A Research on Behavioral and Dispositional Dynamics in Korean Public Sector: With a focus on the Interface among Positive Psychological Capital, Social Capital and Human Capital

Hyo Joo Lee, PhD Student,

Graduate School of Governance, Sungkyunkwan University, Seoul, Korea

Researcher of Research Center for Public HRD Sungkyunkwan University, Seoul, Korea

Sung Min Park, Associate Professor,

Graduate School of Governance, Sungkyunkwan University, Seoul, Korea

Director of Research Center for Public HRD Sungkyunkwan University, Seoul, Korea

ABSTRACT

The solutions to enhance human capital (creative behavior and public service motivation) in public organizations are examined in this study through observing main capital including positive psychological capital (self-efficacy, hope, resilience, and optimism), social capital as well as their interaction effects. To identify the impacts of the several types of capital in Korean public sectors, this study employed survey data on Korean public employees' perception on public sector (sample size: 2,070) collected by Korean Institute of Public

Administration in 2016. The results demonstrated that except for self-efficacy all of constructs of psychological capital and social capital have significant effects on creative behavior. While divergent results were confirmed for the determinants of public service motivation. Based on the results, abundant theoretical and practical implications for developing effective public management systems and cultures were addressed.

Keywords: Human Capital, Psychological Capital, Social Capital, Creative Behavior [CB], Public Service Motivation [PSM], Self-efficacy, Hope, Resilience, Optimism

Contact Sung Min Park sm28386@skku.edu The Research Center for Public Human Resource Development, Graduate School of Governance, Sungkyunkwan University, Faculty Hall 208, 25-2, Sungkyunkwan-ro, Jongno-gu, Seoul 110-745, Korea

INTRODUCTION

Regardless of sector, all organization managers try to find solutions that effectively utilize organizational capital to sustain their competitive advantage in today's complex environment. In particular, New Public Management (NPM) reforms have treated innovation as a vital virtue to improve public sector performance (Bartos 2003; Bruel and Kamensky 2008; Gore 1993; Kamensky 1996; Kettl 2005; Politt and Bouckaert 2004; Fermandez and Moldogaziev 2012). Traditionally, economic capital such as financial and tangible assets have been regarded as crucial factors for innovation, but the importance of intangible human capital is being recognized by today's enlightened managers (Luthans, Luthans, and Luthans 2004). Becker (1964) used the term human capital for the first time in his book and emphasized that investing in Human Resource Development (HRD) for employees is as important as investing in facilities. Given that the public sector has a limited budget that is covered by citizens' taxes, depending only on economic capital is not a sufficient strategic approach. Thus, how to manage and develop human capital is one of the most important determinants of government competency. In order for governments to remain competitive, public sector organizations must be innovative. In particular, it is essential to foster the creative behavior of employees such as developing, adopting, and implementing new ideas for products and work methods (Yuan and Woodman 2010; Rego et al. 2012), which in turn boosts organizational effectiveness (Amabile 1988; DiLiello and Houghton 2006).

Unlike the private sector, one of the most significant values that must be taken into account in the public sector is public interest. Therefore, public service motivation (PSM) is inherently human and is a significant resource for those seeking to increase public interest. Over the past two decades, PSM—defined as "a general altruistic motivation to serve the interests of a community of people, a state, a nation or humanity" (Rainey and Steinbauer 1999:23)—has been found to have a positive effect on organizational performance (Brewer

and Selden 2000), organizational citizenship behavior (Kim 2006), organizational commitment (Crewson 1997), job satisfaction (Wright and Pandey 2008), and organizational innovation (Lee, Kim, and Park 2017). Furthermore, among human capital, the willingness and ability to desire participation and involvement are key tacit knowledge capabilities that constitute human capital (Luthans and Youssef 2004). In line with those arguments, it is evident that PSM, a motive to actively pursue public interest, is one of the most desirable forms of human capital in the public sector.

Tangible capital is easy to imitate and transfer in a competitive world. Other forms of intangible capital such as social capital and positive psychological capital have received increasing attention and are regarded as the advantages necessary to ensure the superiority and dominance of an organization. Social capital is interpreted as involving "interpersonal, inter-group and inter-organizational relationships, networks and connections, as well as the underlying group and community resources, social structure, and cultural dynamics." (Luthans and Youssef 2004:10) Luthans et al. (2004) described social capital as "who you know" while human capital is "what you know." Social capital has been demonstrated to benefit organizations (Adler and Kwon 2002; Lee, Oh, and Park 2017) as it is a resource that reflects the social relations between members and that is realized through collaboration and shared trust (Leana and Van Buren 1999).

