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경영학박사 학위논문

The Relationship between Coworker Support and Knowledge Sharing

2018년 2월

서울대학교 대학원

경영학과 경영학전공

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The Relationship between Coworker Support and Knowledge Sharing
동료지원과 지식공유에 관한 연구

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이 논문을 경영학박사 학위논문으로 제출함
2017년 11월

서울대학교 대학원
경영학과 경영학전공
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채희선의 경영학박사 학위논문을 인준함
2017년 12월

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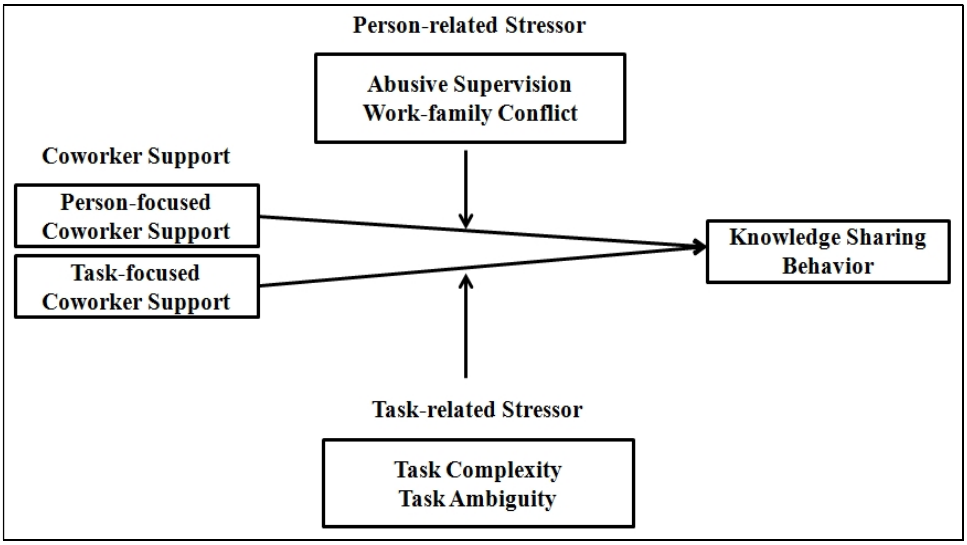
Abstract

In today's knowledge-based economy, many companies have adopted team-based and flatter organizational structures. Consequently, work needs more frequent and more meaningful lateral interactions among coworkers. Reflecting these changes in the work place, researchers have highly focused on the role of coworkers. In this context, this study focuses on the importance of coworkers by examining a comprehensive model of coworker support of knowledge sharing behavior in organizations. Knowledge sharing represents a fragile process that instigates a conflicting choice between cooperation and competition—to either cooperate with others by sharing his/her resources, or to compete others by restoring his/her valuable skills and knowledge to gain an advantage. Thus, coworker influences are important in reducing this dilemma related to sharing knowledge. To solve this knowledge sharing dilemma, this study examines two different dimensions of coworker support as an important antecedent of knowledge sharing behavior. In addition, to fully understand and predict coworker support, this study introduces important situational conditions that enhance the relationships between the two dimensions of coworker support and knowledge sharing behavior. On the basis of social exchange theory combined with the target similarity framework, this study identifies person-related and task-related moderators as matched

constructs that make primary relationships stronger. In particular, whereas person-related stressors from different sources should have a more dominant influence on the relationship between person-focused coworker support and knowledge sharing, task-related stressors should have a more dominant influence on the relationship between task-focused coworker support and knowledge sharing.



< Conceptual Model >

The hypotheses of this dissertation were tested using data from 308 employee-coworker dyads. Data were collected from surveys distributed to employees and their coworkers located in South Korea. The results show that person-focused coworker support is positively related to knowledge sharing behavior, but task-focused coworker support is not significantly related. Among four moderating effects, work-family conflict and task complexity were positively significant.

Abusive supervision and task ambiguity were significant, but the direction was the opposite of what was expected.

The current findings make some important contributions to the existing literature. First, this study extends the literature on individual knowledge sharing behavior by investigating coworkers as specific targets for which employees are motivated to engage in behaviors and attitudes that are benefit to the targets. An individual's motivation for sharing knowledge with a coworker comes from the immediate target beneficiary of the person's knowledge sharing behavior. Second, the study contributes to the literature on social support by simultaneously investigating two types of coworker support in order to uncover the true effects of specific coworker support of knowledge sharing behavior. Third, this study also provides some support for the target similarity model by demonstrating that two foci simultaneously interact with the two constructs of person-related and task-related stressors. Lastly, this study shows that the influence of a coworker support of knowledge sharing behavior should be understood in terms of the extent to which the relevant situation provides cues to increase a coworker's reciprocating decisions. In short, this study may additionally enhance the ability to predict and understand knowledge sharing behavior by taking a more fine-grained approach based on the target similarity framework and social exchange theory.

Despite its limitations due to a cross-sectional design and

limited variables, this study advances the understanding of knowledge sharing behavior by examining different dimensions of coworker support and constructing relevant moderating factors in one framework. It is hoped that the current study could spur other scholars to further deepen the understanding of coworker influence and knowledge sharing behavior in an organization.

Keyword : Person-focused Coworker Support, Task-focused Coworker Support, Knowledge Sharing, Abusive Supervision, Work-family Conflict, Task Complexity, Task Ambiguity

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< Contents>

Chapter 1. Introduction 1

1. Research Question 1
2. Purposes of the Study.....8
3. Overview of Chapters 9

Chapter 2. Theoretical Background.....11

1. Knowledge Sharing Behavior 11
   1.1. History of Knowledge Management Research 11
   1.2. Definition of Knowledge.....14
   1.3. Knowledge Related Constructs 144
   1.4. Individual Knowledge Sharing Behavior.....166
   1.5. Definition of Knowledge Sharing Behavior 177
   1.6. Antecedents of Knowledge Sharing Behavior 233
      1.6.1. Individual Characteristics.....244
      1.6.2. Interpersonal Characteristics 255
      1.6.3. Coworker Influences 2626
      1.6.4. Leadership Characteristics 2828
      1.6.5. Group and Organizational Characteristics.....30
   1.7. Consequences of Knowledge Sharing Behavior 35
   1.8. Knowledge Sharing Behavior in South Korea 377
   1.9. Summary in Knowledge Sharing Behavior literature 400
      1.9.1. Extension of SET in Studying Knowledge Sharing Behavior.....400
      1.9.2. The Influence of Coworker in Studying Knowledge Sharing Behavior 411
      1.9.3. Dyadic Level Studies in Knowledge Sharing Behavior Literature 4343
2. Social Support.....4646
   2.1. Definition of Social Support 46

2.1.1. Sources of Social Support 48
2.1.2. Dimensions of Social Support 50
2.2. Antecedents of Social Support 51
2.3. Consequences of Social Support 55
2.3.1. Health-related Outcomes 55
2.3.2. Work-related Outcomes 56
2.3.3. Knowledge Sharing as an Outcome of Social Support 58
2.4. Summary in Social Support Literature 622
2.4.1. The Direct Role of Social Support on Outcomes 622
2.4.2. Different Effects of Dimensions of Social Support 633
2.4.3. The Role of Coworker Support 64
2.4.4. Outcomes of Social Support 65

Chapter 3. Hypothesis Development 67

1. Conceptual Framework 67
1.1. Main Effects of Coworker Support 68
1.2. Moderating Effects of Stressors 69
2. Hypothesis Development 73
2.1. Knowledge Sharing Dilemma 733
2.2. Coworker Support 7575
2.3. Coworker Support and COR Theory 76
2.4. Reciprocity and Target Similarity Theory 78
2.5. Moderating Effects 811
2.5.1. Person-related Stressor: Abusive Supervision 833
2.5.2. Person-related Stressor: Work-family Conflict 889
2.5.3. Task-related Stressor: Task Complexity 922
2.5.4. Task-related Stressor: Task Ambiguity 95

Chapter 4. Method 98

1. Data Collection Procedures 98

2. Sample 99
3. Measures 1022
4. Analytic Strategies 10606
4.1. Preliminary Analyses Procedures 10606
4.2. Testing Hypotheses Procedures 10707

Chapter 5. Results 10808

1. Preliminary Analyses 10808
1.1. Discriminant Validity.....10808
1.1.1. Exploratory Factor Analysis.....10808
1.1.2. Confirmatory Factor Analysis 11313
1.2. Descriptive Statistics.....11616
2. Hypotheses Testing 11818
2.1. Main Effects 11818
2.2. Moderating Effects: Person-related Stressors 11818
2.3. Moderating Effects: Task-related Stressors 12323
2.4. Summary of Results 12727

Chapter 6. Discussion 129

1. Two Dimensions of Coworker Support 129
2. Moderating Effects: Person-related Stressors 134
3. Moderating Effects: Task-related Stressors 138
4. Theoretical Implications 142
5. Practical Implications 145
6. Study Limitations and Recommendations for Future Research 147
7. Conclusion 150

References.....152

Abstract in Korean 203

<LIST OF TABLES>

Table 1. Definition of Knowledge Sharing Behavior 20
Table 2. Prior Empirical Studies on Antecedents of Knowledge Sharing Behavior 33
Table 3. Prior Empirical Studies on Consequence of Knowledge Sharing Behavior 36
Table 4. Prior Empirical Studies on Antecedents of Knowledge Sharing Behavior in South Korea Context. 38
Table 5. Prior Empirical Studies on Consequences of Knowledge Sharing Behavior in South Korea Context 39
Table 6. Consequences of Social Support 54
Table 7. Prior Empirical Studies on Knowledge Sharing Behavior as an Outcome of Social Support 59
Table 8. Sample Description 101
Table 9. Exploratory Factor Analysis of Coworker Support 110
Table 10. Exploratory Factor Analysis of Work-family Conflict 111
Table 11. Exploratory Factor Analysis of Task Characteristics 112
Table 12. Comparison of Measurement Models 115
Table 13. Descriptive Statistics of the Variables 117
Table 14. Hierarchical Regression Examining the Moderating Effects of Person-related Stressors in the Relationship between Person-focused Coworker Support and Knowledge Sharing Behavior 121
Table 15. Hierarchical Regression Examining the Moderating Effects of Task-related Stressors in the Relationship between Task-focused Coworker Support and Knowledge Sharing Behavior 125
Table 16. Summary of Results 128

<LIST OF FIGURES>

Figure 1. Conceptual Model 72
Figure 2. Interaction of Person-focused Coworker Support and Abusive Supervision on Knowledge Sharing Behavior 122
Figure 3. Interaction of Person-focused Coworker Support and WIF on Knowledge Sharing Behavior 122
Figure 4. Interaction of Task-focused Coworker Support and Task Complexity on Knowledge Sharing Behavior 126
Figure 5. Interaction of Task-focused Coworker Support and Task Ambiguity on Knowledge Sharing Behavior 126

Chapter 1. Introduction

1. Research Question

In knowledge-based economy, knowledge is viewed as one of the most critical assets of an organization's competitive advantage and the main trigger of an organization's value (e.g., Davenport & Prusak, 1998; Grant, 2002). Recognizing this importance of knowledge, firms have paid an ever-increasing attention to knowledge management. Since individual members are the holders and movers of knowledge, it is crucial to motivate individuals share their knowledge with others at workplace (Nonaka, 1994). Therefore, organizations could start to effectively manage and use knowledge resources. only when individuals have high tendency to share their knowledge with others, Accordingly, an individual employee's knowledge sharing is essential to successful mange knowledge in organizations (Wang & Noe, 2010).

Yet, knowledge sharing does not always flow as smoothly as one would hope. The willingness of individuals to contribute their own knowledge to a shared repository accessible to other people tends to be rather low. That is so because knowledge sharing represents a paradigmatic social exchange situation, known as the "social dilemma." Specifically, while knowledge sharing could benefit the collective, it may undermine the position and

advantage of individual knowledge contributors (Cabrera & Cabrera, 2002). Consequently, knowledge sharing instigates a conflicting choice between cooperation and competition—to either cooperate with others by sharing his/her resources, or to compete others by restoring his/her valuable skills and knowledge to gain an advantage. In this context, numerous studies have sought to establish and examine the components that could affect people's willingness to share knowledge in this social dilemma, such as individual factors (eg., big five, goal orientation, exchange ideology, and need for status; Cabrera, Collins, & Salgado, 2006; Park, Chae, & Choi, 2017; Wang & Noe, 2010), motivational factors (eg., self-efficacy, self-monitoring, subjective norm, and attitudes of eagerness; Hsu & Ju, 2007; Lee, Yoo, & Yun, 2015), interpersonal factors (eg., trust and justice; Lin, 2007; Mooradian, Renzl, & Matzler, 2006), relational factors (eg., leadership, LMX, and coworker support; Bradshaw, Chebbi, & Oztel, 2015; Chen & Barnes, 2006; Kim, Kim, & Yun, 2015; Swift & Virick, 2013), and group and organizational factors (eg., rewards and climate; Bock, Zmud, Kim, & Lee, 2005; Olatokun & Nwafor, 2011). However, relevant research investgating how the behaviors of one's coworkers influence on knowledge sharing behavior remains scarce (e.g., Boh & Wong, 2015; Kim & Yun, 2015; Zhang & Jiang, 2015).

At workplace, there are exchanges between an employee and his or her coworkers and supervisor. Until now, researches on the workplace

exchanges have tended to investigate hierarchical relationships. Specifically, most of studies have considered how supervisors' attitudes and behaviors affect those of their direct followers (King & Marks Jr., 2008; Liao, 2008). However, nowadays, management entails more than just hierarchical relationships—and this realization is increasingly dawning on managers and researchers around the world. Today, organizations increasingly reduce hierarchical differences among employees by removing levels of hierarchy, and implementing many employee involvement programs entitling people in lower hierarchical positions with a greater power (Howard, 1995). In addition, many organizations have been adopting team-based and flatter organizational structures. This movement implies more significant and more frequent interactions in the contexts where the importance of status and hierarchy differences has been reduced (Cascio, 1995; Ho & Levesque, 2005; Takeuchi, Yun, & Wong, 2011). Reflecting these changes in the workplace, the role of coworkers has become a focus of many pertinent studies (e.g., Chiaburu & Harrison, 2008). In this context, the specific proposal argued for in the present study is that coworker support can be critical when employees face the dilemma of whether or not to engage in knowledge sharing behavior.

