

**Linking Ethical Leadership and Employees' In-Role Performance: Exploring the Mediating roles of Psychological Capital and Follower-Leader Relational Capital**

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## **ABSTRACT**

This study investigates the mediating impact of psychological capital and follower-leader relational capital on the relationship between ethical leadership and in-role performance through the lenses of social exchange theory, social information processing theory, and psychological resources theory. Analysis of data collected from a sample of 171 employees and 24 supervisors from Pakistan reveals that ethical leadership has a positive effect on followers' in-role job performance, yet this effect is fully explained through the role of psychological capital and partially through follower-leader relational capital. Significant implications of these findings for further research and practice are discussed.

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## 1. INTRODUCTION

The world has recently witnessed, and still continues to be a spectator to a plethora of unethical practices and incidents of business concerns. A surge in the media's interest in these morally questionable business practices reflects the society's concern about ethical behavior in organizations (Treviño, Weaver, & Reynolds, 2006). In consequence, management scholars have also shown a growing interest in studying ethical behavior in organizations. A considerable body of scholarly work explains the unethical conduct of businesses through the dominant role that leadership plays in influencing employees' propensity to act in productive or counterproductive ways (Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009). In this regard, the newly emerging area of ethical leadership has especially been a rapidly expanding area of inquiry (Trevino et al., 2006).

Ethical leadership is defined as “the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making” (Brown, Treviño, & Harrison, 2005, p. 120).

Although ethical leadership has had considerable intuitive and theoretical support (e.g., Brown & Treviño, 2006), to date, little empirical research has been conducted in order to better understand this new concept of leadership. Given that empirical research on ethical leadership is still in its infancy, a number of important questions remain to be explored (Mayer et al., 2009). In this inquiry, I focus on one such key question and that is how ethical leadership relates to in-role job performance. More specifically, the major objective is to explore the processes through which ethical leadership relates to in-role performance. Three important advances made in this area of research are first the Piccolo, Greenbaum, Den Hartog and Folger study (2010), a field

study that provided support for a fully mediated model whereby task significance and effort fully mediate relationships between ethical leadership and subordinates' job performance. Another study by Walumbwa, Wang, Wang, Schaubroeck, and Avolio, (2010) tapped into social exchange theory, social learning and social identity theories to examine leader-member exchange (LMX) and organizational identification as key mediating mechanism. Finally, the Walumbwa, Morrison, and Christensen (2012) paper explores the mediating roles of group conscientiousness and group voice. Accordingly, I intend to build on and extend this recent research by examining the role of two forms of capital (i.e. follower-leader relational capital and psychological capital) in the ethical leadership – in-role job performance relationship.

Leadership research in general suggests that the nature of the relationships between followers and their leader is critical to understanding how the former fulfill their potential and perform well (Epitropaki & Martin, 2005; Manz & Sims, 1987). In this regard, it is unclear how the relational capital embedded in such relationships (Nahapiet & Ghoshal, 1998; Payne, Moore, Griffis, & Autry, 2011) is the key mechanism through which ethical leadership relates to followers' in-role performance. Although previous research emphasized the importance of strong follower – leader relationships for effective organizational functioning (Walumbwa et al., 2010), it failed to specify how different dimensions of this relationship contribute to the positive effects of ethical leadership on followers' job performance. I focus on two critical characteristics of follower – leader relational capital, namely, goal congruence and trust (Lazarova & Taylor, 2009). Goal congruence captures the presence of shared goals between leader and follower (Nahapiet & Ghoshal, 1998), and by extension, it indicates whether followers perceive a strong “fit” with their organization overall (Vancouver & Schmitt, 1991). The second dimension trust captures the level of trustworthiness built in the relationship between follower and supervisor.

Other studies have also used similar conceptualizations to define and operationalize relational capital between followers and leaders (De Clercq, Thongpapanl, & Dimov, 2009; Merlo, Bell, Menguc, & Whitwell, 2006). Furthermore, in this study, I merge the literature between ethical leadership and psychological capital, by examining the mediating role of psychological capital between ethical leadership and follower's in-role performance. Psychological capital here represents an overarching individual motivational propensity that accrues through positive psychological constructs such as self-efficacy, optimism, hope, and resilience (Luthans, Avolio, Avey & Norman, 2007).

The context selected to conduct this study is Pakistan. According to the Global Economic Prospects Report (World Bank, 2013) Pakistan, the second largest economy in South Asia, has been missing its growth target for the past five years and is likely to continue to do so in the near future. It has been claimed that one of the main reasons for underperformance of Pakistan's economy is its widespread corruption at both government and corporate levels. The combined lack of economic growth and the surge of corruption have been attributed to poor ethical standards of the country's political leadership (Chene, 2008). Several World Bank reports show that law enforcement agencies, taxation authorities, and public procurement processes in Pakistan are all prone to unethical and corrupt practices of politicians (Chene, 2008). This corruption at government agencies has also spread to the corporate society in which individuals and businesses are bound to involve in unethical practices such as bribery of government officials and institutions (who control important resources) to survive. In short, Pakistan provides a perfect example of a state where unethical practices trickle down from the level of a country's leadership to several layers of the corporate world. As such, Pakistan provides an interesting

context to examine the relationship between ethical leadership in companies and its trickle-down effect on employees' performance.

In sum, the primary objective of this paper is to examine how ethical leadership is associated with in-role job performance in a country that has been crippled by unethical practices and corruption at both government and corporate levels. Furthermore, by incorporating follower-leader relational capital and psychological capital (for the first time), I respond to calls to explore the mechanisms through which ethical leadership affects followers' in-role job performance (Brown & Treviño, 2006; Walumbwa, Mayer, Wang, Wang, & Workman, & Christensen 2011b). A graphical representation of the study's conceptual model can be seen at Appendix I. The remainder of this thesis is organized as follows: I first highlight some important contributions of the study, briefly review the present literature on the study variables, build hypotheses connecting these variables, and explain the research design and the study's findings. To conclude, theoretical and practical implications of the study are discussed.

## **2. STUDY CONTRIBUTIONS**

I believe that this work contributes to the joint literature on leadership and performance in at least three different ways: *first*, in exploring the mechanisms that link ethical leadership and employee performance, I simultaneously consider the dimensions of relationship quality between supervisors and their immediate subordinates, and employees' internal motivational propensity of individuals in the form of psychological capital; *second*, I extend the motivational capability of leadership to the concept of ethical leadership and link it to employees' internal motivation accruing through the facets of hope, resilience, optimism, and self-efficacy; *finally*, with this study I apply mainly North American constructs in a non-westernized context (i.e., Pakistan). I shed further light on these contributions in this section.

## **2.1. Bringing together relational capital and psychological capital**

The quality of relationship between leaders and their followers has been long proven to have significant implications for work-related employee outcomes (Epitropaki & Martin, 2005; Manz & Sims, 1993; Walumbwa et al., 2010). However, to the best of my knowledge, to date, the impact of different dimensions of follower–leader relationship and employees’ internal motivational propensity (given by psychological capital) has not been simultaneously explored in the ethical leadership – performance relationship. Therefore, through this inquiry, I draw attention to a unique combination of mechanisms that mediate this ethical leadership – performance relationship. Specifically, I suggest that employees’ perceptions of the ethical conduct of their immediate supervisor will more immediately translate into a greater trust in the supervisor, increased acceptance of and agreement with the supervisor’s work goals, and a higher motivation to perform job duties better.

By drawing upon Brown et al.’s theoretical model (2005; 2006) that explains the ethical leadership – performance relationship through the basic principles of Social Exchange Theory (Blau, 1964), I contribute to this line of research by looking at how different dimensions of the quality of the relationship between supervisors and their followers carries through the positive impact of ethical leadership on follower’s in-role performance. At the same time, I propose that another more immediate outcome of employees’ perception of ethical conduct of their immediate supervisor will be their increased internal motivation to perform the job duties better.

## **2.2. Linking motivational propensities inherent to leadership and PsyCap**

In recent years, there has been an increasing number of scholars (Avolio & Gardner, 2005; Brown et al., 2006; Walumbwa et al., 2008) and practitioners (George, 2003), both arguing that leader behavior, that draws upon and promotes an internalized moral perspective and

positive ethical climate, enables the emergence of employees' positive behaviors and psychological capacities. This thesis proposes that followers' perceptions of ethical leadership serve as a crucial antecedent to the development of their psychological capital. Drawing on psychological resource theory, I propose then that psychological capital in turn influences followers' in-role job performance (Gooty, Gavin, Johnson, Frazier & Snow, 2009).

So, a second important theoretical contribution of this thesis lies in the development of a model that connects the motivational impact of an ethical leader to the motivational propensity inherent to psychological capital and its mediating effect on in-role job performance.

### **2.3. Finding a new context for North American concepts**

Finally, despite the emerging character of ethical leadership (Brown & Treviño, 2006; Brown et al., 2005) and psychological capital studies (Luthans, Avolio et al., 2007; Peterson, Luthans, Avolio, Walumbwa & Zhang, 2011; Luthans, Youssef, & Avolio, 2007), the external validity is limited because the theoretical development and empirical testing has been largely conducted within North America. With employees in North America only representing less than 5% of the global workforce, it is not surprising that researchers have repeatedly called for examining in other cultures, the robustness of organizational behavior theories that have heretofore been tested only on U.S. employees (Aycan, Kanungo, & Sinha, 1999; Ramesh & Gelfand, 2010; Sturman, Shao, & Katz, 2012;). As a result insights into the applicability of these 'westernized' concepts and theories in developing countries are extremely limited. In addressing this gap, I rely on the '*Imposed Etic*' paradigm (Berry 1969, 1989), which allows me to directly import and apply the key concepts of this study (i.e., ethical leadership, psychological capital and follower-leader relational capital) in a Pakistani context. Drawing from the convergence perspective (McGaughey & De Cieri, 1999), western-based ethical philosophy and leadership

theories are used to justify the relationships between the study's core variables and are expected to hold in Pakistan. A western-based perspective is adopted because it provides a frame-of-reference as well as a starting point for understanding how ethical leadership and psychological capital are related to job performance in a non-western context. At the same time from a business perspective this approach will provide useful information to managers on how to improve the effectiveness of leading ethically across cultures.

### **3. LITERATURE REVIEW**

#### **3.1. Ethical Leadership**

Existing literature on ethical leadership defines ethical leaders as those considerate, trustworthy, and morally upright individuals who make just decisions, candidly communicate acceptable ethical standards to their followers, and become excellent role models by practicing these ethical standards themselves (Brown & Trevino, 2006; Walumbwa et al., 2011b). The seminal works of Brown et al., (2005) and Treviño and colleagues, (2000; 2003) established ethical leadership as a distinct construct, rather than just a minor aspect embedded within other leadership practices. Two dimensions of ethical leaders highlighted in their research are those of a moral person – who delineates ethical conduct through personal traits and characteristics, and of a moral manager – who proactively attempts to influence followers' ethical conduct (Brown & Trevino, 2006). While other leadership styles such as transformational leadership, and authentic leadership also capture leader's personal traits (Brown et al., 2005; Piccolo et al., 2010), what sets ethical leadership apart from other leadership styles is a more hands-on approach, adopted by the ethical leader, in communication of acceptable ethical standards to followers and allocation of rewards and punishment based on the level of followers' ethical conduct (Brown et al., 2005; Piccolo et al., 2010; Walumbwa et al., 2011b).

