

Linking Social Capital, Knowledge Sharing/Conversion, and Organizational Performance in a Customer Service Organization

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ABSTRACT

This study attempts to examine the importance of social capital in customer service organizations and clarifies how translates into organizational performance through knowledge management activities. A survey was conducted with the customer service employees, and 256 questionnaires were used for an empirical analysis with smart partial least squares (PLS). The analysis found that relational capital had a positive effect on both the knowledge management components of knowledge sharing and knowledge conversion, while structural capital significantly influenced knowledge sharing. In addition, human capital positively affected knowledge conversion. Both knowledge sharing and knowledge conversion significantly influenced organizational performance. This study proposed a conceptual framework of social capital that influences organizational performance mediated by an organization's knowledge management activities. Based on the results, we suggest practical guidelines for managing social capital and recommend areas of improvement for customer organization's managers and employees.

Keywords: Social Capital, Knowledge Sharing, Knowledge Conversion, Organizational Performance, Customer Service Organization

I . Introduction

The role of a customer service organization as a direct contact point for customer relationship management is being increasingly emphasized than previously. It is a vital factor of an organization's

competitive edge, as it contributes to increased sales by ensuring customer satisfaction through providing customers access to information. A call center or customer service organization represents an aggregation of various information and communication technologies (Shim et al., 2016).

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Organizational performance is determined by organization's ownership of core capital (Carmeli and Tischler, 2004; Ketchen et al., 2004; Prahalad and Hamel, 1990) and its effective use of such capital (Brooking, 1996; Cameli and Tischler, 2004; Edvinsson and Malone, 1997). The ability to use and convert the organization's intangible assets or those created by the employees is key in creating and maintaining competitive advantage and, thus, corporate performance (Moorman and Miner, 1997; Watson and Hewett, 2006).

Knowledge-intensive businesses make significant investments in intellectual assets. In recent times, intangible assets that constitute core corporate competencies (e.g., employees' knowledge, relationships with customers and suppliers, strategic alliances with rivals, process innovations) have become more important than tangible assets (Lee, 2007). This is particularly applicable to customer service organizations, as intangible assets become more important resources to increase customer satisfaction.

Until recently, a customer service organization was defined as a flagship knowledge entity that performs customer service activities. As a frontline entity directly responding to customers' diverse complaints and needs, the customer service organization are more important today than ever. Now, a customer service organization is also perceived as a centralized contact point for customers. The concept is evolving into a "corporate brain" which collects and analyzes customers and market information. Many call analytics technologies are available in a customer service organization where real time responses to customers can help employees to address agitated callers (Shim et al., 2016). The customer service organizations acquire and analyze information from customers and handle their demands using employees' experience, knowledge, and expertise based on the com-

pany's diverse tangible and intangible capitals (e.g., customer database, IT equipment and system, knowledge-management system, work process, etc.). However, there have been few studies on the customer service organization's social capital and its utilization. Though the key issue in call centers becomes social capital and knowledge management, few articles did not touch the knowledge sharing/conversion mechanism in call centers. Therefore, this study aims to understand the customer service organization's social capital and figure out how its performance is enhanced by such a social capital.

Corporate social capital has been addressed in resource-based studies. Barney (1991) asserted that in order for businesses to have differentiated competitive advantages, their resources should be valuable, rare, difficult-to-imitate, and difficult-to-substitute. Many customer service organizations already have decent tangible assets including large-scale information systems, software solutions, consultation rooms, and various facilities. However, it is hard to tell whether these tangible assets bring to firms' competitive advantages. In the context of customer service organizations, organizational performance may be related with social capital, which is created in interaction with customers. Considering the lack of research to link social capital, knowledge management activities, and performance in call centers, this study fulfills the research gap from the prior studies.

The customer center is the place where customer contact mostly occurs which becomes important. This study intends to classify the customer service organization's social capital into structural capital, relational capital, and human capital, and examine the effects of the social capital on organizational performance through knowledge-management activities (knowledge sharing and conversion). The study results suggest practical guidelines on what social capital

should be managed and what aspects have to be improved by the customer service organization. Further, this study will provide recommendations to help the customer service organization evolve into a strategic entity by clarifying how and which elements of social capital can promote knowledge sharing and conversion.

II. Literature Review

2.1. Social Capital

Owing to radical changes within the business environment, the ability to develop appropriate solutions has been essential for an organization's survival. Moreover, the ability to develop new solutions by effectively integrating the company's diverse knowledge is a critical factor in determining corporate competitiveness. Thus, businesses are deeply interested in social capital and knowledge-management activities. To survive amid fierce competition, businesses need to share and convert internal and external knowledge in various business management environments and use it in a timely fashion.

It is widely acknowledged that organizational capital has become more important than before in global competition. Why do many organizations invest in intangible capital? Organizational performance is determined by social capital and its effective use (An and Kim, 2019; Carmeli and Tischler, 2004; Ketchen et al., 2004; Prahalad and Hamel, 1990). The organization's intangible capital is critical for long-term success, and the organizations that manage it properly can be more efficient than those that do not (Brooking, 1996; Brooking, 1997; Carmeli and Tischler, 2004; Edvinsson and Malone, 1997). The studies regarding intangible capital have insisted that unseen

resources such as knowledge, capability, and culture rather than visible resources (e.g., asset, property, etc.) are the organization's core competences, and that intangible capital should be secured to achieve continuous growth (Brooking, 1996; Edvinsson and Malone, 1997).

Stewart (1997) classified organizational capital into human, structural, and customer capital while Kamukama et al. (2010) used the categories human, structural, and relational capital. Maditinos et al. (2011) discussed human capital efficiency, structural capital efficiency, and capital-employed efficiency. Although there is a slight difference in the operational definitions of capital in these studies, human capital, structural capital, and relational capital are the common components.

This article examines customer service organizations that acquire and analyze information of interactions with customers, using the employees' experience, knowledge, and knowhow. Mutual trust and cooperation among employees is needed for customer service organizations. Thus, this study considers structural capital, relational capital, and human capital as the key variable among social capitals.

2.2. Structural Capital

Structural capital refers to the level of empowerment given to employees from organizational structure, which itself contains an organizational vision and allows employees to interact with each other (Conger and Kanungo, 1988; Nahapiet and Ghoshal, 1998; Spreitzer, 1995). It includes three components: interaction, vision sharing, and empowerment. Wang and Chang (2005) argued that organizational structure itself would be meaningless in terms of capital; therefore, in order for the organizational structure to play the role of 'capital' rather than just performing

as a simple structure, the structure should reveal values during the organization's management activities.

Nahapiet and Ghoshal (1998) focused on the structure of a network by those engaging in structural relations. They argued that the interactions among the employees can allow access to resources and become the origin of useful information, saving the time and money needed to acquire the information.

As a result of recent changes in organizational environment, demands have been raised for structural change to employees' spontaneous and voluntary commitment (Park, 1997). This has led to the emergence of unusual structures such as empowerment structures have occurred. Capital enhances organizational performance and efficiency when organizational structure reveals empowering characteristics such as employees' autonomy. Structural capital can improve organizational performance by strengthening the ability to effectively respond to changes in external or internal environments through knowledge-management.

2.2.1. Relational Capital

From a macro perspective, relational capital includes resources embedded in external relationships in addition to direct relationships among organizations, societies, and states (McFadyen and Cannella, 2004). In other words, the interpersonal relationship acts as valuable capital to both individuals and their organizations (Adler and Kwon, 2002; Oh et al., 2006). Relational resources were handled as the component of organizational capital in various studies (Brooking, 1996; Edvinsson and Malone, 1997; Kamukama et al., 2010). Nahapiet and Ghoshal (1998) argued that relational capital is a relationship (e.g., trust, norms, and shared experiences) developed through the interactions between employees and related third parties.

