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Understanding the dynamics between supervisor-follower social capital, work engagement and employees' creative work involvement

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Abstract

This study examines the previously unexplored mediating role of work engagement in the link between creative work involvement and the relational resources embedded in supervisor-follower exchanges. The three relational resources inherent to the exchanges between followers and their supervisors that were studied were trust in supervisor, goal congruence and relationship informality. Data were captured from IT professionals working at four well-established IT companies in Ukraine. The findings show that ‘relationship informality’ and ‘goal congruence’ positively affect employees’ creative work involvement, yet these effects are less pronounced when controlling for work engagement. The significance and implications of these findings for research and practice are discussed.

Keywords: work engagement, trust in supervisor, relationship informality, goal congruence, creative work involvement

Résumé

Mots-clés:

Of the forces that facilitate employee creativity, there is a general belief among practitioners and scholars that both psychological (i.e., positive psychological states) and contextual factors (i.e., social context) influence employee creativity (Amabile, 1998; Zhou & Shalley, 2003). Positive psychological states such as positive affect, commitment and work engagement offer the motivation or positive energy to coordinate a person's skills, knowledge and actions to engage in creative activities (Bakker & Xanthopoulou, 2013; Hakanen, Perhoniemi, & Toppinen-Tanner, 2008). The recurring narrative is that employees who are engaged by their work have a positive, fulfilling, work-related state of mind and are likely to build high levels of energy for flexible cognitive thinking and creative problem solving (Frederickson, 2001; Isen, Rosenzweig & Young, 1991). In contrast, when people experience burnout, they devote their resources to attend to these negative feelings, leaving fewer resources and less energy for challenging cognitive tasks like creative thinking (Coelho, Augusto, & Lages, 2011).

According to Amabile's (1988) seminal work, employees who have great creativity potential may or may not produce creative ideas, because it is dependent on whether or not the surrounding social context offers them a supportive platform to exhibit their creativity. Researchers have long been interested in the roles of social context and motivation as antecedents of creativity; however, relatively little is known about the complex dynamics between both forces in shaping involvement in creative work. Creative work involvement sets the stage for creative achievements (Carmeli & Schaubroeck, 2007; Mumford, Scott, Gaddis, & Strange, 2002), a central goal of organizations that face the rising needs accompanying the speed of technological change, the pressure of globalization and the increasing local and international

competition. Despite the growing interest in how and why social context plays a key role in involvement in creative work, this complex relationship remains unclear.

Our attempt to explain why some employees engage their time and effort resources in creative processes associated with work (i.e., creative work involvement) is a key question. Certain jobs may require more or less creativity, yet individuals are not always ready or able to produce creative ideas. Individuals have to be enthusiastic and energized about their work in order to put the necessary effort into creative problem solving and tasks (Hakanen et al., 2008). Thus, a crucial challenge is to improve insights into how and what can induce the right level of energy required for individuals to increase their involvement in creative work. Although research has shown that positive energy is important for individuals' capability to engage in extra-role behavior such as creativity (Bakker & Xanthopoulou, 2013; Quinn & Dutton, 2005), it is not that evident how this energy is freed up. According to Polewsky and Will (1996), novel ideas and innovative vigor do not simply emerge on their own. They require a specific context.

Recognizing the significant role of social context, employee creativity is the result of a social process in which others in the environment stimulate and support creativity (Perry-Smith & Shalley, 2003). Social networks help employees acquire, allocate and utilize relational resources to engage in creative behavior (Nahapiet & Ghoshal, 1998). Supportive work climates, trustworthy peer relationships and constructive behavior at work have been found to foster team and organizational creativity (Merlo, Bell, Menguc & Whitwell, 2006; Tesluk, Farr & Klein, 1997). All these factors are captured by social capital, a context variable that represents the sum of the actual and potential resources embedded within, and derived from the network of relationships possessed by an individual or social unit (Nahapiet & Ghoshal, 1998).

Overall, social capital is instrumental in predicting organizational and team creativity, yet its effects on employees' creative work involvement is less straightforward, with several studies revealing non-significant relationships (Coelho et al., 2011; George & Zhou, 2001; Tierney & Farmer, 2002). A second observation is that research examining the link between social capital and employee creativity does not distinguish between the various referents of social capital. The emphasis has been on capital-based connections with colleagues, friends and other organizational members (Han, Han, & Brass, 2014; Liu, 2013; Merlo et al., 2006). The premise of this research is that close and trustworthy relationships with colleagues and friends lower the barriers for knowledge sharing, a critical source of expertise for unleashing creativity (Renzi, 2008).

The prevailing focus on peer relationships and other organizational members and how relational resources embedded in this network structure are instrumental in shaping involvement in creative work (Chen, Chang, & Hung, 2008; Han et al., 2014; Liu, 2013; Merlo et al., 2006), may explain why the supervisor-follower dyad has been somewhat overlooked, despite a growing recognition that supervisors can offer an important impetus for creativity in the workplace (Shin & Zhou, 2007; Tierney, Farmer, & Graen, 1999; Tierney & Farmer, 2002). For example, the interrelationship between supervisors and employees may represent positive social exchanges, which not only helps to develop the expertise and cognitive flexibility of employees, but also builds up the positive energy and motivation required from employees to engage in creative work (Amabile, 1996). Since the emphasis of our study is on the supervisor-follower dyad, we consider three core elements of supervisor-follower social capital: trust in supervisor, goal congruence and relationship informality. The decision to target these three dimensions is to capture the critical quality, content and process-related dimensions that mark the broader social capital construct (Nahapiet & Ghoshal, 1998; Payne, Moore, Griffis, & Autry, 2011). In adopting

these dimensions, we offer a parsimonious yet comprehensive picture of relational resources embedded in supervisor-follower exchanges.