The 21st century introduction of positive psychological capital, led by Seligman, has initiated a stream of theories and research that apply positivity and strength-based management to the workplace (Luthans and Youssef 2004). Psychological capital, which lies beyond human and social capital and aims to discover "who you are," has been treated as a worthwhile resource to invest in since it increases organizational effectiveness such as productivity and employee retention (Luthans et al. 2004), organizational commitment (Fredrickson 2001; Youssef and Luthans 2007), job satisfaction (Kluemper et al. 2009), and

performance (Bandura 1997; Bandura and Locke 2003). Considering the characteristics of the public sector, it is clear that 1) there is a lack of incentive mechanisms, 2) the definition and measurement of performance is invisible and vague, 3) public employees are expected to have social values such as PSM, and 4) certain jobs require that workers handle various complaints from the public. As such, a high level of positive psychological capital is critically important. Despite the importance of psychological capital in the public sector, very few studies on positive psychological capital have been conducted compared to the quantity and quality of research conducted in the business sector. Above all, knowing how to manage and utilize those capitals in the public sector is the key that determines the success of an organization. However, academic efforts to incorporate several capitals in the public organizational context and empirically proving the dynamics of the capitals are still lacking. To fill in those gaps, this study, grounded on the unique attributes of the public sector, aims to explore the dynamics of organizational capital, namely, human capital, positive psychological capital, and social capital. The current study specifically focuses on examining the impact of positive psychological capital and social capital, as well as the interaction effects of those capitals on human capital, by utilizing survey data on Korean public employees' perception of the public sector collected in 2016. In other words, the purpose of this study is to answer the following research questions. 1) Does positive psychological capital (self-efficacy, hope, resilience, and optimism) influence human capital (creative behavior and PSM)? 2) Does social capital (trust and reciprocity) have a positive impact on human capital? 3) Does social capital have a significant moderating effect on human capital? In order to answer these questions, this study reviewed literature and developed several hypotheses. Furthermore, quantitative research methods were used to test the hypotheses. Finally, implications of the findings regarding public human resource management and organizational theory are discussed.

LITERATURE REVIEW

Human Capital: Creative Behavior and Public Service Motivation (PSM)

Bill Gates said that our most important asset walks out the door every night, emphasizing human capital when it comes to competitiveness. Such a perspective is in line with the view that human resources are not a cost to pay for doing business, but an asset worth investing in. In other words, human capital can yield a return; therefore, it should be effectively managed and invested in (Luthans and Youssef 2004:2). Despite the importance of human capital, it is often observed that some organizations try to overcome economic adversities by implementing downsizing or outsourcing. Although knowledge and skills can be replaced due to technological advancements such as Artificial Intelligence, tacit knowledge is a resource that is derived from human beings. Luthans and Yousset (2004) note that explicit knowledge is easy to imitate and work experience can be copied if competitors lure away competent employees. On the other hand, tacit knowledge, which is another dimension of human capital, is "organization-specific and built over time as members become socialized into the organization." (Luthans and Yousset 2004:6) One of the reasons why tacit knowledge must be considered more redeemable than explicit knowledge in HR practices, such as in the selection stage, is because tacit knowledge includes willingness and desire. In other words, tacit knowledge is akin to the attitudes and motivation embedded in employees, such as the desire to participate.

What competency can be considered as tacit knowledge in the public sector? Today, the public requires more innovation and effectiveness from the government; the rationale behind why creative behavior should be analyzed as human capital in the public sector can be found in literature arguing that creativity plays a role in adhering to a budget (Fox 2014) and providing quality public service (Nahavandi, Denhardt, Denhardt, and Aristigueta 2013).

Creativity, a source of innovation for organizations (Amabile, Conti, Coon, Lazenby, and Herron 1996; Scott 1995; West and Farr 1990) and the key to organizational competitiveness (Oldham and Cummings 1996; DiLiello and Houghton 2006), involves behavior that manifests one's creative potential (Sweetman, Luthans, Avey, and Luthans 2010:5). Since creative behavior is demanded in nearly all jobs (Shalley, Gilson, and Blum 2000), and requires a risk-taking mindset that can be promoted by organizational culture, support from colleagues, and leadership, it is more related to tacit knowledge than explicit knowledge. For example, anyone can come up with novel ideas but not everyone can convert those ideas into actions. When we suggest a new idea against an existent one supported by our colleagues, we need courage and a willingness to take risks because we can never be sure what outcomes the introduction of innovation may have (Lee, Kim, and Park 2017). The public sector in particular is controlled by rules and laws; in the Korean context, where hierarchical culture and group culture still prevail due to Confucianism (Kim, Lee, and Park 2016), it can be even more difficult to behave in an innovative way. Thus, in this study, creative behavior is analyzed as a form of tacit knowledge that consists of human capital.