Several recent empirical studies have demonstrated a link between ethical leadership and employee outcomes including task performance, citizenship and deviant behaviors, and employees' ethical conduct and cognitions (Avey, Palanski, & Walumbwa, 2010; Piccolo et al., 2010; Shaubroeck, Hannah, Avolio, Kozlowski, Lord, Trevino, et al., 2012; Walumbwa et al., 2011b). Two dominant mechanisms employed to establish a link between ethical leadership and employee outcomes are the social exchange and social information processing perspectives. For example, Walumbwa et al. (2011b) found that the morally upright conduct of ethical leaders and their characteristics channel into strong social exchange relationships between leaders and followers and make followers reciprocate the high quality social exchange by improving their performance (Walumbwa et al., 2011b). Similarly, Brown et al. (2005), Piccolo et al. (2010), and Walumbwa et al. (2011b) all suggest that through their "normatively appropriate" conduct, (Brown et al., 2005, p.120) and candid communication of ethical standards, ethical leaders render themselves as creditable role models and important sources of information. This develops a shared understanding of acceptable behaviors among followers and makes them learn and emulate their leaders' conduct, thereby ultimately enhancing task performance (Piccolo et al., 2010; Walumbwa et al., 2011b). Thus, although, several recent ethical catastrophes have led to an increased interest in the ethical practices followed by the business leaders around the globe (Walumbwa et al., 2011b; Brown et al., 2005), ethical leadership has especially become relevant in the current era due to its practical influence on employee performance – a construct of prime interest to managers and scholars alike (Bommer, Johnson, Rich, Podsakoff, & Mackenzie, 1995). This is primarily why ethical leadership has gained my attention as a main predictor of in-role performance.

Recently, there have been calls for exploring the more proximal mechanisms that might mediate the relationship between ethical leadership and employee performance related outcomes (Walumbwa et al., 2011b). Accordingly, here I employ the two perspectives of social information processing and social exchange to explore how ethical leadership relates to followers' in-role performance. For the purpose of this study, ethical leadership is operationalized as a unit level construct, assessed through employees' perceptions of their immediate supervisor's ethical conduct aggregated at group level.

Next I explain, what I believe are two of the more proximal consequences of employees' perception of the ethical conduct of their immediate supervisors (that is, psychological capital and follower-leader relational capital), and the distal outcome of in-role performance.

### **3.2. Psychological Capital**

Extant literature delineates psychological capital (i.e., PsyCap) as a positive psychological resource comprising of the four facets of hope, resilience, self-efficacy, and optimism. All four facets operate together as a source of internal motivation (Luthans, Avolio, et al., 2007). The preliminary work on the positive role of PsyCap paid specific attention to hope, resilience, optimism and self-efficacy as separate constructs (Norman, Avey, Nimmicht, & Pigeon, 2010). More recently, however, these four factors have been found not to operate independently but converge together mirroring the core construct of PsyCap (Avey, Luthans, & Youssef, 2010). Building on this emerging stream of research, I also consider PsyCap as an overarching second order construct (Luthans, Youssef, et al., 2007b) encompassing hope, resilience, optimism and self-efficacy. In the remainder of this paragraph I elaborate more on and define the four core elements of PsyCap.

*Hope* here is defined as “the perceived capability to derive pathways to desired goals, and motivate oneself via agency thinking to use those pathways” (Snyder, 2002, p.249). This conceptualization suggests the existence of two basic aspects of hope: a realistic cognition of one’s capacity and persistence or continued energy. In other words, hope gives the ability to remain committed to continuously finding novel ways to accomplish the desired goal. Specifically, the potent combination of willpower and capability leads to greater probabilities of goal attainment (Norman et al., 2010).

Secondly, Masten and Reed (2002) initiated early work on *resilience* and translated this to the organizational context as “positive psychological capacity to rebound, to ‘bounce back’ from adversity, uncertainty, conflict, failure, or even positive change, progress and increased responsibility” (Luthans, 2002, p.702). Essentially, resilience depicts an individual’s positive restoration efforts during unfavorable circumstances. Literature on resilience has linked it to several positive organizational outcomes including organizational commitment and job satisfaction (Norman et al., 2010).

Thirdly, *optimism* has been derived from Seligman (1998) who found it to be positively associated with performance. Subsequent work on optimism advanced Seligman’s definition of optimism to account for an individual’s realistic capabilities. According to Norman et al. (2010) this realistic optimism has been found to be positively associated with self-rated performance and job satisfaction.

Finally, *self-efficacy* is primarily inferred from Bandura’s work (Bandura, 1997), which was later adapted by Stajkovic and Luthans (1998) to the workplace as an employee’s firmly grounded confidence to marshal required resources in order to accomplish a task in a specific

context. Recent studies show that self-efficacy is positively associated with work-related performance (Norman et al., 2010; Walumbwa et al., 2011b).

In conclusion, PsyCap has recently emerged as an important part of research on positive organizational behavior (Avey, Luthans et al., 2010) and has been mostly related to desirable work-related outcomes. Importantly, it has been found to play a vital role in explaining employee performance (Peterson, Luthans, Avolio, Walumbwa, & Zhang, 2011; Luthans, Avolio, et al., 2007, Luthans et al., 2008). Interestingly, some recent studies have brought the leadership and PsyCap literature together (Walumbwa, Luthans, Avey, & Oke, 2011a; Gooty, et al., 2009; Rego, Sousa, Marques, & Cunha, 2012). These studies demonstrate that leadership can provide a favorable context for PsyCap to flourish and thus enhance employee outcomes. Therefore in this study, I advance this stream of knowledge and explore the mediating role of PsyCap and follower-leader relational capital in the ethical leadership – performance relationship.

### **3.3. Follower-Leader Relational Capital**

Relational capital has been referred to as the quality of connection shared by the parties involved in that particular relationship (Blatt, 2009). In this inquiry, I specifically focus on the quality of relationship between immediate supervisors and their followers because, as the social capital literature points out, these relationships provide access to valuable resources that can be utilized to achieve work-related individual and group goals (Dakhli & De Clercq, 2004; Nahapiet & Ghoshal, 1998). Consistent with Nahapiet and Ghoshal, (1998) and Tsai and Ghoshal (1998), I particularly propose that the degree of trust and alignment of work-related objectives embedded in the follower-leader relation will determine whether or not the followers' relation with their supervisor becomes available as a motivational resource to enhance follower performance. These two pillars of the follower-leader relational capital draw heavily on the principals of social

exchange theory (Blau, 1964; Cook & Rice, 2003; Emerson, 1976) and have been linked with performance at individual, firm, regional, and even country levels (Dakhli, & De Clercq, 2004; De Clercq, & Sapienza, 2006; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998).

Note that, here follower-leader relational capital may appear to overlap with the concept of Leader-Member Exchange (LMX) (Graen & Uhl-Bien, 1995). Therefore it is pivotal to draw a clear distinction between both concepts. First, LMX classifies the relational dyads into in-groups and out-groups (Gerstner & Day, 1997) where differentiated relationship quality between both classifications is predicted to yield different performance levels from followers. Here, relational capital does not categorize the quality of relationship between followers and leaders as in- versus out-group. Secondly, Uhl-Bien's framework of "entity versus relational" approaches (Uhl-Bien, 2006, p. 654) can be utilized to distinguish LMX and relational capital. LMX mirrors the entity perspective: it focuses on behaviors and traits of individuals involved in the dyadic leader-follower relationship (Uhl-Bien, 2006) and explains the formation of leadership influence through a series of social exchanges. On the other hand, relational capital reflects the relational approach. More specifically, relational capital stems from the context of ethical leadership, and both the actor (follower) and the context (leaders) come together to form the reality of action space for follower (Holmberg, 2000, as cited in Uhl-Bien, 2006). Finally, several researchers agree that LMX may comprise of several highly interrelated dimensions and thus measure it as a unidimensional construct (Gerstner & Day, 1997). Relational capital, however, is formulated as a bi-dimensional construct encompassing trust and goal congruence. I now briefly explain these two below:

The *trust* dimension of relational capital captures the mutual expectation and obligation to honor the bond formed in the relationship and not to take undue advantage of each other

(Coleman, 1990). As Tsai and Ghoshal (1998) point out, trust is formed by mutual effort on part of both actors involved in a relationship and in order for one party to gain another's trust, it is important for one to establish fidelity with the other. Since ethical leaders candidly communicate their acceptable behaviors and discipline or reward employees accordingly (Brown et al., 2005), they are likely to establish trustworthiness with the followers. This trustworthiness is, in turn, likely to gain followers' support for goal achievement (Tsai & Ghoshal, 1998). Secondly, drawing from Nahapiet and Ghoshal, (1998), and De Clercq and Sapienza (2006), I operationalize *goal congruence* as the degree to which the work-related goals of immediate supervisor and followers converge. Goal convergence becomes important for enhanced performance as it provides cognitions of shared understanding of organizational objectives and channels employees' energies into similar direction (Nahapiet & Ghoshal, 1998). Note that, although, the social capital literature mainly incorporates three dimensions of this resource base embedded in network relations namely, trust, goal congruence, and social interaction, I opt to exclude the social interaction dimension from this study. As explained earlier, I am interested in examining the mediating impact of the *quality* of follower-leader relationship on ethical leadership-performance relationship. Therefore, I excluded the social interaction dimension because it focuses on the *intensity* of the follower-leader relationship rather than the quality. For example, De Clercq, Thongpapanl, and Dimov(2009) point out that existence of an informal relationship (which mainly forms due to social interaction) between exchange parties, will not prevent either of them from acting in an opportunistic way thereby negatively affecting the bond shared by them (p, 284). Also, Tsai and Ghoshal (1998) have noted that the two dimensions of trust and goal congruence are closely linked together; that is, together they form an important resource that creates value for individual employees and entire organizations. So, this study

explores how this resource mediates the relationship between ethical leadership and in-role performance.

### **3.4. In-Role Performance**

Employee performance is undoubtedly the most researched criterion variable in OB and HRM literatures (Bommer et al., 1995). Being no exception to the tradition, leadership research has also consistently and persistently tried to explain employee performance by establishing a direct or indirect link between various leadership forms and performance (Gooty et al., 2009 ; Rego et al., 2012; Shin, 2012; Walumbwa et al., 2011a; Walumbwa et al., 2011b). One reason, why this relationship has received growing attention, is that that leadership is one of the most important contextual factors that influence employee outcomes and allows for practical interventions that can easily channel employee performance in desirable directions (Rego et al., 2012; Walumbwa et al., 2011b).

Traditionally, many researchers operationalized the term ‘performance’ by explicitly categorizing how performance is to be measured. The most commonly used categories of performance measures are subjective versus objective measures (Baker, Gibbons, & Murphy, 1994; Bommer et al., 1995; Hoffman, Nathan, & Holden, 1991). While *objective* performance measures are more straightforward such as “production or quality indices” (Hoffman et al., 1991), the *subjective* measures are not as forthright, they are rather, as the name suggests, subjectively evaluated during performance appraisals and are behavioral in nature.

Another important and even better utilized categorization of performance is given in terms of in-role versus extra-role behaviors, that is, IRBs versus ERBs (Katz, 1964, as cited in Williams & Anderson, 1991). While IRBs are the job duties an employee is required to perform, ERBs are more subjective in nature and mostly refer to the extra efforts made by employees that

improve the overall work environment. These are most commonly termed as citizenship behaviors (Williams & Anderson, 1991). For this research, I am explicitly concerned with what Williams and Anderson (1991) term as IRBs; here I specifically call these behaviors “in-role performance” and assess performance as immediate supervisor’s evaluations of individual employees’ task performance.

This completes a brief overview of the key variables in this inquiry. In what follows, I explicate the theoretical perspectives that connect the study’s variables and develop study hypotheses.