The objective of this study is to explore how employee perceptions of supervisor-follower social capital, via a positive psychological state in the form of work engagement, is related to employees' creative work involvement. Exploring this relationship is consistent with the perspective advocated by creativity researchers who argue that contextual forces and psychological forces contribute jointly to employees' creativity (George & Zhou, 2001; Oldham & Cummings, 1996). Second, framing the origins of creative work engagement within the energy/resources literature (Hobfoll, 2002; Quinn, Spreitzer & Lam, 2012) gave us the opportunity to adopt an alternative perspective to the Interactionist Model (Woodman & Schoenfeldt, 1990; Woodman, Sawyer, & Griffin, 1993), a model that has been relied on in previous studies to explain the interplay between context and individual factors in shaping employees' creativity (Shalley, Gilson, & Blum, 2009; Tierney et al., 1999). The interactionist model is based on the premise that individuals with dispositional traits towards creativity are most likely to exhibit stronger creative behavior when exposed to a work climate that supports creativity (de Stobbeleir, Ashford, & Buyens, 2011; Shalley et al., 2009; Tierney et al., 1999). By focusing on energy embedded in psychological states, our perspective is that not only dispositional traits, but also more malleable psychological states such as work engagement, are pivotal individual forces that shape involvement in creative endeavor. Third, by positioning work engagement as a mediating variable, this study responds to Bakker, Albrecht, and Leiter's (2011) general call to regard engagement as a core mechanism which explicates how contextual forces (i.e., supervisor-follower social capital) indirectly affect important extra-role behaviors (i.e., creativity).

In summary, this study investigates the relationship between supervisor-follower social capital and creative work involvement, as well as how this relationship is mediated by work engagement (see Figure 1). First, we posit that supervisor-follower social capital has a positive impact on creative work involvement (H1). Second, we contend that supervisor-follower social capital is positively related to work engagement (H2). More specifically, consistent with conservation of resources theory (Hobfoll, 2002), work engagement varies according to the relational resources that individuals perceive themselves to have (Kahn, 1990; Liu, 2013; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Finally, the relational resources embedded in supervisor-follower exchanges produce the right level of positive energy required so that followers can engage in creative endeavors (Amabile, Barsade, Mueller, & Staw, 2005; Isen et al., 1991; Frederickson, 2001). Conversely, in the absence of these resources, followers may fail to build up the work engagement necessary for the open and flexible cognitive processing essential to creativity (H3 and H4). In the next sections, we outline in detail the relationships between supervisor-follower social capital, work engagement and creative work involvement.

Insert Figure 1 here

Theoretical Framing

Supervisor-follower social capital and creative work involvement

Supervisor-follower social capital is a specific case of the broader social capital construct. It captures the actual and potential resources embedded in the relationships among

supervisors and their followers (Bourdieu, 1986; Nahapiet & Ghoshal, 1998). The more generic construct has received increasing interest as an explanation for organizational or group level phenomena encompassing organizational performance (Leana & van Buren, 1999); group communication and communication flows in teams (Kratzer, Leenders, & van Engelen, 2004); knowledge transfer and organizational learning (Inkpen & Tsang, 2005); and organizational innovation and team creativity (Chen et al., 2008; Merlo et al., 2006; Tsai & Ghoshal, 1998). Like many other forms of capital (e.g., human capital, financial capital, etc.), social capital is considered a valuable asset, characterized by the existence of close interpersonal relationships among individuals that facilitate a firm's ability to create value (Lin, 2001; Tsai & Ghoshal, 1998).

To our knowledge, few studies have examined the relationship between supervisor-follower social capital and individual behavior; however, there is an indication that the quality of the exchanges between followers and supervisors operates as a contextual resource in facilitating or inhibiting positive individual behaviors (e.g., organizational citizenship behavior) and positive work-related states, beliefs and intentions (e.g., work engagement, intrinsic motivation and commitment, etc.) (Chow, 2009; Watson & Papamarcos, 2002). In light of these findings, supervisor-follower social capital is a key relational resource which offers positive energy to engage in activities that go beyond tasks outlined in job descriptions.

The conceptual space of supervisor-follower social capital is extrapolated from Nahapiet and Ghoshal's (1998) perspective that social capital consists of three dimensions, and is marked by three critical characteristics of follower-leader exchange. These are trust in supervisors, goal congruence, and relationship informality, which respectively represent the quality, content, and process dimensions of supervisor-follower exchanges. The first dimension focuses on the level

of trust or trustworthiness of the relationships between employees and their supervisors (Fukuyama, 1995). Trust in supervisors reflects the socio-emotional support component in fostering creativity. It involves the extent to which employees believe that the work context provides the interpersonal support necessary to feel free to function creatively (Tesluk et al., 1997). Employees who trust their supervisors are more likely to express unconventional ideas and risk sharing bold insights (Merlo et al., 2006), because they believe the supervisor will act benevolently, even when there is a possibility for opportunism.

The second dimension of supervisor-follower exchange goal congruence, is presumed to have a beneficial impact on creative work involvement. The probability of process conflict is reduced when followers and leaders have mutual expectations. A common understanding of goals reduces ambiguity about effort allocation and ensures that followers' activities directly contribute to novel solutions and problem solving for the organization. Goal congruence and mutual expectations free employees to direct their efforts towards trying out new solutions to existing problems, rather than spending their energy on prioritizing goals (Dasgupta & Serageldin, 1999; Liu, 2013).

Finally, the third dimension, relationship informality, captures the extent to which employees maintain close social relationships with their supervisors and know one another on a personal level (De Clercq, Thongpapanl, & Dimov, 2009). When employees maintain informal relationships with their supervisors, their fear of criticism in proposing novel solutions should be minimal (Tsai, 2002), making them less hesitant to offer risky suggestions (Floyd & Lane, 2000; Payne et al., 2011). In addition, close, informal relationships with supervisors can help employees settle conflicting viewpoints about problem situations more quickly, such that they

can leverage their energy more efficiently into original solutions to organizational problems (De Dreu, Weingart, & Kwon, 2000).