Another challenge for the public sector is achieving public interest and respecting public values. Even though highly educated and skilled employees have been introduced in the public sector, we cannot be certain that public employees' morality and altruism have been verified in the selection process developed by HR practices. Given that the report by Transparency International lists corruption within the public sector as one of global civil service's biggest challenges (Transparency International 2016), the motivation and attitude to desire public values are essential among the other competencies that constitute human capital in the public sector. One of the attitudes that is in line with public values is PSM; PSM has received significant attention in the global public sector for the past several decades. According to Mansbridge (1990), the extent to which public employees' behavior is

motivated by self-interest in contrast to altruism is a central controversy in research that aims to model motivation. PSM has been shown to be associated with a number of desirable attitudes and behaviors such as job satisfaction (Steijn 2008) and organizational performance (Kim 2004) (see also Ritz et al. 2016). Some scholars argue that PSM is stable over time (Oberfield 2014), while others note that the level of PSM can change over time (Ward 2014). Although the variability of PSM is still controversial, it is evident that individuals with high PSM want to do good things for others and society through the delivery of public services (Perry et al. 2008); individual and organizational factors affect PSM. In spite of a number of studies revealing the antecedents of PSM, very few scholars have explored the effects of psychological capital on PSM with a view of establishing PSM as part of human capital. Considering that psychological capital is deeply related to motivation-seeking goals (Snyder et al. 2002), now is the right time to empirically examine how positive psychological capital influences PSM.

Positive Psychological Capital and Broaden-and-Build Theory

Positive psychological capital consists of four capacities: self-efficacy (confidence), optimism, hope, and resilience. First, self-efficacy refers to an individual's conviction about his or her abilities to mobilize motivation and the cognitive resources needed to perform a given task. Previous studies have revealed that self-efficacy has positive effects on creative performance (Amabile 1996), creativity (Tierney and Farmer 2002), and the problem solving process (Phelan and Young 2003). Furthermore, employees with a high level of self-efficacy prefer challenging tasks and extend motivation to others, and work harder to achieve their goals (Luthans and Youssef 2004). According to the Self-Determination Theory (SDT) developed by Ryan and Deci (1985:2000), autonomy, competence, and relatedness promote intrinsic motivation. In this context, we can presume that self-efficacy as cognition of one's

own competence encourages PSM and acts as a kind of intrinsic motivation. Second, optimism refers to a positive explanatory style that attributes positive events to internal, permanent, and pervasive causes, and negative events to external, temporary, and situation-specific causes (Luthans and Youssef 2004:17). Optimistic individuals are willing to accept challenges (Carver and Scheiver 1998). Such a tendency is useful in overcoming failure when the outcome of creative behavior is different from what was expected, by recognizing that failure does not result from internal aspects. Third, hope is "a cognitive set that is based on a reciprocal derived sense of successful agency (goal-directed determination) and pathways (planning to meet goals)." (Snyder et al. 1991:571) Since hope is grounded in the belief that one is able to find pathways and is motivated to make use of those pathways, employees work harder to pursue a goal (Snyder et al. 2002). As public employees see increasing public interest as a goal, hope will motivate them more and increase their PSM. Lastly, resilience refers to a positive adaption to adversities. Resilient employees exhibit the vigor of persistence when facing challenges (Masten and Reed 2002). According to Spreitzer's (1995, 1996) research, psychological capital is positively associated with effectiveness and innovation.

The positive effects of positive psychological capital on creative behavior and PSM can be explained by the broaden-and-build theory. According to this theory, developed by Fredrickson (1998), positive emotions such as happiness and anticipation broaden one's awareness and encourage various novel and exploratory thoughts and actions, which builds resources (Fredrickson 2004). In Fredrickson's study (2003), the experimental group experienced positive emotions by watching films and displayed increased creativity compared to the other group who were exposed to negative emotions. He explains that such positive emotions contribute to the development of positive psychological capital such as resilience, which broadens and builds thought-action followed by cultivated resources. In line

with those arguments, we posit that positive psychological capital will cultivate creative behavior and PSM, both of which are valuable resources in the public sector.

H1: Employees' high levels of positive psychological capital will be positively associated with creative behavior in the Korean public sector.

H2: Employees' high levels of positive psychological capital will be positively associated with PSM in the Korean public sector.

Social Capital and Social Exchange Theory

Although there have been calls to study the role of social capital in public sector organizations (Pil and Leana 2009; Tantardini and Kroll 2015; Andrews 2017), there is still a lack of research exploring the interrelationship between other forms of capital within organizations. Taking into account the function of social capital as delivering resources in a public organization that is noted for its labor intensity (Andrews 2017), we need to empirically determine how social capital is associated with individual capital, such as positive psychological capital, to increase forms of human capital that are conducive to organizational effectiveness.

Social capital consists of three dimensions—structural, relational, and cognitive—and is regarded as a collective "asset" that can transfer the knowledge required to accomplish organizational improvements (Nahapiet and Ghoshal 1998:243). The structural dimension relates to the connections among employees, such as the extent of communication between colleagues. The relational dimension refers to the trust among employees, as evidenced in collaboration within the organization. The cognitive dimension implies shared goals and values among employees (Nahapiet and Ghoshal 1998; Andrews 2017). Coleman (1990) argues that mutual interdependence between employees is one of the main sources that

constitute social capital. Taking bounded rationality into consideration, as suggested by Simon (1976), social interaction within the organization must be cultivated as it encourages knowledge creation and is helpful in making good decisions. These resources are likely to result in a "commitment to sharing and acting upon valuable information." (Andrews 2017:43) Actively exchanging information and collaborating with colleagues may drive employees to suggest innovative ideas through sharing and creating resources. In addition, a climate that encourages the participation of members and that emphasizes teamwork may allow employees to feel more supported by their organization. Employees, in turn, may be more willing to provide something of benefit to the organization. Such a process of social capital that is utilized within the organization can be supported by social exchange theory (Lee, Oh, and Park 2017). Thus, we presume that employees who perceive abundant social capital are more likely to have altruistic attitudes and are more willing to satisfy organizational goals, thereby enhancing public value in the public organization.