## **4. THEORY AND HYPOTHESIS DEVELOPMENT**

### **4.1. How Ethical Leadership Fosters Positive Outcomes: Two Theoretical Perspectives**

Brown et al. (2005) recently provided a new conceptualization of leadership in the form of ethical leadership. Although partly overlapping with the moral or ethical dimensions of other leadership styles such as transformational leadership, authentic leadership and servant leadership (Toor & Ofori, 2009), it has been shown that the conceptual basis for treating ethical leadership as a distinct leadership construct are valid (Brown et al., 2005; Brown & Trevino, 2006). Trevino et al. (2000) found that ethical leadership incorporates two important dimensions. The first dimension is the moral person dimension which overlaps with the ethical dimensions inherent to more traditional leadership styles. Moral persons possess personal traits and characteristics such as honesty, integrity and trustworthiness. Beyond these personality attributes and traits, ethical leadership can be distinguished from more traditional leadership styles through the moral manager dimension. The moral manager dimension of ethical leadership captures the proactive behaviors by which the ethical leader influences the followers’ actions and beliefs about ethics. These proactive efforts include communicating high performance expectations, role-modeling

behaviors that are normatively appropriate and good for the collective, using reinforcement systems to hold people responsible for appropriate conduct, and treating people fairly and with respect (Brown & Mitchell, 2010; Toor & Ofori, 2009; Trevino, Brown, & Hartman, 2003).

Firstly, I will discuss two theoretical perspectives (i.e., social information processing framework, social exchange theory) and how both frameworks explain the relationship between ethical leadership and two forms of capital (i.e., follower-leader relational capital and psychological capital). Secondly, I will discuss the relationships between these two forms of capital and in-role job performance.

#### ***4.1.1. Social Information Processing Theory: Ethical leadership and PsyCap***

The first theoretical perspective is rooted in the Salancik's and Pfeffer's social information processing approach (1978), a framework that assumes that employees' behavior is a result of the information they retrieve and interpret from the immediate work context rather than their predispositions regarding work or work context (Goldman, 2001; Pfeffer, 1980; Salancik & Pfeffer, 1978). In other words, this theory suggests that the information and cues from their immediate work environment help employees to make sense of events, and in turn guide their behavior; therefore, in order to understand employee behaviors, it is important to study their context. The social information processing approach has been applied to explain several employee outcomes including intentions to quit, performance, satisfaction, and reaction to organizational change (Pfeffer, 1980; Goldman, 2001). Here I utilize this perspective to explain how ethical leadership can foster internal positivity in employees and hence enhance performance.

According to the social information processing approach, employees may observe their work environment and interpret it based on their past experiences; alternatively, they may rely on

“comments from other people about the job” to formulate their interpretations of their work (Goldman, 2001; Zalesny & Ford, 1990 p. 207). Further, according to Salancik and Pfeffer, (1978), and Goleman (2001) some work contexts might facilitate interpretation and information processing by making certain aspects of the situation more prominent. An important implication for my research is that, as ethical leaders explicate ethical standards, model ethical behaviors themselves, and encourage ethical behaviors in followers by providing feedback, they influence followers’ perceptions and their work experiences in positive ways. These positive perceptions and interpretations, in turn, play an important role in fostering employees’ internal resources of hope, optimism, resilience, and self-efficacy (Luthans, Avolio, et al., 2007).

Ethical leaders are assumed to be able to exert influence on followers’ interpretations, attitudes, and thus behaviors especially because the social information processing model highlights that the more credible the source of information is, the more deeply will the information be processed and retained (Zalesny & Ford, 1990). Therefore, since leadership shapes employees’ work context in important ways (Piccolo et al., 2010), the social information processing theory turns out to be one of the most appropriate models for explaining work motivation for this research.

In alignment with Lewin’s field theory (1943), psychologically proximal elements in the employees’ work context have a more dominant effect on their attitudes and behavior than those that are more distant. Along these lines of thinking it is assumed then that the leadership of immediate supervisors of employees may provide crucial information or cues that guide followers’ motivations and eventually behaviors. Numerous studies have indicated that the interactions with supervisors are more effective in monitoring, rewarding and influencing employee behavior than senior management who are less psychologically proximate to followers

(Kristof-Brown, Zimmerman, & Johnson, 2005; Walumbwa et al., 2011b). Some of the key characteristics of supervisors' ethical leadership style are their proactive communication about what is (un-)ethical behavior, and their transparent and open information sharing, which provides followers with constructive and useful feedback about what is expected from them in order to thrive within these companies. This feedback in turn fosters stronger levels of psychological capital among followers in the form of increased efficacy, hope, optimism and resilience (Luthans, Avolio, et al., 2007; Luthans, Youssef, et al., 2007). More specifically, ethical leaders may enhance followers' self-efficacy – a core characteristic of PsyCap – because ethical leaders are very consistent in clarifying how follower's actions and tasks will contribute to achieving the organization's goals (De Hoogh & Den Hartog, 2008). Being encouraged to assess the ethical consequences of their actions and decision-making, followers learn to think more strategically which enhances their perceived ability to execute specific tasks or challenges and thus contributes to their self-efficacy. Also, it is proposed that ethical leaders by engaging in behaviors such as honesty, fair treatment of employees and consideration of others are likely to be evaluated by followers as attractive and therefore credible role models (Howell & Avolio, 1992). This engaging in transparent, fair, and caring actions, and by creating a fair working environment, the ethical leaders become an important source of information, identification and last but not least motivational hope. So, when confronted with an obstacle or challenging situation followers with ethical leaders are more likely to develop more positive coping skills and have the will to succeed even in the face of adverse situations (Snyder, 2000; Masten, 2001), because they can fall back on leaders that will stand beside them and help them face those challenges. Finally, ethical leaders are more likely to exhibit active and adaptive coping skills and are less likely to adopt counterproductive coping skills themselves when faced with setbacks

(Walumbwa et al., 2011b). By adopting these positive approaches to problem solving, followers are likely to do the same (Peterson, 2000), resulting in the development of a positive outlook or attribution of events. In sum, these ethical leadership characteristics and actions all seem fundamental in nurturing psychological capital, and therefore it is hypothesized:

*H1:* There is a positive relationship between a supervisors' ethical leadership and followers' psychological capital.

#### ***4.1.2. Social Exchange Theory: Ethical leadership and relational capital***

Another important theoretical perspective that provides a possible explanation for the relationship between ethical leadership and follower positive behaviors or attitudes is the social exchange theory (Brown and Trevino, 2006). The social exchange perspective, as applied to organizational settings, propounds that employees do not exist in a vacuum; they rather establish and maintain high value providing relationships (Blau, 1964). Central to the theory of social exchange is the idea of obligation creation, which generates the norm of reciprocity and helps employees maintain desired relationships (Emerson, 1976). The social exchange approach has been mainly utilized to explicate employees' relationship with their supervisors and organizations (Cropanzano & Mitchell, 2005). Here I employ the concept of social exchange to explain how exchange relationship with ethical leader might provide followers with the resource of relational capital, important for enhanced employee performance.

Research suggests that the best conditions for formation of social exchange relationships are characterized by presence of mutual trust (Brown et al., 2005; Dirks & Ferrin, 2001; Hansen, 2011). Since ethical leaders are, by definition, trustworthy, and fair, (Brown et al., 2005; Brown & Trevino, 2006), they are likely to elicit social exchanges, beyond the economic quid-pro-quo ones, from their followers (Brown & Trevino, 2006; Gouldner, 1960). Literature on social

exchange suggests that in social exchange relationships, currency of exchange is more likely to be “socioemotional” (Cropanzano & Mitchell, 2005, p. 881) rather than purely economic. Here I specifically propose that subordinates will express their trust in their immediate supervisor by accepting and agreeing with his work-related objectives. By the very definition of social exchange, once both parties have each other’s trust, they will feel obliged to carry on their mutual investment in this exchange relationship (Cropanzano & Mitchell, 2005). Importantly, the currency of exchange in this relationship will be trust and goal congruence provided by subordinates, and fair and ethical treatment of subordinates by supervisors.

Brown and colleagues (Brown & Trevino, 2006) propose that followers of ethical leaders are more likely to perceive themselves as being in social exchange relationships with their leaders. According to social exchange theory, employees tend to develop high-quality relationships with their ethical leaders because they are viewed as honest and trustworthy people who care about the fair treatment and greater good of their employees (Brown & Trevino, 2006; Trevino, Brown, & Hartman, 2003). These leaders are also concerned with building trusting relationships with followers through solicitation of followers’ ideas. Given the social exchange relationship with their leaders (Blau, 1964), followers will wish to reciprocate the caring and fair treatment they receive by returning their trust in their supervisor (Dirks & Ferrin, 2002; Mayer & Gavin, 2005) and showing support for the leaders’ moral goals and values (Mayer & Gavin, 2005). Conceptually, I propose then that ethical leaders through their caring style, transparent information sharing style, and high moral values are likely to enhance follower-leader relational capital. First, it has been shown that the leader’s level of transparency affects the followers’ perceived trust in the leader (Norman, Avolio & Luthans, 2010). Because of their open interaction style, truthfulness and high integrity, ethical leaders promote unconditional trust from

their followers (Ilies, Morgeson, & Nahrgang, 2005). Their proactive actions aimed at encouraging high moral standards, ethical leaders are also more likely to have a major influence on the values internalized by followers. Furthermore, because of their perceived credibility and attractiveness as role models, followers are likely to embody values that are congruent with their leaders (Zhang, Wang, & Shi, 2012). Prior research suggests that having similar values between leader and followers promotes goal congruence between leader and followers (Ilies et al., 2005; Schaubroeck, Lam, & Cha, 2007; Zhang et al., 2012). In sum, it is proposed that followers are likely to reciprocate their social exchange with supervisors by supporting their goals and expressing trust in their leadership style. Thus, I formulate the second hypothesis:

*H2: There is a positive relationship between a supervisor's ethical leadership and follower-leader relational capital.*

To close the loop related to the mediating roles of PsyCap and follower-leader relational capital, the following two paragraphs will cover the discussion of relationships between respectively PsyCap and in-role job performance and follower-leader relational capital and in-role job performance.

#### **4.2. Psychological Capital and Job Performance**

With the increasing interest in positive psychology, a number of scholars started to focus on the relationship between PsyCap and job performance (Gooty et al., 2009; Luthans, Avolio et al., 2007; Luthans, et al, 2008; Peterson, et al., 2011). Along with several other studies the findings suggest a moderate to strong positive relationship between PsyCap on in-role employee performance.

According to Psychological Resources Theory (Fredrickson, 2001; Luthans, et al., 2008), the four underlying facets of PsyCap act as armours against the daily challenges presented to

employees at work (Gooty et al., 2009). Particularly, this view advocates the notion that workplace challenges deplete important psychological resources of employees thereby adversely affecting their work related performance. However, the positive state-like PsyCap taps into important positive work-related cognitions and therefore yields more positive work-related outcomes (Gooty et al., 2009). For example, being hopeful about one's work has been related to motivational drive required to succeed at work, optimism has been linked to a positive approach towards one's work, self-efficacy has been associated with mobilization of resources required for successful task accomplishment, and resilience has been related to perseverance in face of adversity (Luthans, Avey, Avolio, & Peterson, 2010).