In resource-enriched organizational ecologies, marked by supervisor-follower social capital, employees establish high quality exchanges that result in greater access to resources, information and continuous emotional support (Foster, 2010; Rispens, Greer, Jehn & Thatcher, 2011). Employees who have positive exchanges with their supervisors may also be more inclined to reciprocate by engaging in activities or behaviors that go beyond the job description (van Vianen, Shen & Chuang, 2011). When employees experience trust, share similar goals with their supervisors and have strong informal relationships, a feeling of psychological safety and meaningfulness encourages them to express new and sometimes unconventional ideas even when they risk criticism (Zhang, Fang, Wei & Chen, 2010). They understand that challenging existing beliefs and insights feeds creativity, a core competence that may offer a competitive advantage to companies (Merlo et al., 2006). However, in case of weak supervisor-follower social capital, employees are less inclined to direct their cognitive resources to value-producing activities and creative output; instead, they are more preoccupied with defensive behaviors in the form of self-protection (Ashforth & Lee, 1990). Also, the lack of trust, goal incongruence, and poor relationship informality may increase the concern among followers about how their supervisors may try to adversely impact them. The mental energy spent on worrying has been found to tax important cognitive resources that are crucial for creative work involvement (Dutton, 2003; Frederickson, 2001). Based on the above discussion, we formulate the following hypotheses:

H1a: Trust in supervisor is positively related to creative work involvement.

H1b: Goal congruence is positively related to creative work involvement.

H1c: Relationship informality is positively related to creative work involvement.

Supervisor-follower social capital and work engagement

A growing number of studies have shown that employees tend to be more engaged when contextual resources are present (Bakker & Xanthopoulou, 2013; Dutton, 2003; Xanthopoulou et al., 2009). Drawing from this research, we anticipate that supervisor-follower exchanges can be an important relational resource that triggers work engagement. First, employees who trust their supervisors are more likely to exchange vital information with their supervisors. Feelings of psychological safety that accompany trust have been found to facilitate task completion and contribute to stronger work engagement (Hakanen et al., 2008). Also, employees who believe their supervisors are reliable are less likely to expend their limited resources on monitoring co-workers' actions. Instead, they direct their energy and resources on achieving their work objectives, which translates into higher work engagement (Chugtai & Buckley, 2008).

Second, we consider the impact of goal congruence, the content dimension of supervisor-follower social capital, on work engagement. Maslach and Leiter (1997) suggest that the greater the perceived congruency between the individual and his or her immediate work environment, the greater the likelihood he/she will develop work engagement. When applied to supervisor-follower exchanges, this implies that when followers and leaders fail to agree over goals (i.e., goal incongruity), significant stress and dissatisfaction may be experienced; both forces are detrimental to employees' work engagement (Hakanen, Bakker & Schaufeli, 2006). However, in case of goal congruence, followers are given cues about how decisions affect their own work (De Clercq, Thongpapanl & Dimov, 2009), thereby stimulating a safe, meaningful work environment such that they feel protected in the actions undertaken (Schaubroeck, Lam & Peng, 2011). This

positive feeling means employees are more likely to engage strongly in their daily work (Brown & Leigh, 1996; Kahn, 1990).

Finally, when followers have strong, informal relationships with their supervisors, the followers are able to establish exchanges that result in greater access to resources, information and support (Foster, 2010; Rispens et al., 2011). Strong social ties facilitate the ability to learn and appreciate their supervisors' contributions (Nahapiet & Ghoshal, 1998). Supervisors provide followers with deeper insights into how they can create safe personal workplaces, to the extent that followers know their leader on a personal level and engage in intensive informal exchanges (Brown & Leigh, 1996). Put differently, these ties expose followers to a broader, more useful set of supervisors' knowledge (De Clercq et al., 2011), which enables them to leverage this knowledge into meaningful work contributions, and thus enhanced work engagement (Kahn, 1990; Xanthopoulou et al., 2009). Accordingly, we hypothesize that:

H2a: Trust in supervisor is positively related to work engagement.

H2b: Goal congruence is positively related to work engagement.

H2c: Relationship informality is positively related to work engagement.

Work engagement as a mediating mechanism

In addition to the assumption that the relational resources embedded in supervisor-follower dyads (i.e., trust in supervisor, goal congruence, relationship informality) are key to the emergence of work engagement and involvement in creativity, work engagement itself operates as a pivotal personal resource that fuels creative work involvement (Bakker & Xanthopoulou, 2013; Carmeli & Spreitzer, 2009; Zhou & Shalley, 2003). Substantial evidence suggests that the nature of work engagement as a positive fulfilling work-related state marked by positive feelings

of flow, mental resilience and dedication broadens people's thought-action repertoires (Bakker & Xanthopoulou, 2013). Several scholars documented that people experiencing flow and resiliency tend to be open to novel information (Csikszentmihalyi, 1990; Estrada, Isen & Young, 1997), and this openness produces a broad, flexible cognitive orientation and an ability to integrate diverse material. These are all elements that are essential to involvement in creative performance (Isen et al., 1991; Frederickson, 2001). More general research has noted that positive feelings facilitate cognitive variation and enables the sustainment of broadening cognitive associations. For example, Amabile et al. (2005) found, in their longitudinal diary study, a positive relationship between positive affect and creativity. In conclusion, it has been demonstrated that individuals who are highly motivated and positive about their work are likely to be more involved in creativity than those who are less energized and enthusiastic at work (Atwater & Carmeli, 2009). Based on these findings, it is thus reasonable to hypothesize that work engagement is an important source of energy that enables involvement in creative work.