H3: Organizations' high levels of social capital will be positively associated with employees' creative behavior in the Korean public sector.

H4: Organizations' high levels of social capital will be positively associated with employees' PSM in the Korean public sector.

Moderating Effects and Conservation of Resources Theory

According to Fredrickson (2001), there is a mutual reinforcement of resources in organizations. In other words, when positive psychological capital is combined with other socialization resources such as training, organizational support, and leadership, it enforces employees' positive psychological capital which increases organizational effectiveness. Luthans and Youssef (2004) maintain that social capital functions as a cultivator of human

capital, which is important in creating a sustainable competitive advantage. They elaborate on the role of social capital by noting that building human capital becomes problematic if trust-based psychological contracts are absent. The moderating effect of social capital on the relationship between positive psychological capital and human capital is supported by the meta-analysis conducted by Stajkovic and Luthans (1998). In their study, HR practices that are rooted in social capital, such as communication-oriented practices, social recognition, and feedback, result in employees feeling supported and interested in significantly enhancing their performance.

The mechanism of utilizing resources can be explained by the conservation of resources theory developed by Walter (1932). Although this theory is designed to describe the process of stress or burnout, it can be applied to the explanation of the effects of resources in an organization. In this theory, there are two basic principles regarding the protection of resources: 1) the primacy of resource loss, and 2) resource investment (Halbesleben, Paustian-Underal, and Westman 2014). The former explains that it is more harmful to lose resources than to obtain them. The latter notes that people with abundant resources are likely prepared to gain even more resources. Employees working in a resourceful work environment are likely to reinforce their beliefs in their capabilities and resilience, have more efficient beliefs, and be more optimistic about meeting their goals (Siu et al. 2014:982). Applying the conservation of resources theory to this study, we posit that the higher employees' positive psychological capital, the more social capital employees perceive and utilize, which results in increased creative behavior and PSM. For those reasons, we establish hypotheses regarding the moderating effect of social capital.

H5: Social capital will have a moderating effect on the relationship between positive psychological capital and creative behavior in the Korean public sector.

H6: Social capital will have a moderating effect on the relationship between positive psychological capital and PSM in the Korean public sector.

RESEARCH METHODS

Based on a review of literature, a heuristic research model was developed as shown in figure 1 to show the relationship among several capitals such as positive psychological capital (self-efficacy, hope, resilience, and optimism), social capital (trust and reciprocity), and human capital (creative behavior and PSM) in the Korean public sectors. In this research, social capital was designated as the moderators, and gender, age, education, job tenure, and rank were designated as the control variable.

[Insert Figure 1 here]

Data and Sample

Empirical analysis was performed based on the results of the "Korean public employees' perception on public sector" conducted by the Korean Institute of Public Administration. The survey targeted public officials working in public institutes including central government and local government in Korea to understand Korean employees' attitudes and organizational behaviors. Sampling was conducted to reflect the demographic background of public organization members to adequately represent the population. This research employed the quota sampling method, which allocates the number of each group of samples based on agency types and the number of employees. The respondents consisted of 2,070 public officials from 59 different agencies in Korea. Table 1 demonstrates detailed information on respondent characteristics.

[Insert Table 1 here]

Statistical Modeling and Results

Reliability Tests and EFA Results

In order to verify the validity and reliability of each variable exploratory factor analysis and reliability analysis were performed. Principal components analysis was utilized as the factor extraction method in exploratory factor analysis, and varimax was used as the factor rotation method. Through the Kaiser-Meyer-Olkin (KMO) value, it selection of variables was confirmed as suitable. The questions used in this research have more than 1.0 in eigenvalue, and all factor loading values were greater than 0.6. Furthermore, Cronbach's α for all constructs was over than 0.6, which validates the reliability of the measuring tool. To sum up, this study confirms the reliability of the questions included in the variables. The analysis results are shown in the Table 2.

[Insert Table 2 here]

Correlation Analysis

The relationships between individual characteristics, the three types of capital were investigated. As table 3 indicates, the human capital variables (creative behavior and PSM) are significantly correlated with the two types of capital (positive psychological capital and social capital) in the Korean public sector. In addition, the components of positive psychological capital correlated with each other in Korean public sector. Further, the human capital variables are significantly correlated with gender, age, education, rank, and job tenure.

[Insert Table 3 here]

Hierarchical Multivariate Regression

To investigate the possible causal relationships between several capitals and human capital, a hierarchical multivariate regression analysis was employed. Four different equations were regressed on human capital to observe changes in total variance influenced by each set of factors (R^2 changes). β represents the standardized regression coefficient that estimates the relative importance of each antecedent variable association with human capital. The main statistical results of the regression model are reported in tables 5 and 6.