Secondly theoretical support for a positive relationship between PsyCap and in-role performance can be found in Conservation of Resources Theory (Hobfoll, 2011). This theory suggests that individuals who possess higher level of psychological resources are more likely to strive to achieve their work-related objectives. Since PsyCap represents important source of psychological resources in the form of hope, optimism, resilience, and self-efficacy (Gooty et al., 2009; Luthans et al., 2010), PsyCap operates as an important source of energy that enables employees to perform better at work. In summary, consistent with previous research I propose that psychological capital will positively affect in-role employee performance. Therefore, I hypothesize that:

*H3: There is a positive relationship between followers' psychological capital and in-role job performance.*

### **4.3. Follower-Leader Relational Capital and Job Performance**

As I explained earlier, relying on the principles of social exchange theory, it is suggested that ethical leadership has a positive effect on follower-leader relational capital. Also I conceptualized follower-leader relational capital as the extent to which exchange involves trust in leadership and follower-leader goal congruence. My premise is that both facets of relational capital primarily enhance perceived performance by increasing the quality of communication and knowledge sharing between supervisors and followers (De Clercq & Sapienza, 2006). I suggest that if followers don't trust their supervisor, their cognitive resources will be focused defensive behaviors in the form of self-protection, rather than being channeled towards value producing activities (Ashforth & Lee, 1990). Also the lack of trust may be accompanied with increased worrying among followers about how their supervisors may adversely impact them. This mental energy spent on worrying has been found to tax important cognitive resources that are crucial for productive efforts (Kim & Choi, 2010; Pugh, Skarlicki, & Passell, 2003; Reinardy, 2010). Also when followers feel they cannot rely on their leader, or their leader has not their best interests at heart, followers are unlikely to carry out the goals specified by their leader or work toward the performance related objectives set by the organization. In contrast, when followers trust their supervisors, it may facilitate both efficient exchange of information and knowledge sharing by reducing the need for cognitive resources aimed at self-protection (Yli-Renko et al., 2001). Followers' faith in the goodwill of their leaders enhances in-role job performance, primarily because of fruitful communication between both parties. Such quality of communication could bring the information and support needed to improve their decision making and performance (Burt, 1992; Wayne, Shore, & Liden, 1997; Colquitt, Scott, & Lepine, 2007).

A second key aspect of follower-leader relational capital is the extent to which employees and supervisors pursue the same goals for the organization and think alike on issues with respect to the internal functioning of the organization (Nahapiet & Ghoshal, 1998; Vancouver, Millsap & Peters 1994; Witt, 1998). Such goal congruence represents an important type of person-environment fit (Kristof-Brown, Zimmerman, & Johnson, 2005; Schneider, 1987; Vancouver & Schmitt, 1991). I hypothesize that the presence of goal congruence between employees and their supervisor improves the in-role job performance. One explanation is that goal congruence increases the amount and quality of information sharing (De Clercq & Sapienza, 2006). This implies that when followers and supervisors share the same goals followers have insight into information useful to their effective functioning. In other words, a shared understanding of the importance of specific goals by leaders and their followers reduces ambiguity about effort allocation and helps ensure that followers' activities directly contribute to their organizations' overarching goals (Colbert, Kristof-Brown, Bradley, & Barrick, 2008). Also I expect goal congruence to be positively associated with job performance, because goals in itself are important motivational forces that help employees in selecting the activities on which they should expend effort (Locke & Latham, 2002). Put differently, goal congruence increases the motivation to invest high levels of personal energy in work because such investment is believed to not only benefit the entire organization but also the individual's own objectives (Nahapiet & Ghoshal, 1998). Based on the above I hypothesize:

*H4: There is a positive relationship between follower-leader relational capital and in-role job performance.*

Based on the above proposed arguments we also suggest that psychological capital and follower-leader relational capital will fully mediate the relationship between ethical leadership and in-role job performance. Therefore I propose the following hypothesis:

*H5: Employees' psychological capital mediates the relationship between ethical leadership and their in-role job performance.*

*H6: Follower-leader relational capital mediates the relationship between ethical leadership and their in-role job performance.*

## **5. METHOD**

### **5.1. Sample and Data Collection Procedure**

The sample consisted of 24 groups representing 171 clerical staff working in different sectors in Pakistan including manufacturing (17.5%), services (29.2%), banking and finance (21.6%), not-for-profit (15.8%), telecommunication (7%), consumer goods (7%) and higher education (1.8%). I gained access to these organizations through my personal and professional contacts. The members of each group reported to a common immediate supervisor, and met on a regularly basis to discuss issues related to the work group unit. Data were collected in two waves over a six week period. The measures for ethical leadership, psychological capital, trust in supervisors and goal congruence were completed during the first wave of the data collection. The self-reported data for ethical leadership were aggregated at the group level. During the second wave, the 24 supervisors, one for every work unit, were asked to evaluate the job performance of their employees. The self- and supervisor-report forms were similarly numbered for pairing of received responses. A cover letter attached to both questionnaires explained the purpose and scope of the study, assured the respondent of strictest confidentiality of the responses, and that the decision to participate in the study was voluntary. The letter instructed the respondents to fill

out the self-report forms and return it directly to the author(s). I requested the immediate supervisor of each respondent to rate their employees' performance. Both the respondent and the supervisor did not have access to responses of each other.

I followed two procedural remedies suggested by Podsakoff, Mackenzie, Lee, & Podsakoff (2003), and Podsakoff, Mackenzie, & Podsakoff; (2012) to reduce the potential for common method bias. First, a temporal separation was created in the measurement of predictor variable and mediators (i.e., ethical leadership, psychological capital, trust and goal congruence) and the criterion variable (i.e. job performance). Second, the sources of data collection were varied for predictor and criterion variables. Specifically, individual employees assessed ethical leadership whereas in-role performance was supervisor-rated. Also, the potential for common method bias between the predictor variable and the mediators was reduced because ethical leadership was operationalized as unit (group) level variable whereas the mediators were measured at the individual level.

Of the total of 400 surveys distributed, 171 paired usable responses were received back, resulting in a response rate of 43%. Overall 83 percent of the study participants were male, and had an average tenure of 4.8 years with their present organizations. Furthermore the majority of the respondents had ages ranging from 25 to 44, had an undergraduate degree, and had worked with at least 2 organizations over the course of their employment period.

## **5.2. Measures**

Table 1 provides the descriptive statistics (i.e., means and standard deviations), bivariate correlations, and reliability (i.e., Cronbach's alpha) of the scales used. Unless otherwise noted all scales were measured using 5-point Likert scales. Only widely used and tested scales were adopted for this study to minimize idiosyncratic interpretations of individual scale items thereby

reducing the probable scale item ambiguity (Podsakoff et al., 2003; 2012) across multiple industries. Table 2 lists all individual scale items used for this study.

[Insert Table 1 here]

[Insert Table 2 here]

**5.2.1. Ethical Leadership** was measured using the ethical leadership scale (ELS) proposed by Brown et al. (2005). Individual respondents were asked to indicate their agreement or disagreement regarding the ethical conduct of their immediate supervisors. All 10 items as proposed by Brown et al., (2005) were used in the current study. Example items for ethical leadership include: 'My supervisor listens to what employees have to say'; 'My supervisor conducts his/her life in an ethical manner'. A one-factor solution using the 10 items yielded the best fit ( $\chi^2/df = 1.83$ ; GFI = 0.93; IFI = 0.97; RMR = 0.03; RMSEA: 0.07). The internal reliability of ethical leadership was 0.91.

**5.2.2. Psychological Capital** was measured using the psychological capital questionnaire (PCQ, Luthans, Youssef, & Avolio, 2007). As in the original PCQ I gathered self-reports about individuals' hope, resilience, self-efficacy, and optimism. Sample items include: (a) efficacy: 'I feel confident in representing my work area in meetings with management' and 'I feel confident helping to set targets/goals in my work area'; (b) hope: 'Right now I see myself as being pretty successful at work' and 'If I should find myself in a jam at work, I could think of many ways to get out of it' ; (c) resilience: 'When I have a setback at work, I have trouble recovering from it, moving on (R)' and 'I usually take stressful things at work in stride' ; and (d) optimism: 'I always look on the bright side of things regarding my job' and 'If something can go wrong for me work-wise, it will (R).' I conducted a second-order CFA to see if optimism, mental resiliency, hope and self-efficacy loaded onto a single latent factor. Results yielded a good fit for

a latent single factor model ( $\chi^2/df = 1.506$ ; GFI = 0.88; IFI = 0.93; RMR = 0.03; RMSEA: 0.05). Therefore, to create overall PsyCap, I averaged scores on all the items such that a high score reflected high PsyCap. The internal consistency reliability of PsyCap was 0.91.

**5.2.3. Follower-Leader Relational Capital** was operationalized and measured following De Clercq and Sapienza (2006) and comprised of two subscales goal congruence and trust. Here, the participants were required to assess their relationship with their immediate supervisors in terms of goal alignment and trustworthiness. The alpha reliabilities were 0.82 for trust ( $\chi^2/df = 5.28$ ; GFI = 0.94; IFI = 0.93; RMR = 0.04; RMSEA: 0.08) and 0.71 for goal congruence ( $\chi^2/df = 0.21$ ; GFI = 0.99; IFI = 0.99; RMR = 0.01; RMSEA: 0.01). No composite score was computed for follower-leader relational capital because the separate dimensions yielded better fit. Goal congruence refers to the degree to which followers and their supervisors hold common goals and values. Similar to De Clercq and Sapienza (2007) and Tsai and Ghoshal (1998), goal congruence was measured using five items (e.g., My supervisor can always be trusted to what is right for me; My supervisor always keeps the promises s/he makes to me). Drawing on the literature of follower-leader trust I used a four items scale developed by De Clercq and Sapienza (2007). Example items are: ‘My supervisor and I think alike on most issues with respect to the organization’; ‘My supervisor’s work-related goals are fully aligned with mine’.

**5.2.4. In-role Job Performance** here refers to the supervisors’ assessment of every employees’ performance in their work-group. Seven items were adapted from Williams & Anderson (1991). Example items are: ‘Employee X meets his/her formal performance requirements’ and ‘Employee X adequately completes his/her assigned duties.’ A one-factor CFA using seven items yielded an excellent fit ( $\chi^2/df = 0.71$ ; GFI = 0.99; IFI = 0.99; RMR = .03;

RMSEA: .01). The 7 items were averaged to calculate the composite in-role job performance ( $\alpha = .72$ )

### 5.3. Analysis procedure

Step one in the analysis was to examine the construct validity of the measures. In addition to CFA analyses and reliability analyses, I examined whether the group-level composition variable ethical leadership could be aggregated at the unit level by computing the intraclass correlation coefficients (ICC 1 and 2), and  $r_{wg(j)}$  values (James, Demaree, & Wolf, 1993). Because individual employees were nested within units (here, groups), I used hierarchical linear modeling (HLM: Raudenbush & Bryk, 2002) to test the hypotheses. First, I estimated a null model (Woltman, Feldstain, MacKay, & Rocchi, 2012) that had no predictors at either level 1 (individual level) or level 2 (unit level) to partition performance variance into within- and between units. Next, I tested for a 2-1-1 multilevel mediation model (Zhang, Zyphur, & Preacher, 2009) using HLM 7.0 (Raudenbush, Bryk, Cheong, Fai, Congdon, & Toit, 2011). Following Hofmann, and Gavin's (1998) recommendations I used grand-mean centering for the independent variables at each level. Given below, is the detailed analysis procedure.

Due to the multilevel character of the data, I adopted the critical steps identified by Klein and Kozlowski (2000) that should be followed when performing multilevel research. *First* step is identifying the nature and appropriate operationalization of each higher level construct; that is, whether the construct is shared, global or configural? The *second* step is a model choice; that is, single-level model, cross-level model, or homologous multilevel model. Step *three* is choosing an appropriate data analysis technique. And finally step *four* in case of shared constructs is verifying whether the constructs can be empirically aggregated.

### ***5.3.1. Nature of Higher Level Construct and Interrater Agreement***

The higher level construct, that is, ethical leadership is operationalized in this study as a “shared” group-level construct (Klein & Kozlowski, 2000, p. 215). Therefore I examined ethical leadership in terms of between-unit and within-unit variability. Three measures of interrater agreement (Lebreton & Senter, 2008) were computed:  $r_{wg(j)}$  (James et al., 1984),  $ICC(1)$  (McGraw & Wong, 1996) and  $ICC(2)$  (Bliese, 2000). All three measures helped us in answering the question whether ethical leadership, measured at individual level, can be aggregated at the group level.

### ***5.3.2. Type of Multilevel Model***

In this study the model is a “cross-level direct effects model” (Klein & Kozlowski, 2000, p. 218). In essence, I am interested to know whether the higher level construct of ethical leadership (aggregated at group level) provides incremental prediction of employees’ in-role job performance over and above individual levelvariance.