Consistent with the previous studies examining the positive effects of social relationships in the general population, studies on the workplace also reveals the benefits of having supportive coworkers (Ducharme & Martin

2000; Sloan, 2012). However, even though prior research has explored positive relationships between perceived coworker support and knowledge sharing (Cabrera et al., 2006; Kulkarni et al., 2006; Lee et al, 2015), several important issues remain unaddressed. First, while coworker support is a meta-construct concept, previous research has failed to use a comprehensive frame to cover different dimensions of coworker support and to examine the effects of these dimensions on outcomes. Since coworker support is a meta-construct (Vaux, 1988), it is significant to differentiate the other aspects of coworker support, such as offering of sympathy (person-focused support) and caring to the provision of tangible assistance (task-focused support) (Beehr, Jex, Stacy, & Murray, 2000; Iverson & Pullman, 2000; Mossholder, Settoon, & Henagan, 2005). However, as argued by Beehr et al. (2000), this distinction has not been clearly mentioned in prior coworker support research. In addition, most of the empirical studies found that the two dimensions of support are highly inter-related. Consequently, researchers combined those dimensions into one measurement instead of investigating the different effects of them (Beehr, 1995). However, significant information is lost when combining these aspects into one index or using only one aspect of support. Therefore, research that would separately examine the impact of person-focused and task-focused support is needed. Furthermore, identifying differences in their effects of different dimensions of coworker support may have practical implications for

managerial and organizational interventions. For instance, if person-focused support is found to be more influential in the formulation of norm of reciprocity and positive work attitudes, organizations may benefit from emphasizing personal aspects. Considering the above, the present study addresses this problem by separately investigating whether the two dimensions of coworker support (eg., person-focused and task-focused coworker support) have positive effects on knowledge sharing behavior.

Second, previous researches investigating the linkage between coworker support and knowledge sharing behavior have focused on support for knowledge sharing (Cabrera et al., 2006; Kulkarni et al., 2006; Lu et al., 2006). However, researchers have fewer concerns on the support for an individual providing know-how or skills. Recently, with an increase of the awareness about the importance of interpersonal exchange relationships in modern organizational environment (Flynn et al., 2006), some researchers have demonstrated the effects of dyadic relationships (Anderson & Williams, 1996; Scott &Judge, 2009; Swift & Virick, 2013). For instance, Flynn and colleagues have investigated an asymmetry of perception in the exchange with the giver and the receiver. They found that the behavior of the recipient influences the reaction of the giver (Bohns & Flynn, 2010; Flynn & Brockner, 2003; Flynn et al., 2006). Likewise, Anderson and Williams (1996) have found that, in the workplace, the help-seeking behavior of the recipient is

positively related to the helping behavior of the giver. These findings reveal that individuals are likely to direct their reciprocating attitudes and behaviors toward the specific target that provides benefits. Consistently with these findings, the target similarity framework (Lavelle et al., 2007) explains that individuals make meaningful distinctions between the relationship with specific social exchange partners and the intended beneficiaries of their behaviors. In other words, individuals' social exchange relationship with a specific partner may best expect favorable behaviors directed toward that partner. The coworker can be a specific target encouraging an individual to engage in attitudes and behaviors beneficial to the source. Thus, based on the target similarity framework (Lavelle et al., 2007), the present study shows the employee-coworker relationship in knowledge sharing behavior.

Finally, despite perceived coworker support's role as a critical antecedent of knowledge sharing behavior, little theoretical or empirical consideration of different boundary conditions that enhance the relationships between the two dimensions of coworker support and knowledge sharing behavior in place. When considering the different nature of person-focused and task-focused coworker support, there is a loss of context fostering highly reciprocal employee-coworker relationships (Swift & Virick, 2013). Based on the multifocal target-matching perspective on social exchange relationships (Lavelle et al., 2007; Rupp & Cropanzano, 2002; Stinglhamber et al., 2006),

the present study considers two main groups of stressors (person-related and task-related stressors) as moderators to strengthen the primary effects. The target similarity theory (Lavelle et al., 2007) argues that relationships between constructs are more powerful and stronger when these constructs are matched. Specifically, when the constructs refer to the same targets and foci, than when they refer to different targets and foci. In particular, whereas person-related stressors from different sources, such as supervisor or the family, should have a more dominant influence on relationship between person-focused coworker support and knowledge sharing, task-related stressors, such as task complexity and task ambiguity, should have a more dominant influence on the relationship between task-focused coworker support and knowledge sharing. Therefore, the study proposes a model to deal with knowledge sharing dilemma by investigating different types of coworker support (person-focused coworker support and task-focused coworker support) and situational moderators, including person-related stressors (abusive supervision and work-family conflict) and task-related stressors (task complexity and task ambiguity).

2. Purposes of the Study

This study is aimed at theoretically and empirically investigating a comprehensive model of coworker support and knowledge sharing behavior that is expected to allow a better integration of coworker influence on research regarding knowledge sharing. In doing so, the study has three purposes. First, this study explains how coworker support solves knowledge sharing dilemmas by applying conservation of resources (COR) theory, social exchange theory (SET), and target similarity theory. Second, this study asserts that coworker support is a multidimensional construct with two dimensions: person-focused coworker support and task-focused coworker support. Third, understanding the importance of moderating factors, this study selects person-related and task-related stressors as relevant factors that may increase the importance of perceiving different levels of coworker support and different cost/benefit ratios when engaging in knowledge sharing behavior.

3. Overview of Chapters

To comprehensively understand the relationship between coworker support and knowledge sharing behavior, this study is organized as follows. Chapter 1 presents and elaborates on the research question and purposes of this study. In Chapter 2, the main theoretical background and concepts are described. This literature review chapter is divided into two sections. The first part is devoted toward showing the importance that knowledge holds for organizational competitiveness and identifying the importance of sharing knowledge in organizations. This study reviews the most prominent aspects of the definition, antecedents, and consequences of knowledge sharing. Studies conducted in South Korea are also presented. Based on these literature reviews, this study draws limitations and suggests recommendations for future studies in knowledge sharing literature. Subsequently, this study thoroughly reviews social support literature, including the background, definitions, antecedents, and outcomes of dimensions of social support, such as the dimensions of the sources (supervisor and coworker support) and types of content (person-focused and task-focused support). Limitations and recommendations of social support literature are also presented. In Chapter 3, all hypotheses and its rationales are specifically elaborated. Data collection procedures, sample, measures used, and data analysis strategies are discussed

in chapter 4. Chapter 5 presents the results of all hypotheses. This chapter includes preliminary analyses, descriptive statistics and multiple regression analysis. In Chapter 6, this study presents the overall findings and contributions in terms of theoretical and practical implications. This chapter also outlines study limitations, and provides avenues for future research.

Chapter 2. Theoretical Background

1. Knowledge Sharing Behavior

This section exhibits the overview of knowledge sharing behavior and thoroughly reviewed its related literature. The first part of this section is to introduce the history of knowledge management research, which helped to understand the context of where the knowledge sharing concept comes from. Then, the definition of knowledge and knowledge sharing is presented. The study also provides how knowledge sharing behavior is distinct from other related constructs. The second part of this section is to review the literature of knowledge sharing behavior, such as antecedents and consequences of knowledge sharing behavior. Lastly, the study discussed the limitation and further needed research issues in knowledge sharing literature.

1.1. History of Knowledge Management Research

Concept of knowledge sharing comes from knowledge management. Many organizations have now initiated knowledge management projects aiming to identify and use their knowledge resources to foster organizational

innovation and drive organizational performance within their firms.

Knowledge management is a practitioner-based invention, which originates from substantive response to economic and social trends of the knowledge-centric view of the firm, globalization, and ubiquitous computing (Prusak, 2001). The significance of knowledge as critical assets for the competitive advantage firstly received a consideration among practitioners (Wiig, 1997). According to Willg (1997), the first academic movement for knowledge management is a European management conference (1986). After this movement, Technology Transfer Society at Purdue University held the first knowledge management forum titled by 'Knowledge assets into the 21st century' in 1987. Stata (1989) published the first article, titled by 'Organizational Learning: The key to management innovation', relating to knowledge management in the journal of The Sloan Management Review. To support this stream, Wilson (2002) searched from the Web of Science, from 1981 to 2002 for articles with the title 'knowledge management'. The term of 'knowledge management' did not appear until 1986 and showed a very broad range of topics represented under the title 'knowledge management' in the first eleven years (1986-1996). From 1997 to 2002, the growth has been exponential.

The good milestone for the beginning of the knowledge management in academic area is a significant trend of an emerging knowledge-focused

view of the firm. As a critical and strategic asset, knowledge is defined as scarce, valuable, path dependent, and hard to imitate for third parties (Wernerfelt, 1984). Many organizations increasingly consider both the quality and quantity of knowledge as important resources, which they could use by creating, developing and applying inside the organizational boundaries. Increasingly, there is agreement among economists, academics researchers, and practitioners that an organization can best be viewed as 'a coordinated collection of capabilities'. These capabilities are limited in its effectiveness by its current social and cognitive skills and bound by its own history. The knowledge is the primary source of these capabilities, especially when the knowledge is mostly specific and tacit to the company. This importance of knowledge is highlighted for knowledge-intensive firms, because these firms have a high proportion of highly qualified employees and frequently exchange valuable knowledge among them (Blackler, 1995). Because of this popularity; the concept and development of knowledge management get high attention in management studies. There are many attempting to provide theoretical explanations and guideline towards the development of knowledge management in many organizations.

1.2. Definition of Knowledge

The definition of knowledge is probably paying the price for its success, which researchers have not reached consensus agreement on how to define knowledge. For instance, Davenport & Prusak (1998) defined knowledge as "a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information". According to Goldstein (1993), knowledge is characterized by "an adequate understanding of concepts, facts, and their relationship". Meanwhile, Nonaka (1994) follows traditional epistemology and articulates knowledge as "justified true belief." Iske and Boersma (2005) refer to knowledge as "results from the interaction of someone's insights, information and imagination." In fact, it is not easy to obviously define the meaning of knowledge, since knowledge is a multifaceted concept with multilayered meanings (Nonaka, 1994).

1.3. Knowledge Related Constructs

There are different knowledge related typologies, such as data, information, and knowledge. For example, Miller and Morris (1999) suggested that knowledge is more than just data. They defined data as raw facts, measurements and statistics.

Among many similar concepts, information is the term that many researchers use interchangeably with knowledge. In knowledge sharing research, practical utility in differentiating knowledge from information is lacking (Bartol & Srivastava, 2002; Makhija & Ganesh, 1997). Nonaka and his colleagues suggested a clear distinction between information and knowledge. They followed traditional epistemology and identified three characteristics that distinguish knowledge from information (Nonaka & Takeuchi, 1995; Nonake, Krogh, & Voelpel, 2006; Nonaka & Krogh, 2009). First, unlike information, knowledge is justified true beliefs and commitment. Based on their interactions with the world, individuals could justify the truthfulness of their observation (Nonaka, 1994; Nonaka et al., 2006). According to Nonaka (1994), information is a just flow of messages; however, knowledge is developed by the information and anchored on true beliefs. Consequently, justification completely depends on unique approaches, personal experience and sensibility (Nonaka &Takeuchi, 1995).

Second, knowledge is explicit and tacit along a continuum (Nonaka 1994). Researchers divided knowledge into two factors; tacit and explicit knowledge (Polanyi, 1966; Nonaka, 1994; Nonaka & Takeuchi, 1995). Explicit knowledge is embodied in a code or a language, which processed, transmitted, communicated, and stored (Nonake et al., 2006; Nonaka & Krogh, 2009). The explicit knowledge can be relatively easily exchanged in the form

of manuals, data, and scientific formulae. Patents are the representative example of explicit knowledge in a workplace context. However, tacit knowledge is the personal and context specific knowledge of an individual that resides in the human mind, perception and behaviors (Duffy, 2000). This tacit knowledge is hard to formalize and communicate, because it has a personal component covering elements of perception, emotion, values, skill, experience, and history (Nonaka et al., 1996). The examples of the tacit knowledge are operational skills and know-how, which makes them hard to verbalize. Thus, based on these characteristics of tacit knowledge, only when individual is willing to share his or her knowledge with others, organizations can begin to benefit by managing knowledge resources. This makes individual employee's knowledge sharing as a critical for the success of organization's knowledge management (Wang & Noe, 2010).

1.4. Individual Knowledge Sharing Behavior

Although knowledge resides on multiple levels in an organization (e.g., individual, group, and organization level) (Long, 2000), many scholars have addressed that the individual level knowledge is the most fundamental (e.g., Nonaka, 1994; Polanyi & Sen, 1983). Organizations devote their great attentions and efforts to analyze how to create the organizational environment

to facilitate a valuable sharing and effective use of knowledge (Damodaran & Olphert, 2000). However, their knowledge management efforts do not guarantee individuals' actual actions of sharing knowledge. For example, Huber (1991) pointed out that cognition processing cannot be formed by groups or organizations, because knowledge is located in individuals. In the similar vein, Blackler (1995) argued that the most critical mean of 'production knowledge' comes from the individual employees, especially in knowledge-based organizations. However, despite of the significance of the individual in the production of knowledge, the greater part of the studies has been conducted at the organizational level (Quigley et al., 2007) and studies conducted at the individual-level knowledge are rare (Wang & Noe, 2010). Acknowledging this deficit in the literature, this study concentrates on knowledge sharing at the individual level.

1.5. Definition of Knowledge Sharing Behavior

Previously said that "Knowledge is power" but now the scenario has been changed to "sharing knowledge is power". Knowledge alone cannot create new ideas and innovative solutions if it is not shared. Knowledge sharing has been defined throughout literature in numerous ways. Knowledge sharing is defined as the dissemination or exchange of tacit or explicit data,

technology, or experience between individuals (Wang & Noe, 2010). Cummings (2004) refers to the knowledge sharing as “the provision of task information and know-how to help others and to collaborate with others to solve problems, develop new ideas, or implement procedures”. Amayah (2013) focuses on the know-how type of knowledge to create new ideas, solve problems, help others, or apply procedures. Bartol and Stivastava defined (2002) as “the individual behavior of sharing organizationally relevant information, ideas, suggestions, and expertise with one another” (p. 65). Knowledge sharing could happen via face-to-face communications via interacting with other experts or written correspondence. It also occurs by organizing, documenting, and capturing knowledge for others.

Another definition states that knowledge sharing is the process by which knowledge held by one source is transformed into a new format that can be absorbed, understood, and used by other sources (Bouma, 2011). For knowledge sharing to happen, there should be an exchange between two individuals; one who gives knowledge and one who receives it.

On the process view of, knowledge sharing has been considered either unidirectional or bidirectional approaches. The bidirectional approach suggests that knowledge sharing is a single direction, which involving the dissemination of knowledge from the provider to recipient (Yi, 2009). Sharing entirely depends on the knowledge provider and not the knowledge recipient

(Yi, 2009). However, according to the bidirectional perspective, sharing is a two-way process; the actions of knowledge donating and collecting (van den Hooff & de Ridder, 2004). Knowledge collecting is the process of individuals consulting others to inspire them to share their intellectual capital, while knowledge donating is the process of communicating their personal intellectual capital to colleagues (Lin, 2007c). Table 1 presents some of the knowledge sharing definition and measures.