[Insert Table 5 here]

[Insert Table 6 here]

Creative Behavior Model

In the first model (table 5), the relationship between a set of determinants and creative behavior in the context of the Korean public sectors was analyzed. First, demographic factors were regressed on creative behavior. The five demographic factors only accounted for approximately 5.1% of the total variance of creative engagement ($p < .001$). Gender ($\beta = .086$, $p < .001$), age ($\beta = .093$, $p <. 01$), education ($\beta = .046$, $p < .01$), and job tenure ($\beta = .129$, $p < .001$) are significantly associated with public employees' creative behavior. Results suggest that males, those with an older age, a higher level of education, and longer job tenure are more likely to have a higher level of creative behavior in the Korean public sector.

Second, the addition of the positive psychological capital accounted for 27.3% of the total variance in creative behavior ($p < .001$), suggesting that all of constructs of psychological capital are the best predictor, at least for employees working in the Korean

public sector. As predicted, self-efficacy (β = .094, $p < .001$), hope (β = .204, $p < .001$), resilience (β = .115, $p < .001$), and optimism (β = .170, $p < .001$) are significantly and positively related to the level of creative behavior displayed by Korean public employees. Standardized coefficients indicate that a high level of positive psychological capital will increase employees' creative behavior. These findings provide support for Hypothesis 1.

Third, when the organizational factor is added, the total variance of creative behavior accounted for by social capital significantly increased to 38.9% ($p < .001$). As hypothesized, social capital is significantly related to creative behavior (β = .377, $p < .001$), supporting Hypothesis 3.

Fourth, when the moderating factors are added, the total variance of creative behavior accounted for by moderation factors (i.e., 1. self-efficacy * social capital, 2. hope * social capital, 3. resilience * social capital, 4. optimism * social capital) significantly increased to 39.2% ($p < .001$). As hypothesized, social capital has a statistically significant impact on the relationship between creative behavior and self-efficacy (β =-.060, $p < .005$), and resilience (β =.085, $p < .001$) respectively. While social capital has no significant impact on the relationship between creative behavior and hope, and optimism respectively. These findings partially provide support for hypotheses 5.

PSM Model

In the second model (table 6), the relationship between a set of determinants and PSM in the context of the Korean public sectors was analyzed. First, demographic factors were regressed on PSM. The five demographic factors only accounted for approximately 0.8% of the total variance of PSM ($p < .001$). Education (β = .054, $p < .005$), and job tenure (β = .105, $p < .001$) are significantly associated with public employees' PSM. Results suggest that public employees, those with a higher level of education, and longer job tenure are more

likely to have a higher level of PSM in the Korean public sector.

Second, the addition of the positive psychological capital accounted for 15.0% of the total variance in PSM ($p < .001$), suggesting that self-efficacy ($\beta = .252$, $p < .001$) and optimism ($\beta = .194$, $p < .001$) are the best predictor, at least for employees working in the Korean public sector. Standardized coefficients indicate that a high level of positive psychological capital will increase employees' PSM. These findings provide partial support for Hypothesis 2.

Third, when the organizational factor is added, the total variance of PSM accounted for by social capital significantly increased to 15.5% ($p < .001$). As hypothesized, social capital is significantly related to PSM ($\beta = .078$, $p < .001$), supporting Hypothesis 4.

Finally, when the moderating factors are added, the total variance of creative behavior accounted for by moderation factors (i.e., 1. Self-efficacy * social capital, 2. hope * social capital, 3. resilience * social capital, 4. optimism * social capital) significantly increased to 16.2% ($p < .001$). As hypothesized, social capital has a statistically significant impact on the relationship between PSM and self-efficacy ($\beta = .055$, $p < .1$). While social capital has no significant impact on the relationship between PSM and hope, resilience, and optimism respectively. These findings partially provide support for hypotheses 6.

DISCUSSION

This study explored the effects of positive psychological capital and social capital on human capital, and sought to investigate how positive psychological capital interacts with social capital to increase human capital. Although some studies have dealt with positive psychological capital, social capital, and human capital (Luthans and Youssef 2004; Luthans et al. 2004), those studies are limited to introducing the theoretical concepts and practical suggestions for management purposes. In other words, few have examined the behavioral and

dispositional dynamics of the three types of capital based on empirical data. The theoretical and practical inquiries of this study are inspired by the notion that the success of utilizing individual and organizational capital that cultivates human capital may be contingent upon employees' perception of the capital, and specifically whether employees positively view the capital.

First, hypothesis 1 was partially confirmed, indicating that hope, resilience, and optimism are important cultivators and activators among Korean public agencies in increasing employees' creative behavior. According to the suggestions of some scholars, a high level of hope (Amabile 1996), resilience (Luthans, Youssef, and Avolio 2007), and optimism (Peterson and Seligman 2004) may increase creative behavior. In order to amplify employees' creative behavior in an organization, leaders or managers must provide Human Resource Management (HRM) and HRD best practices that encourage positive psychological capital. This suggestion is supported by Fredrickson's broaden-and-build theory (1998). This research considers employees' positive psychological capital as antecedents of broadened thoughts for building creative behavior.