### ***5.3.3. Analytical Technique and Centering Procedures***

To test the study’s hypotheses hierarchical linear modeling (HLM) is used. Hofmann et al., (2000) suggest that HLM is conducted in a simultaneous two-stage process. In the first stage, HLM analyzes the relationship among lower level variables (i.e. individual) within each higher level unit (i.e., group in this case), calculating the intercepts and slope(s) for the lower level model within each unit. In the second step, HLM analyzes the relationship between the higher level variables, for example, group in this study, and the intercepts and slopes for each unit (group).

#### ***5.3.4. Shared Construct or Not: Empirical Evidence for Aggregation***

The values of the three interrater agreement indices suggest that the individual employees' perceptions of ethical leadership of immediate supervisor have a shared equivalent at the group level. In a recent paper by Lebreton and Senter (2008), standards for interpreting  $r_{wg(j)}$  values have been suggested. Values that range between .51 and .70 have moderate agreement, whereas values between .71 and .90 indicate strong agreement. Common practice is to conclude that the aggregation of those variables to the organization level is appropriate if the  $r_{wg(j)}$  mean equals or exceeds 0.70 (Klein & Kozlowski, 2000). The median  $r_{wg(j)}$  score for ethical leadership was greater than 0.80, showing strong levels of agreement (Lebreton & Senter, 2008).

The  $ICC(1)$  scores can be interpreted in terms of effect sizes. A value of .01 might be considered a small effect, a value of .10 might be considered a medium effect, and a value of .25 might be considered a large effect (Murphy & Myers, 1998). The  $ICC(1)$  was found to have a medium effect size with a value greater than 0.10 (Bliese, 2000). Finally, the  $ICC(2)$  value also exceeded the recommended 0.70 level (Nunnally & Bernstein, 1994), providing evidence that the group means for ethical leadership are reliable. Thus, from an empirical perspective I conclude that the aggregation of ethical leadership at the group level is justified and adequate.

## 6. RESULTS

### 6.1. Construct Validity

We confirmed the discriminant validity of the five focal constructs by adopting two different approaches. *First*, the average variance extracted estimates of the constructs were greater than the squared correlations between corresponding pairs of constructs (Fornell & Larcker, 1981). *Second*, significant differences were found between the unconstrained model and constrained model (Anderson & Gerbing, 1988) for all 10 pairs of constructs. For example, for the psychological capital–ethical leadership pair, the fit of the unconstrained model ( $\chi^2 = 627.00$ ) was significantly better ( $\Delta\chi^2_{(1)} = 79.72, p < .001$ ) than that of the constrained model ( $\chi^2 = 706.73$ ). Tables 3a and 3b show results of both these approaches.

[Insert Tables 3a and 3b about here]

### 6.2. Data Aggregation

We conceptualized ethical leadership as a shared unit construct or composition construct. This implies that ethical leadership is a construct that is shared by members of a unit, in this case, group. These shared unit constructs originate in individual unit members' experiences, attitudes, perceptions, values, cognitions, or behaviors and converge among unit members through processes of socialization, social interaction, selection, etc. Because shared unit properties emerge as a collective aspect of the unit as a whole, one has to check for restricted within-unit variance (Klein & Kozlowski, 2000). Three indices were used to compute the level of restricted within-unit variance that is (1)  $r_{wg(j)}$ , an index of within-group consensus and agreement (James et al., 1993; Lebreton & Senter, 2008) and (b) the intraclass correlation coefficients,  $ICC(1)$  and  $ICC(2)$ , an index of within-group consistency, or interrater reliability (Bliese, 2000). The median

$r_{wg(j)}$  values for ethical leadership (0.95) indicate strong agreement within each unit about the ethical leadership. The  $ICC(1)$  was found to have a medium effect size with a value of 0.17. This indicates that at least 17% of variance in individual employees' responses to ethical leadership resides in group membership. Put differently, this value indicates that a substantial amount of variance explained in the context is due to group membership. Similarly, the  $ICC(2)$  index indicating group mean reliability was found to be 0.81. Therefore, I proceeded with aggregation of ethical leadership at group level.

### **6.3. Findings**

Before testing the hypotheses I investigated whether there was enough significant systematic variance in supervisor-rated individual performance. Results of a null model revealed that 20 percent of variance in in-role job performance resided between work groups (0.11/0.56). As shown in Table 4, ethical leadership significantly relates to in-role job performance. The findings also indicate that ethical leadership is significantly related to psychological capital, trust (i.e., follower-leader relational capital) and goal congruence (i.e., follower-leader relational capital) controlling for age, gender, and tenure. The results provide support for hypotheses 1 and 2. Furthermore, in full support of hypothesis 3 and partial support for hypothesis 4, I found that psychological capital and goal congruence are positively related to in-role job performance (see Table 4, Model 5).

[Insert Table 4 about here]

In addition, I followed Kenny, Korchmaros and Bolger's (2003) procedure to test the mediating roles of psychological capital and follower-leader relational capital. In step 1, ethical leadership should have a significant relationship to in-role job performance (Model 1). In the next step ethical leadership needs to be significantly related to psychological capital, trust and

goal congruence (see hypotheses 1 and 2, Models 2 through 4). Finally in order to find support for full mediation the effect of psychological capital and relational capital, the relationship between ethical leadership and performance should become insignificant or at least the strength of the relationship between ethical leadership and in-role job-performance should weaken (partial mediation). When I tested for the mediation effect of one of the three variables I also controlled for the other two mediator variables. Results reveal that when mediated by psychological capital and goal congruence, the ethical leadership-performance relationship becomes insignificant. However, with respect to trust, the HLM results reveal that while ethical leadership and trust are significantly related, trust does not appear to be mediating the relationship between ethical leadership and in-role performance (see table 4, Model 5). Taken together the HLM analyses revealed that the ethical leadership-performance was fully mediated through psychological capital and goal congruence. Therefore, I found full support for hypothesis 5 and partial support for hypothesis 6.

## **7. DISCUSSION**

### **7.1. Theoretical and Practical Implications**

Recent work has highlighted the importance of linking leadership in general to in-role job performance. Yet, relatively limited attention has been paid to the simultaneous instruments through which ethical leaders influence followers to achieve desired outcomes (Kark & Van Dijk, 2007). One exception is Walumbwa et al.'s study (2011a) which was a first attempt to test simultaneously the role of LMX and organizational identification as mediating mechanisms that extend the existing understanding of how ethical leadership influences employee performance. By building further upon this stream of research, this study makes several important contributions. By exploring the simultaneous role of psychological capital and follower-leader

relational capital I respond to the notion that the role of the follower (i.e. psychological capital) is equally important to understanding the influence of the leadership process on behavioral outcomes as is the quality of the relationship between leader and follower (i.e. follower-leader relational capital). This is a critical distinction from other studies looking only at the quality of relationship between leaders and followers as a key mechanism in order to explain the instrumental role of ethical leadership in shaping followers' in-role job performance (e.g., Schaubroeck et al., 2012). Put differently, the findings showed that ethical leadership may enhance followers' in-role job performance by enhancing people's positive motivation in the form of psychological capital.

Our finding that followers' perceptions of ethical leadership are positively related to their PsyCap is novel and conceptually appealing because it integrates the ethical dimension of leadership with the motivational propensity of PsyCap. These findings are promising, especially when considering that scholars of positive organizational behavior have called for investigations into the ways in which followers' PsyCap can be developed (e.g., Luthans, Avolio et al., 2007). From a practical point of view, this finding highlights the significance of an ethical leader in energizing the workforce toward positive psychological resources. Also, several critics of the positive organizational behavior movement (Fineman, 2006; Lazarus, 2003) have expressed their concerns about the utility of PsyCap with respect to work outcomes. With this study I weigh in on this topic by providing support for scholarly conceptual positions indicating that PsyCap does relate to work performance (Luthans, 2002; Wright, 2003).

Another primary contribution is that I identified not only a psychological process (i.e., PsyCap) by which ethical leadership is associated to in-role performance, social exchange theory is another crucial mechanism by which ethical leaders impact their followers. Consistent with the

theorizing of Zhang et al. (2012) I found goal congruence in goals between leaders and followers is an important intervening mechanism in the ethical leadership–performance relationship. By including multiple mediating mechanisms, this study represents a first attempt to integrate psychological processes and the role of quality of relationship between leaders and followers in explaining the relationship between ethical leadership and employee performance.

Although this study does not provide a direct test of whether ethical leadership varies around the globe or is universal, the fact that the data were collected in Pakistan, a country that differs significantly from many western developed countries, is a first step in the right direction to know more about the construct's cross-cultural validity. I applied the ethical leadership construct, and westernized theoretical frameworks on data collected from Pakistan - a collectivistic society with strong religious influence on all aspects of life (Khilji, 2002). Since most of the hypotheses were supported, it would be safe to conclude that this study has contributed the cross cultural validity of ethical leadership and performance research.

Finally, an important practical implication is that the findings indicate that ethical leadership can be instrumental for the effective functioning of organizations. The results show that ethical leadership may positively influence in-role job performance through two forms of capital. So in addition to the normative role that ethical leadership plays by encouraging ethical behaviors, (Brown et al., 2005; 2006) the construct also plays a more practical and concrete role in improving employee performance by enhancing follower's individual motivational propensity, that is, psychological capital and/or alignment in goals between leaders and followers. Successful programs already exist that can be used to train leaders and employees so that they become ethical leaders. At same time the fact that ethical leadership indirectly affects performance helps

to make a case as to why organizations should include ethics as an essential part of their leadership development programs.

## **7.2. Future Research Directions and Limitations**

Some limitations exist to the study, particularly with the study design. Because this study is cross sectional by design no inferences about causality can be drawn. For example a reciprocal relationship may exist between are two forms of capital and ethical leadership. For example it could be that follower-leader relational capital or PsyCap shape followers' perceptions of ethical leadership, and not just the causal order as I predicted. Therefore future directions of research should include a temporal or longitudinal component in order to address the causality issues. Furthermore, a longitudinal approach taken to this research stream would allow capturing more data points given throughout a timeframe and help to understand fluctuations in a state like characteristic like psychological capital may influence in-role job performance.

Although the study's sample size was able to detect significant effects in mediation analyses, future research requires a greater sample size that would allow to test the study's model with a more sophisticated analysis technique such as Multilevel Structural Equation Modeling (Hox, Mass, & Brinkhuis, 2010). Finally, I measured in-role job performance with evaluations from supervisors. Because prior research has shown meta-analytically that objective and subjective performance ratings cannot be equated (Bommer et al., 1995), I encourage future studies to replicate the findings using objective performance measures where possible.

Trust as an aspect of follower-leader relational capital did not mediate the relationship between ethical leadership and performance, however, some meta-analyses suggest the need to further explore the potential role of boundary conditions in explaining the relationship between trust and in-role job performance. As a result, researchers should try to develop better and more

inclusive models that refine the predictions of the mediator variable trust in leaders. Inclusion of contextual boundary conditions such as workplace stressors or resources into such model can explain the understanding of the mediating role of trust between ethical leadership and in-role job performance. With this request for testing more inclusive models, future studies that explore the relationship between ethical leadership and performance should perhaps also control for other leadership styles (that is, transformational leadership, spiritual leadership and authentic leadership) that overlap with the ethical leadership domain.

One possible explanation as to why trust was not found to play a significant role in mediating the ethical leadership – performance relationship is rooted in the “leader-follower” literature (Howell & Hall-Merenda, 1999, p.680). Particularly, the Leader-Member Exchange theory (LMX) (Graen & Cashman, 1975; Graen & Scandura, 1987, Graen & Uhl-Bien, 1995, as cited in Howell & Hall-Merenda, 1999) suggests that leaders are able to elicit different behavioral outcomes from followers. A large body of research attributes these performance differences among followers to the leader – follower relationship quality, which is grounded in exchange relations between followers and leaders and is shaped by a number of contextual factors, trust being one of them (Graen & Uhl-Bien, 1995). For example, the LMX literature suggests that when leaders assign crucial tasks to followers, they are likely to perceive that the leaders have faith in their capabilities to perform that task and are likely to reciprocate this trust by having faith in the leader’s vision and goals (Gerstner & Day, 1997; Howell & Hall-Merenda, 1999). Here trust is shown to acquire a contextual role and thus, future research should investigate whether the relationship between ethical leadership and performance is contingent upon different levels of trust.