H3: Work engagement is positively related to creative work involvement.

Considering the arguments in H1-H3, work engagement is also expected to have a mediating effect between supervisor-follower social capital and involvement in creativity. Drawing on conservation of resources theory (Hobfoll, 2002), we posit that a resource-enriched organizational context characterized by relational resources inherent to supervisor-follower exchanges evokes positive feelings of excitement about work (i.e., work engagement) (H2a-H2c), which then triggers involvement in creativity (i.e., H3). Research by Bakker et al. (2011) claimed that any work context that is characterized by forces that facilitate or inhibit a person's work engagement, will serve as an intermediary positive or negative state of mind between a host

of situational or contextual resources and creative work involvement. In line with these assumptions, Bakker and Xanthopoulou (2013), in a study of 84 school principals, explained the role of work engagement as an intervening mechanism between contextual resources and creativity. In conclusion, when relational resources in supervisor-follower dyads are strong, employees are likely to increase their work engagement; this usually leads to increased levels of energy, resilience and positive feelings, all of which help to ignite cognitive flexibility and creative thinking. Accordingly, we hypothesize that:

H4: Work engagement partially mediates the relationship between supervisor-follower social capital and involvement in creative work involvement.

Method

Sample and Procedure

To test the hypotheses, we collected data from four IT organizations in Ukraine. This context is highly relevant for this study due to the important role that employee creativity and innovation plays in organizations in the high tech industry (Bommer & Jalajas, 2002; Lapierre & Giroux, 2003). We collected data via a field survey that was distributed by the first author on-site. Organizations were identified and invited to participate through the personal networks of the first author. A total of six companies were contacted. All six organizations invited to participate were quite similar in terms of size and market share. Two companies decided not to participate because their employees were recently involved in another study. Ethics clearance for this study was received from an academic institution and the HR departments of participating organizations.

Data was collected in two stages. The first survey contained questions about employees' perceived levels of trust in supervisors, goal congruence, relationship informality and work engagement. Two weeks after completing the first questionnaire, employees completed a second survey that measured creative work involvement. The surveys, translated into Russian, were only distributed to IT professionals in non-managerial positions. A cover letter explaining the purpose and scope of the study assured respondents of the study's data anonymity and voluntary participation. The letter included contact information of the principal investigator in case participants had questions about the study or wanted to provide feedback. Respondents were also given the opportunity to withdraw from the study at any time. Furthermore, the cover letter instructed respondents to complete the self-report forms and return them directly to the researcher.

A total of 393 surveys were randomly distributed in the four organizations. Potential participants were selected by randomly choosing names from employee lists provided by the HR departments. In total, 296 usable responses were returned, resulting in a satisfying response rate of 75%. Of the four companies that participated, we received 118 of 152 responses (78% response rate), 77 of 110 responses (70% response rate), 57 of 73 responses (78% response rate) and 44 of 58 responses (76% response rate). We believe this study's response rate is high because the principal investigator visited each site to explain the purpose of the study and participants could receive personal feedback on their responses (Baruch & Holtom, 2008). Demographically, our sample is representative of the IT industry in Ukraine which employs largely young and highly-skilled professionals (Ishenko, 2014). All respondents held a university degree, were on average 31.7 years old, and had an average tenure with the organization of 5.8 years. Fifty-four percent of the participants were male. A comparison of the means between all

four organizations for the dependent variable creative work involvement revealed no significant differences.

The original measurement scales were translated as Russian is the business language in the four companies. One research assistant, fully proficient in both English and Russian, translated the survey from English to Russian, and an independent and bilingual translator back-translated it. Both English versions were compared by the first translator to assess equivalence (Hambleton & Patsula, 1998). The discrepancies were minor, but when present, were resolved through consultation between the two translators.

Measures

We used previously validated items to measure the focal constructs. All items were measured on five-point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree), unless otherwise indicated. An overview of all the scales and their corresponding items are reported in Appendix A.

Supervisor-follower social capital.

The quality, process, and content dimensions that reflect supervisor-follower social capital were measured by adopting three scales (trust in supervisor, relationship informality and goal congruence) that have been used in previous studies (De Clercq & Sapienza, 2006; Merlo et al., 2006; Tsai & Ghoshal, 1998). Trust in supervisor was measured by five items (Cronbach's α = .86), relationship informality was comprised of four items (Cronbach's α = .83) and goal congruence was gauged by four items (Cronbach's α = .84).

Work engagement.

Work engagement was measured with a nine-item scale developed by Schaufeli, Bakker, and Salanova (2006). This scale is the shortened version of the original 17-item Utrecht Work Engagement scale (UWES) and has displayed excellent psychometric properties. As the three factors of work engagement (i.e., vigor, dedication and absorption) are very highly correlated, it has been suggested that rather than computing three different scores, researchers should use the total nine-item score as an indicator of work engagement (Schaufeli et al., 2006; Sonnentag, 2003).[1] Respondents were asked to read each of the nine statements and decide how often they had experienced the described feeling on a seven-point scale that ranged from 0 (never) to 6 (always). The nine items were averaged for an overall score (Cronbach's $\alpha = .89$).

Creative work involvement.