Second, hypothesis 2 was partially confirmed, demonstrating that self-efficacy and optimism may cultivate and activate PSM in the Korean public sector. This is consistent with previous studies of Badura (1997) and Badura and Locke (2003), and explains that a high level of self-efficacy makes an individual more determined in his or her own task goals based on self-determination power, which increases intrinsic motivation. Results show that resilience is negatively associated with PSM in Korean public sectors, which is in contrast to previous literature showing the positive relationship between resilience and intrinsic motivation (Siu, Bakker, and Jiang 2014). This result may inspire us to conduct more research on work motivation in the Korean public sector. For example, we could suppose that there may be more differences than similarities in the concepts and constructs of PSM and

intrinsic motivation in a Korean context.

Third, hypotheses 3 and 4 were confirmed, proving that social capital is the most significant booster among Korean public agencies in increasing employees' creative behavior and PSM. The results suggest that organizational social capital functions as a resource that reflects trust based on active communication and collaboration, which increases flexibility in performing tasks and commitment to the organization (Leana and Buren 1999). Social capital is therefore a factor that encourages a developmental culture in which the values of flexibility, growth, innovation, and creativity are effectively and strategically managed and cultivated.

Finally, hypotheses 5 and 6 were partially confirmed, indicating that social capital regulates the relationships between positive psychological capital and creative behavior, and PSM. Specifically, social capital positively moderates the relationship between resilience and creative behavior. In contrast, the interaction effect of social capital and self-efficacy was found to have a negative effect on creative behavior. On the other hand, resilience only interacts with social capital, which increases the PSM of employees.

In summation, social capital is the strongest determinant of both creative behavior and PSM. Among positive forms of psychological capital, resilience is a key resource for boosting creative behavior while self-efficacy is a crucial resource for cultivating PSM in the Korean public sector.

Implications and Limitations

The significance of the dynamics of organizational capital in increasing human capital has been emphasized by theories and recent studies on organizational behavior. Furthermore, with rising dynamics and rapidly changing organizational environments, organizations are required to innovate, which makes utilizing organizational capital a key issue. This study statistically investigated the antecedents of human capital, focusing on the public sector, and

established a theoretical literature base for positive psychological capital, social capital, and human capital. Additionally, this study developed a theory that explains the antecedents of human capital by adapting the broaden-and-build theory, social exchange theory, and conservation of resources theory. Thus, this study indicates how individual and organizational capital positively influences human capital.

This study is concerned with the positive psychological and social capital that is embedded in public employees in the public sector. Given the findings, managers should carefully reconsider positive psychological capital and social capital as preconditions for creative behavior and PSM. Specifically, employees who have high levels of positive psychological capital seem bound to be motivated by public interest and will search for innovative ideas in their workplace, which will ultimately support and increase their creative behavior and PSM. Furthermore, employees who perceive high levels of social capital are more likely to pursue the public interest and social value and to act in innovative ways. Thus, when designing public employees' training and development, managers and organizations should focus on how to create, develop, and sustain employees' positive psychological capital and accumulate social capital in the workplace. In terms of social capital, for example, compensation policies can affect trust (Campbell, Campbell, and Chia 1998), therefore organizational justice must be guaranteed. While positive psychological capital does not have an effect on an individual's mood and personal life, it plays a significant role in increasing human capital, which is the core resource for organizational effectiveness. Thus, positive psychological capital must not be dismissed as a merely personal or private factor that is not related to the workplace, but must be regarded as fuel to boost human capital.

Positive psychological capital is state-like, and as such it can be developed within organizational members through workplace interventions and proactive management (Luthans and Youssef 2004). Given the results of the current study, in order to encourage

employees' creative behavior, organizations should strategically cultivate employee resilience. Other scholars (Masten 2001; Luthans and Youssef 2004) recommend the following strategies regarding resilience. First, organizations must implement risk-focused strategies to reduce the risks and stressors that are likely to result in undesirable outcomes. Second, healthcare benefits, wellness programs, and employee assistance programs should be provided to employees in order to decrease physical and psychological risks. Lastly, considering that no organization can prevent all possible risk factors, effective leadership and organizational learning may mitigate the effects of adversities.

Based on the results that show that self-efficacy is the significant driving force of PSM, organizational management practices can be suggested as follows. First, task goals should be challenging but achievable, as well as concrete, specific, and proximal, as it is essential for employees to experience frequent successes that are conducive to their efficacy development. Second, vicarious learning or modeling can be alternatives when success experiences are unavailable. Observing successful mentors may help build self-efficacy through "imaginalary experiences." (Luthans and Youssef 2004:19)

In spite of its strengths, this study has limitations that suggest better methods for future research. Further studies on the interaction effects of leadership, as well as more experimental design, would be useful to determine the dispositional dynamics of organizational capital in public sectors. Additionally, this study employed self-reported survey data, and as such common method bias may not have been fully eliminated. Finally, while this study examines a single Asian country, future research should compare the effects of organizational capital across borders, especially between the East and West. For example, should we expect a set of positive psychological capital, grounded in different philosophical thinking, to lead to similar consequences such as creative behavior and PSM? The direction of the effect of self-efficacy may be different depending on how self-efficacy is perceived in

the cultural context (see Rego et al. 2010). To answer these questions, further research is required.