To conclude, this study has also significant strengths: data for performance was not self-report, which helped us to reduce potential issues associated with common method bias (Podsakoff et al., 2003). Also, the context of the current study differed from most of the developed western countries of North America and Europe expanding the international perspective of job performance research (e.g., Butt, Jin, & Jaeger, 2005; Jamal & Al-Marri, 2007; Raja, Johns, & Filotheos, 2004). Another strength of this inquiry is that it simultaneously examined several intervening mechanisms within the same study. Since this allows to determine the relative importance of each of the mediators, this is an important addition to previous leadership research that tends to include only one mediator per study (Walumbwa et al., 2011a).

## 8. CONCLUSION

The focal objective of this study has been to deepen the existing understanding on the relationship between ethical leadership and employees' job performance. Particularly, this study is an empirical attempt to unravel some of the intervening mechanisms through which ethical leadership is likely to affect employees' in-role performance. The perspectives of social exchange (Blau, 1964), social information processing (Salancik & Pfeffer, 1978), and psychological resources (Fredrickson, 2001) were applied to develop the linkages between ethical leadership and performance through the mediating roles of follower-leader relational capital and psychological capital.

The model developed in this study was tested in Pakistan, a country that has suffered from corruption and unethical practices at government and corporate levels.. Group level analysis was conducted to test the data collected from multiple industry sectors using hierarchical linear modeling (Raudenbush & Bryk, 2002; Woltman et al., 2012). Results provide overall support for the study's conceptual model; specifically, the relationship between ethical leadership and in-role performance was found to be fully mediated through psychological capital and partially mediated through follower-leader relational capital. Particularly, the goal congruence facet of follower-leader relational capital fully mediated the explored relationship.

Despite the limited scope, this study has important implications for research in the arena of ethical leadership and for practitioners interested in developing training programs and interventions targeted at performance improvement. Of particular relevance is that I was able to bring to light the simultaneous role played by followers' internal motivational propensity and relationship quality between followers and leaders in linking ethical leadership and in-role performance. This finding is important for scholars interested in investigating the antecedents of

PsyCap and is also meaningful for scholars attempting to unpack the outcomes of ethical leadership. From a practical purview, these findings are instrumental because they point out toward yet another approach to improve employees' hope, resilience, optimism, self-efficacy in order to enhance their task performance.

In sum, I believe that this work is one of the initial attempts to simultaneously recognize multiple mechanisms that intervene the ethical leadership – employee performance relationship. Although, it is just a drop in the ocean, I hope that this study will encourage further research in this direction whereby organizational researchers will explore several other mechanics of this relation in many different manners.

## 9. REFERENCES

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Ashforth, B.E., & Lee, R.T. (1990). Defensive behavior in organizations: A preliminary model. *Human Relations*, 43(7), 621–648.
- Avey, J. B., Luthans, F., & Youssef, C. M. (2010). The additive value of positive psychological capital in predicting work attitudes and behaviors. *Journal of Management*, 36, 430-452, p.432.
- Avey, J. B., Palanski, M. E., & Walumbwa, F. O. (2010). When leadership goes unnoticed: The moderating role of follower self-esteem on the relationship between ethical leadership and follower behavior. *Journal of Business Ethics*. doi:10.1007/s10551-010-0610-2.
- Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance. *Human resource Development Quarterly*, 22(2), 127-152. doi: 10.1002/hrdq.20070
- Avolio, B.J. & Gardner, W.L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *Leadership Quarterly*, 16, 315–338.
- Aycan, Z., Kanungo, R.N., & Sinha, J.B.P. (1999). Organizational culture and human resource management practices: the model of culture fit. *Journal of Cross-Cultural Psychology*, 30, 501–526.
- Baker, G., Gibbons, R., & Murphy, K. J. (1994). Subjective performance measures in optimal incentive contracts. *The Quarterly Journal of Economics*, 1125-1156.
- Bandura, A. 1997. *Self-efficacy: The exercise of control*. New York: Freeman.

- Berry, J. W. (1969). On cross-cultural comparability. *International journal of Psychology*, 4(2), 119-128.
- Berry, J. W. (1989). Imposed etics-emics-derived etics: The operationalization of a compelling idea. *International Journal of Psychology*, 24(1), 721-735.
- Blatt, R. (2009). Tough love: How communal schemas and contracting practices build relational capital in entrepreneurial teams. *Academy of Management Review*, 34(3), 533-551.
- Blau, P. (1964). *Exchange and Power in Social Life*. New York: Wiley.
- Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S.W.J. Kozlowski (Eds.), *Multilevel Theory, Research, and Methods in Organizations* (pp. 349-381). San Francisco: Jossey-Bass.
- Bommer, W. H., Johnson, J. L., Rich, G. A., Podsakoff, P. M., & Mackenzie, S. B. (1995). On the interchangeability of objective and subjective measures of employee performance: A meta-analysis. *Personnel Psychology*, 48, 587-605.
- Brown, M.E., & Mitchell, M.S. (2010). Ethical and unethical leadership: Exploring new avenues for future research. *Business Ethics Quarterly*, 20, 583–616.
- Brown, M.E., & Trevino, L.K. (2006). Ethical leadership: A review and future directions. *The Leadership Quarterly*, 17, 595–616.
- Brown, M. E., Treviño, L. K., & Harrison, D. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, 97, 117-134.
- Burt, R. S. (1992). *Structural holes: The social structure of competition*. Cambridge: Harvard University Press.

- Chene, M. (2008). Overview of corruption in Pakistan. *Transparency International*. Retrieved April 13, 2013, from <http://www.u4.no/publications/overview-of-corruption-in-pakistan/>
- Colbert, A.E., Kristof-Brown, A.L., Bradley, B.H., & Barrick, M. R. (2008). CEO transformational leadership: The role of goal importance congruence in top management teams. *Academy of Management Journal*, 51(1), 81–96.
- Coleman, J. S. 1990. *Foundations of social theory*. Cambridge: Harvard University Press.
- Colquitt, J.A., Scott, B.A., & Lepine, J. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal*, 92(4), 909–927.
- Cook, K. S., & Rice, E. (2003). Social Exchange Theory. In *Handbook of Social Psychology*, edited by Delamater, J. (53–76). New York, Kluwer.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874-900.
- Dakhli, M., & De Clercq, D. (2004). Human capital, social capital, and innovation: A multi-country study. *Entrepreneurship and Regional Development*, 16, 107-128.
- De Clercq, D., & Sapienza, H. J. (2006). Effects of relational capital and commitment on venture capitalists' perception of portfolio company performance. *Journal of Business Venturing*, 21, 326-347. doi:10.1016/j.jbusvent.2005.04.007
- De Clercq, D., Thongpapanl, N., & Dimov, D. (2009). When good conflict gets better and bad conflict becomes worse: The role of social capital in the conflict–innovation relationship. *Journal of the Academy of Marketing Science*, 37, 283–297.

- De Hoogh, A.H.B., & Den Hartog, D.N. (2008). Ethical and despotic leadership, relationships with leader's social responsibility, top management team effectiveness and subordinates' optimism: A multi-method study. *The Leadership Quarterly*, 19, 297–311.
- Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, 87, 611-628.
- Emerson, R. M. (1976). Social Exchange Theory. *Annual Review of Sociology*, 2, 335-362.
- Epitropaki, O. & Martin, R. (2005). From Ideal to Real: A Longitudinal Study of the Role of Implicit Leadership Theories on Leader-Member Exchanges and Employee Outcomes. *Journal of Applied Psychology*, 90, 659-676.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56, 218–226.
- Fineman, S. (2006). On being positive: Concerns and counterpoints. *Academy of Management Review*, 31(2), 270-291.
- Gerstner, C. R., & Day, D. V.(1997). Meta-analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology*, 82 (6), 827 – 844.
- George B. Authentic leadership: Rediscovering the secrets to creating lasting value. San Francisco, CA: Jossey Bass; 2003.
- Goldman, B. M. (2001). Toward an understanding of employment discrimination claiming: An integration of organizational justice and social information processing theories, *Personnel Psychology*, 54, 361- 386.
- Gooty, J., Gaving, M., Johnson, P. D., Frazier, M. L., & Snow, D. B. (2009). In the eyes of the beholder transformational leadership, psychological capital, and performance, *Journal of Leadership and Organizational Studies*, 15(4) 353-367.

- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25, 161-178.
- Graen, G. B., & Cashman, J. F. (1975). A role-making model of leadership in formal organizations: A developmental approach. In J. G. Hunt & L. L. Larson (Eds.), *Leadership Frontiers* (pp.143-165). Kent, OH: Kent State University Press.
- Graen, G. B., & Scandura, T. A. (1987). Toward a psychology of dyadic organizing. In L. L. Cummings & B. M. Staw (Eds.), *Research in Organizational Behavior* (pp. 175-208). Greenwich, CT: JAI Press.
- Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly*, 6, 219-247.
- Hansen, D. (2011). Ethical leadership: A multifoci social exchange perspective. *The Journal of Business Inquiry*, 10(1), 41-55.
- Hobfoll, S. E. (2011). Commentary conservation of resource canvass and engaged settings. *Journal of Occupational and Organizational Psychology*, 84, 116-122. doi: 10.1111/j.2044-8325.2010.02016.x
- Hofmann, D. A. & Gavin, M. B. (1998). Centring decisions in hierarchical linear models: Implications for research in organizations. *Journal of Management*, 24(5) 623-641.
- Hofmann, D. A., Griffin, M. A., & Gavin, M. B. (2000). The application of hierarchical linear modeling to organizational research. In K. J. Klein & S. W. J. Kozlowski (eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 467-511). San Francisco, CA: Jossey-Bass.

- Hoffman, C. C., Nathan, B. R., & Holden, L. M. (1991). A comparison of validation criteria: objective versus subjective performance measures and self-versus supervisor ratings. *Personnel Psychology*, 44, 601-619.
- Holmberg, R. (2000). Organizational learning and participation: Some critical reflections from a relational perspective. *European Journal of Work and Organizational Psychology*, 9(2), 177-188.
- Howell, J.M., & Avolio, B.J. (1992). The ethics of charismatic leadership: Submission or liberation? *Academy of Management Perspectives*, 6, 43–54.
- Howell, J. M., & Hall-Merenda, K. E. (1999). The ties that bind: The impact of leader-member exchange, transformational leadership, and distance on predicting follower performance. *Journal of Applied Psychology*, 84(5), 680 – 694.
- Hox, J. J., Mass, C. J. M., Brinkhuis, M. J. S. (2010). The effect of estimation method and sample size in multilevel structural equation modeling. *Statistica Neerlandica*, 64(2), 155 – 170.
- Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-being: Understanding leader-follower outcomes. *The Leadership Quarterly*, 16, 373-394.
- Jamal, A. & Al-Marri, M. (2007). Exploring the effect of self image congruence and brand preference on satisfaction: the role of expertise. *Journal of Marketing Management*, 23, 613 – 629.
- James, L. R., Demaree, R. G., & Wolf, G. (1993).  $r_{wg}$ : An assessment of within-group interrater agreement. *Journal of Applied Psychology*, 78, 306-309.