The component of trust is the basis for several activities such as knowledge and information exchange and sharing, smooth communication, and participation in various activities (Lee, 2007). Trust allows employees to invest their time in productive behaviors by constructing their collaborative relationships, boosting creativity through interaction, and saving costs to monitor each other (Dakhli and deClercq, 2004). Norms, another component of relational capital, refer to social contracts, regulations and codes of conduct. Therefore, reciprocity is a very productive factor in organizational capital. In an organization in which employees have no doubt that they would be fairly compensated for observing the norms, reciprocal norms are developed (Kim et al., 2006). The norms set standards and principles in the organization, and strengthen collaboration among employees by reducing any misunderstanding and conflict among them.

2.2.2. Human Capital

Human capital covers employees' expertise, creative problem-solving ability, and leadership (Brooking, 1996). Human capital is the sum of personal capabilities and experiences of the management and employees (Edvinsson and Malone, 1997). Many businesses have made a huge investment in the acquisition, development and maintenance of human capital because employee education and training can enhance work efficiency, improve the value of human capital and, ultimately, be a driving force for the organization's sustainable growth (Bassi and McMurrer, 1998).

Most researchers regard "human capital" as the most critical of organizational capitals. Human resources can create infinite value through education and training (Gardner, 2002). The leverage effects of human capital are greater than physical capital.

While physical capital can be readily imitated by rivals, human capital cannot be easily imitated. Therefore, human capital can be a source of organizational competitiveness (Kim et al., 2011). Additionally, structural capital and relational capital are, after all, managed and operated by humans.

2.3. Knowledge-management Activities

Knowledge-management activities are critical because they further strengthen collaborative relationships among employees, improve organizational potential, and enhance organizational performance (Bishop and Scott, 2000; Saavedra et al., 1993). Allred et al. (2011) emphasized collaborative behavior, insisting that knowledge-management activities are very important because the achievement of corporate goals is decided by the level of collaboration among employees. Given the high complexity and dynamics of organizational environments, information exchange, collaborative behaviors, and collective decision-making among organizational members can enhance capital sharing and capital conversion. Smith et al. (2005) insisted that the collaborative atmosphere played an important role in promoting risk-taking behavior and experiments. In addition, the intensity of product innovation and decision-making quality may be improved throughout knowledge-management activities (Li and Zhang, 2002). Hence, knowledge-management activities are critical during the systematic utilization of the acquired information.

2.3.1. Knowledge Sharing

An organization encourages its employees to share organizational capital and to spread it across the organization to achieve organizational performance. Nonaka (1994) insisted that utilization means a

process of refining capital. Through this process, conventional organizational capital is integrated and internalized. Knowledge sharing is important in organizations (Bock et al., 2010) and behavioral sharing to maximize customer satisfaction is needed (Azyabi, 2018; Deshpande et al., 1989; Hult et al., 2004; Jaworski and Kohli, 1993; Rapp et al., 2010). For the success of strategic alliances and collaborative investments, the targeted goal and mission should be well aligned (Barclay, 1991; Xie et al., 1998). If any organizational purpose is not properly shared, conflicts may occur (Hamel and Prahalad, 1994; Humphreys et al., 2009), causing a negative effect on performance. In a customer service organization, organizational purposes are explicitly shared, and the continuous development of capabilities such as learning, feedback, and information sharing are active. Thus, knowledge sharing is one of the most critical competence factors in customer service organizations.

2.3.2. Knowledge Conversion

Knowledge conversion refers to the disposal of the existing resources or knowledge, and adoption of new methods and new knowledge (March, 1991). Like any exploratory venture, it is a process of creating a new creative mechanism (Weick, 1979).

Galunic and Eisenhardt (2001) emphasized the importance of reconfiguration competence. Capital reconfiguration refers to the improvement of evolutionary fitness in the resource environment by taking advantage of conventional operating capabilities as new resources for responding to environmental changes (Pavlou and El Sawy, 2011). Teece et al. (1997) and Kogut and Zander (1996) stressed the role of knowledge as a means of creating organizational innovation and competitive advantage. In other

words, corporate growth and performance are dependent upon the development and introduction of knowledge, and thus businesses should have the ability to convert resources into new knowledge in addition to knowledge sharing and acquisition (Azyabi, 2018; Prahalad and Hamel, 1990; Um et al., 2011). For example, IBM's PC industry, Xerox' copying machine business and Kmart's discount stores got into trouble by not having proper responses to environmental changes despite excellent capital (Lee, 2008). Businesses need to convert capital to respond to turbulent environmental changes more efficiently. Therefore, the conversion of knowledge capital is a core factor for organizational performance.

III. Research Model and Hypotheses

3.1. Research Model

This study focuses on antecedent variables that have an effect on the customer service organization's

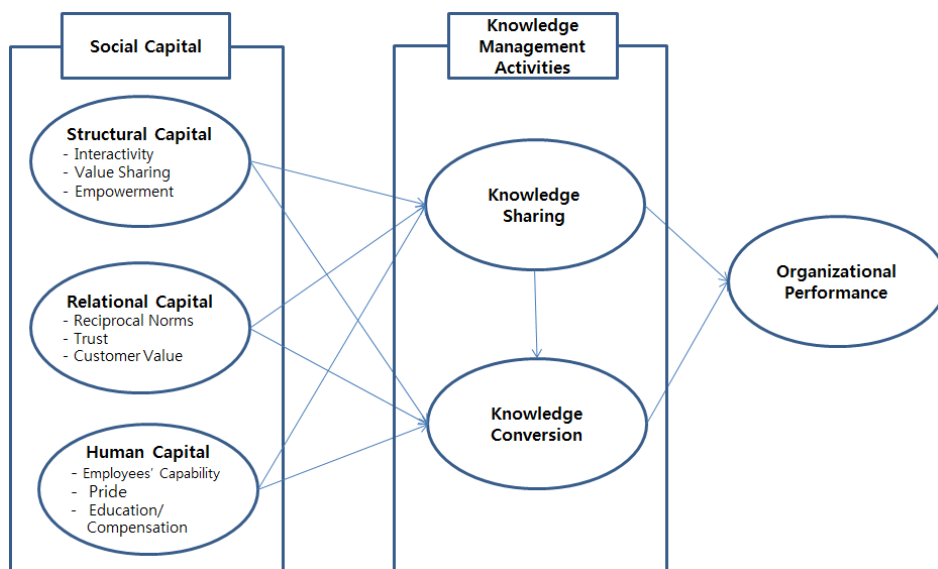
performance, and their roles and aims to identify how organizational performance is generated. As such, it focuses on defining the customer service organization's social capital and empirically demonstrating the roles of knowledge sharing and knowledge conversion that will improve organizational performance. <Figure 1> shows the research model of this study.

3.2. Hypothesis Development

3.2.1. Relationship between Structural Capital and Knowledge-management Activities

Many studies relating to empowerment have suggested that organizational structure would be able to play the role of "capital" that enhances organizational performance through employees' autonomy and empowerment.

Nahapiet and Ghoshal (1998) addressed the construction of a network by those engaging in a structural relation and how their responsibilities and au-



<Figure 1> Research Model

thority interacted with other individuals. Interactivity among the employees can allow access to resources and become the origin of useful information. In addition, it can save time and the money needed to acquire the information (Nahapiet and Ghoshal, 1998). Edvinsson and Malone (1997) insisted that structural capital includes both employees' and the third parties' values. If organizational structure gains customer satisfaction and loyalty by virtue of the efforts to meet customers' needs, this kind of organizational structure plays its role as capital.