Table 1. Definition of Knowledge Sharing Behavior

Author	Definition of Knowledge	Measurement
Bock et al. (2005)	The willingness of individuals in an organization to share with others the knowledge they have acquired	Intention and attitude towards knowledge sharing using knowledge taxonomies as dimensions (implicit and explicit)
Chennamaneni (2006)	The degree to which knowledge worker actually shares knowledge with other members within the organization	Actual knowledge sharing behavior
Chiu et al. (2006)	Willingness to share knowledge in virtual community	Quantity and quality of knowledge shared in virtual community
Cummings (2004)	As information processed by individuals including ideas, facts, expertise, and judgment relevant for individual, team, and organizational performance	Intragroup and External Knowledge Sharing in Work Groups
Fathi et al. (2011)	The degree of one's favorable or positive feeling about sharing one's knowledge	Attitude towards knowledge sharing and knowledge sharing intention
Gammelgaard & Ritter (2000)	As a combination of experience, values, contextual information and expert insight that help evaluate and incorporate new experience and information	Actual knowledge sharing

Iske & Boersma (2005)	Articulated that knowledge results from the interaction of someone's insights (past experience, intuition and attitude), information and imagination (generating ideas and visualizing futures)	Q&A system
Lin (2007c)	Knowledge sharing is a social interaction culture, involving the exchange of employee knowledge, experiences, and skills through the whole department or organization	Exchange of knowledge using knowledge donating and knowledge collecting as dimensions (adapted from van den Hooff & de Ridder, 2004)
Phang & Foong (2010)	Knowledge sharing involves capturing of new knowledge (tacit and explicit) and making it available to others via four patterns of interactions	Modes of knowledge sharing (socialization, externalization, combination, internalization)
Ramayah et al. (2013)	Knowledge sharing is the exchange of knowledge between at least two parties in a reciprocal process allowing reshaping and sense-making of the knowledge in the new context	Actual knowledge sharing (exchange) behavior
Sandhu et al. (2011)	Knowledge sharing is the process where individuals mutually exchange their (implicit and explicit) knowledge and jointly create new knowledge adopted from Van den Hooff & de Ridder (2004, p. 209)	Knowledge exchange via knowledge receiving and knowledge donating as dimensions

Suppiah & Sandhu (2011)	Knowledge sharing is an act of making knowledge available to others within the organization	Actual tacit knowledge sharing behavior using four methods of sharing as dimensions, i.e. organizational communication, personal interactions, mentoring/tutoring and willingness to share knowledge freely (adapted from Yi, 2009)
Tohidinia & Mosakhani (2010)	Knowledge sharing occurs when organizational members share organization-related information, ideas, suggestions and expertise with each other	Actual knowledge sharing (exchange) behavior involving knowledge donating and knowledge collecting as dimensions

1.6. Antecedents of Knowledge Sharing Behavior

Since knowledge sharing is the critical source for sustainable organizational growth and economic performance, previous studies examine factors of the knowledge sharing. There are several qualitative reviews of the knowledge sharing literature. For example, Yahya and Goh (2002) investigated the relationship between human resource practices and knowledge management. Grossman (2007) also considered knowledge management as the emerging academic subject. Wang and Noe (2010) also suggested the comprehensive framework organizing knowledge sharing research, including organizational context, cultural characteristics, interpersonal and team characteristics, motivational factors, and individual characteristics. However, given the breadth of this literature, meta-analysis of knowledge sharing literature is rare.

Recently, Witherspoon et al. (2013) conducted a cross-disciplinary meta-analysis of knowledge sharing, which investigated the antecedents of knowledge sharing intentions and behaviors. However, their meta-analysis was lacked individual and interpersonal factors influencing on individual knowledge sharing behavior. Thus, based on the meta-analysis of Witherspoon et al. (2013) and qualitative literature reviews of knowledge sharing, this section reorganized the antecedents of knowledge sharing

identifying four areas of knowledge sharing research: individual characteristics, interpersonal characteristics, leadership characteristics, and group and organizational characteristics. Table 2 summarizes the sample studies of previous studies on antecedents of knowledge sharing.

1.6.1. Individual Characteristics

Ultimately, it is up to individuals whether to share their knowledge. Consequently, there are many studies which concentrated on individual factors as determinants of knowledge sharing, such as personality, self-efficacy, attitude, subjective norm, intention, trust, and emotions. Specifically, goal orientations (Lee et al., 2015; Swift et al., 2010), as well as personality traits (conscientiousness, openness to experience, and agreeableness) (Cabrera et al., 2006; Matzler et al., 2008; Wang & Yang, 2007) were discovered as predecessors of the knowledge sharing behavior. Additionally, exchange ideology (Lee et al., 2015; Lin, 2007), ability (Jarvenpaa & Staples, 2000), expertise (Constant et al., 1994), image (Chen et al., 2009), need for status (Park et al., 2017), and propensity to trust (Mooradian et al., 2006) have exerted influence on knowledge sharing.

Among motivational states, as applying Social Cognitive Theory, self-efficacy has been a powerful explanatory variable of knowledge sharing

(Hsu & Ju, 2007; Quigley et al., 2007). Kamdar et al. (2004) also find that different type of incentives, which individuals expect to receive, affect to the sharing decision for high self-monitors share. Moreover, several studies showed that a subjective norm and attitude exert positive effect on the share knowledge intention (Chen et al., 2009; Ryu et al., 2003). Attitudes of eagerness and willingness were used as an indicator of knowledge sharing behavior. Emotion of empathy affects individual' intention to share knowledge only via willingness. However, emotion of pride affects individual' intention to share knowledge both through willingness and eagerness. (Hoof et al., 2012).

1.6.2. Interpersonal Characteristics

In interpersonal relationships, two key antecedents or mediators of knowledge sharing are trust and justice by using social exchange theory (Lin, 2007; Organ, 1990; Robinson, 1996). Examining how trust and justice related to knowledge sharing is significant, since knowledge sharing includes expectations for reciprocity (e.g., Wu, Hsu, & Yeh, 2007). Firstly, trust increases knowledge sharing via improving willingness to document knowledge and reducing fear of losing one's unique value (Renzl et al., 2005). However, some studies have focused mixed results (Mooradian et al., 2006;

Renzl, 2008; Sondergaard, Kerr, & Clegg, 2007) and others have found a poor explanatory of knowledge sharing (Bakker et al., 2006).

Secondly, researchers focused less on the justice–knowledge sharing relationship. Few studies examined the role of justice in affecting knowledge sharing decision. Through fair treatment of employees, individuals could have high quality of social exchange relationships with a leader and organization (e.g., Rupp & Cropanzano, 2002), which can influence a cognitive state promoting positive behaviors leading to good outcomes such as organization citizenship behavior or knowledge sharing behavior. Specifically, Schepers and van den Berg (2007) found that perceptions of procedural justice fostered knowledge sharing behavior. Lin (2007a) also argued and empirically found whereas distributive and procedural justice had significant indirect effects on tacit knowledge sharing through organizational commitment, distributive justice influenced knowledge sharing via coworker trust.

1.6.3. Coworker Influences

Coworkers affect employee's behavior, since they could act as social referents for knowledge-sharing behavior within organizations (Boh & Wong, 2015). However, few researches have demonstrated the importance of coworkers in facilitating employee knowledge sharing behaviors (Boh &

Wong, 2015). Since the good social relationships were a source of support and fostered a prosocial attitude, studies have concentrated attention on the relational dimensions of coworker influence, such as strength of relations. The most of studies reveals that strong ties have stronger effect on knowledge transfer (Reagans & McEvily, 2003). For example, in a study of knowledge sharing in a German steel mill, Gross and Kluge (2014) observed the positive effect of social ties on knowledge sharing. Uzzi and Lancaster (2003) also found that embedded ties had a positive effect on knowledge sharing than more arms-length ones.

Consistent with these evidences, research has examined that the social interaction between different group members was a significant predictor of knowledge-sharing behavior (Hansen, 1999; Reagans & McEvily, 2003; Tsai, 2002). For instance, in the sample of multinational corporations in Denmark, Minbaeva et al. (2012) found that engagement in social interaction were related to a higher level of knowledge sharing. These findings are consistent with results from a study in Taiwan, prosocial commitment matters for knowledge sharing (Tseng & Kuo, 2014).

Some researchers considered coworker support as an antecedent of knowledge sharing (eg., Cabrera et al., 2006; Lee et al., 2014; Swift & Virick, 2013). With the sample of a large multinational corporation in Spain, Cabrera et al. (2006) found that coworker support had positive effect on knowledge

sharing behavior. In the sample of South Korea, Lee et al. (2014) also found that coworker support was positively associated with knowledge sharing.

1.6.4. Leadership Characteristics

Leadership was also viewed as a critical component in knowledge sharing (Søndergaard et al., 2007). Leadership is a process of influencing subordinates in a group and leading group members in pertinent directions (Certo & Certo, 2006). The leader is the one who sets and provides the incentives or best practice of for collaboration and coordination and activities. The leaders furthermore act as role-models for knowledge sharing and promote networks of knowledgeable individuals of the organization.

In hotel properties, Srivatava et al. (2006) showed that empowering leadership had powerful influence to lead both efficacy and knowledge sharing, in turn, leading to better team performance. Using the data from professional service firms in Taiwan and the United States, Chen and Barnes (2006) found that whereas transformational leadership behaviors are positively related to internal knowledge sharing, contingent reward leadership behaviors have positive effect on both internal and external knowledge sharing. As is shown above, there are strong evidences that transformational leadership can influence on knowledge sharing. However, the role of

transactional leadership is not so clear yet. For example, according to a theoretical model from Vera and Crossan (2004), good leaders clearly understand how to switch between a transactional and a transformational leadership in compliance with the context to promote knowledge sharing. Specifically, transactional leaders can facilitate the knowledge sharing, only under the specific and clear situations where role and task requirements are clearly divided or purpose and goals are clearly served. Bradshaw et al. (2015) provide the combination approach towards leadership styles to identify the most effective leadership styles in order to achieve knowledge sharing behavior. Their study revealed that overall a transformational leadership is more effective leadership style than any other leadership styles investigated. Besides, King and Marks Jr (2008) showed supervisory control as a factor to influence on contribution frequency and effort to the knowledge sharing. In the similar vein, Kim et al. (2015) showed employees under abusive leader may not wish to share their own resources, because they are high uncertainty to get positive or fair treatment from their abusive supervisors. Thus, leadership is an important factor to affect individuals' cognitive state and help the intention of sharing knowledge with others.

1.6.5. Group and Organizational Characteristics

Organizational context, predominately organizational rewards, climate and values are regarded as important environment factors increasing individual knowledge sharing behavior in organizations (Al-Alawi et al., 2007; Chen & Cheng, 2012). Many of studies acknowledge that extrinsic rewards such as higher bonus commissions, benefits and pay can support activities that are critical for knowledge sharing (Kim & Lee, 2006). However, there is no consensus agreement on the role of rewards in knowledge sharing. The positive influence of rewards on knowledge sharing is quite controversial (Zhang et al., 2010).

One stream of studies showed a significantly positive relationship between reward and knowledge sharing in organizations (Al-Alawi et al., 2007, Alam et al., 2009). For example, when employees perceive a higher level of incentives to share knowledge, they are more likely to evaluate the usefulness of the content of knowledge management system (Cabrera et al., 2006; Kulkarni et al., 2006). Using South Korea sample, Kim and Lee (2006) also found that performance-based pay system is positively associated with knowledge sharing.

Another stream of studies argued that rewards are not sufficient for knowledge sharing. There are recent studies that showed non-significant

results of rewards on employee attitudes and intentions toward knowledge sharing (Olatokun & Nwafor, 2011; Seba et al., 2012). For example, using sample of knowledge workers in the Australian film industry, Alony et al. (2007) found that individuals did not motivate by financial reward to share their knowledge. According to Lin and Joe (2012)'s study, whereas financial bonuses may increase use of technologies of knowledge sharing, they are less likely to promote sharing themselves. Bock et al. (2005) even observed the negative effect of monetary incentives on attitudes toward knowledge sharing. Huysman and de Wit (2002) suggested the short-term influence of financial rewards. During the initial phase, rewards can be useful tools to facilitate active participating in knowledge-sharing initiatives. However, rewards are not useful tools to create the culture of knowledge sharing in an organization. Besides, there are several studies showed no relationship between extrinsic rewards and knowledge sharing (Kwok & Gao, 2005; Lin, 2007b). Specifically, using sample of product development team, Chang, Yeh, and Yeh (2007) found no effects of outcome-based rewards and sufficient rewards for effort on knowledge sharing.

Organizational climate refers to common practices, shared beliefs, and value systems, which plays an essential role in affecting their perception of knowledge management (Long, 2000; Sveiby & Simons, 2002). Individuals are more likely to share knowledge under the organizational climate focusing

on trust (Kankankhalli et al., 2005; Liao 2006), innovation (Bock et al., 2005), learning (Hsu, 2006; Taylor & Wright 2004), and cooperation (Wang, 2004). Specifically, Kankanhalli et al. (2005) found that a trustful culture is more likely to help reducing the negative effect of perceived costs on sharing (Kankanhalli et al., 2005). In addition to trust, Ruppel and Harrington (2001) showed that innovative culture helped to implement intranet knowledge management system.

There are also mixed results in studies of investigating the relationship between learning culture and knowledge sharing. If the organization possesses a strong learning climate, employees are willing to share their knowledge (Taylor &Wright, 2004). Lee et al. (2006), however, showed different results, which showed non-significant relationship between knowledge sharing and a learning orientation. Lastly, Wang (2004) found that a strong innovative and cooperative climate was positively related with effective knowledge sharing, because these climates send a clear signal to employees that it is desirable for them to make networks to share and gather knowledge.