We used a self-reported version of the eight-item scale developed by Zhou and George (2001) to measure creative work involvement. The eight items yielded excellent reliability (Cronbach's $\alpha = .90$). In alignment with prior work done in this field (e.g., Shalley et al., 2009), we selected the self-reported measure because of its good fit with our sampling procedure. Since respondents were assured anonymity, it was not feasible for supervisors to rate employees' creative work involvement. Another significant advantage of reliance on self-reported data is that supervisors typically lack the ability to observe the entire range of creative activities that their employees engage in, thus supporting the use of self-perceived measures (Hocevar, 1981; Hocevar & Bachelor, 1989; Zhou et al., 2008). Creative behaviors are goal directed and intentional (Shalley, 1991), so their assessment by employees themselves, who are most aware and knowledgeable about their actual involvement in these behaviors has great value (Janssen, 2000; Lumsden, 1999). Finally, involvement in creative behaviors originates from individual

employees' conscious choices (Ford, 1996) and these behaviors cannot be seen in isolation of employees' own subjective experiences (Csikszentmihalyi, 1990). Henceforth, investigating why some employees are more likely than others to undertake creative activities, based on self-perceptions of these activities, is of significant value for better understanding the creativity process (cf. Zhou et al., 2008).

Control variables.

We also controlled for age, gender, tenure and organization. Due to the high correlation between age and tenure, we tested the model and its hypothesized relationships by excluding these two demographic variables individually. Since the results remained the same, we report our findings with both variables included in the models.

Results

Assessment of 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 in this study.

Insert Table 1 here

In order to test construct independence and determine the discriminant validity of all the variables involved, we performed confirmatory factor analyses (CFA) on all five constructs (see Table 2). First, we tested a five-factor model with all factors loading separately, which provided a good fit to the data (χ^2 = 815.9; χ^2/df = 1.92; GFI = .89; TLI = .93; RMSEA = .06; IFI = .94; CFI = .93). Next, we tested several alternative models. In each case, chi-square difference tests indicated that the five-factor model was a better fit than the following alternative models: (1) a -

three-factor model that merged the three dimensions of supervisor-follower social capital (χ^2 = 1596.4; χ^2/df = 3.70; GFI = .72; TLI = .76; RMSEA = .10; IFI = .78; CFI = .78) ; (2) a two-factor model composed of all antecedent variables and the outcome variable (χ^2 = 2364.2; χ^2/df = 5.46; GFI = .57; TLI = .61; RMSEA = .12; IFI = .64; CFI = .64); and (3) all five constructs in the original model as a single factor (χ^2 = 3108.4; χ^2/df = 7.16; GFI = .46; TLI = .46; RMSEA = .15; IFI = .50; CFI = .50)

Insert Table 2 here

Assessment of Common Method Bias

We conducted several diagnostic analyses to address the potential for common method bias among our measures. First, we estimated a CFA model in which all the indicator variables loaded on one general method factor. This one-factor model yielded a very low fit (χ^2 = 3108.4; χ^2/df = 7.16; GFI = .46; TLI = .46; RMSEA = .15; IFI = .50; CFI = .50). Second, we applied the partial correlation procedure suggested by Lindell and Whitney (2001) to the data. We used a three-item measure of respondents' self-awareness insight (e.g., 'To what extent are you aware of your own values and beliefs?'; 'How likely are your friends to say that you know yourself well?'; 'To what extent do you understand how your characteristics and your experiences have led to you becoming the person you are today?') as the theoretically unrelated marker variable and then partialled out the effect of this variable from the relationships among the focal constructs. Using Olkin and Finn's (1995) significance test, we found that no partial correlations were significantly smaller than the corresponding zero-order correlations, which further rejected the presence of common method bias (Lindell & Whitney, 2001). Taken together, these tests discounted the presence of common method bias.

Hypotheses Testing

We proposed that supervisor-follower social capital marked by trust in supervisor, relationship informality, and goal congruence would be related to involvement in creative work and that work engagement would partially mediate these relationships. We tested our hypotheses using hierarchical regression analysis (Aiken & West, 1991). Table 3 provides an overview of the findings. We tested mediation using the Baron and Kenny approach (1986).

Table 3 (Model 5) indicates that goal congruence (b = .26) and relationship informality (b = .27) are related positively to creative work involvement, but trust in supervisor (b = .06) is not. Hence, H1b and H1c are supported. We found support for H2 a, b and c in that trust in supervisor (b = .29), goal congruence (b = .30) and relationship informality (b = .26) are positively related to work engagement (Model 2). Work engagement (b = .54) is positively and significantly related to creative work involvement (Model 4), which supports H3. Finally, when work engagement is included in the model (Model 6) along with the three dimensions of supervisor-follower social capital, work engagement remains significantly related to creative work involvement (b = .50). Also, the level of significance for goal congruence (b = .13) and relationship informality (b = .12) decreases in model 6 in comparison to model 5 after controlling for work engagement. In summary, these findings offer partial support for H4 which proposed that work engagement acts as a partial mediator in the relationships between relationship informality and goal congruence, and creative work involvement.

Insert Table 3 here

In addition to the traditional Baron and Kenny approach (1986) for testing mediation, we tested the significance of the indirect effect of goal congruence and relationship informality on

involvement in creative work using a bootstrapping approach (Preacher, Rucker, & Hayes, 2007). As Table 4 indicates, the results are statistically significant with a bootstrapped 95% CI around the indirect effect not containing zero, which further supports our earlier findings.

Insert Table 4 here

Discussion

Summary

This study is among the first to highlight the significant roles of supervisor-follower social capital and work engagement in developing employee creativity. Our findings highlight how work engagement mediates the relationship between the relational resources embedded in supervisor-follower exchanges and creative work involvement. Whereas previous research relied on the Interactionist Model (Woodman et al., 1993) to explain the roles of contextual and individual forces in shaping creativity, this inquiry brings greater nuance to the understanding of the collective influence of personal and contextual resources on creativity (de Stobbeleir et al., 2011; Shalley et al., 2004; 2009). Drawing from energy/resources literature (Hobfoll, 2002; Quinn et al., 2012), supervisor-follower social capital operates as a source of energy invigorating employees' positive work-related state of mind (i.e., work engagement), which is an important positive personal resource that mobilizes those cognitive and motivational processes that are crucial to the facilitation of creative thinking and problem solving (Csikszentmihaly, 1990; Frederickson, 2001).