Coleman (1988) suggested that employees' interactivity generates accessibility to capital, expectations of higher values through capital exchange and bonding, and the motivation for knowledge exchange and bonding. Moreover, customer-oriented organizational structures can construct capital that creates a new customer relation with the knowledge and information acquired from the customers. The structural capital can increase organizational performance by strengthening the ability to respond to changes in internal/external environments through sharing organizational knowledge. Also, the structural capital is expected to accelerate knowledge conversion process since it plays role of empowering employees who come up with the environmental changes and customer claims. The following hypotheses were proposed:

H1: Structural capital will have a positive effect on knowledge sharing.

H2: Structural capital will have a positive effect on knowledge conversion.

3.2.2. Relationship between Relational Capital and Knowledge-management Activities

Relational capital refers to the level of positive

relations that occur in the relationships with internal and external stakeholders. It includes three components: reciprocal norms, trust, and customer values. Norms can transform the relationship for individuals' benefits into collaboration for social benefits (Dakhli and deClercq, 2004). In an organization in which employees would be fairly compensated for observing the norms, reciprocal norms are developed (Child and Rodrigues, 1996; Lewicki and Bunker, 1996; Merton, 1968; Pettigrew, 1973; Simon and Davies, 1996; Tajfel, 1982).

Trust among employees plays a role as the basis for knowledge-management activities. Without trust, information would not flow smoothly among employees, and opportunistic behavior-caused cost would occur (Son et al., 2013). Further, inter-employee trust brings about a very close and collaborative relationship that allows voluntary cooperation (Knez and Camerer, 1994; Kramer et al., 1996; Nahapiet and Ghoshal, 1998).

Relational capital has focused on customer capital (Edvinsson and Malone, 1997; Petrash, 1996). It is the customers who buy the products and services that have a direct effect on sales and profits. Therefore, an analysis of how customer values should be measured and what efforts should be made to enhance these customer values is mandatory (Jain and Singh, 2002).

The resources that employees can gain through relational capital include job-related information and advice, and emotional support. Such information and resources through social relations inside and outside the organization can enhance innovative propensity and organizational performance (Woolcock, 2001). If these resources are provided by other employees, in particular, they differ from the organization's resources. The biggest advantage of this relation is that organizational innovation can be easily promoted

through the use and integration of new capital (Blyler and Coff, 2003). Blyler and Coff (2003) argued that relational capital promoted resource integration and spread as well as resource acquisition. As employees gain new knowledge, information, and innovative ideas through useful connections, the organization can also acquire new knowledge and generate innovative ideas (McFadyen and Cannella, 2004; Oh et al., 2006); this would, in turn, have a positive effect on knowledge conversion. To build competence through collaboration with external organizations and other groups can be critical for organizations (Madhok and Osegowitsch, 2000). Organizational competence can be improved by technical alliance with other engineers and a new external network (Rothaermel and Hess, 2009).

A customer service organization is an entity that is operated through reciprocal relations. Reciprocal norms are one of the most important forms of relational capital. Trust and customer values are also important for knowledge sharing and conversion.

H3: Relational capital will have a positive effect on knowledge sharing.

H4: Relational capital will have a positive effect on knowledge conversion.

3.2.3. Relationship between Human Capital and Knowledge-management Activities

Human capital refers to a set of types of knowledge central to employees such as job-related skills and competence, including the behavior-centric systems that support these employees' capabilities.

Most studies on organizational capital have argued that human capital is the most important factor (An and Kim, 2019). However, a model aimed at managing human capital focuses on an individual's accumu-

lated competence (Haanes and Lowendahl, 1997; Lowendahl, 1997; Roos et al., 1998). Roos et al. (1998) asserted that human capital is constituted by knowledge, skill, motivation, and task. Recently, there have been studies insisting that the human resource management activities that can enhance employees' competence are the core forms of human capital owing to the influence of personnel management studies and sociology studies (Dulewicz and Herbert, 1999; Warr and Fay, 2001; Youndt and Snell, 2004).

The psychological attributes such as work satisfaction, commitment to the organization and pride are a part of human capital elements, which represents a personal psychological state. The favorable psychological attributes can influence work performance in organizations (Muchinsky, 2004). The employees' pride on their organization and personal capability level are the elements being intangible capitals which has a closer effect on organizational performance. When the education and training system is comprehensively supported by the organization, employees' skill base can be improved which increases their performance (Arthur, 1994). Brooking (1996) and Edvinsson and Malone (1997), who examined intangible capital from the organization's perspective, also discussed human capital as the key factor of the organization's intangible capital because of the assumption that personal learning and efforts are connected with the improvement of job expertise and organizational performance. A customer service organization needs to consider human capital factors such as employees' pride, capabilities, and education to increase knowledge sharing/conversion.

H5: Human capital will have a positive effect on knowledge sharing.

H6: Human capital will have a positive effect on knowledge conversion.

3.2.4. Relationship between Knowledge-management Activities and Organizational Performance

A customer service organization needs to provide services on time by detecting customer needs in a timely fashion. In the organization, employees get access to other employees' resources through interaction and use them while carrying out their duties (Bock et al., 2010). Meantime, shared interest among employees is created. This shared interest strengthens unity and collaboration among employees, creating new core competences that cannot be easily imitated. These knowledge-sharing activities make the acquisition and access to capital easy and enhance work capability.

The knowledge owned by the organization and employees can be shared and converted into new knowledge. The purposes of corporate core competences are to improve conventional knowledge by responding to environmental changes or converting knowledge into new knowledge (March, 1991). Hence, the following hypothesis can be proposed:

H7: Knowledge sharing will have a positive effect on knowledge conversion.

Teece et al. (1997) asserted that the knowledge-management activities can lead to superior performance in a rapidly changing environment. When an organization owns its own capital and properly uses it, the organizational competence has an influence on performance. To gain high performance and sustainable growth in an organization, the organizational knowledge should be well managed (Lewis, 2000; Peters and Waterman, 1982).

Peters and Waterman (1982) emphasized the importance of knowledge sharing and knowledge con-

version if businesses are to evolve into high-performance and sustainable-growth enterprises. Gibson and Birkinshaw (2004) also empirically demonstrated that knowledge-management activities can improve overall organizational performance. In order to achieve high performance in an organization, it should develop new knowledge through knowledge conversion in addition to knowledge sharing. These knowledge-management activities work as the antecedent variables of organizational performance (Lewis, 2000). In order for an organization to acquire a competitive edge within a business environment with high uncertainty, sustainable knowledge-management activities are needed (Leonard and Sensiper, 1998). Consequently, knowledge-management activities create values that, ultimately, lead to high organizational performance.

H8: Knowledge sharing will have a positive effect on organizational performance.

H9: Knowledge conversion will have a positive effect on organizational performance.

IV. Methods

4.1. Operational Definition of Variables and Measurement

In this study, the following six research variables were considered: organizational performance, knowledge sharing, knowledge conversion, structural capital, relational capital, and human capital. Using a 7-point Likert-scale, the original instruments of all the variables were properly adjusted to the context. The operational definition of the variables used in this study and their measurement are presented in <Table 1>.