Table 2. Prior Empirical Studies on Antecedents of Knowledge Sharing Behavior

Classification	Variables	Sample Studies
Individual Characteristics	Personality traits (eg., conscientiousness, agreeableness)	Cabrera et al., 2006; Matzler et al., 2008; Mooradian et al., 2006; Wang &Yang, 2007
	Goal orientations	Lee et al., 2015; Swift et al., 2010
	Self-efficacy	Hsu & Ju, 2007; Quigley et al., 2007
	Exchange ideology	Lee et al., 2015; Lin, 2007
	Ability	Jarvenpaa & Staples, 2000
	Expertise	Constant et al., 1994
	Image	Chen et al., 2009
	Need for status	Park et al., 2017
	Propensity to trust	Mooradian et al., 2006
	Attitude and a subjective norm	Chen et al., 2009; Ryu et al., 2003
	Emotion of pride	Hoof et al., 2012
Interpersonal Characteristics	Trust	Butler, 1999; Lin, 2007; Mooradian et al., 2006; Renzl et al., 2005; Sondergaard et al., 2007
	Justice	Lin, 2007; Rupp & Cropanzano, 2002; Schepers & van den Berg, 2007

Coworker Influences	Ties	Gross & Kluge, 2014; Reagans & McEvily, 2003; Rowley et al., 2000; Uzzi, 1997; Uzzi & Lancaster, 2003
	Social interaction	Hansen, 1999; Reagans & McEvily, 2003; Tsai, 2002; Tsai & Ghoshal, 1998
	Coworker support	Cabrera et al., 2006; Lee et al., 2014; Swift & Virick, 2013
Leadership Characteristics	Empowering leadership	Srivatava et al., 2006
	Transformational and transactional leadership	Bradshaw et al., 2015; Chen& Barnes, 2006; Vera & Crossan, 2004
	Supervisory control	King & Marks Jr., 2008
	Abusive supervision	Kim et al., 2015
Group and Organizational Characteristics	Rewards	Al-Alawi et al., 2007; Bock et al., 2005; Cabrera et al., 2006; Chang et al., 2007; Huysman & de Wit, 2002; Kim & Lee, 2006; Kulkarni et al., 2006; Kwok & Gao, 2005; Nwafor, 2011; Olatokun & Seba, 2012
	Climate and culture	Chiu et al., 2006; Hsu, 2006; Kankankhalli et al., 2005; Liao 2006; Long, 2000; Ruppel & Harrington, 2001; Simons, 2002; Sveiby et al., 2004; Wang, 2004

1.7. Consequences of Knowledge Sharing Behavior

In addition to the studies mentioned in Table 3, literature in knowledge sharing has found many positive consequences such as productivity (Noaman & Fouad, 2014), organization innovation capability (Yesil & Dereli, 2013), organization effectiveness (Yang, 2007), and firm performance (Collins & Smith, 2006). However, only few studies have provided empirically clues regarding the positive relationship between knowledge sharing and performance on the individual level, such as individual performances (van Woerkom & Sanders, 2010) and individual innovative behavior (Yu et al., 2013). Specifically, with decision-making simulations, Quigley et al. (2007) examined the effects of knowledge sharing on individual performance. Van Woerkom and Sanders (2010) also investigated the effects of knowledge sharing on individual performance. Interestingly, they divided knowledge sharing behavior into two factors: asking and giving advice and openness for sharing opinion and suggestions. Their analysis showed that only the exchange of advice positively predicted individual performance. There was no effect of openness for sharing opinion and suggestions on individual performance.

Table 3. Prior Empirical Studies on Consequence of Knowledge Sharing Behavior

Outcomes	Studies	Country	Sample	Methodology	Results of outcomes
Organizational Effectiveness	Yang (2007)	Taiwan	499 individuals	Survey based questionnaire	Organizational learning (+) Organizational effectiveness (+)
Innovation	Yesil & Dereli (2013)	Turkey	150 individuals	Survey based questionnaire	Innovation capability of the organizations (+)
Performance	Collins & Smith (2006)	3 Countries	136 technology companies	Survey based questionnaire	Firm performance (+)
	Cummings (2004)	6 Countries	182 work groups	Archival data, interviews and survey	Performance in Work Groups (+)
	Du, Ai, & Ren (2007)	China	249 organizations	Survey based questionnaire	Firm Performance (+)
	Kim & Yun (2015)	South Korea	149 individuals	Survey based questionnaire	Individual performance (+)
	Quigley et al. (2007)	USA	120 undergraduates	Simulation	Individual performance (+)
	Srivastava et al. (2006)	United States	102 teams	Survey based questionnaire	Team performance (+)
	van Woerkom & Sanders (2010)	Dutch	126 teams	Survey based questionnaire	Individual performance (+)

1.8. Knowledge Sharing Behavior in South Korea

This study also reviewed knowledge sharing literature in South Korea by searching major journals in management and psychology. Many studies have investigated an antecedents and consequences of knowledge sharing using South Korea samples. This study categorized 4 dimensions of antecedents, such as individual characteristics, interpersonal characteristics, leadership characteristics, and group and organizational characteristics, and 3 dimensions of consequences, such as performance, effectiveness, and innovation, following the above review section. As noted in Table 4, studies from South Korea examined antecedents of knowledge sharing (1) for individual characteristics, such as self-efficacy, goal related variables, Big five variables, attitude, (2) for interpersonal characteristics, such as social loafing, trust, and justice, (3) for leadership characteristics, (4) for group and organizational characteristics, such as rewards and climate. Studies from South Korea have noted that knowledge sharing is positively related to, effectiveness, innovation. Table 5 summarizes the consequences of previous studies on the effects of knowledge sharing in South Korea context.

Table 4. Prior Empirical Studies on Antecedents of Knowledge Sharing Behavior in South Korea Context

Classification	Variables	Sample Studies
Individual Characteristics	Self-efficacy	Jang et al., 2014; Park et al., 2013
	Goal orientation	Hu & Chun, 2008; Kang & Kwon, 2001
	Proactive personality	Park & Chae, 2017
	Big Five Factors	Hu & Chun, 2008; Park, 2001
	Attitude	Park, 2001
Interpersonal Characteristics	Social loafing	Park & Chae 2017
	Trust	Choi, 2005; Joo et al., 2002; Joo, 2005; Jung, 1998; Kang, 2005; Kang & Park, 2004; Kim, 2003; Kim & Kim, 2009; Park & Jung, 2002; Park & Kim, 2002; Park & Moon, 2001; Park & Park, 2000
	Justice	Kim & Hong, 2013; Park, 2001; Park et al., 2011
Leadership Characteristics	Leadership	Choi et al., 2016; Han & Min, 2004; Jang, 2001; Joo, 2005; Jung, 2001; Kang, 2005; Kim, 2003; Kim & Kim, 2000; Lee, 1999; Lee et al., 2015; Lim & Kim, 2014; Park, 2016; Park & Jung, 2002; Park & Moon, 2001; Park & Park, 2000; Son et al., 2016
Group and Organizational Characteristics	Rewards	Choi, 2005; Jang, 2001; Joo, 2005; Jung, 2001; Kang, 2005; Kang & Kwon, 2001; Kim, 2003; Kim & Kim, 2000; Lee, 1999; Park et al., 2013; Park & Jung, 2000; Park & Lim, 2001; Park & Moon, 2001
	Climate	Jang, 2010; Jang et al., 2014; Kim, 2007; Kim & Kang, 2015; Kwon & Kim, 2004; Lee & Nam, 2002; Park & Han, 2014

Table 5. Prior Empirical Studies on Consequences of Knowledge Sharing Behavior in South Korea Context

Outcome	Sample Studies
Performance	Kang, 2005; Kang & Kim, 2007; Kim et al., 2005; Kim & Kwon, 2015; Lee, 2012
Effectiveness	Kwon & Lee, 2009
Innovation	Kim & Lee, 2012; Park et al., 2013

1.9. Summary in Knowledge Sharing Behavior literature

1.9.1. Extension of SET in Studying Knowledge Sharing Behavior

Researchers have been applied a wide range of theories to study knowledge sharing behavior, such as the theory of reasoned action, social exchange theory, social capital and network theories. Wand and Noe (2010) reviewed the knowledge sharing literature and found that approximately one-third of the studies used one of the above theories. Among these theories, social exchange theory is the most commonly used theoretical perspective for explaining knowledge sharing. According to the meta-analysis of 23 journal articles and five conference papers, Liang and his colleagues (2008) found the correlation between social exchange factors and knowledge sharing behaviors. Specifically, they showed a significant effect of the constructs from social exchange theory (the study coded social interaction, perceived benefit, commitment to organization, and trust, among others) on individuals' knowledge sharing behaviors.

Social exchange is defined as being a joint activity of two or more actors (Thibaut & Kelley, 1959). In the exchange of the explicit or implicit task, each individual provides benefits by exchanging their know-how and skills to help others or solve problems that individual cannot get alone

(Emerson, 1972; Homans, 1961; Thibaut & Kelley, 1959). Knowledge sharing has long been understood to be a form of social exchange (Bock et al., 2005; Cabrera & Cabrera, 2002; Wang & Noe, 2010). Knowledge exchange is a social process (Bock & Kim, 2002; Levin & Cross, 2004) and any system involving social exchange can be considered as a social dilemma (Olson, 1971); this provides insight for extending the social exchange perspective to the examination of knowledge sharing by combining the theory of social dilemmas and the social exchange theory. Specifically, this cost-benefit dilemma may be useful for investigating the factors that affect the different perceptions of sharing knowledge. These differing perceptions may hold important implications for strategies in dealing with the conflict between cooperation and competitiveness. Thus, to solve the knowledge sharing dilemma, this study provides factors that have a critical role in assessing the estimation of cost, benefit, and outcomes incurred in a cooperative social exchange processes.

1.9.2. The Influence of Coworker in Studying Knowledge Sharing Behavior

Due to the importance of knowledge sharing for organizations, many studies have examined the components that facilitate knowledge sharing. As

noted in Table 2, among social influence research, most studies have examined leadership characteristics as key antecedents that predict employee' knowledge sharing behaviors. Leader influence is obvious, because leaders are likely to possess power and influence over employees. When leaders are supportive, employees are more likely to exhibit risky and challenging behaviors, such as those involving knowledge sharing. However, within a workplace, there are also exchanges that occur between an individual and their coworkers. Surprisingly, previous research on knowledge sharing has not paid much attention to how coworkers could promote knowledge sharing behavior.

Since an individual's knowledge sharing is a social behavior occurring from other people, it is susceptible to expose to social influences. To shape reality and form perceptions, attitudes, and behaviors, people use information from their immediate social environment, which is a significant source of information (Salancik & Pfeffer, 1978). Felin and Hesterly (2007), for example, explain that understanding organizational-level phenomena is based on the individual and interpersonal levels of explanatory mechanisms.

Coworkers are one of important key members of employees' social exchange networks (Blau, 1964). Coworkers are one of the important sources of the social environment at work, which can actually define the environment (Chiaburu & Harrison, 2008). According to Mayer' definition (1995),

coworkers have relatively equal power or levels of authority, who are members of an organization. Individuals interact with coworkers during the workday. Because many organizations have adopted team-based and flatter organizational structures, the importance of coworkers as a social influence is also increasing (Chiaburu & Harrison, 2008). This movement results in more frequent and more important interactions in workplace contexts with reduced status and hierarchy differences (Cascio, 1995; Ho & Levesque, 2005; Takeuchi et al., 2011). Through the communication of individual learning among coworkers, organizational knowledge is created (Senge, 1990). In line with this research attention, thus, it would be beneficial to investigate coworker influence as a critical antecedent factor in exchange relationships and behaviors.

1.9.3. Dyadic Level Studies in Knowledge Sharing Behavior Literature

Surprisingly, researchers has investigated the support for knowledge sharing when they investigated the linkage between coworker support and knowledge sharing (Cabrera et al., 2006; Kulkarni, Ravindran, & Freeze, 2006-7; Lu et al., 2006). Few researchers focused on support for the person providing the knowledge (Swift et al., 2013). As the importance of

interpersonal exchange relationships increases in the modern organizational environment (Flynn et al., 2006), some researchers have proven the effects of a dyadic relationship (Anderson & Williams, 1996; Scott & Judge, 2009). Under the realm of knowledge sharing research, studies have investigated the dyadic effects on knowledge sharing. For instance, Hinds et al. (2001) argue that the difference between the expertise of the giver and that of the receiver hinders the effectiveness of knowledge transfer because the giver fails to think the viewpoints of the receiver. A study by Levin and Cross (2004) revealed that having strong ties with a focal coworker leads to the effective acquisition of useful knowledge through a trust mediated mechanism.

Research on the multifoci perspective of social exchange provides a good example of investigating employee-coworker dyadic levels (Lavelle et al., 2007). This view explained that individuals do not perceive organization as being "a monolithic, undifferentiated entity (Reichers, 1985, p. 469)," but instead "conceptualize their work experience in a multifaceted way, differentiating between exchange relationship partners, and beneficiaries of citizenship behaviors (Lavelle et al., 2007, p. 851)." This multifoci perspective of social exchange argued that the actions of coworkers have the bigger influence on the perceptions of coworkers and the resulting beneficial outcomes directed toward coworkers. This approach allows investigating whether the behavior of the recipient influences the reaction of the giver. Thus,

to capture the coworker influence, future research needs to apply a relational approach to investigate coworker influence at the dyadic level (i.e., between a focal employee and a closely related coworker).

2. Social Support

This section thoroughly reviews social support literature, including the background, definitions, antecedents, and outcomes of dimensions of social support, such as the dimensions of the sources (supervisor and coworker support) and types of content (person-focused and task-focused support). Limitations and recommendations of social support literature are also presented.

2.1. Definition of Social Support

The concept of workplace social support is originated from the broader social support literature. Social support studies began in the mid 1970s with researches on how social support promote well-being or increase resistance to health problems (Cohen, Gottlieb, & Underwood, 2000). Since social support is a broad construct including many specific elements of an individual's social world, many definitions of social support have been suggested (e.g., Bahniuk, Dobos, & Hill, 1990; Beehr, 1985; LaRocco et al., 1980; Mclntosh, 1991). Shumaker and Brownell (1984), for instance, defined social support as "exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the well-

being of the recipient (p. 13)". Cobb (1976) refers to social support as "an individuals' belief is cared about as part of a social network of mutual obligation". Focusing on the subjective-objective dimension, Lin (1986) conceptualized social support as "perceived or actual instrumental and/or expressive provisions supplied by the community, social networks, and confiding partners" (p. 18).

Researchers have characterized social support as a "meta-construct" (Heller & Swindle, 1983; Vaux, Riedel, & Stewart, 1987). Social support is composed of several sub-constructs. Reviews of this literature (Beehr, 1985; Cohen & Wills, 1985; Fenlason & Beehr, 1994; House, 1981) suggest that contents (e.g. person-focused and task-focused) and source (e.g. organizations, supervisors, or coworkers) are important dimensions of social support (Cohen & Wills, 1985; House, 1981). Three major review papers also identify other aspects of social support. Whereas Thoits (1982) concluded that social support can be identified in terms of its function or structure, Cohen and Wills (1985) suggested that it can be measured by the network structure or the function of social support. House and Kahn (1985) defied three important properties of social support, such as the existence or quantity of social relationships, the functional content of relationships, and the structure of the relationships. Besides, Hill et al. (1989) divided workplace social support into four types. Task support includes sharing work ideas and assignments. Collegial social

support involves exchanging personal problems, friendships, and confidences. Coaching focuses on teaching professional and organizational goals and rules. However, this study focused on source of support and contents of support, which have been consistently identified and empirical support for the relevance of two dimensions of support for explaining its effects.