With this study, we offer a more complete understanding of the potential resources embedded in social exchange between supervisors and followers (Shalley et al., 2004; 2009) by not only treating relational resources inherent to supervisor-follower exchange as one dimension

(Liao, Liu, & Loi, 2010; Tierney et al., 1999), but by differentiating between the quality (i.e., trust), content (i.e., goal congruence) and process-related dimensions (i.e., relationship informality) that operate as distinct relational resources in shaping employees' involvement in creativity. Previous research yielded mixed findings regarding the impact of supervisor-follower exchanges on employee creativity (Liao et al., 2010; Scott & Bruce, 1998; Tierney & Farmer, 2002). Our results explain these findings by showing that work engagement operates as key intervening mechanism between supervisor-follower social capital and involvement in creativity.

Contributions to Scholarship

A number of studies have already established that high quality exchanges between supervisors and followers generate greater employee creativity (Elkins & Keller, 2003; Liao et al., 2010; Scott & Bruce, 1998; Tierney & Farmer, 2002); however, none of them have explored the effect of partial mediation through work engagement. Our findings offer support for Bakker et al.'s (2011) call to consider work engagement as a key intervention mechanism and allows us to explain how relational resources embedded in supervisor-follower dyads are an important source of energy to foster attitudes and behaviors that are beneficial to an organization. Based on our findings, it is clear that positive energy resulting from leader-follower exchanges can be both a direct and indirect resource in fostering employee creativity. First, in work environments characterized by openness and shared goals between employees and supervisors, employees are less likely to encounter obstacles when exchanging information and knowledge. These work environments encourage employees to take initiative, explore new challenges and discover innovative and creative solutions to problems (Coelho et al., 2011; Tierney & Farmer, 2002; Zhou & Shalley, 2003). Second, drawing on conservation of resources theory (Hobfoll, 2002),

supervisor-follower exchange can be considered a key relational resource that mobilizes personal resources in the form of work engagement. Work engagement, in turn, is a positive source of energy that mobilizes the cognitive processes so crucial to creative thinking and problem solving (Csikszentmihaly, 1990; Frederickson, 2001). This finding supports previous studies by showing that employees who are not engaged at work are not going to use their skills and expertise in the service of creative performance (Bakker & Xanthopoulou, 2013). In contrast, it is likely that employees who are energetic, dedicated, and absorbed in their work will broaden their cognitive orientation and be more open to invest their energy into new challenges and experiences (Isen et al., 1991).

An analysis of the three dimensions of supervisor-follower social capital in relation to creative work involvement indicates that goal congruence and relationship informality are positively and significantly related to employees' creative work involvement. However, trust in supervisors had no significant direct effect on involvement in creative work, which may be the result of the multicollinearity between the three relational resources. An alternate explanation is that the relationship between trust in supervisors and creativity may be moderated by other contextual or personal resources not accounted for in this study (Dirks & Ferrin, 2002). Thus, more in-depth research is required to draw more definite conclusions. Finally, the need for future research to differentiate between the relational sources underlying supervisor-follower exchange is supported by the fact that not all resources embedded in a supervisor-follower exchange have an indirect effect on creative work involvement.

Our results based on employees who work for IT organizations in Ukraine indicate the applicability of typical Westernized management concepts (such as supervisor-follower social capital and work engagement) to other country's settings. Although our theoretical arguments

were general and not country-specific, cultural factors could interfere with our conceptual framework. For example, in a collectivistic, high power distance and high uncertainty avoidance culture such as Ukraine, social relationships with supervisors are highly regarded (Hofstede, 2001). Therefore, the potency of supervisor-follower social capital in shaping work engagement and involvement in creative activity may be more pronounced than in more individualistic societies. In a society marked by less powerful members accepting that power is unequally distributed (high power distance), where members feel uncomfortable with uncertainty and ambiguity (high uncertainty avoidance) and show a strong preference for a tightly-knit framework (collectivism), strong relational resources from supervisor-follower dyads, such as trust in the supervisor, sharing of goals and strong informal relationships may force employees to reciprocate strongly by engaging in positive attitudes and behaviors.

In addition to cultural factors to consider in our study, there are economic considerations that are also relevant. Ukraine has a low per capita income, high levels of poverty and high unemployment rates (OECD, 2013). At the time that data were collected, the country's situation was further complicated by the recent waves of political unrest and civil war. Given these environmental conditions, the Ukrainian work context is a more stressful one in comparison to the average work environment of a Western developed country. By Western standards, organizations' lack of facilities and resources in Ukraine places great challenges on employees to become engaged at work. The very high unemployment rates in the country make the threat of being replaced a very real concern, and the politically unstable climate may evoke more caution among employees to trust and share ideas with supervisors and peers. In such a challenging work environment where employees' resilience is constantly tested, positive exchanges between supervisors may be viewed as a rare source of hope and psychological safety, which creates

positive energies. Hence, the combination of a lack of financial resources and dire work conditions may force employees to reorient their focus towards building stronger relationships with their supervisors, which enables them to tap into important relational resources that enables them to free up the mental energy necessary for engaging in creative ways of dealing effectively with daily work challenges.

Limitations and Future Directions

Notwithstanding the contributions of this study both to practice and literature, several limitations should be noted. First, while our outcome variable creative work involvement may play a major role in many organizational behavior models, it remains a soft measure of successful performance behavior. Second, as our data was collected by self-report, the responses may have yielded more socially desirable answers than if supervisors had rated creative work involvement. We partly controlled for social desirability by relying on a design based on complete anonymity, which is presumed to facilitate data accuracy by alleviating social desirability pressures (Evans & Rooney, 2008). In short, we believe employees had little reason to over-report their involvement in creative endeavors. If such over-reporting did occur, then our criterion's range restriction would have attenuated our results, suggesting that our estimates were too conservative.