<Table 1> Operational Definition of Variables and Measurement

Variable		Operating Definition of Variables and Instruments	
Organizational Performance		How deeply the organization approaches a new method to enhance the quality and efficiency of duties and improve organizational problems.	
		① The quality of the company's work process improves.	
		② The company's work efficiency improves.	
		③ Employees attempt to carry out their duties in an upgraded manner.	
Knowledge-Management Activities	Knowledge Sharing	How much employees share knowledge with others to carry out their duties.	
		① Employees share diverse knowledge with others fairly well.	
		② Employees share information and knowledge on customers, market, and products to carry out their duties.	
		③ Employees share knowledge to enhance work performance.	
	Knowledge Conversion	How much the knowledge acquired by employees is actually used at work.	
		① The company attempts to apply the model cases to the work.	
		② The company monitors business and customer trends and reflects in the business.	
		③ The company promptly reflects incidents inside and outside the company and the management's decisions on the business.	
Social Capital	Structural Capital	How much the organizational structure is customer-oriented to empower employees, allows them to interact with each other, and identifies customer needs.	
		Empowerment	① The customer center mostly reflects employees' opinions on duty-related decision-making.
			② The customer center's operating plan and goal can be revised independently.
			③ The customer center's duties sufficiently reflect employees' opinions.
		Interactivity	① The customer center's employees intend to share their knowledge and knowhow with others.
			② With respect to the work, the customer center guarantees free talk and debate among employees.
			③ The employees provide work-related ideas.
			④ Regarding job handling, the customer center guarantees easy contact among departments.
		Value Sharing	① The customer center maintains a close relationship with customers.
	② The customer center invests considerable time and money in interaction with customers.		
	③ The customer center frequently communicates with customers.		
	Relational Capital	How well the organization has built positive relationships (ex: reciprocal norms, trust, customer value, etc.) with the related parties inside and outside the organization.	
		Reciprocal Norms	① The company has decent norms and regulations.
			② Employees comply well with the norms and regulations.
③ Good order is established in the company.			

<Table 1> Operational Definition of Variables and Measurement (Cont.)

Variable		Operating Definition of Variables and Instruments	
Social Capital	Relational Capital	Trust	① When a colleague is having a hard time in handling his/her duties, it is quite natural to help him/her.
			② I believe that when I get in trouble at work, my colleagues would help me.
			③ Employees are supportive and helpful towards each other.
		Customer Value	① Customers are mostly satisfied with the company's services.
			② Customer satisfaction has increased after customers contact the company.
			③ Our major customers repurchase our products.
	Human Capital	Employees' work performance, employees' pride on their organization and education and compensation aimed to help employees build their capabilities.	
		Employees' Capability	① Employees believe that they have good work performance.
			② I have my own work performance skills.
			③ I believe I am an expert in my field.
		Pride	① I am proud of my company.
			② I believe that the organizational goal is my personal goal so that I am willing to work hard with loyalty.
			③ I am pleased to work for my company.
			④ I believe that my task at work is beneficial to me.
			⑤ I carry out my duties in a spirit of fun and excitement.
Education and Compensation	① The company provides diverse educational programs to employees.		
	② The educational program provided by the company is shared and used.		
	③ The company has an appropriate compensation procedure on employees' performances.		
	④ The company provides appropriate compensation to encourage employees to build personal skills and knowledge and share them with others.		
	⑤ The company reflects employees' diverse voices (colleague, customer supervisor, etc.) in performance appraisals of the employees.		

4.2. Sampling and Respondent Design

This study was conducted with customer centers' employees. 256 customer center employees from 8 different industries regardless of business type (i.e., bank, distribution, public organization, etc.) or work type (inbound services, outbound services, and blended services) were examined. Because there is a possibility that each industry has its own type of work, work type could be biased if only a certain industry

was targeted. To overcome this possibility, various methods have been used for the selection of respondents. For example, Premkumar and Ramamurthy (1995), and Premkumar et al. (1994) recommended that employees from the related department should be included equally if possible. In this study, a list of managers was collected by contacting the customer center. Then, a questionnaire survey was conducted with managers with diverse job titles (e.g., director of the center, manager, and agent). A total of 256

<Table 2> Respondents' Demographic Characteristics

Division		Frequency	%	Division		Frequency	%
Gender	Female	166	64.8	Age	20-29	125	48.8
	Male	90	35.2		30-39	86	33.6
Education	Less than high school graduate	17	6.6		40-49	41	16.0
	High school graduate	91	35.5		50-60	4	1.6
	Junior college	62	24.2	Industry	Finance	82	32.0
	Undergraduate	48	18.8		Distribution	51	19.9
	College graduate	36	14.1		Medical	27	10.5
	Post graduate	2	0.8		Manufacturing	23	9.0
Position	Agent	193	75.4		Logistics	15	5.9
	Manager	28	10.9		Telecommunication	12	4.7
	Director	7	2.7	IT	15	5.9	
	QC	9	3.5	Public institution	31	12.1	
	others	19	7.4				

usable questionnaires were collected by following this protocol. <Table 2> describes the respondents' demographic characteristics.

4.3. Data Analysis Methods

For the analysis, this study used smart partial least squares (PLS), one of the structural equation modeling analysis tools. The PLS method has the advantage of analyzing both a measuring model, which measures the validity of multiple variables in multilevel structures and a structural model, which explains the path and explanatory power of variables at the same time (Chin, 1998; Chin et al., 2003; Yoo and Alavi, 2001). The PLS is regarded as one of the structural equation model-based methods. However, it clearly differs from the conventional methods that use analysis of covariance such as LISREL or AMOS. The PLS is free from a strict assumption about the normal distribution of collected data, which has been known as a substantial barrier in conventional structural equation model-based methods using the principal

component analysis (PCA). In addition, PLS maximizes the predictive power of path coefficients using a method that minimizes a measurement error and a prediction error among latent variables without using the analysis of covariance.

According to the Kolmogorov-Smirnov and Shapiro-Wilk tests, all research variables were significant at $p < 0.05$ or lower (that is, the null hypothesis that the data are normally distributed is rejected). It was confirmed that the data do not follow a normal distribution, implying skewness in the distribution of variables. Therefore, PLS analysis rather than the analyses of covariance such as AMOS or LISREL was used.

V. Results

5.1. Measuring Model and Structural Model Testing

To test the research variables' measurement, con-

firmatory factor analysis (CFA) was conducted with SmartPLS. Then, construct validity, convergent validity, and discriminant validity on each variable's individual item were examined. For the construct validity test, we followed the procedure of second-order construct, two-step approach that Wilson and Henseler (2007) proposed. We used the reflective indicators and new data set with Latent Variable (LV) scores by using SmartPLS in the second step (Wilson and Henseler, 2007). As a result, structural capital has 3 constructs from 10 indicators, relational capital has 3 constructs from 9 indicators, and human capital has 3 constructs from 13 indicators.

According to Nunally (1978), construct validity on each variable's instrument items is evaluated by the measuring question's factor loading. He explains that achieving more than 0.7 of factor loading means

that the construct validity is secured. <Table 3> shows the factor loading and cross-factor loading of the research model's measuring variables. As indicated in this table, each item's factor loading was greater than 0.7. Thus, construct validity was secured.

To assess the convergent validity of constructs, composite reliability (CR) and average variance extracted (AVE) are used. In general, more than 0.7 of CR implies that each variable has internal consistency (Fornell and Lacker, 1981; Hair et al., 1998). In <Table 4>, all composite reliabilities were 0.8 or above (0.875 ~ 0.958) and the AVE was also 0.7 or above (0.702 ~ 0.883), which shows the high reliability of items. Meanwhile, the AVE refers to the average variance shared between one construct and the measurement value in the research model. In general, more than 0.5 of AVE (Fornell and Larcker,