2.1.1. Sources of Social Support

Researchers have argued the significance of interactions among key workplace actors. Regarding sources of social support providers, it has been common to divide them into two groups in the workplace: the employee's supervisor and the employee's coworkers (e.g. Caplan et al., 1975; French et al., 1974; Ganster et al., 1986). Multifocal perspectives of social exchange have focused on the significance of varied sources of support. This approach suggested that employees differentiate discrete exchange relationships from differing organizational targets (Lavelle et al., 2007). Supervisors in an organization are likely to have the most significant effects on the attitude and behaviors of subordinates when compared with other entities (e.g., coworkers) considering that supervisors have the authority and positional powers to influence subordinates' day-to-day lives (Barsade, 2002; Yukl & Mahsud, 2010). For this reasons, many studies consider how supervisors' attitudes and

behaviors influence those of their direct subordinates (King & Marks Jr., 2008; Liao, 2008). In addition to this, supervisor support has been attracted special attention from subordinates.

Supervisors represent only one side of individuals' social influence at workplace and coworkers represent another important yet often overlooked social environment (Chiaburu & Harrison, 2008; Ho & Levesque, 2005). In contemporary organizations, there are the increasing autonomy and responsibilities given to coworkers, which increase exchange relationships among interdependent coworkers. These changes make knowledge and resources to disperse throughout the organization, informal networks replace authority lines (Burt, 2005). Hence, coworkers may have influence on shaping and implementing the employee's objectives and values. They also contribute to employees' outcomes. According to the meta-analysis of Ng and Sorensen (2008), perceived coworker support was associated with work effectiveness such as task performance and organizational citizenship behavior. They argued that researchers should reconsider the neglect role of coworkers as a source of social influence.

2.1.2. Dimensions of Social Support

Fleishman and colleagues (1991) divided social support into two dimensions: task-focused social support, which focus on facilitate task accomplishment and person-focused social support, which focus on interaction and/or development. This dichotomy has occurred in the literature on interpersonal behaviors. Interpersonal behaviors can be separated into two components: (1) person-focused interpersonal behaviors, which target an individual's physical or psychological well-being; and (2) task-focused interpersonal behaviors, which target another person's work performance. This distinction has previously been made in the context of interpersonal citizenship behaviors, where these behaviors are differentiated into person-focused behaviors that facilitate the "fabric of social relations" in the workplace and task-focused ones that directly support colleagues' task performance (Settoon & Mossholder, 2002, p. 263).

Consistent with this notion, researchers have segregated supportive behaviors into two factors, namely person-focused support and task-focused support. Researcher such as Beehr et al. (2000) defined that emotional support is person-focused, characterized as friendship and personal concern. Thoits (1982) defined emotional support as person-focused construct coming through affection, sympathy and understanding, acceptance, and esteem from others.

This person-focused support is grounded on the actions of caring and listening sympathetically to others, such as smile, a hug, and gently patting another's arm or back to giving advice, encouragement, and consolation (Mancini & Blieszner, 1992). It involves expressions and behaviors that are interpersonally intimate and emotionally positive.

Instrumental support is task-focused, characterized as helping employees solve work-related problems and getting specific tasks or objectives accomplished (Beehr et al., 2000; Fenlason & Beehr, 1994; Swanson & Power, 2001). Examples of this support range from rendering tangible assistance included information, professional advice, expertise, political advocacy, supplies, and equipment. To enhance individuals' right functioning in organizational life, task-focused support is an important asset.

2.2. Antecedents of Social Support

Despite its important role in occupational stress literature, little research has been examined on potential antecedents of workplace social support. Three studies showed relationships between personality and social support. Specifically, in the sample of 296 American nurses, Zellars and Perrewe (2001) investigated that personality traits (extraversion, agreeableness, and neuroticism) mediated of the link between three levels of

social support (supervisory, peer, and personal) and burnout. In nonprobability convenience sample of 204 American, McCann et al. (1997) found that feelings of time pressure at work were not associated with general perceived availability of social support and hostility was related to receiving less support. Bowling et al. (2004) revealed that extraversion and agreeableness were positively associated with receiving and giving non-job and positive work-related social support. On the other hands, extraversion and neuroticism were unrelated to the receipt and giving of negative job-related social support. In addition, in a longitudinal study, Marcelissen et al. (1988) found that depression in employees actually leads to the receipt of less social support from coworkers. With the sample of 21,419 employees in 25 Belgian organizations, Pelfrene et al. (2001) examined the job demand control support model over a 4-year period. The results found strong correlations between decision latitude and supervisor social support ($r = .35$, $p < .001$) and between decision latitude and coworker support ($r = .28$, $p < .001$). In the sample of 1,721 nurses across 15 hospitals, Tummers et al. (2003) found that whereas high level decision making authority has significant effect on high levels of social support, high level individual complexity has significant effect on low levels of social support. In the sample of 309 first-year students in a public university, Zhu et al. (2013) found the social network structure (closeness,

size, upper reachability, and proportion of new contacts) was related to social support.

Table 6. Consequences of Social Support

		Ng & Sorensen (2008) Meta		Chiaburu & Harrison (2008) Meta			
Variables		Source of social support		Source of social support		Dimension of coworker support	
		Coworker support	Supervisor support	Coworker support	Supervisor support	Person-focused coworker support	Task-focused coworker support
Role perceptions	Role ambiguity			—	—		
	Role conflict			—	—		
	Role overload			—	—		
Work attitudes	Job satisfaction	+	+	+	+	+	+
	Job involvement			+	N/A	+	+
	Organizational commitment	+	+	+	+	+	+
Withdrawal	Effort reduction			—	N/A		
	Absenteeism			N/A	N/A		
	Intention to quit	—	—	—	—		
	Turnover			—	—		
Effectiveness (Interpersonal)	CWB-I						
	OCB-I					+	+
Effectiveness (Organizational)	CWB-O						
	OCB-O			N/A	+		
	Focal performance			+	+	+	+

2.3. Consequences of Social Support

2.3.1. Health-related Outcomes

Because of the root of social support, much attention has been given to the health outcomes. For example, Halbesleben (2006) provided a meta-analysis of the sources of social support (overall, work support, non-work support, coworker, supervisor, family, and friends) and 3 burnout types (emotional exhaustion, depersonalization, and personal accomplishment). The meta-analysis found non-significant differences in the relationship between overall social support and the three burnout types. Specifically, the results from the overall effect of support on burnout showed that the relationships were slightly stronger for exhaustion (ρ = -.25) than depersonalization (ρ = -.22) and personal accomplishment (ρ = .23). To compare supervisor and coworker support, supervisor support (exhaustion, ρ =-.28) was more strongly related to exhaustion than coworker support (exhaustion, ρ =-.23). Supervisor support (ρ =-.24) was similarly related to depersonalization with coworker support (ρ =-.23), while coworker support (ρ =.24) was equally associated with personal accomplishment. However, the results from the source of the social support (work vs. non-work) as a moderator showed that different sources of social support are differentially associated with different burnout types. Whereas work-related sources of social support was more strongly

associated with exhaustion than depersonalization or personal accomplishment, non-work sources of social support would be more strongly related to depersonalization and personal accomplishment than exhaustion. Specifically, work-related support was more strongly associated with exhaustion (ρ = -.26) than depersonalization (ρ =-.19) and personal accomplishment (ρ = .19). On the other hand, non-work support was more strongly associated with depersonalization (ρ = -.12) and personal accomplishment (ρ = .15) than exhaustion (ρ =- .10).

2.3.2. Work-related Outcomes

Previous studies have showed the consistent pattern between social support and outcomes at workplace, such as job satisfaction, involvement, intent to remain on the job and effectiveness (Abdel-Halim, 1982; Larocco et al., 1980; Seers et al., 1983). In a meta-analysis examining source of support from supervisors and coworkers, Ng and Sorensen (2008) found that a mean, sample size weighted, corrected correlation of .52 between supervisor support and job satisfaction, a correlation of .48 between affective commitment and supervisor support, and a correlation of -.36 between turnover intention and supervisor support (see Table 6). In the same meta-analysis, the mean, sample size weighted, corrected correlation of .37 between supervisor support and job

satisfaction, a correlation of .28 between affective commitment and supervisor support, and a correlation of -.19 between turnover intention and supervisor support.

Consistent with this meta-analysis, Chiaburu and Harrison (2008) also conducted meta-analysis and suggested the unique influence of coworker support. They demonstrated that coworker support matters when leader support are partialed or accounted for and considered simultaneously. Specifically, coworker support have more positive effects than leader support on job involvement (ρ = .33 and ρ = .06 for coworker support and leader support, respectively) and could play an important role of the withdrawal-related criteria (e.g., ρ = -.22 vs. ρ = -.04 for effort reduction, and ρ = -.08 vs. ρ = -.01 for absenteeism, coworker and leader support, respectively). This meta study showed that task-focused coworker support have a stronger influence on outcomes such as OCB-I and task performance than person-focused coworker support. Correlations of person-focused versus task focused support were ρ = .40 versus .28 for job satisfaction; ρ = .32 versus .09 for job involvement; and ρ = .41 versus .24 for organizational commitment. They also found stronger linkages between task-focused coworker support and OCB-I (ρ = .28) and task performance (ρ = .37) than between person-focused coworker support and OCB-I (ρ = .17 and .12, respectively). However, the relationship

between social support and knowledge sharing behavior is not examined in both meta studies.

2.3.3. Knowledge Sharing as an Outcome of Social Support

Few studies have been shown to be positively related to social support and the willingness to share knowledge or the actual behavior of sharing knowledge. Table 7 shows the empirical studies investigating the relationship between social support and knowledge sharing behavior in one framework. For example, with MBA students' sample, Lu and colleagues (2006) found an indirect effect on between managers' perceptions of coworker collegiality and their knowledge sharing. With MBA students sample, Kulkarni and colleagues (2006) suggested that perceived usefulness of knowledge sharing strengths user satisfaction, thus, results in knowledge use. Organizations can increase perceived usefulness of knowledge sharing by considering its determinants of supervisor and coworker support.

Table 7. Prior Empirical Studies on Knowledge Sharing Behavior as an Outcome of Social Support

Studies	Predictor	Dependent Variable	Moderator or Mediator	Results of Outcomes
Bordia et al. (2006)	-Interpersonal context (Direct contact between 2 employees)	-Knowledge sharing intention	(Moderator) -Evaluation apprehension	-Main effect: (+) supported -Moderating effect: (-) supported
Cabreba et al. (2006)	-Supervisor support -Coworker support	-Knowledge seeking -Knowledge providing		-(+) Supported
Chiaburu et al. (2010)	-Perceived organizational support -Supervisor support	-Training knowledge transfer	(Mediator) -Training self-efficacy -Learning goal orientation -Motivation to transfer	-Main effect: (+) supported -Mediating effect: (+) all paths supported
Connelly (2003)	-Organizational support	-Knowledge sharing culture		-(+) Supported
King & Marks (2008)	- Supervisory control -Organizational support	-Knowledge frequency -Sharing effort		-(+) supported

Lu et al. (2006)	-Coworker collegiality - Organizational support	-Knowledge sharing	(Mediator) -Greed -Self-efficacy	-Main effect: not supported -Mediating effect: (-) supported mediating effects of greed -Mediating effect: (+) supported mediating effects of self-efficacy
Kudisch et al. (2006)	-Top management support -Coworker support	-Desire to provide upward feedback	(Mediator) -Perceived usefulness of knowledge	-Main effect: (+) supported -Mediating effect: (+) supported in only coworker support
Kulkarniet et al. (2006)	-Supervisor support -Coworker support	-Knowledge use	(Mediator) -Perceived usefulness of Knowledge	-Main effect: (+) supported -Mediating effect: (+) supported
Lavelle et al. (2007)	-Workgroup support -Supervisor support -Organizational support	-OCB to workgroup -OCB to supervisor -OCB to organization		-(+) Supported
Lee et al. (2015)	-Coworker support -Exchange ideology -Learning orientation	-Knowledge sharing	(Interaction effects)	-Main effect: (+) supported only in coworker support and learning orientation -Interaction effect: (+) supported in coworker support X Exchange ideology -Interaction effect: (-) supported in coworker support X Learning orientation

Lin (2007)	-Top management support	-Firm innovation capability	(Mediator) -Knowledge sharing process	-Main effect: (+) supported -Mediating effect: (+) supported
Muneer et al. (2014)	- Perceived organizational Support -Organizational trust	-Knowledge sharing behavior	(Mediator) -Organizational commitment	-(+) supported
Swift & Virick (2013)	-Coworker support -Organizational support	-Provider knowledge sharing	(Moderator) -Provider knowledge tacitness	-Main effect: (+) supported only in coworker support -Moderating effect: (+) supported in only coworker support
Wickramasinghe & Widyaratne (2012)	-Interpersonal trust -Team leader support -Rewards -Work group communication -Personal interactions	-Knowledge sharing		-(+) all supported without team leader support

2.4. Summary in Social Support Literature

2.4.1. The Direct Role of Social Support on Outcomes

Most studies on social support have long considered coworker resources as buffers of the negative effects of stress on outcomes (Sloan, 2012). For example, Kim et al. (2015) demonstrated this stress-buffering hypothesis that supportive coworkers moderate the impact of unfair treatment by a supervisor on knowledge sharing behavior. When individuals are under abusive supervisors, they perceive negative treatment from supervisors. This negative perception may affect to employees to feel a sense of obligation toward supportive coworkers. However, few studies have found that social support has strong independent, primary effects on subjective outcomes (Frone et al., 1997; Parasuraman et al., 1991). Following the recognition of the critical role played by coworkers in the focal employee's outcomes (Kahn et al., 1964; Schneider, 1987), some researchers have investigated the direct effect of coworker support on the focal employee's outcomes across multiple research domains. For example, studies on social exchange processes have examined that effective exchange relationships with members promote individual task performance and creativity (Liao et al., 2010); social network researches have revealed that employees show more interpersonal organizational citizenship behavior toward coworkers with strong friendship

ties (Bowler & Brass, 2006). Taken together, these findings showed a strong evidence of the coworker influence on employee work outcomes. Thus, this study considers coworker support, such as social support, as a direct contributor to ultimate outcomes rather than simply as a moderator.