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Appendix

Figure 1 Research Framework

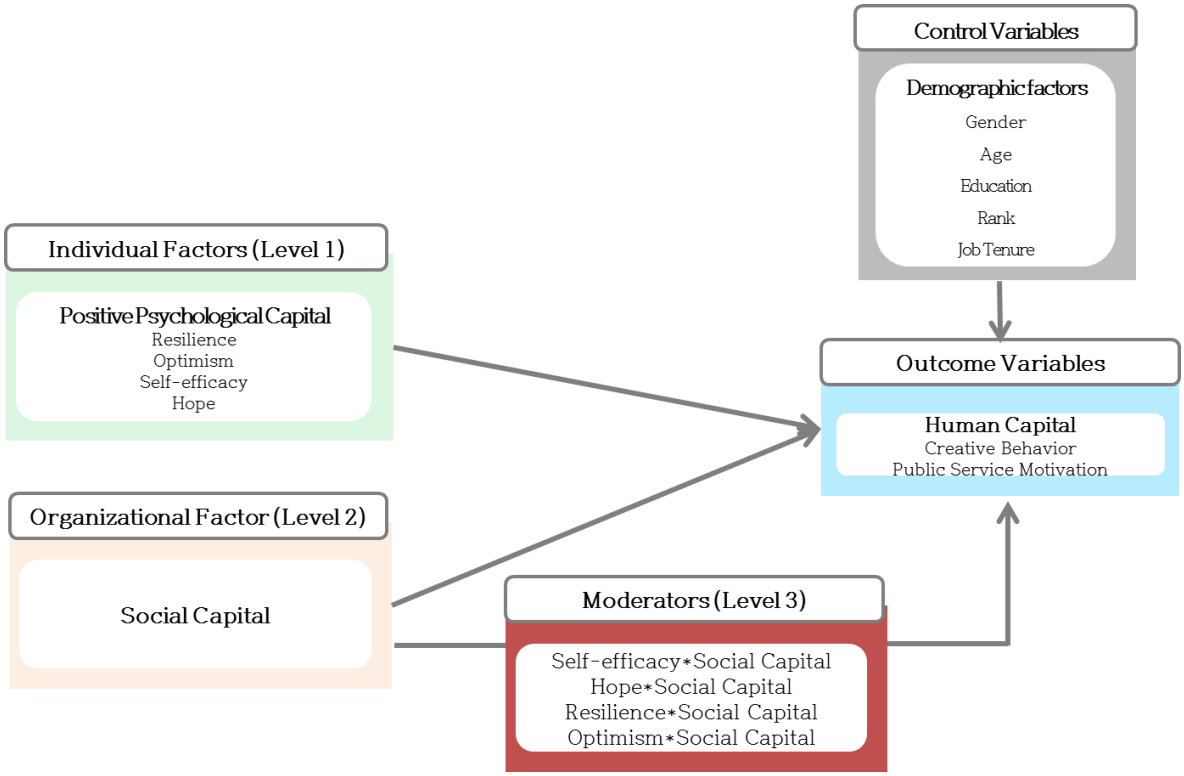

Table 1 Sample Characteristics

Contents	Dimension	Frequency	Rate
Gender	Male	1312	63.4
	Female	758	36.6
Age	20s	191	9.2
	30s	817	39.5
	40s	795	38.4
	50s	266	12.9
	60s	1	0.0
Education	High School or less	60	2.9
	College	113	5.5
	Bachelor's Degree	1499	72.4
	Master's Degree	365	17.6
	Doctorate	33	1.6
Rank	2 Grade	1	0.0
	3 Grade	27	1.3
	4 Grade	118	5.7
	5 Grade	468	22.6
	6 Grade	596	28.8
	7 Grade	596	28.8
	8 Grade	162	7.8
	9 Grade	102	4.9
Job Tenure	1-7 Years	527	25.5
	8-14 Years	615	29.7
	15-21 Years	386	18.6
	22-28 Years	392	18.9
	29-35 Years	107	5.2
	over 36 Years	43	2.1
Total		**2,070**	**100.0**

Table 2 Validity and Reliability Tests

Variable	Questions	Factor Loading	Eigenvalue	Cronbach's Alpha
Self-efficacy	1	.878	1.846	.869
	2	.859		
Optimism	1	.844	1.826	.844
	2	.828		
Hope	1	.787	1.592	.772
	2	.786		
Resilience	1	.888	1.532	.776
	2	.659		
Social Capital	1	.719	2.985	.830
	2	.720		
	3	.797		
	4	.825		
	5	.796		
Creative Behavior	1	.941	1.771	.870
	2	.941		
PSM	1	.781	4.511	.907
	2	.831		
	3	.803		
	4	.786		
	5	.848		
	6	.797		
	7	.771		