<Table 3> Factor Loadings and Cross-factor Loadings of Variables

Variables	Items	STRU	RELA	HUMA	KNOW_S	KNOW_C	PERF
Structural Capital	stru01	0.930	0.623	0.371	0.571	0.585	0.512
	stru02	0.712	0.633	0.459	0.458	0.467	0.509
	stru03	0.856	0.436	0.308	0.503	0.506	0.426
Relational Capital	rela01	0.613	0.951	0.535	0.560	0.587	0.558
	rela02	0.667	0.864	0.551	0.551	0.645	0.634
	rela03	0.563	0.933	0.459	0.559	0.584	0.494
Human Capital	huma01	0.326	0.414	0.898	0.333	0.407	0.440
	huma02	0.489	0.623	0.841	0.453	0.596	0.680
	huma03	0.297	0.358	0.867	0.298	0.376	0.388
Knowledge Sharing	know01	0.579	0.554	0.389	0.938	0.560	0.488
	know02	0.578	0.592	0.401	0.958	0.574	0.472
	know03	0.569	0.567	0.429	0.922	0.572	0.548
Knowledge Conversion	know04	0.567	0.526	0.475	0.502	0.856	0.573
	know05	0.564	0.612	0.466	0.601	0.940	0.577
	know06	0.541	0.638	0.545	0.520	0.886	0.549
Organizational Performance	perf01	0.518	0.576	0.631	0.470	0.591	0.902
	perf02	0.480	0.534	0.547	0.444	0.548	0.905
	perf03	0.509	0.556	0.517	0.489	0.560	0.912

<Table 4> Convergent Validity Table

Variables	AVE	Composite Reliability	Cronbach's α
Structural Capital	0.702	0.875	0.780
Relational Capital	0.841	0.941	0.904
Human Capital	0.756	0.903	0.845
Knowledge Sharing	0.883	0.958	0.934
Knowledge Conversion	0.802	0.924	0.875
Organizational Performance	0.812	0.945	0.923

<Table 5> Discriminant Validity

Variables	STRU	RELA	HUMA	KNOW_S	KNOW_C	PERF
Structural Capital	0.838					
Relational Capital	0.672	0.917				
Human Capital	0.448	0.564	0.870			
Knowledge Sharing	0.613	0.608	0.433	0.940		
Knowledge Conversion	0.623	0.662	0.554	0.606	0.895	
Organizational Performance	0.575	0.616	0.611	0.536	0.633	0.901

1981; Gefen and Straub, 2005) indicates the existence of convergent validity.

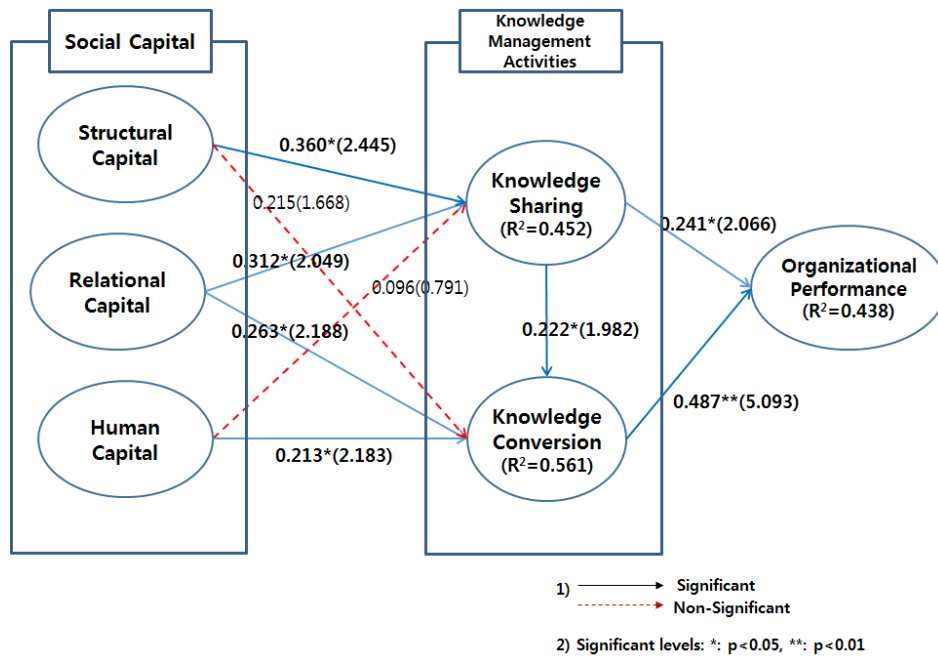
To test discriminant validity, both the AVE-based evaluation method and the cross-factor loading-based method proposed by Fornell and Larcker (1981) were used. To secure discriminant validity, the square root of AVE should be 0.7 or above (Bagozzi and Yi, 1988; Fornell and Larcker, 1981), and it should be significantly greater than other correlation coefficients of longitudinal and lateral axes (Barclay et al., 1995; Chin, 1998). The AVE values of six variables in <Table 5> showed 0.8 or above (0.838 ~ 0.940) and they are greater than the correlation coefficients among variables. Therefore, it is apparent that discriminant validity exists. In addition, in comparison to cross-factor loading and factor loading, each item's factor loading should be greater than cross-factor loading to secure discriminant validity. As the factor loading was higher than the cross-factor loading, discriminant validity was secured (See <Table 3>).

As the validity and reliability of the variables were secured through measuring the model testing, inter-variable relations and significance of the variables' explanatory power and path were examined by using the SmartPLS' bootstrap analysis. For bootstrap analysis, a total of 1000 samples were set.

5.2. Results of Hypothesis Tests

According to the path analysis with SmartPLS, statistical significance was found in seven of the nine paths. <Figure 2> shows the results of the test on inter-variable relations and the significance of the variables' explanatory power and path using SmartPLS. In this figure, solid lines refer to hypotheses with significant paths while dotted lines are rejected paths.

In terms of the relations between social capital and knowledge sharing, both structural capital (path coefficient = 0.360, $t = 2.445$, $p < 0.05$) and relational capital (path coefficient = 0.312, $t = 2.049$, $p < 0.05$)



<Figure 2> Results of Path Analysis on Research Model

<Table 6> Results of Hypothesis Testing

Hypothesis	Path	Hypothesis Direction	Path Coefficient	t-value	Results
H1	Structural Capital → Knowledge Sharing	+	0.360	2.445*	Accepted
H2	Structural Capital → Knowledge Conversion	+	0.215	1.668	Rejected
H3	Relational Capital → Knowledge Sharing	+	0.312	2.049*	Accepted
H4	Relational Capital → Knowledge Conversion	+	0.263	2.188*	Accepted
H5	Human Capital → Knowledge Sharing	+	0.096	0.791	Rejected
H6	Human Capital → Knowledge Conversion	+	0.213	2.183*	Accepted
H7	Knowledge Sharing → Knowledge Conversion	+	0.222	1.982*	Accepted
H8	Knowledge Sharing → Organizational Performance	+	0.241	2.066*	Accepted
H9	Knowledge Conversion → Organizational Performance	+	0.487	5.093**	Accepted

Note: * $p < 0.05$, ** $p < 0.01$

had positive effects on knowledge sharing. Thus the hypotheses 1 and 3 were accepted. However, the effect of human capital on knowledge sharing was not found to be significant, resulting in the rejection of H5. The explanatory power on knowledge sharing

was 45.2%. On the relationship between social capital and knowledge conversion, hypothesis 2 – that structural capital would have a positive effect on knowledge conversion – was rejected. Since both relational capital (path coefficient = 0.263, $t = 2.188$,

$p < 0.05$) and human capital (path coefficient = 0.213, $t = 2.183$, $p < 0.05$) had positive impacts on knowledge conversion, hypotheses 4 and 6 were accepted. H7 on the relationship between knowledge sharing and knowledge conversion was also accepted (path coefficient = 0.222, $t = 1.982$, $p < 0.05$). Their explanatory power on knowledge conversion was as high as 56.1%. Lastly, both knowledge sharing (path coefficient = 0.241, $t = 2.066$, $p < 0.05$) and knowledge conversion (path coefficient = 0.487, $t = 5.093$, $p < 0.01$) had positive effects on organizational performance. Hence, hypotheses 8 and 9 were accepted. Their explanatory power on organizational performance was 43.8%. The results of the test on the hypotheses of this study are summarized in <Table 6>.