2.4.2. Different Effects of Dimensions of Social Support

Because of the meta-construct of social support (Vaux, 1988), researchers have studied different dimensions of social support. The distinction between the dimensions of support is not, however, without problems. Beehr et al. (2000) suggested that it is important to differentiate between two dimensions of support: person-focused (emotional support) and task-focused support (instrumental support). However, this distinction has not been clearly made nor has it been capitalized upon in prior social support research. In particular, empirical research suggests that the two forms of support are strongly inter-correlated, particularly when they stem from the same source or supportive person (Fenlason & Beehr, 1994; Sarason, Shearin, Pierce, & Sarason, 1987; Wills & Shinar, 2000). Research often combines them into one global measure. For example, Fenlason and Beehr (1994) also observed a high correlation that person-focused supervisor support correlated to the extent of .78 with the task-focused supervisor support and that person-

focused coworker support correlated to the extent of .65 with task-focused coworker support. A meta-analysis focusing on work situations found a stronger relationship between person-focused support (labeled “nontangible”) and all types of strains and stress outcomes (Viswesvaran et al., 1999). Thus, more researches are needed to study the different effects of the two dimensions of social support.

2.4.3. The Role of Coworker Support

Due to the hierarchical power and position, previous researches emphasized supervisor support as more valuable and stable resources compared to coworker support. The role of coworker support was overlooked. However, scholars recently have demonstrated that coworker support is a significant aspect of employees’ work experience and outcomes (Chiaburu & Harrison, 2008). For example, the meta-analysis of Chiaburu and Harrison (2008) also provided evidence of the importance and uniqueness of coworkers’ effects in organizations. These results also showed that coworker support matters for some outcomes more than others. Thus, further studies are needed to investigate the role of coworker support.

2.4.4. Outcomes of Social Support

A great deal of studies has found the positive linkage between social support and mental health. That is because of the birth background of social support, which began with studies on how social ties influence on physical and mental health (Gottlieb, 1981). As shown in table 6, the consequences of social support are highly related to all types of strains or stress outcomes. Work-related outcomes are highly focused on the work attitudes such as job commitment and satisfaction. Besides, few studies investigated effectiveness of social support in workplace such as OCB-O and focal performance. Thus, it needs to understand various outcomes rather than stress related ones, such as knowledge sharing.

As shown to the table 7, few studies have been shown to be positively related with social support and the willingness to share knowledge or the actual behavior of sharing knowledge. However, only two studies thoroughly investigated the influence of coworker support on knowledge sharing with moderating variables. Swift and Virick (2013) provided that perceived coworker support has a strong relationship with provider knowledge sharing but, perceived organizational support does not have a significant relationship. Also their study showed the moderating role of knowledge tacitness, which knowledge tacitness moderates the relationship between perceived coworker

support and knowledge sharing. The study of Lee and colleagues (2015) provided that whereas both coworker support and learning orientation are positively related with knowledge sharing, exchange ideology is negatively associated with knowledge sharing. They also found the moderating effects of individual's characteristics; the level of knowledge sharing depends on each individual's characteristics under low level of coworker support. However, employees showed high level of knowledge sharing irrespective of their individual characteristics under high level of coworker support. Thus, more research is needed to understand the role of coworker support such as the various outcomes and boundary conditions underlying the observed relationships found in the literature.

Chapter 3. Hypothesis Development

This chapter demonstrates the theoretical model that links coworker support as antecedent of knowledge sharing behavior and the moderating factors that strengthen the primary effects. The first part of this chapter depicts the proposed theoretical model. The next section presents the research hypotheses, including (1) the relationship between person-focused and task-focused coworker support and knowledge sharing behavior and (2) the moderating effects that may strengthen the cost/benefit calculation of reinvesting in perceived coworker support resources by sharing their knowledge.

1. Conceptual Framework

Based on prior literature reviews and my own review of the literature regarding workplace social support and knowledge sharing behavior, this study first selects two dimensions of coworker support as antecedents of approaching the knowledge sharing dilemma. Subsequently, to understand workplace coworker support in depth, this study introduces the potential moderators that identify, and provide detailed understanding of, contexts that makes the main relationship stronger. To draw the hypotheses, this study

adapted social exchange theory, COR theory, the target similarity framework, and arousal stress theory.

1.1. Main Effects of Coworker Support

The target similarity framework (Lavelle et al., 2007) explains that the quality of employees' social exchange relationship with a specific entity influence on the employees' behaviors targeted at that entity. The coworker becomes a specific target, which motivates an employee to engage in attitudes and behaviors that are favorable to the target. For instance, individual's motivation to share his or her knowledge with coworkers may depend on the immediate target beneficiary of knowledge sharing behavior. Employees' desire to reciprocate to the positive actions of their coworker affects the real actions of knowledge sharing. Extending this reasoning to an employee-coworker dyadic relationship, this study draws on the premise of developing a model of social support by invoking tenets from COR theory (Hobfoll, 2001) and social exchange (Blau, 1964) literature. In particular, this study suggests that employee who perceives that his/her coworker cares (person-focused coworker support) and has informational help to overcome task problems (task-related coworker support) reciprocates into sharing knowledge that benefits his/her coworker.

1.2. Moderating Effects of Stressors

Based on the target similarity model (Lavelle et al., 2007), this study introduces the potential boundary conditions that explain the circumstances under which the two dimensions of coworker support are associated with providing knowledge sharing behavior. Specifically, this study expects that whereas person-related stressors from different sources such as the supervisor and the family strengthen the positive relationship between person-focused coworker support and knowledge sharing, task-related stressors strengthen the positive relationship between task-focused coworker support and knowledge sharing.

The target similarity model (Lavelle et al., 2007) argues that relationships are stronger when constructs are matched, such as when they have similar targets and foci. That model thus provides a conceptual rationale for matching person-related stressors to person-focused coworker support and task-related stressors to task-focused coworker support to predict knowledge sharing behavior because these are matched constructs. To apply this theory, this study identifies two main groups of stressors as moderators to make the primary effects stronger (Matthews, Davies, Westerman, & Stammers, 2000): first, stressors due to a person, which include two different sources, the leader and the family; and second, stressors stemming from the different features of

the task itself, such as task complexity and task ambiguity. In other words, person-focused coworker support and person-related stressors are interpersonal constructs that focus on other individuals such as supervisors, and families. In contrast, task-focused coworker support and task-related stressors focus on the tasks of individuals. Person-focused coworker support represents the coworker's real actions of caring or listening sympathetically to others; thus, it focuses on other individuals. Task-related coworker support represents the coworker's actions in the form of the provision of work-related information and feedback, thereby focusing on the tasks. Next, this study proposes that the two person-related stressors-an abusive supervision and a work-family conflict- have special relevance to person-focused coworker support because these constructs focus on interpersonal relationships. In contrast, the two task-related stressors (task complexity and task ambiguity) focus on the conditions and quality of the employee's tasks and have special relevance to task-focused coworker support because both focus on the task. In short, on basis of the target similarity model (Lavelle et al., 2007), this study expects that person-related stressors, such as abusive supervision and work-family conflict, moderate the relationship between person-focused coworker support and knowledge sharing behavior, whereas task-focused stressor, such as task complexity and task ambiguity, moderate the relationship between

task-focused coworker support and knowledge sharing behavior. Figure 1 depicts the conceptual model of this study.

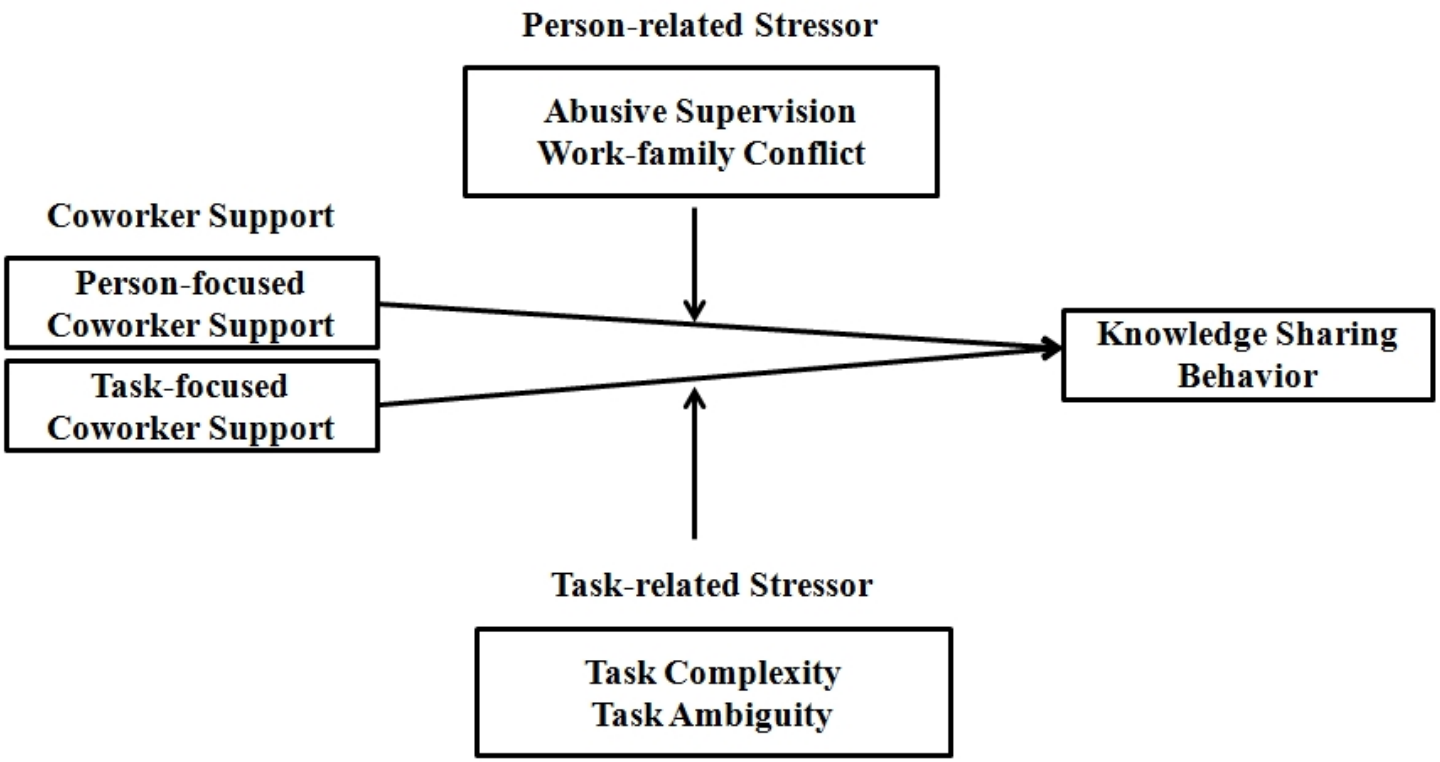


Figure 1. Conceptual Model

2. Hypothesis Development

2.1. Knowledge Sharing Dilemma

Knowledge sharing has long been understood to be a form of social exchange, with people exchanging their know-how and skills (Bock et al., 2005; Cabrera & Cabrera, 2002; Wang & Noe, 2010). Knowledge exchange is a social process, which can cause a social dilemma (Alavi & Leidner, 2001; Bock & Kim, 2002; Levin & Cross, 2004). This social dilemma refers to situations when each member in group must decide whether to provide a public good in order to cooperate with others (Olson, 1971).

Knowledge sharing is a fragile process that poses a social dilemma for actors and makes exchange inherently risky and potentially unstable (Connolly & Thorn, 1990). The success of knowledge sharing systems relies on users' willingness to contribute resources rather than simply consuming them. Knowledge sharing considers as a duality of interests between the individual and the others (Cabrera & Cabrera, 2002). An individual could add knowledge to a system that carries some cost but does not bring any additional benefits. The payoff structure of a social dilemma is caused by two different factors. The one is the cost that a person has to pay for contributing, which consists of the effort and the time required for making the knowledge

available to another person. Knowledge sharing also includes the potential loss of relative power or advantage. Another is the gain what a person acquires from such a contribution, such as the obligation for others to reciprocate, heightened self-esteem. Knowledge sharing can affect to increased self-efficacy, personal identification with coworkers, reputation, and enjoyment in helping others (e.g. Bock & Kim, 2002; Bock et al., 2005; Cabrera & Cabrera, 2002; Kankanhalli et al., 2005; Wasko & Faraj, 2000). However, an individual could produce value for another by sharing their knowledge, but receive nothing in return. For example, when the knowledge (the public good) is available to all employees, people may be motivated to seek a "free ride". Free rider wants to gain benefits from shared knowledge contributing to the knowledge management system. In short, the other person has the opportunity to receive something for nothing, and there is a temptation to pursue self-interest and not to reciprocate.

In sum, theory and research suggest that individual knowledge sharing can be presented as a public good dilemma. When a certain decision reflects a social dilemma like knowledge sharing, information from the social context is likely to play a role in affecting the choice of whether to engage in risky behaviors (Dutton et al., 1997). Employees adjust their behaviors and attitudes on the basis of the behaviors and attitudes of their coworker (Salancik & Pfeffer, 1978). With the dynamic nature of personal resources (Bowling et al.,

2004), coworker has specific impacts on the provision of that enables his/her coworker to successfully achieve the goals in the workplace. Accordingly, coworkers' supportive behavior may affect to have different perceptions of sharing knowledge and these differing perceptions may hold important implications for their strategies in dealing with the cost/benefit calculation of the knowledge sharing dilemma.

2.2. Coworker Support

Recent research has defined resources as "anything perceived by the individual to help and attain his or her goals" (Halbesleben et al., 2014). There is growing evidence of coworker support being a critical resource (Halbesleben et al., 2014; Lee & Ashforth, 1996; Xanthopoulou et al., 2009). Fisher (1985) conceptualized coworker support as "the number and quality of friendships or caring relationships which provide either emotional reassurance, needed information, or instrumental aid in dealing with stressful situations" (p. 40). It may be critical to distinguish between the different aspects of coworker support. Beehr et al. (2000) suggested that differentiating the different aspects of coworker support is important and distinguished coworker support, such as person-focused support (emotional support) and task-focused support (instrumental support). Whereas emotional support is person-focused, instrumental support is task-focused. Person-focused support includes

friendship and personal concern. By contrast, Task-focused support involves helping in order to get work requirements or resolve work-related problems (Beehr et al., 2000).

The two dimensions of coworker support are powerful resources that serve as a mechanism for developing additional resources for an individual to meet their goals (Chen et al., 2009). Hobfoll (1988) suggested an important role of social support, which can broaden one's pool of available resources. In particular, the coworker support are resources in the COR framework. Specifically, coworker support can be invested in order to receive future resources (e.g., a coworker helping solving work-related problems would free up time to work on other activities). Coworker support fits the work context (e.g., a coworker helping solving work-related problems fits the demands one is experiencing at work) (Halbesleben, 2006). In light of the theoretical importance of coworker support, this study proposes that these powerful resources can provide a useful prediction for criterion of interest by explaining how people behave when faced with dilemmatic situations.