Table 3 Correlation Results

	a	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**	**l**
a	1											
b	-.232***	1										
c	-.067**	.079***	1									
d	.242***	-.426***	-.241***	1								
e	-.119***	.807***	-.010	-.391***	1							
f	-.099***	.154***	.158***	-.166***	.135***	1						
g	-.137***	.187***	.129***	-.158***	.160***	.626***	1					
h	-.096***	.182***	.093***	-.083***	.165***	.467***	.577***	1				
I	-.079***	.174***	.101***	-.112***	.156***	.492***	.573***	.658***	1			
J	-.044*	.102***	.025	-.037+	.104***	.316***	.321***	.316***	.382***	1		
K	-.125***	.203***	.052*	-.086***	.189***	.370***	.435***	.404***	.419***	.496***	1	
l	-.037+	.060**	.060**	-.084***	.063**	.354***	.275***	.219***	.295***	.238***	.245***	1

a: Gender, **b:** Age, **c:** Education, **d:** Rank, **e:** Job Tenure,
f: Self-efficacy, **g:** Hope, **h:** Resilience, **i:** Optimism **j:** Social Capital, **k:** Creative Behavior, **l:** Public Service Motivation

+p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

Table 4 Hierarchical Multivariate Regression Analysis on Creative Behavior

	Creative Behavior			
	Step 1	**Step 2**	**Step 3**	**Step 4**
	t-statistics (β)	t-statistics (β)	t-statistics (β)	t-statistics (β)
Step 1: Demographic Factors				
Gender(Male =1)	3.790***(.086)	2.308*(.046)	2.271*(.041)	2.226*(.041)
Age	2.500*(.093)	1.676^{+}(.055)	2.379*(.071)	2.301*(.069)
Education	2.059*(.046)	-0.488(-.010)	.253(.005)	.248(.004)
Rank	1.355(.034)	2.082*(.046)	1.852^{+}(.038)	1.790^{+}(.036)
Job Tenure	3.508***(.129)	2.175*(.071)	1.504(.045)	1.526(.045)
Step 2: Individual Factors				
Self-efficacy (A)		3.757***(.094)	1.569(.036)	1.119(.027)
Hope(B)		7.277***(.204)	7.215***(.185)	7.134***(.188)
Resilience(C)		4.188***(.115)	3.299**(.083)	3.548***(.091)
Optimism(D)		6.325***(.170)	3.476**(.087)	3.344**(.086)
Step 3: Organizational Factors				
Social Capital(E)			19.815***(.377)	19.352***(.373)
Step 4: Moderating Effects				
A*E				-2.387*(-.060)
B*E				.675(.019)
C*E				3.010**(.085)
D*E				-.716(-.020)
	adjR^2=.051 F = 23.287, p = .000	adjR^2=.273 F = 87.215, p = .000 Durbin-Watson = 1.938	adjR^2=.389 F = 132.679, p = .000	adjR^2=.392 F = 96.130, p = .000

$^{+}$p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001

Table 5 Hierarchical Multivariate Regression Analysis on Public Service Motivation

	Public Service Motivation			
	Step 1	**Step 2**	**Step 3**	**Step 4**
	t-statistics (β)	t-statistics (β)	t-statistics (β)	t-statistics (β)
Step 1: Demographic Factors				
Gender(Male =1)	.779(.018)	-.216(-.005)	-.260(-.006)	-.453(-.010)
Age	-1.634(-.062)	-2.399*(-.085)	-2.307(-.082)	-2.295*(-.081)
Education	2.341*(.054)	.289(.006)	.428(.009)	.277(.006)
Rank	-1.484(-.038)	-.552(-.013)	-.627(-.015)	-.863(-.021)
Job Tenure	2.785**(.105)	1.863^{+}(.065)	1.713^{+} (.060)	1.661^{+}(.058)
Step 2: Individual Factors				
Self-efficacy (A)		9.320***(.252)	8.830***(.240)	9.034***(.252)
Hope(B)		1.565(.047)	1.442(.044)	.989(.030)
Resilience(C)		-1.634(-.048)	-1.857^{+}(-.055)	-1.671^{+}(-.050)
Optimism(D)		6.669***(.194)	6.006***(.177)	5.947***(.179)
Step 3: Organizational Factors				
Social Capital(E)			3.494***(.078)	3.101**(.070)
Step 4: Moderating Effects				
A*E				1.861^{+}(.055)
B*E				-.653(-.022)
C*E				1.288(.043)
D*E				.877(.028)
	adjR^2=.008	adjR^2=.150	adjR^2=.155	adjR^2=.162
	F = 4.452, p = .000	F = 41.953, p = .000	F = 38.858, p = .000	F = 29.507,p = .000
		Durbin-Watson = 1.879		

$^{+}$p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001