VI. Discussion and Implications

Customer service organizations have been regarded as core centers for customer retention and sales growth through customer satisfaction and contact-point management. Public organizations have also started to introduce customer centers to enhance the quality of administrative services. A customer service organization is an entity where the contact with customers is a top priority, and customer service-based experience and knowledge are concentrated. Therefore, the importance of intangible assets, such as knowledge, experience, relationships and process serve as critical forms of capital, compared to any other organizations. Hence, this study examined the influence of social capital on knowledge-management activities and organizational performance.

Based on the previous studies on social capital, this study demonstrated the concept and components of social capital suitable to the customer center in consideration of the customer center's particularity;

it also tested the effects of each component on organizational performance. From the empirical tests, major findings are as follows:

First, relational capital of social capital had a positive effect on the organization's knowledge-management activities. The customer center employees share their knowledge, experience and knowhow through a network with their colleagues such as communities-of-practice (CoPs), explore new knowledge and perform knowledge-management activities for the customer problem solving. Relational capital, such as trust in colleagues and reciprocal norms became important, which has an effect on knowledge-management activities. The relationship with others can help to collect new information and bring empathy to any organizational changes.

Second, structural capital had an effect on knowledge sharing activities while it did not have any significant influence on knowledge conversion activities. A customer service organization is a typical entity in which jobs are standardized in accordance with clear rules, procedures and policies. Since almost all of the activities are standardized and documented, knowledge can be easily shared. However, a rigid organizational structure like a customer center hinders employees from acquiring psychological empowerment and autonomy. Thus, it is hard to display personal initiative and knowledge conversion. Customer centers need to empower employees to enhance their participation, creativity and autonomy. Another possible explanation on the result of the insignificant effect of structural capital on knowledge sharing is that structural capital might have indirect impact by the mediation of relational capital or human capital. Since structural capital refers to the level of empowerment given to employees by the structure, it can be like an infrastructure or long-term block for knowledge management, rather than any direct

effect.

Third, human capital had an effect on knowledge conversion while having no influence on knowledge sharing. Employees' pride, capability, education and compensation are the resources by which they exhibit their competence and skills. We interpret the results to indicate that the employees with competence and skills can create new knowledge by using the shared knowledge. Regarding the insignificance of the relationship between human capital and knowledge sharing, we may find out the hint from the information cascading-behaviors (An and Kim, 2019; Anderson and Holt, 1997). Employees with high level of human capital are likely to have well developed body of knowledge, having more direct opportunities for knowledge conversion without knowledge sharing. That is, knowledge sharing process can be omitted in such context.

Basically, the organization's competitive edge is generated by organizational capital (Barney, 1996; Conner and Prahalad, 1996; Hamel and Prahalad, 1994; Wernerfelt, 1984). Human capital plays a key role as the organization's core competence, and high performance can be achieved by this form of capital (Wright and McMahan, 1992). To obtain higher performance, therefore, the directors of customer centers should pay more attention to the employees' human capital.

Customer service organization's knowledge-management activities had a positive impact on organizational performance, which is similar to the results of previous studies (Gibson and Birkinshaw, 2004; He and Wong, 2004; O'Reilly and Tushman, 2008). If the organization is characterized by solid social capital, shared knowledge and the competence to convert knowledge suitable to performance achievement, organizational performance can be improved (Fang and Zou, 2009; Ghoshal and Bartlett,

1994; Gibson and Birkinshaw, 2004). Grant (1997) insisted that organization's intangible assets themselves cannot be strategic capital, and that when these kind of intangible assets are used to achieve the organizational goal, they eventually become valuable as true strategic capital.

One of the interesting findings from the results is that the three elements of social capital show differential effects on knowledge sharing and knowledge conversion. Knowledge sharing was affected by structural capital and relational capital whereas knowledge conversion was influenced by relational capital and human capital. Thus, the service organization managers need to recognize which elements are critical for achieving the knowledge sharing and conversion respectively. Knowledge conversion can be met without knowledge sharing process since human capital itself builds the shared knowledge by teamwork essentially. Further, the results that the relational capital showed the significant impact on both knowledge sharing and knowledge conversion imply the importance of relational capital in promoting knowledge management activities. Thus, to build relational capital will be core for both knowledge sharing and conversion which can lead to organizational performance.

In terms of the academic contributions of this study, first, a conceptual framework of social capitals that has an effect on organizational performance mediated by customer service organization's knowledge-management activities was proposed. Second, this study specified the social capital elements that have an influence on organizational performance and validated the importance of knowledge sharing/conversion in the relationship. Third, though there were a number of studies to identify the components that had an effect on organizational performance, they were mostly as abstract as the relation between general

components (e.g., human resources, systems, processes, etc.) and organizational performance. However, this study differs from previous studies in that this study revealed what kinds of social capital were appropriate in a customer service organization and how these types of social capital can specifically influence organizational performance through knowledge sharing and knowledge conversion.

Based on the study results, some implications from the practical perspective can be derived: A customer service organization is strictly operated according to regulations and guidelines compared to other organizations. In addition, standardized processes rather than an individual's particularity are emphasized. Therefore, many employees are lacking autonomy. However, recently, a customer service organization has become an organization that effectively provides high-quality customer services and handles difficult and complicated tasks. To create high performance, the organization needs to give employees the autonomy to make decisions and a chance to exhibit their creativity. Second, since in a customer service organization many people are concentrated in a limited space, relational capital and human capital among employees have become very important. To improve the customer service organization's operating efficiency and performance, it is essential to raise positive relational capital. Social capital can be highly influential because of participation and activities by the customer service organization's managers and employees. It is necessary to pay closer attention to relational capital and human capital. Third, organizational culture is a critical element that supports the improvement of the customer service organization's performance. Thus, managers should try to help employees understand and share the value and vision of their organization. Moreover, they must be more careful to help employees share these charac-

teristics as organizational culture has an effect on daily routines. Lastly, a customer service organization may take the initiative to apply organizational capital in order to improve organizational performance. To convert this knowledge/resource into more advanced capital, a significant change may be requested of customer service organizations. Since a number of customer service organizations and call centers have good opportunities to use new information systems and technologies such as phonetic analytics and big data (Shim et al., 2016), they can do knowledge management operation more elaborately rather than other organizations. This paper adapted the social capital issues and knowledge management concepts to a customer service organization, which differs from previous research.

VII. Study Limitation and Future Research Directions

This study has some limitations. First, we did not check the mediating effect of knowledge sharing and knowledge conversion on the relationship between social capital and organizational performance since it was not the focus of this study. This mediating role should be investigated in future research (Chin, 1988). Second, structural capital may have an indirect effect on knowledge conversion through relational capital or human capital. Future research is needed to examine the mediating roles of relational capital and human capital in the relationship between structural capital and knowledge conversion. Finally, more elaborate interpretation of the results for the two rejected hypotheses can provide additional insights. Research on these issues would be valuable for customer service organizations.