Our single-respondent design can raise concerns about common method bias, especially given that work engagement and supervisor-follower social capital were concurrently measured. However, several statistical controls reduced this concern. Our results are mainly correlational in nature. Therefore, inferences regarding causality and the sequence of effects are limited. In response, future studies should explore the reversed and reciprocal effects of creative work

involvement on work engagement and supervisor-follower social capital. Another flaw in this inquiry is that we only measured one mediating mechanism to explain the relationships between supervisor-follower social capital and creative work involvement. Perhaps future studies should include additional mediating mechanisms such as knowledge sharing or improved ability to exchange information (Bock, Zmud, Kim & Lee, 2005).

Another potential limitation relates to the generalizability of the data as they were collected from multiple organizations in a country characterized by high economic and political turmoil. Thus, even after controlling for organization, there is still a possibility that some of the variance explained in involvement in creative work is due to specific organizational and/or cross-cultural features that were not considered in the study's design. However, we believe that the heterogeneity of our sample is preferable to the idiosyncratic character of data collected from a single organization. Finally, cross-country studies could provide additional insights into the relative importance of different political climates and cultural contexts in leveraging the positive influence of supervisor-follower exchanges in work engagement and positive employee attitudes like involvement in creative behavior. Cross-cultural comparisons of the enablers of involvement in creative work, including work engagement and social capital, would be beneficial for multinationals that seek to develop work context for promoting creative behavior across their subsidiaries.

Applied Implications

For practitioners, this study shows that organizations that want to prioritize creative behavior should craft a workplace culture in which employees and supervisors have the opportunity to work towards establishing common goals (i.e., goal congruence) and to build

strong informal relations (i.e., relationship informality). The presence of these relational resources also encourages a more engaged workforce. The dedication, energy, and enthusiasm that characterize work engagement helps facilitate broad and flexible cognitive orientation and innovative behaviors. As goal congruence and relationship informality are vital to an employee's involvement in creativity, a culture that embraces transformational leadership in supervisors may be instrumental in building strong relationships between transformational leaders and their followers (Stone, Russell & Patterson, 2004). The study's findings also provide insight into policies that organizations could adopt to improve work engagement. As engaging in creative behaviors requires significant resources and energy expenditure, organizations should focus on the development of programs that allow supervisors and employees to frequently interact with each other, learn to share similar goals and thus direct their positive energy, dedication and enthusiasm towards new idea development and creative behavior. Previous research has demonstrated that when senior management supports frontline supervisors, this behavior will elicit a positive attitude from supervisors towards employees and eventually improves the exchanges between employees and their supervisors (Shanock & Eisenberger, 2006).

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Endnotes

1. Confirmatory factor analyses revealed that all nine items loading on one single dimension of work engagement yielded a better fit ($\chi^2 = 70.53$; $\chi^2/df = 2.61$; GFI = .95; TLI = .95; RMSEA = .08; IFI = .97; CFI = .97) than a three-factor solution ($\chi^2 = 300.81$; $\chi^2/df = 12.53$; GFI = .82; TLI = .72; RMSEA = .20; IFI = .81; CFI = .81).

Tables

Table 1

Descriptive Statistics, Bivariate Correlations and Reliability Estimates

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Organization 1												
2. Organization 2												
3. Organization 3												
4. Organization 4												
5. Gender (1-male; 2-female)	.01	.03	.05	-.09								
6. Age (years)	-.12*	-.06	.22**	.01	.20**							
7. Tenure (Ln)	-.16**	-.04	.16**	.10	.19**	.73**						
8. Trust in supervisor	-.16**	.09	.01	.10	-.06	-.06	.03					
9. Relationship informality	-.14*	.09	.04	.03	-.01	-.10	-.02	.56**				
10. Goal congruence	-.11	.10	.01	.02	-.08	-.13*	-.05	.64**	.55**			
11. Work engagement	-.20**	.02	.13*	.10	-.09	.10	.15*	.42**	.32**	.43**		
12. Creative work involvement	-.16**	.07	.05	.08	-.25**	-.10	-.01	.25**	.32**	.38**	.58**	
Mean	.39	.26	.15	.19	1.45	31.68	1.46	2.71	2.13	3.17	3.79	3.65
Standard deviation					.49	8.83	.77	1.03	.95	.96	.91	.87
Cronbach's alpha								.86	.83	.84	.89	.90

*p < .05; **p < .01)

Table 2

CFA Analyses on Core Constructs: Model Comparison

Models	χ^2 (df)	$\Delta\chi^2$ (Δdf)[a]	GFI	TLI	CFI	IFI	RMSEA
Measurement Model	815.9 (424)	-	.89	.93	.93	.94	.06
Alternative Model 1	1596.4 (431)	780.5* (7)	.72	.76	.78	.78	.10
Alternative Model 2	2364.2 (433)	1548.3* (9)	.57	.61	.64	.64	.12
Alternative Model 3	3108.4 (434)	2292.5* (10)	.46	.46	.50	.50	.15

Note: *p< .05

[a] Difference test with the Measurement Model

Alternative Model 1: a three-factor model that merged the three dimensions of supervisor-follower social capital

Alternative Model 2: a two-factor model composed of all antecedent variables and the outcome variable

Alternative Model 3: all five constructs in the original model as a single factor