2.3. Coworker Support and COR Theory

The COR theory has specific influences for the linkage between social support and knowledge sharing behavior. Hobfoll conceived COR as a

general motivation theory that is based on the notion of resources, which he defined as those objects, states, and characteristics that are of value to employees (Hobfoll, 1988). The model of conservation of resources goes beyond Lazarus and Folkman's (1984) coping model in that it inherently states what individuals do when confronted with stress. According to Hobfoll (1988, 1989), there are two tenets for understanding how individuals differently behave in react to individual resources. First, when individuals confronted with stress and anxiety, they are expected by the theory to achieve minimizing net loss of resources (termed primacy of resource loss). Second, when not currently confronted with stressors, individuals look for increasing resources by investing current resources (termed resource investment). COR theory explains that individuals actively defend their current resources and look for ways to gain new resources (Hobfoll, 1988, 1989). Researchers have less focused on the resource investment tenets of COR theory. According to COR theory, individuals invest their current resources to maximize their future returns. Similar with this logic, individuals often reinvest their work resources in the workplace (Hobfoll, 2001). Individuals are highly motivated to continually gain additional resources; in turn, they strategically try to reinvest resources (Hobfoll, 2001). When individuals gain more personal resources, they have more resources to strategically reinvest for future returns on those investments, such as by sharing their knowledge.

To apply this logic to social support, those resources can be reinvested where resources can be best utilized (Hobfoll, 2001). When employees perceive support from coworker, reinvesting into that specific coworker could be the best strategy for the future gains. The targeted coworker has a positive tendency to be willing to provide support even in the future (Blau, 1964; Halbesleben & Bowler, 2007). Therefore, those with excess work resources (e.g., those high in coworker person-focused or task-focused support) are likely to reinvest those resources back into coworker (Halbesleben & Wheeler, 2008) by doing or performing beneficial behaviors to coworker (Saks, 2006; Salanova, Agut, & Peiro´, 2005). Thus, this study contends that as individual gains person-focused and task-focused coworker support, he/she becomes better equipped to invest in and provides additional resources to his/her coworker.

2.4. Reciprocity and Target Similarity Theory

Reciprocity perceptions can explain the reasons of investment decisions. Social exchange theorists (Homans, 1974) have suggested that individuals have tendency to maximize gains and minimize costs in social realtionship. In this way, people tend to avoid “contribution costs”-investing time and effort or, in some cases, losing their own knowledge lead- but enjoy

all the benefit from using the others' contributions. The norm of reciprocity is the basis of the social exchange theory (Blau, 1964; Eisenberger et al., 1986). One individual can engage in beneficial actions targeted at another party, which creates an implicit obligation for the other party (Cropanzano & Mitchell, 2005). These obligations could result in beneficial behaviors to the initiating individual in the future. For example, employees trade dedications and efforts to their teams or organization for such both tangible incentives such as benefits and pay and intangible benefits such as self-esteem, approval, and caring. Individuals who feel respected reciprocate with the same amount of respect in turn. Accordingly, reciprocity perceptions make individuals to see reward in sharing their knowledge or to believe their efforts involve beneficial reinvention of their knowledge.

The target similarity framework can explain the directions of investment decisions. Based on the social exchange theory, Lavelle and his colleagues (2007) developed a target-similarity framework, which suggest social exchange relationships can be directed toward distinct social entities. According to the target similarity framework (Lavelle et al., 2007), individuals differentiate between social exchange relationship entities and the intended recipients of their behaviors. Specifically, individuals act beneficial behaviors to targeted entity, which has positive social exchange relationship. The multifoci approach has received attention in the literature on

organizational citizenship behavior (OCB: eg., Lepine, Erez, & Johnson, 2002; Williams & Anderson, 1991). For instance, the individually-directed citizenship behaviors (OCBI) or helping dimension has been suggested to benefit the supervisor (Masterson, Lewis, Goldman, & Taylor, 2000), whereas the organizationally-directed citizenships (OCBO) or voice dimension may benefit the organization (Tsui, Pearce, Porter, & Tripoli, 1997). Drawing on this framework, coworker becomes a specific entity that facilitates an individual to engage in behaviors that are favorable for the entity. Specifically, an individual can identify the beneficial behavior of his/her coworker and experience a stronger obligation.

Based on this norm of reciprocity and the target similarity theory, employees who are satisfied with coworker support (eg., person-focused coworker support, such as showing affection, sympathy and understanding, acceptance, and esteem from others, or task-focused coworker support, such as practical assistance to resolve problems, provide useful knowledge to achieve task completion) are more motivated to provide their knowledge to that coworker. They do so as a way of reciprocating for the positive treatment they have received in his/her coworker, which is the reasonable way to increase benefits of sharing knowledge. Employee who faces resource surplus should increase resources by reinvesting other resources to take a long-term outlook toward the conservation of resources, as a result, see little costs of

sharing his/her knowledge to the coworker. In short, due to norms of reciprocity, individuals are likely to invest their resources in supportive coworker with the expectations that this investment will be properly reciprocated by coworker in the future. Thus, this study proposes the following.

Hypothesis 1. *Coworker support is positively related to knowledge sharing behavior.*

H 1a. *Person-focused coworker support is positively related to knowledge sharing behavior.*

H 1b. *Task-focused coworker support is positively related to knowledge sharing behavior.*

2.5. Moderating Effects

The choice of relevant moderator constructs is rooted in the target similarity effect (Lavelle et al., 2007), which state that relationships between constructs are stronger when constructs are matched, such as when the constructs referred to the same targets and foci than when they referred to different targets and foci. On the basis of the target similarity effect (Lavelle et al., 2007), this study suggests that whereas person-related stressors should have a more dominant influence on relationship between person-focused

coworker support and employees' knowledge sharing behavior, task-related stressors should have a more dominant influence on relationship between task-focused coworker support and employees' knowledge sharing behavior.

The activation theory, a major theory in stress area, suggests that stimulation can be a stronger driver or motivator only when the arousal level is achieved an optimal level (e.g., Gardner & Cummings, 1988). In support of this theory, Lee and her colleagues (2013) showed that subordinates' creativity was discouraged under very low or very high level of abusive supervision, whereas subordinates' creativity was encouraged under a moderate level of abusive supervision. Leung and his colleagues' (2011) work also revealed that when faced with a moderate level of role stress, employees actively engage in coping strategies to decrease its negative effects, in turn, resulting in achieving high level of performance. In the similar vein, Gardner and Cummings (1988) suggested that "job stress occurs whenever job related stimuli cause a job holder's experienced activation level to deviate substantially from one's characteristic level of activity" (p. 106). Similarly, Yerkes and Dodson (1908) suggested an inverted-U shaped association between tension and performance. They assessed the relationship between the level of arousal/stress and memory performance.

General Adaptation Syndrome (GAS) model of stress proposed by Selye (1950, 1974) also confirmed the U-shaped relationship between

stressors and outcomes. GAS model posits that a certain level of stress could increase individual's motivation in the workplace. Specifically, in the alarm phase of GAS model, stress at a low level decreases performance. In the reactance phase, moderate levels of stress trigger coping responses, which function to increase performance. Finally, in the exhaustion phase, coping responses become ineffective because of the high levels of stress experienced, and performance declines. Specifically, extremely low and extremely high levels of tension are dysfunctional and moderate levels have a beneficial impact on individual attitudes and behaviors. Thus, drawing on theoretical and empirical studies, this study develops a more sophisticated understanding of how matching constructs interact to affect their willingness to share knowledge by examining three levels of stress: low, moderate, and high. Specifically, this study argues that a moderate stress level plays an critical role in calculating the benefits of knowledge sharing behavior, thus triggering the norm of reciprocation and increasing the investment of their resources to share their knowledge.

2.5.1. Person-related Stressor: Abusive Supervision

Based on the target similarity framework (Lavelle et al., 2007), this study examines whether one dimension of the person-related stressors,

abusive supervision, moderates the proposed the positive person-focused coworker support-knowledge sharing relation. Owing to the hierarchical position to have power of controlling critical decisions around tangible and intangible rewards, supervisors are the most influential partners in social exchanges (Wang & Noe, 2010). Consequently, supervisors' behaviors are critical to employee's decision whether to share their knowledge. Compared with other positive supervisors' behaviors, negative exchanges or destructive supervisor behaviors such as abusive supervision are so powerful to wash out the effects of other contingencies on employees behaviors. Tepper (2000) defined abusive supervision as "subordinates' perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact" (p. 178). Examples of abusive supervision include "using derogatory names, engaging in explosive outbursts (e.g., yelling or screaming at someone for disagreeing), intimidating by use of threats of job loss, withholding needed information, aggressive eye contact, the silent treatment, and humiliating or ridiculing someone in front of others" (Keashly, 1998, p. 87).

Studies of abusive supervision showed the negative effects on job and satisfaction, role conflict, intention to quit jobs, and fairness perception (Duffy et al., 2002; Keashly et al., 1994; Tepper, 2000). Abused subordinates report the great level of employee resistance, emotional exhaustion, and

psychological distress (Tepper, 2000; Tepper, Duffy, Henle, & Lambert, 2006; Tepper, Henle, Lambert, Giacalone, & Duffy, 2008; Zellars, Tepper, & Duffy, 2002). For example, Ashforth (1997) found the significant linkages between abusive supervision and subordinate stress, and reactance. His results also showed the negative relationship between abusive supervision and self-esteem and task performance. Another example of Tepper (2000) also revealed that abusive supervision increased subordinates' psychological distress and decreased a normative and affective commitment. Wu and Hu (2009) found that employees who interact with supervisor who treat them abusively can become emotionally exhausted because of the higher stress levels they experience. Aryee et al. (2008) investigated the processes linkage between abusive supervision and employee contextual performance through mediating mechanism of emotional exhaustion. There are strong evidences indicating abusive supervision as a source of stress, which can cause serious implications for their subordinates.

Based on the target similarity effect (Lavelle et al., 2007), which state that relationships between constructs are stronger when constructs are matched, such as when the constructs referred to the same targets and foci than when they referred to different targets and foci. As conceptualizing abusive supervision as a source of personal stress, this study argues that moderate levels of abusive supervision trigger the benefits of person-related

coworker support, which in turn increases the investment of their resources to share their knowledge. Abusive supervision can have either positive or negative effects on subordinates, according to the level at which abusive supervision is perceived by the subordinate. According to stress theory by Gardner and Cummings (1988) and Selye (1974), stress is functional for employees up to an optimal point, since stress increases engagement and arousal. In the reactance phase of Selye's model (1974), stress at a moderate level leads active engagement in coping behaviors to deal with the stress. In the cost–benefit evaluation context, when abusive supervision reaches a moderate level, it cause high level of annoyance that cannot be neglected; in turn, results in increased levels of arousal. The transactional model of stress (Larzarus & Folkman, 1984) posits that when a person appraises an event or a state as threat to one's resources, the person enacts coping responses to reduce the negative effects of the event or the state. Following this theorizing, this study argues that when confronted with a moderate level of abusive supervision, individuals will actively engage in evaluating the benefits and costs to reinvest their resources to share their knowledge.

A moderate level of abusive supervision makes coworker' supportive behavior a valuables resource because it focuses on problems linked to the individual's emotional well-being. In particular, under a stressful situation with abusive supervision, an employee with negative emotions highly values

expressions to and shares with coworker's intimate feelings. Abused employees gain comfort from the sympathetic behavior of their coworker. A moderate level of abusive supervision leads a focal person to see a supportive coworker as being a good partner, to whom they can bare their heart, and these results in a strong normative sense of responsibility to the supportive coworker. Consequently, the employee may search for more efficient ways of reciprocating coworker support; one way of doing so is by sharing ideas and experiences with his/her coworker. Conversely, as abusive supervision exceeds the optimal level, employees become anxious and feel threatened, which causes them to lose their emotional resources, such as self-esteem and self-confidence (Tepper et al., 2008; Wu & Hu, 2009). Selye's model (1974) posits that in exhaustion phase, stress continues to rise to a high level, resulting in outcome declines. This situation is same as burnout cases. In the cost–benefit evaluation context, when a high level of abusive supervision is present, employees must expend substantial energy and effort dealing with their abusive supervisor. The psychological resources of employees may be gradually consumed and this drain on their resources will highlight the cost of sharing their knowledge with coworkers, in turn, taking away from their willingness to share their knowledge. Consequently, they are likely to conserve resources perceived from a coworker rather than invest additional resources for future return. In this way, they restore the control they have

suffered from abusive supervision. However, as abusive supervision drops below the optimal level, employees make little effort in order to cope with low-level stress. Selye's model (1974) posits that when stress decreases to a low level, the alarm phase sets in without people being aware of it. In the cost–benefit evaluation context, employees in a situation with a low level of abusive supervision are unlikely to feel compelled to take drastic actions to reduce it due to its mild nature. Thus, when abusive supervision is moderately activated, this situation may stimulate individuals to value the person-focused coworker support and increase the motivational arousal to reinvest their resources in coworkers by sharing knowledge. Therefore, this study presents the following hypothesis:

Hypothesis 2. *Abusive supervision moderates the relationship between person-focused coworker support and knowledge sharing behavior, such that the positive relationship between person-focused coworker support and knowledge sharing behavior is stronger for individual experiencing a moderate level of abusive supervision.*

2.5.2. Person-related Stressor: Work-family Conflict

Based on the target similarity framework (Lavelle et al., 2007), this study investigates the possibility that the proposed the positive person-focused coworker support-knowledge sharing relation is moderated by one dimension of the person-related stressors, work-family conflict. In a workplace, there are four major work sources of social influence, such as the organization, the supervisor, one's coworkers, and family. Increasingly, scholars and practitioners agree that some features of the family-domain have a strong impact on the work, so they began to investigate changes needed to consider at the workplace. Specifically, several issues, including the increase in dual-earner families, changes in the demographic constitution, and the changing nature of the job market are drawing attention to the important influences of family, especially, work-family role conflicts (Bruck, Allen, & Spector, 2002). Work-family conflict is defined as a form of inter-role conflict (a stressor) or the stress experienced when an employee has trouble to respond to these stressors (e.g., Poelmans, 2005). There is the bidirectional nature of work-family conflict. One is work-interfering-with-family (WIF), where the experience of stress associated with work aspects are deleterious to perform family responsibilities (eg., by bringing work home and completing it at the expense of family time); however, there is also family-interfering-with-work

(FIW) conflict, where the experience of stress associated with family aspects impede works (e.g., by having to suddenly postpone an important appointment due to the child issue).