<References>

- [1] Adler, P. S., and Kwon, S. W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, 27(1), 17-40.
- [2] Allred, C. R., Fawcett, S. E., Wallin, C., and Magnan, G. M. (2011). A dynamic collaboration capability as a source of competitive advantage. *Decision Sciences*, 42(1), 129-161.
- [3] An, J., and Kim, H. W. (2019). Investigating signals on equity crowdfunding: Human capital, earlier investors, and social capital. *Asia Pacific Journal of Information Systems*, 29(2), 283-307.
- [4] Anderson, L. R., and Holt, C. A. (1997). Information cascades in the laboratory. *American Economic Review*, 87(5), 847-862.
- [5] Arthur, J. B. (1994). Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal*, 37(3), 670-687.
- [6] Azyabi, N. G. (2018). The role of IT usage in mediating the relationship between knowledge sharing and academics performance. *Asia Pacific Journal of Information Systems*, 28(3), 167-182.
- [7] Bagozzi, R. P., and Yi, Y. (1988). On the evaluation of structural models. *Journal of Academy of Marketing Science*, 16(1), 74-94.
- [8] Barclay, D. W. (1991). Interdepartmental conflict in organizational buying: The impact of the organizational context. *Journal of Marketing Research*, 28(2), 145-159.
- [9] Barclay, D., Thompson, R., and Higgins, C. (1995). The Partial Least Squares(PLS) approach to causal modeling: Personal computer adoption and use as an illustration. *Technology Studies*, 2(2), 285-309.
- [10] Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- [11] Barney, J. B. (1996). The resource-based theory of the firm. *Organizational Science*, 7(5), 469-496.
- [12] Bassi, L. J., and McMurrer, D. P. (1998). Training investment can mean financial performance. *Training and Development*, 52(5), 40-42.
- [13] Bishop, J. W., and Scott, K. D. (2000). Organizational and team commitment in a team environment. *Journal of Applied Psychology*, 85(3), 439-450.
- [14] Blyler, M., and Coff, R. W. (2003). Dynamic capabilities, social capital, and rent appropriation: Ties that split pies. *Strategic Management Journal*, 24(7), 677-686.
- [15] Bock, G. W., Lee, J. Y., and Lee, J. (2010). Cross cultural study on behavioral intention formation in knowledge sharing. *Asia Pacific Journal of Information Systems*, 20(3), 1-32.
- [16] Brooking, A. (1996). *Intellectual capital: Core asset for the third millennium*. Thomson Learning, London.
- [17] Brooking, A. (1997). The management intellectual capital. *Long Range Planning*, 30(3), 364-365.
- [18] Carmeli, A., and Tischler, A. (2004). The relationships between intangible organizational elements and organizational performance. *Strategic Management Journal*, 25(13), 1257-1278.
- [19] Child, J., and Rodrigues, S. (1996). The role of social identity in the international transfer of knowledge through joint ventures. In S. R. Clegg, and G. Palmer (Eds.), *The politics of management knowledge* (pp. 46-68). Sage, London.
- [20] Chin, W. W. (1988). The Partial Least Squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295-336). Lawrence Erlbaum, London.
- [21] Chin, W. W. (1998). Issues and opinion on structural equation modeling. *MIS Quarterly*, 22(1), 7-16.
- [22] Chin, W. W., Marcolin, B. L., and Newsted, P. R. (2003). A Partial Least Squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information Systems Research*, 14(2), 189-217.
- [23] Coleman, J. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, 95-120.

- [24] Conger, J. A., and Kanungo, R. N. (1998). *Charismatic leadership in organizations*. Thousand Oaks, CA: Sage Publications.
- [25] Conner, K. R., and Prahalad, C. K. (1996). A resource-based theory of the firm: Knowledge versus opportunism. *Organization Science*, 7(5), 477-501.
- [26] Dakhli, M., and De Clercq, D. (2004). Human capital, social capital and innovation: A multi-country study. *Entrepreneurship and Regional Development*, 16(2), 107-128.
- [27] Deshpande, R., and Webster, R. E. (1989). Organizational culture and marketing: Defining the research agenda. *Journal of Marketing*, 53(1), 3-15.
- [28] Dulewicz, V., and Herbert, P. (1999). Predicting advancement to senior management from competencies and personality data: A seven year follow-up study. *British Journal of Management*, 10(1), 13-22.
- [29] Edvinsson, L., and Malone, M. S. (1997). *Intellectual capital: Realizing your company's true value by finding its hidden brainpower*. Harper Business, New York.
- [30] Fang, E., and Zou, S. (2009). The effect of marketing dynamic capabilities on firm's performance: A dyadic investigation in the context of international high-tech joint ventures. *Journal of International Business Studies*, (40), 742-762.
- [31] Fornell, C., and Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388.
- [32] Galunic, D. C., and Eisenhardt, K. M. (2001). Architectural innovation and modular corporate forms. *Academy of Management Journal*, 44(6), 1229-1249.
- [33] Gardner, T. M. (2002). In the trenches at the talent wars: Competitive interaction for scarce human resources. *Human Resource Management*, 41(2), 225-237.
- [34] Gefen, D., and Straub, D. (2005). A practical guide to factorial validity using PLS-graph: Tutorial and annotated example. *Communications of the Association for Information Systems*, 16(1), 91-109.
- [35] Ghoshal, S., and Bartlett, C. A. (1994). Linking organizational context and managerial action: The dimensions of quality of management. *Strategic Management Journal*, 15(2), 91-112.
- [36] Gibson, C. B., and Birkinshaw, J. (2004). The antecedents, consequences and mediating role of organizational ambidexterity. *Academy of Management Journal*, 47(2), 209-226.
- [37] Grant, R. M. (1997). The knowledge-based view of the firm: Implications for management practice. *Long Range Planning*, 30(3), 450-454.
- [38] Haanes, K., and Lowendahl, B. (1997). *The unit of activity: Towards an alternative to the theories of the firm, strategy, structure and style*. In H. Thomas, et al. (Eds.), John Wiley & Sons.
- [39] Hair, J. F. Jr., Anderson, R. E., Tatham, R. L., and Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Prentice-Hall International.
- [40] Hamel, G., and Prahalad, C. K. (1994). Competing for the future. *Harvard Business Review*, 72(4), 122-129.
- [41] He, Z., and Wong, P. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization Science*, 15(4), 481-494.
- [42] Hult, G. T. M., Ketchen, D. J., and Slater, S. F. (2004). Information processing, knowledge development, and strategic supply chain performance. *Academy of Management Journal*, 47(2), 241-253.
- [43] Humphreys, M., Williams, M., and Goebel, D. (2009). The mediating effect of supplier oriented purchasing on conflict in inter-firm relationships. *Journal of Business and Industrial Marketing*, 24(3), 198-206.
- [44] Jain, D., and Singh, S. S. (2002). Customer lifetime value research in marketing: A review and, future directions. *Journal of Interactive Marketing*, 16(2), 34-46.
- [45] Jaworski, B. J., and Kohli, A. K. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing*, 57(3), 53-70.
- [46] Kamukama, N., Ahiauzu, A., and Ntayi, J. M. (2010). Intellectual capital and performance: Testing the