- Kark, R. & Van Dijk, D. (2007). Motivation to lead, motivation to follow: The role of the self-regulatory focus in leadership processes. *Academy of Management Review*, 32(2), 500-528.
- Katz, D. (1964). The motivational basis of organizational behavior. *Behavioral Science*, 9, 131-133.
- Kenny, D. A., Korchmaros, J. D., & Bolger, N. (2003). Lower level mediation in multilevel models. *Psychological Methods*, 8, 115-128.
- Khilji, E. (2002). Modes of convergence and divergence: An integrative view of multinational practices in Pakistan. *International Journal of Human Resource Management*, 13(2), 232-253.
- Kim, M. S., & Choi, J. N. (2010). Layoff victim's employment relationship with a new employer in Korea: Effects of unmet tenure expectations on trust and psychological contract. *The International Journal of Human Resource Management*, 21(5), 781-798.
- Klein, K. J., & Kozlowski, S. W. J. (2000). From micro to meso: Critical steps in conceptualizing and conducting multilevel research. *Organizational Research Methods*, 3, 211 – 236.
- Kristof-Brown, A.L., Zimmerman, R.D., & Johnson, E.C. (2005). Consequences of individuals' fit at work: A meta-analysis of person–job, person–organization, person–group, and person–supervisor fit. *Personnel Psychology*, 58, 281-342.
- Lane, P.J., & Lubaktin, M. (1998). Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*, 19, 461–477.

- Lazarova, M., & Taylor, S. (2009). Boundaryless careers, social capital, and knowledge management: Implications for organizational performance. *Journal of Organizational Behavior*, 30, 119-139.
- Lazarus, R. S. (2003). Does positive psychology movement have legs? *Psychological Inquiry*, 24(2), 93 – 109.
- LeBreton, J. M., & Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods*, 11(4), 815-852.
- Lewin, K. (1943). Defining the 'field at a given time.'. *Psychological Review; Psychological Review*, 50(3), 292.
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation. *American Psychologist*, 57(9), 705-717.
- Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23, 695-706.
- Luthans, F. Avey, J. B., Avolio, B. J., & Peterson, S. J. (2010). The development and resulting performance impact of positive psychological capital. *Human Resource Development Quarterly*, 21(1), 41-67. doi: 10.1002/hrdq.20034
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Leadership Institute Faculty Publications*, paper 11 <http://digitalcommons.unl.edu/leadershipfacpub/11>.
- Luthans, F. Norman, S. M., Avolio, B. J., & Avey, J. B. (2008). The mediating role of psychological capital in the supportive organizational climate – employee performance relationship. *Journal of Organizational Behavior*, 29, 219-238.

- Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital: Developing the human competitive edge*. Oxford, UK: Oxford University Press.
- Manz, C.C., & Sims, H.P. Jr. (1993). *Business without bosses: How self-managing teams are building high performance companies*. New York, NY: Wiley.
- Masten, A.S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56, 227–238.
- Masten, A. S., & Reed, M. G. J. (2002). Resilience in development. In C. R. Snyder & S. Lopez (Ed.), *Handbook of positive psychology* (pp. 74-88). Oxford, UK: Oxford University Press.
- Mayer, D.M., Kuenzi, M., Greenbaum, R., Bardes, M., & Salvador, R. (2009). How does ethical leadership flow? Test of a trickle-down model. *Organizational Behavior and Human Decision Processes*, 108, 1–13.
- Mayer, R. C., & Gavin, M. B. Trust in management and performance: Who minds the shop while the employees watch the boss? *Academy of Management Journal*, 48(5) 874-888.
- Merlo, O., Bell, S. J., Menguc, B., & Whitwell, G. J. (2006). Social capital, customer service orientation and creativity in retail stores. *Journal of Business Research*, 59(12), 1214 – 1221.
- McGaughey, S., & De Ceiri, H. (1999). Reassessment of convergence and divergence dynamics: Implications for international HRM. *International Journal of Human Resource Management*, 10, 235–250.
- Murphy, K. R., & Myers, B. (1998). *Statistical power analysis: A simple and general model for traditional and modern hypothesis tests*. Mahwah, NJ: Lawrence Erlbaum.

- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital and the organizational advantage. *Academy of Management Review*, 23(2), 242-266.
- Norman, S. M., Avey, J. B., Nimmicht, J. L., & Pigeon, N. G. (2010). The interactive effects of psychological capital and organizational identity on organizational citizenship and deviance behaviors. *Journal of Leadership and Organizational Studies*, 17, 380-391.
- Norman, S.M., Avolio, B.J., & Luthans, F. (2010). The impact of positivity and transparency on trust in leaders and their perceived effectiveness. *Leadership Quarterly*, 21, 350-364.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Payne, G.T., Moore, C.B., Griffis, S.E., & Autry, C.W. (2011). Multilevel challenges and opportunities in social capital research. *Journal of Management*, 37, 491-520.
- Peterson, C. (2000). The future of optimism. *American Psychologist*, 55, 44-55.
- Peterson, S.J., Luthans, F., Avolio, B.J., Walumbwa, F.O., & Zhang Z. (2011). Psychological capital and employee performance: A latent growth modeling approach. *Personnel Psychology*, 64, 427-450.
- Pfeffer, J. (1980). A partial test of social information processing model of job attitudes. *Human Relations*, 33, 457-476.
- Piccolo, R.F., Greenbaum, R., Den Hartog, D.N., & Folger, R. (2010). The relationship between ethical leadership and core job characteristics. *Journal of Organizational Behavior*, 31, 259-278.
- Podsakoff, P. M., Mackenzie, S. B., Lee, J-Y, & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommendation remedies. *Journal of Applied Psychology*, 88, 879-903.

- Podsakoff, P. M., Mackenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539-569.
- Pugh, S.D., Skarlicki, D.P., & Passell, B.S. (2003). After the fall: Layoff victims' trust and cynicism in re-employment. *Journal of Occupational and Organizational Psychology*, 76(2), 201–212.
- Raja, U., Johns, G., & Filotheos, N. (2004). The impact of personality on psychological contracts. *Academy of Management Journal*, 47, 350 – 367.
- Ramesh, A., & Gelfand, M.J. (2010). Will they stay or will they go? The role of job embeddedness in predicting turnover in individualistic and collectivistic cultures. *Journal of Applied Psychology*, 95, 807–823.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Raudenbush, S. W., Bryk, A. S., Cheong, A. S., Fai, Y. F., Congdon, R. T., & du Toit, M. (2011). *HLM 7: Hierarchical linear and nonlinear modeling*. Lincolnwood, IL: Scientific Software International.
- Rego, A., Sousa, F., Marques, C., & Cunha, M. P. (2012). Authentic leadership promoting employees' psychological capital and creativity. *Journal of Business Research*, 65, 429-437.
- Reinardy, S. (2010). Downsizing effects on personnel: The case of layoff survivors in U.S. newspapers. *Journal of Media Business Studies*, 7(4), 1-19.

- Schaubroeck, J. M., Hannah, S. T., Avolio, B. J., Kozlowski, S. W. J., Lord, R. G., Trevino, L. K., Dimotakis, N., & Peng, A. C. (2012). Embedding ethical leadership within and across organizational levels. *Academy of Management Journal*, 55(5), 1053 – 1078.
- Schaubroeck, J. M., Lam, S. S. K., Cha, S. E. (2012). Embracing transformational leadership: Team values and the impact of leader behavior on team performance. *Journal of Applied Psychology*, 92(4), 1020-1030.
- Seligman, M. E. P. (1998). *Learned optimism*. New York: Pocket Books.
- Salancik, G.R., & Pfeffer, J.R. (1978). An examination of need-satisfaction models of job attitudes. *Administrative Science Quarterly*, 23, 224–252.
- Snyder, C.R. (2000). *Handbook of hope: Theory, measures, and applications*. San Diego, CA: Academic Press.
- Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry*, 13, 249-276.
- Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work related performance: A meta-analysis. *Psychological Bulletin*, 124, 240-261.
- Sturman, M.C., Shao, L., & Katz, J.H. (2012). The effect of culture on the curvilinear relationship between performance and turnover. *Journal of Applied Psychology*, 97, 46 - 62.
- Toor, S.R. & Ofori, G. (2009). Ethical leadership: Examining the relationships with full-range leadership model, employee outcomes, and organizational culture. *Journal of Business Ethics*, 90, 533–547.
- Treviño, L. K., Brown, M., & Hartman, L. P. (2003). A qualitative investigation of perceived executive ethical leadership: Perceptions from inside and outside the executive suite. *Human Relations*, 55, 5-37.

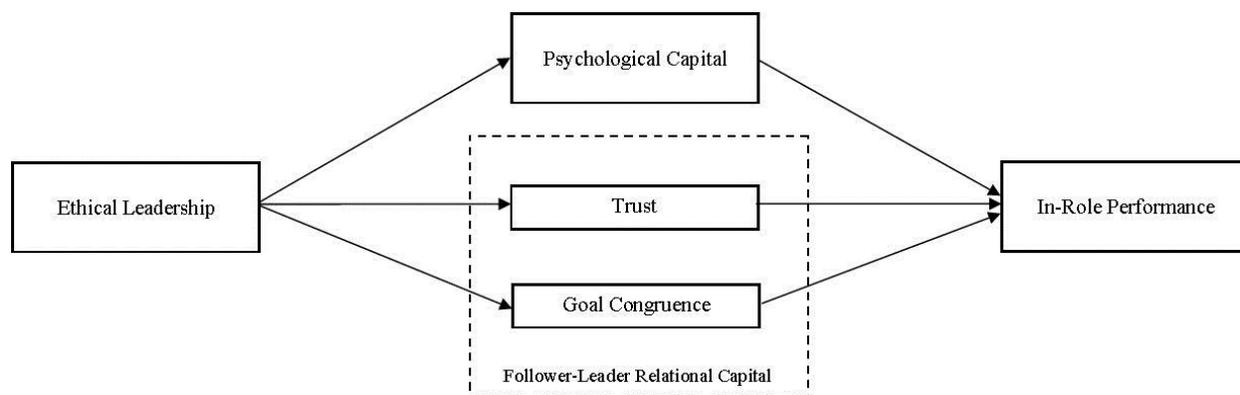
- Treviño, L. K., Hartman, L. P., & Brown, M. (2000). Moral person and moral manager: How executives develop a reputation for ethical leadership. *California Management Review*, 42, 128-142.
- Trevino, L.K., Weaver, G.R., & Reynolds, S.J. (2006). Behavioral ethics in organizations: A review. *Journal of Management*, 32, 951–990.
- Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, 41(4), 464-476.
- Uhl-Bien, M. (2006). Relational leadership theory: Exploring the social processes of leadership and organizing. *The Leadership Quarterly*, 17, 654 – 676.
- Vancouver, J.B., Millsap, R.E., & Peters, P.A. (1994). Multilevel analysis of organizational goal congruence. *Journal of Applied Psychology*, 79, 666-679.
- Vancouver, J. B., & Schmitt, N. W. (1991). An exploratory examination of person organization fit: Organizational goal congruence. *Personnel Psychology*, 44, 333-352.
- Walumbwa, F.O., Avolio, B.J., Gardner, W.L., Wernsing, T.S., & Peterson, S.J. (2008). Authentic leadership: Development and analysis of a multidimensional theory-based measure. *Journal of Management*, 34, 89–126.
- Walumbwa, F. O., Luthans, F., Avey, J. B., & Oke, A. (2011a). Authentically leading groups: The mediating role of collective psychological capital and trust. *Journal of Organizational Behavior*, 32, 4-24. doi: 10.1002/job.653
- Walumbwa, F. O., Mayer, D. M., Wang, P., Wang, H., Workman, K., & Christensen, A. L. (2011b). Linking ethical leadership to employee performance: The roles of leader-member exchange, self-efficacy, and organizational identification. *Organizational Behavior and Human Decision Processes*, 115, 204-213.