Table 3

Regression Results

	Work Engagement						Creative work involvement					
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Constant	4.37***	.29	3.17***	.29	4.74***	.27	4.61***	.22	3.90***	.28	4.25***	.25
Organization 1	-.46**	.16	-.34*	.14	-.33*	.15	-.08	.12	-.23	.14	-.06	.12
Organization 2	-.21	.17	-.24	.15	-.05	.16	.07	.13	-.06	.15	.07	.13
Organization 4	-.11	.18	-.10	.16	-.08	.17	-.02	.14	-.03	.16	.02	.14
Gender	-.21*	.11	-.17	.10	-.43*	.10	-.31***	.08	-.41***	.09	-.32***	.08
Age	.00	.01	.01	.01	-.02*	.01	-.02*	.01	-.01	.01	-.01	.01
Tenure	.16	.10	.09	.09	.16	.09	.07	.08	.12	.09	.07	.08
Trust in supervisor			.29***	.05					.06	.05	-.08	.05
Relationship informality			.30***	.05					.27***	.05	.12**	.04
Goal congruence			.26***	.07					.26***	.06	.13*	.06
Work engagement							.54***	.05			.50***	.05
R^2	.07***		.28		.10***		.40***		.23***		.43***	
ΔR^2	-		.21***		-		.30***		.17***		.20***	

Unstandardized regression coefficients (B) and standard errors (SE) are reported.
*p < .05; **p < .01; ***p < .001

Table 4

Bootstrapping Results for Indirect Effects (Simple Mediation)

Independent variables	Indirect effect	SE	z	LL 95% CI	UL 95% CI
Relationship informality	.149	.031	4.806*	.115	.220
Goal congruence	.129	.033	3.909*	.067	.196

Note. Unstandardized regression coefficients are reported. Number of bootstrap resamples = 5,000; LL = lower limit; UL = upper limit; CI = confidence interval; SE = standard error.
*p < .001 (two-tailed test)

Figures

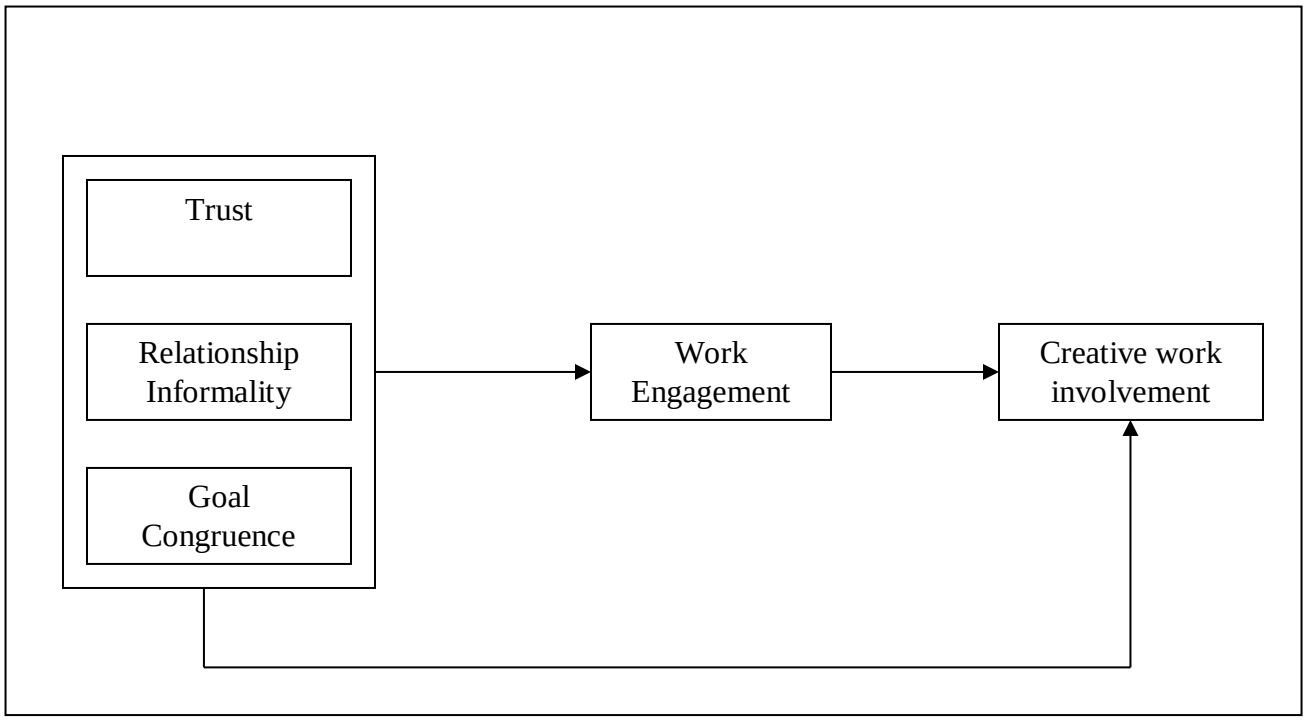

Figure 1. Conceptual model.

Appendix

Measurement Scales Items

Supervisor-Follower Social Capital

Trust in Supervisor

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

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.

Relationship Informality

My supervisor and I spend significant time together in social situations.

I maintain a close social relationship with my supervisor.

The relationship with my supervisor is very informal.

I know my supervisor on a personal level and vice versa.

Work Engagement

At work, I feel bursting with energy.

At my job, I feel strong and vigorous.

I am enthusiastic about my job.

My job inspires me.

When I get up in the morning, I feel like going to work.

I feel happy when I am working intensely.

I am proud of the work that I do.

I get carried away when I am working.

I am immersed in my work.

Creative Work Involvement

I suggest new ways to achieve goals or objectives.

I come up with new and practical ideas to improve performance.

I search out new technologies, processes, techniques, and/or product ideas.

I suggest new ways to increase quality.

I am not afraid to take risks.

I come up with creative solutions to problems.

I usually adopt a fresh approach to problems.

I suggest new ways of performing work tasks.