- interaction effects. *Journal of Intellectual Capital*, 11(4), 554-574.
- [47] Ketchen, D. J., Snow, C. C., and Street, V. L. (2004). Improving firm performance by matching strategic decision-making processes to competitive dynamics. *Academy of Management Executive*, 18(4), 29-43.
- [48] Kim, D. H., Kim, Y. J., and Lee, Y. C. (2006). *Corporate social capital and human resource development*. Korea Research Institute for Vocational Education and Training.
- [49] Kim, Y. J., Kim, S. K., and Kim, G. S. (2011). *Human resource management*. Top Books, Seoul.
- [50] Knez, M., and Camerer, C. (1994). Creating expectational assets in the laboratory: Coordination in "weakest link" games. *Strategic Management Journal*, 15(8), 101-119.
- [51] Kogut B., and Zander U. (1996). What firms do? Coordination, identity, and learning. *Organization Science*, 7(5), 502-518.
- [52] Kramer, R. M., Brewer, M. B., and Hanna, B. A. (1996). Collective trust and collective action: The decision to trust as a social decision. In R. M. Kramer, and T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 357-389). Sage, Thousand Oaks, CA.
- [53] Lee, D. H. (2008). The effect of alliance partner's learning type on knowledge transfer. *International Business Journal*, 17(4), 1-30.
- [54] Lee, Y. C. (2007). Social capital, knowledge management, and organizational performance. *Journal of Information Systems*, 16(4), 223-241.
- [55] Leonard, D., and Sensiper, S. (1998). The role of tacit knowledge in group innovation. *California Management Review*, 40(3), 112-132.
- [56] Lewicki, R. J., and Bunker, B. B. (1996). Developing and maintaining trust in work relationships. In R. M. Kramer, and T. M. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 114-139). Sage, Thousand Oaks: CA.
- [57] Lewis, K. (2000). Is performance all in their minds? The impact of transactive memory on knowledge-worker team performance. Paper Presented at *Academy of Management Meetings*, Toronto, Canada.
- [58] Li, H., and Zhang, Y. (2002). Founding team comprehension and behavioral integration: Evidence from new technology ventures in China. In *Academy of Management Best Paper Proceedings*.
- [59] Lowendahl, B. (1997). *Strategic management of professional service firms*. Handelshojskolens Forlag, Copenhagen.
- [60] Madhok, A., and Osegowitsch, T. (2000). The international biotechnology industry: A dynamic capabilities perspective. *Journal of International Business Studies*, 31(2), 325-335.
- [61] Maditinos, D., Chatzoudes, D., Tsairidis, C., and Georgios, T. (2011). The impact of intellectual capital on firms' market value and financial performance. *Journal of Intellectual Capital*, 12(1), 132-151.
- [62] March, J. G. (1991). Exploration and exploitation in organizational learning. *Organizational Science*, 2(1), 71-87.
- [63] McFadyen, M. A., and Cannella, A. (2004). Social capital and knowledge creation: Diminishing returns of the number and strength of exchange relationships. *Academy of Management Journal*, 47(5), 735-746.
- [64] Merton, R. K. (1968). *Social theory and social structure*. Free Press: New York.
- [65] Moorman, C., and Miner, A. S. (1997). The impact of organizational memory on new product performance and creativity. *Journal of Marketing Research*, 34(1), 91-106.
- [66] Muchinsky, P. M. (2004). When the psychometrics of test development meets organizational realities: A conceptual framework for organizational change, examples and recommendations. *Personnel Psychology*, 57(1), 175-209.
- [67] Nahapiet, J., and Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242-266.
- [68] Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14-37.
- [69] Nunnally, J. C. (1978). *Psychometric theory* (2nd

- ed.). New York: McGraw-Hill.
- [70] Oh, H., Labianca, G., and Chung, M. (2006). A multilevel model of group social capital. *Academy of Management Review*, 31(3), 569-582.
- [71] O'Reilly, C. A., and Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in Organizational Behavior*, 28, 185-206.
- [72] Park, W. W. (1997). Empowerment: Its meaning and application. *Korean Management Review*, 26(1), 115-138.
- [73] Pavlou, P. A., and El Sawy, O. A. (2011). Understanding the elusive black box of dynamic capabilities. *Decision Sciences*, 42(1), 239-273.
- [74] Peters, T., and Waterman, R. (1982). *In search of excellence: Lessons from America's best run companies*. New York: Harper and Row.
- [75] Petrash, G. (1996). Dow's journey to a knowledge value management culture. *European Management Journal*, 14(4), 365-373.
- [76] Pettigrew, A. M. (1973). *The politics of organizational decision making*. Tavistock, London.
- [77] Prahalad, C. K., and Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68(3), 79-91.
- [78] Premkumar, G. P., and Ramamurthy, K. (1995). The role of inter-organizational and organizational factors on the decision mode for adoption of IOISs. *Decision Sciences*, 26(3), 303-335.
- [79] Premkumar, G. P., Ramamurthy, K., and Nilakanta, S. (1994). Implementation of EDI: An innovation diffusion perspective. *Journal of Management Information Systems*, 11(2), 157-186.
- [80] Rapp, A., Trainor, K. J., and Agnihotri, R. (2010). Performance implications of customer-linking capabilities: Examining the complementary role of customer orientation and CRM technology. *Journal of Business Research*, 63(11), 1229-1236.
- [81] Roos, J., Roos, G., Edvinsson, L., and Dragonetti, N. C. (1998). *Intellectual capital: Navigating in the new business landscape*. New York University Press, New York.
- [82] Rothaermel, F., and Hess, A. (2009). *Finding an innovation strategy that works*. The Wall Street Journal, August 17th.
- [83] Saavedra, R., Earley, P. C., and Van Dyne, L. (1993). Complex interdependence in task-performing groups. *Journal of Applied Psychology*, 78(1), 61-72.
- [84] Shim, J. P., Koh, J., Fister, S., and Seo, H. Y. (2016). Phonetic analytics technology and big data: Real-world cases. *Communications of the ACM*, 59(2), 84-90.
- [85] Simon, L., and Davies, G. (1996). A contextual approach to management learning. *Organization Studies*, 17(2), 269-289.
- [86] Smith, K. G., Collins, C. L., and Clark, K. B. (2005). Existing knowledge, knowledge creation capability, and the rate of new product introduction in high-technology firms. *Academy of Management Journal*, 48(2), 346-357.
- [87] Son, J. E., Jang, Y. J., Lee, S. H., and Kim, H. W. (2013). A systems thinking approach to the enhancement of social capital: In case of social media users. *Information Systems Review*, 15(2), 21-40.
- [88] Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement and validation. *Academy of Management Journal*, 38(5), 1442-1465.
- [89] Stewart, T. A. (1997). *Intellectual capital: The new wealth of organizations*. Doubleday/Currency, New York.
- [90] Tajfel, H. (1982). *Social relations and intergroup relations*. Cambridge University Press, Cambridge.
- [91] Teece, D. J., Pisano, G., and Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- [92] Um, H. M., Kang, S., and Kim, M. S. (2011). The effect of team diversity on knowledge creation: With conflict and absorptive capacity. *Journal of Information Technology Applications and Management*, 18(1), 101-123.
- [93] Wang, W. Y., and Chang, C. (2005). Intellectual capital and performance in causal models: Evidence from the information technology industry in

- Taiwan. *Journal of Intellectual Capital*, 6(2), 222-237.
- [94] Warr, P., and Fay, D. (2001). Age and personal initiative at work. *European Journal of Work and Organizational Psychology*, 10(3), 343-353.
- [95] Watson, S., and Hewett, K. (2006). A multi-theoretical model of knowledge transfer in organizations: Determinants of knowledge contribution and knowledge reuse. *Journal of Management Studies*, 43(2), 141-173.
- [96] Weick, K. E. (1979). Cognitive processes in organization. In B. M. Staw (Eds.), *Research in organizational behavior*. Greenwich, CT: JAI Press.
- [97] Wernerfelt, B. (1984). A resource based view of the firm. *Strategic Management Journal*, 5(2), 171-180.
- [98] Wilson, B., and Henseler, J. (2007). Modeling reflective higher-order constructs using three approaches with PLS path modeling: A Monte-Carlo comparison. *Australian and New Zealand Marketing Academy Conference*, 791-800.
- [99] Woolcock, M. (2001). The place of social capital in understanding social and economic outcomes. *Canadian Journal of Policy Research*, 2(1), 1-17.
- [100] Wright, P. M., and McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. *Journal of Management*, 18(2), 295-320.
- [101] Xie, J., Song, X. M., and Stringfellow, A. (1998). Interfunctional conflict, conflict resolution styles, and new product success: A four-culture comparison. *Management Science*, 44(12), 192-206.
- [102] Yoo, Y., and Alavi, M. (2001). Media and group cohesion: Relative influences on social presence, task participation, and group consensus. *MIS Quarterly*, 25(3), 371-390.
- [103] Youndt, M. A., and Snell, S. A. (2004). Human resource configurations, intellectual capital and organizational performance. *Journal of Management*, 16(3), 337-360.

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