- Walumbwa, F.O., Morrison, E.W., & Christensen, A.L. (2012). Ethical leadership and group in-role performance: The mediating roles of group conscientiousness and group voice. *Leadership Quarterly*, *23*, 953–964.
- Walumbwa, F.O., Wang, P., Wang, H., Schaubroeck, J., & Avolio, B., J. (2010). Psychological processes linking authentic leadership to follower behaviors. *Leadership Quarterly*, *21*, 901–914.
- Wayne, S. J., Shore, L. M., & Liden, R. C. (1997). Perceived organizational support and leader-member exchange: A social exchange perspective. *Academy of Management Journal*, *40*(1), 82-111.
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, *17*(3), 601-617.
- Woltman, H., Feldstain, A., MacKay, J. C., & Rocchi, M. (2012). An introduction to hierarchical linear modeling. *Tutorials in Quantitative Methods for Psychology*, *8*(1), 52-69.
- World Bank. (2013, January), *Global Economic Prospects*. Retrieved April 9, 2013 from <http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1322593305595/8287139-1358278153255/GEP13aSARRegionalAnnex.pdf>
- Wright, T. A. (2003). Positive organizational behavior: An idea whose time has truly come. *Journal of Organizational Behavior*, *24*, 437–442.
- Yli-Renko, H., Autio, E., & Sapienza, H.J. (2001). Social Capital, Knowledge Acquisition and Knowledge Exploitation in Young Technology-Based Firms. *Strategic Management Journal*, *22*, 587-614.

- Zalesny, M. D., & Ford, J. K. (1990). Extending the social information processing perspective: New links to attitudes, behaviors, and perceptions. *Organizational Behavior and Human Decision Processes*, 47, 205-246.
- Zhang, Z., Wang, M., & Shi, J. (2012). Leader-follower congruence in proactive personality and work outcomes: The mediating role of leader-member exchange. *Academy of Management Journal*, 55(1), 111-130.
- Zhang, Z., Zyphur, M. J., & Preacher, K. J. (2009). Testing multilevel mediation using hierarchical linear models: Problems and solutions. *Organizational Research Methods*, 12(4), 695-719.

## 10. APPENDIX I: CONCEPTUAL MODEL

A graphical representation of the study's conceptual model:



## 11. APPENDIX II: TABLES

**Table 1: Descriptive statistics**

<b>Table 1: Correlations and Descriptive Statistics</b>								
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>1. Ethical Leadership</b>	1.00							
<b>2. Psychological Capital</b>	0.60**	1.00						
<b>3. Goal Congruence</b>	0.50**	0.37**	1.00					
<b>4. Trust</b>	0.52**	0.24**	0.67**	1.00				
<b>5. In-Role Performance</b>	0.28**	0.40**	0.37**	0.29**	1.00			
<b>6. Gender</b>	0.09	0.05	0.04	0.06	0.05	1.00		
<b>7. Age</b>	0.03	0.01	0.01	-0.06	-0.03	-0.25**	1.00	
<b>8. Tenure</b>	0.04	0.04	-0.04	-0.14	-0.07	-0.15	0.56**	1.00
<b>Cronbach's Alpha</b>	0.91	0.91	0.71	0.82	0.72			
<b>Mean</b>	3.98	4.04	3.87	3.86	4.93	0.17	2.33	4.82
<b>Standard Deviation</b>	0.68	0.49	0.62	0.68	0.74	0.38	0.96	5.69

Notes: \*\*P<0.01 (two tailed test); With the exception of ethical leadership (Level 2, N = 24), all other variables are Level 1 (N = 171).

**Table 2: Measurement Scales**


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<b>Table 2: Measurement Scales Items</b>
<b>Psychological Capital (<math>\alpha = 0.905</math>)</b>
I feel confident analyzing a long-term problem to find its solution.
I feel confident in representing my work area in meetings with management.
I feel confident contributing to discussions about the organization's strategy.
I feel confident helping to set targets/goals in my work area.
I feel confident contacting people outside the organization (e.g. Clients, suppliers, customers) to discuss problems.
I feel confident presenting information to a group of colleagues.
If I should find myself in a jam at work, I could think of many ways to get out of it.
At the present time, I am energetically pursuing my work goals.
There are lots of ways around any problem.
Right now I see myself as being pretty successful at work.
I can think of many ways to reach my current work goals.
At this time, I am meeting the work goals that I have set for myself.
When I have a setback at work, I have trouble recovering from it and moving on. (R)
I usually manage to overcome difficulties one way or another at work.
I can be "on my own," so to speak, at work if I have to.
I usually take stressful things at work in smooth way.
I can get through difficult times at work because I've experienced difficulty before.
I feel I can handle many things at a time at this job.
When things are uncertain for me at work, I usually expect the best.
If something can go wrong for me work-wise, it will. (R)
I always look on the bright side of things regarding my job.
I'm optimistic about what will happen to me in the future as it pertains to work.
<b>Ethical Leadership (<math>\alpha = 0.913</math>)</b>
My supervisor listens to what employees have to say.
My supervisor disciplines employees who violate ethical standards.
My supervisor conducts his/her personal life in an ethical manner.
My supervisor has the best interest of employees in mind.
My supervisor makes fair and balanced decisions.
My supervisor can be trusted.
My supervisor discusses business ethics or values with employees.
My supervisor sets an example of how to do things the right way in terms of ethics.
My supervisor defines success not just by results but also the way they are obtained.
When making decisions, my supervisor asks, "what is the right thing to do?"

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**Table 2: Measurement Scales Items (Continued)**

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**Relational Capital****Trust ( $\alpha = 0.816$ )**

My supervisor can always be trusted to do what is right for me.

My supervisor always keeps the promises s/he makes to me.

My supervisor is perfectly honest and truthful with me.

My supervisor is truly sincere in her/his promises.

My supervisor would not take advantage of me, even if the opportunity arose.

**Goal Congruence ( $\alpha = 0.705$ )**

My supervisor and I have a similar vision regarding how things should be done in the organization.

My supervisor and I are enthusiastic about pursuing the same goals for the organization.

My supervisor and I think alike on most issues with respect to the organization.

My supervisor's work-related goals are fully aligned with mine.

**In-Role Performance ( $\alpha = 0.717$ )**

Employee X adequately completes assigned duties.

Employee X fulfils his/her responsibilities as specified in his/her job description.

Employee X executes the tasks that he/she is expected to perform.

Employee X fails to perform essential duties. (R)

Employee X neglects aspects of the job he/she is obliged to perform. (R)

Employee X meets formal performance requirements.

Employee X engages in activities that will directly affect his/her performance evaluation.

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**Table 3: Discriminant Validity**

Pairs of Constructs	Chi-Square Values		Chi-Square Difference	$\Delta$ DF	(CV)	Discriminant Validity (Chi-Sq diff > CV)
	Constrained (Cov=1)	Unconstrained (Cov $\neq$ 1)				
EthLead $\leftrightarrow$ PsyCap	706.73	627.01	79.72	1	3.84	Y
EthLead $\leftrightarrow$ GoalCong	183.73	123.57	60.17	1	3.84	Y
EthLead $\leftrightarrow$ Trust	218.35	138.93	79.42	1	3.84	Y
EthLead $\leftrightarrow$ Perf	209.67	134.63	75.04	1	3.84	Y
PsyCap $\leftrightarrow$ GoalCong	496.17	397.62	98.55	1	3.84	Y
PsyCap $\leftrightarrow$ Trust	598.90	462.26	136.64	1	3.84	Y
PsyCap $\leftrightarrow$ Perf	502.79	418.29	84.50	1	3.84	Y
GoalCong $\leftrightarrow$ Trust	143.51	90.87	52.65	1	3.84	Y
GoalCong $\leftrightarrow$ Perf	84.26	34.70	49.56	1	3.84	Y
Trust $\leftrightarrow$ Perf	146.69	70.69	76.00	1	3.84	Y

Notes: PsyCap = Psychological Capital; EthLead = Ethical Leadership; Perf = In-Role Performance; DV = Discriminant Validity; DF = Degrees of Freedom; CV = Critical Value)

	Average Variance Explained (AVEs)					Common Variance (CV)	Support for DV (AVE > CV)
	EthLead	PsyCap	GoalCong	Trust	Perf		
EthLead $\leftrightarrow$ PsyCap	0.52	0.35				0.34	Y
EthLead $\leftrightarrow$ GoalCong	0.52		0.40			0.38	Y
EthLead $\leftrightarrow$ Trust	0.52			0.50		0.38	Y
EthLead $\leftrightarrow$ Perf	0.52				0.41	0.09	Y
PsyCap $\leftrightarrow$ GoalCong		0.35	0.40			0.18	Y
PsyCap $\leftrightarrow$ Trust		0.35		0.50		0.08	Y
PsyCap $\leftrightarrow$ Perf		0.35			0.41	0.19	Y
GoalCong $\leftrightarrow$ Trust			0.40	0.50		0.36	Y
GoalCong $\leftrightarrow$ Perf			0.40		0.41	0.29	Y
Trust $\leftrightarrow$ Perf				0.50	0.41	0.17	Y

Notes: CV = Correlations squared; PsyCap = Psychological Capital; EthLead = Ethical Leadership; GoalCong = Goal Congruence; Perf = In-Role Performance; DV = Discriminant Validity

**Table 4: HLM results**

<b>Table 4: HLM results - Effects of Ethical Leadership on In-Role Performance</b>					
	(set as outcome at level 1)				
	<b>In-Role Performance (M1)</b>	<b>Psychological Capital (M2)</b>	<b>Goal Congruence (M3)</b>	<b>Trust (M4)</b>	<b>In-Role Performance (M5)</b>
<b>Step1</b>					
Age	.05 (.07)				
Gender	-.00 (.11)				
Tenure	-.02 (.00)*				
Ethical Leadership	.55 (.21)*				
<b>Step2</b>					
Age		.05 (.10)	.01 (.07)	.01 (.04)	
Gender		.01 (.14)	-.01 (.15)	.00 (.12)	
Tenure		.01 (.01)	-.01 (.00)*	-.01 (.00)**	
Ethical Leadership		1.04 (.30)**	.84 (.20)***	.57 (.14)***	
<b>Step3</b>					
Age					.00 (.06)
Gender					-.02 (.14)
Tenure					-.00 (.01)
Ethical Leadership					.39 (.22)
Psychological Capital					.35 (.12)**
Goal Congruence					.27 (.11)*
Trust					.05 (.10)

Notes: With the exception of ethical leadership (Level 2, N = 24), all other variables are Level 1 (N = 171). M = model. Values in parentheses are standard errors. \* p <.05; \*\* p <.01; \*\*\*p <.001

**Table 5: Construct Definitions**

<b>Table 5: Construct Definitions and Operationalizations</b>					
<b>Construct</b>	<b>Role</b>	<b>Operationalization</b>	<b>Measurement</b>	<b>Definition</b>	<b>Source</b>
<b>Ethical Leadership</b>	Independent /Explanatory Variable	Shared, group-level construct	Individual employees' perceptions of immediate supervisor's ethical conduct aggregated at group level.	"The demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making".	Brown et al., 2005, p. 120
<b>Psychological Capital</b>	Mediating Variable	Individual level	Self-reports of individual employees on psychological capital questionnaire.	"an individual's positive psychological state of development 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 (resilience) to attain success".	Luthans, Avey et al., 2007, p. 542
<b>Follower-Leader Relational Capital</b>	Mediating Variable	Individual level	Self-reports of individual employees' assessment of their trust in, and goal congruence with their immediate supervisors.	Trust has been defined as "confidence in the other's good will and predictability" and goal congruence is defined as "the degree to which exchange partners' goals and values converge"	De Clercq & Sapienza, 2006, p. 331,333
<b>In-Role Performance</b>	Dependent/ Outcome Variable	Individual level	Immediate supervisor's evaluation of each group member's performance.	Expected set of job duties, as outlined by one's formal job description	Katz (1964), as cited in Williams & Anderson (1991); Bommer et al., 1995

