascio, et al., 1997; Fernandez, et al., 2000; Leana & Van Buren, 1999; and Van Marrewijk & Timmers, 2003) and the same is true for more recently recognized social capital (Adler & Kwon, 2002; Florin, Lubatkin, & Schulze, 2003; Nahapiet & Ghoshal, 1998; Pennings & Lee, 1999). Knowing that PsyCap in this preliminary research seems to add value to both human and social capital in predicting workers' desirable attitudes will hopefully generate future research to see if it holds true in other samples and environments.

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