Countless studies have identified WIF and FIW as a significant source of work stress (Parasuraman & Greenhaus, 2002). For example, Bunk et al. (2012) suggested the experience of work-family conflict cause stress through utilizing cognitive appraisal framework. Taking over multiple roles could cause role overload and inter-role conflict, which in turn created exhaustion and distress (Marks, 1977). Empirically, studies have showed the association between work-family conflict and work-related outcomes, such as job satisfaction (e.g., Perrewe´, Hochwarter, & Kiewitz, 1999), organizational commitment (e.g., Aryee, Srinivas, & Tan, 2005), organizational citizenship behavior (e.g., Netemeyer, Maxham, & Pullig, 2005), intention to quit (e.g., Shaffer, Harrison, Gilley, & Luk, 2001), burnout (e.g., Peeters, Montgomery, Bakker, & Schaufeli, 2005), and work-related strain (e.g., Netemeyer, Brashear- Alejandro, & Boles, 2004). Studies also have found the effects between work-family conflict and family-related outcomes, such as marital satisfaction (e.g., Voydanoff, 2005), family satisfaction (e.g., Cardenas, Major, & Bernas, 2004), and family-related strain (e.g., Swanson & Power, 1999). Taken together, these findings proved that work-family conflict is a source to create the stressful situations to drain resources.

Based on the optimal level arousal of stress-induced arousal (Gardner & Cummings, 1988; Selye, 1974; Yerkes & Dodson, 1908), a moderate level of work –family conflict may be a critical situational cue to activate the focal employee's cost–benefit evaluation of investing resources to share their knowledge. A moderate level of work–family conflict increases arousal and engagement in the cost–benefit evaluation context. This optimal level of work–family conflict is functional for individuals who perceive person-focused coworker support because it leads them to perceive a supportive employee as an ally. Under work–family stress, person-focused coworker support effectively makes an employee feel supported by lending an ear and offering sympathy in relation to a stressful problem. Consequently, the employee would want to reciprocate to demonstrate appreciation. However, as work–family conflict exceeds the optimal level, employees become taxed and exceed their resources, which increase employees' negative emotions, stress, and fatigue, in turn, causes exhaustion as they become overwhelmed by stress (Netemeyer et al., 2004; Peeters et al., 2005). In the cost–benefit evaluation context, employees with a high level of work–family conflict may be inept at meeting the domain needs of their work activities and not available for other domains of family responsibilities; as a consequence, these are more likely to consume their resources to manage these conflicts. Due to the loss of resources, employees suffering from a high level of work–family conflict may

try to conserve their resources rather than getting resources to reinvest by sharing knowledge. By contrast, as work–family conflict drops below the optimal level, employees may not be aware of the stress due to its mild nature. In the cost–benefit evaluation context, when a low level of work–family conflict is perceived, employees are unlikely to feel compelled to take drastic action to resolve the conflict. Thus, individuals with a moderate level of work–family conflict actively engage in knowledge sharing because this optimal level stimulate motivational arousal to evaluate the benefits of reinvesting their resources in the future returns from coworkers. Therefore, this study presents the following hypothesis:

Hypothesis 3. *Work-family conflict moderates the relationship between person-focused coworker support and knowledge sharing behavior, such that the positive relationship between person-focused coworker support and knowledge sharing behavior is stronger for individual experiencing moderate level of work-family conflict.*

2.5.3. Task-related Stressor: Task Complexity

As suggested by target similarity effect (Lavelle et al., 2007), this study explains how the proposed the positive task-focused coworker support-knowledge sharing relation is moderated by one dimension of the task-related

stressors, task complexity. Humphrey et al. (2007) defined task complexity as "the extent to which a task is multifaceted and difficult to perform" (p. 1335). Complex tasks contain mentally challenging demands and require workers to use a number of complex skills. This notion has obtained great recognition as a moderator of processes in a workplace including job design (Hackman & Oldham, 1980), information processing and decision making (Streufert & Streufert, 1978), and goal setting (Wood, Mento, & Locke, 1987). As a challenging stressor, when jobs are complex, individuals tend to experience high levels of intrinsic motivation, which in turn, it affects the improvement of task performance (Hackman & Oldham, 1980). However, when work demands are overwhelmed with too broad a variety of tasks, job complexity may also interfere with normal psychological functioning (Parker & deCotiis, 1983). Consequently, job complexity may increase stress (Xie & Johns, 1995), which has been found to diminish individual task performance (Motowidlo et al., 1986). Job complexity also could cause feelings of time pressure (Parker & DeCotiis, 1983) and depression (Motowidlo et al., 1986).

Consistent with the activation theory (Gardner & Cummings, 1988) and Selye's stress model (1974) described in the preceding sections, a moderate level of task complexity triggers the benefits of task-focused coworker support, which, in turn, increases the investment of their resources to share knowledge. A moderate level of task complexity increases the

importance of task-focused coworker support because it focused on problems linked to the variety of problems requiring resolution and to the amount of information and alternatives that an employee must assess to fulfill a task. A moderate level of task complexity leads a focal person to see a supportive coworker as being good partner to provide professional advice and useful equipment, which results in a strong normative sense of reciprocating to the supportive coworker. Consequently, the benefits of sharing knowledge with supportive coworker are highlighted. Conversely, when demands related to the variety of tasks become so extreme, employee is completely overwhelmed by stress (Motowidlo et al., 1986; Parker & deCotiis, 1983). When arousal and the need for cognitive resources become high with complex task demands, employees have difficulty in dealing with the rising challenge. These increasing levels of stress are dysfunctional for calculating of reciprocation. As job complexity drops below the optimal level, employees are also not motivated to engage in reciprocating activities. Based on this logic, the present study expects that a moderate level of task complexity is the optimal arousal level to value task-focused coworker support and therefore likely to be associated with the most knowledge sharing behavior. Therefore, this study presents the following hypothesis:

Hypothesis 4. *Task complexity moderates the relationship between task-focused coworker support and knowledge sharing behavior, such that the positive relationship between task-focused coworker support and knowledge sharing behavior is stronger for individual experiencing moderate level of task complexity.*

2.5.4. Task-related Stressor: Task Ambiguity

Following the target similarity effect (Lavelle et al., 2007), this study proposes that task ambiguity will moderate the relationship between task-focused coworker support and knowledge sharing behavior. Recently, there are growing emphasis on organizational change, flexibility, autonomous working conditions, and employee empowerment (Kalleberg, 2001; Smith, 1997). These shifts have caused task ambiguousness and task uncertainty. According to Kahn et al. (1964), task ambiguity arises when an individual lacks necessary task-related information to perform their task. Three subtypes of task ambiguity exist, including the scope of responsibilities, behavioral responsibilities, and the hierarchy of responsibilities. Whereas the scope of responsibilities means understanding exactly what the expectations are, behavioral responsibilities means understanding what activities will cause the achievement of those expectations. The hierarchy of responsibilities means

understanding what the priorities are in terms of accomplishing multiple expectations. Cohen (1959) found that employees with high task ambiguity were less motivated, less secure, and less worked efficiently than employees with high goal clarity. Beard (1999) also reported that task ambiguity caused many detrimental outcomes, such as job dissatisfaction, stress, and intention to quit. Tow meta-analyses of role conflict and ambiguity from Jackson and Schuler (1985) and burnout from Lee and Ashforth (1996) suggested that there is a positive relationship between task ambiguity and distress. The extant research on task ambiguity clearly demonstrates that task ambiguity represents a source of stress streaming from task that has significant impact on employees.

Based on the stress arousal model (Gardner & Cummings, 1988; Selye, 1974), a moderate level of task ambiguity accentuates the positive relationship between task-focused coworker support and knowledge sharing behavior due to its optimal level of arousal. Employee with a moderate level of task ambiguity actively engages in evaluating the benefits of reciprocating. A moderate level of formalized task expectations, scope and behavior of responsibilities makes coworkers' supportive behavior an appropriate resource because it focuses on task-related information (Breaugh & Colihan, 1994; Rizzo, House, & Lirtzman, 1970). However, when the task ambiguity exceeds the optimal level, employees feel that they are burdened by a lack of task-

related information, such as lack of performance expectations, goals, assignments, authority, responsibilities, task duties, and other task conditions, and reach the exhaustion stage. This drain on their resources makes cost of sharing their knowledge with coworker more salient and decreases their engagement in reciprocating with knowledge sharing. In contrast, as task ambiguity drops below the optimal level, employee makes little effort to cope with low-level stress. Therefore, when an individual has a moderate level of task ambiguity, the individual views coworker' task focused support as a significant resources and tends to appreciate the coworker. The individual then offers more resources to help the coworker to reciprocate their support. Therefore, the last moderating hypothesis can be formulated as follows.

Hypothesis 5. *Task ambiguity moderates the relationship between task-focused coworker support and knowledge sharing behavior, such that the positive relationship between task-focused coworker support and knowledge sharing behavior is stronger for individual experiencing moderate level of task ambiguity.*

Chapter 4. Method

This chapter outlines data collection and analysis strategies for this study. First, this study describes data collection procedures. Second, this study presents the information about the sample for this study. Third, this study introduces measures for each variables included in theoretical model. Lastly, analysis procedures are presented.

1. Data Collection Procedures

The data for the present study was collected from 13 organizations in South Korea that represent diverse industries, including manufacturing, construction design, IT/telecom, electronics, and financial investment. Two sets of paper-based surveys were administered. The first survey was designed for the focal employee (self-survey), and the second survey was designed to be completed by a coworker who works in a team setting (the target employee and a coworker who can evaluate their knowledge sharing behavior). Participants completed the survey during regular working hours. The focal employee survey contained measures of the two dimensions of coworker support, abusive supervision, work-family conflict, task complexity, and task

ambiguity. The coworker survey contained measure of the focal employee' knowledge sharing behavior. The target individual was instructed to identify a coworker with whom he or she works together regularly and to pass on the coworker-survey packet to this coworker. The target and coworker completed the survey instruments separately and sent the completed surveys directly to the researcher. The complete survey packets were returned to the researcher through the contact people. To assure confidentiality issue, the survey packets included a cover letter that clarified the purpose of the study and guaranteed the confidentiality of their responses.

2. Sample

The survey packages, which include both the self-survey and the coworker-survey, were distributed to 360 dyads. Out of the 360 sets of surveys distributed, 320 completed sets were returned, representing a response rate of 88.9%. After eliminating unreliable data with missing variables and no rating or careless evaluation from the coworkers, the final analysis sample included 308 dyads of matched responses with an overall response rate of 85.6%.

Of this final sample, the average age of the employees was 38.61 years (s.d.= 9.36). The sample included 125 women (40.6%) and 183 men (59.4%). Education levels varied from a high school diploma to a doctoral

degree; 3.9% of the respondents had completed only their high school, 15.6% their 2-year college education, 63.6% their bachelor's, 16.9% their master's and doctorate. The organizational tenure of the employees in the current organization ranged from less than 1 month to 384 months, and their average tenure was 7.10 years (s.d.= 90.69). Their average tenure with their coworkers was 3.04 years (s.d. = 48.42). Various industry sectors were represented including 30.2% from manufacturing, 21.8% from construction, 12.7% from government agency, 11% from banking and finance, 10.1% from IT and communication service, 2.9% from distribution, and 11.4% from others. Most of subordinates held office type jobs such as 42.9% from administrative operation (management), 24% professional works, 19.2% from research and development, 9.4% technicians, 2.3% sales, and 2.3% from others. Table 8 presents the description of the sample in the study.

Table 8. Sample Description

Classification		Frequency	%
Gender	Male	183	59.4
	Female	125	40.6
Age	20 ~ 30	67	21.8
	31 ~ 40	119	38.6
	41 ~ 50	85	27.6
	Over 51	37	12
Education	High school	12	3.9
	2-year collage	48	15.6
	Bachelor degree	196	63.6
	Master Degree or higher	52	16.9
Position	Associate	163	52.9
	Senior associate	69	22.4
	Assistant manager	41	13.3
	Manager	20	6.5
	Senior manager or higher	15	4.9
Organizational Tenure	Less than 5 years	156	50.7
	6 ~ 10 years	75	24.3
	11 ~ 15 years	42	13.6
	More than 15 years	35	11.4
Tenure with coworker	Less than 5 years	251	81.5
	6 ~ 10 years	42	13.6
	11 ~ 15 years	13	4.2
	More than 15 years	2	0.7
Industry	Manufacturing	93	30.2
	Construction	67	21.8
	Public corporation	39	12.7
	Banking and finance	34	11
	IT and communication service	31	10.1
	Distribution	9	2.9
	Others	35	11.3

3. Measures

Participating employees rated all items using a seven-point Likert scale ranging from 1 (not at all) to 7 (extremely), except for demographic data. All measures were originally developed in English, and translated them to Korean following standard back-translation procedures (Brislin, 1986).

Coworker support. Two dimensions of coworker support were measured with a 14-item scale developed by Settoon and Mossholder (2002). Examples of 8 person-focused coworker support items are "My coworker compliments me when I succeed at work" and "My coworker makes an extra effort to understand my problems and concerns". Examples of task-focused coworker support 6 items are "My coworker assists me with heavy workloads" and "My coworker helps me with difficult assignments, even when I don't directly request assistance". Reliability, as measured by Cronbach's alpha for this measure was α = .96 for person-focused coworker support and α = .97 for task-focused coworker support.

Abusive supervision. Abusive supervision was measured a 15-item scale developed by Tepper (2000). Sample items are "My supervisor is rude to me", "My supervisor tells me my thoughts or feelings are stupid", and "My

supervisor puts me down in front of others". Reliability, as measured by Cronbach's alpha for this sample was α = .98.

Work-family conflict. Work-family conflict can be divided into two dimensions, such as WIF and FIW. This study measured 5-item scale each for WIF and FIW from Netemeyer et al.'s scale (1996). Sample items are "The demands of my work interfere with my home and my family life" (WIF) and "The demands of my family or spouse/partner interfere with work-related activities" (FIW). Reliability, as measured by Cronbach's alpha for this sample was α = .97 for WIF and α = .98 for FIW.

Task complexity. Task complexity was measured a 4-item scale from the Work Design Questionnaire (Morgeson & Humphrey, 2006). Scale included the following four items: (a) "The job requires that I only do one task or activity at a time" (reversed), (b) "The tasks on the job are simple and uncomplicated" (reversed), (c) "The job comprises relatively uncomplicated tasks" (reversed), and "The job involves performing relatively simple tasks" (reversed). Reliability, as measured by Cronbach's alpha for this sample was α = .87.

Task ambiguity. For task ambiguity, this study used the 5-item scale of Currivan (1999), which address the aspects of task ambiguity such as the clearness and incompatibility of job expectations. This scale included the following five items: (a) "I do not know what my responsibilities are in performing my job", (b) "I know exactly what is expected of me in my job" (reversed), (c) "I know how to get my job done" (reversed), (d) "I get conflicting job requests from my co-workers", and (e) "Job requests from my managers and co-workers are often conflicting." Reliability, as measured by Cronbach's alpha for this sample was α = .90.

Knowledge sharing behavior. Knowledge sharing behavior was measured by using the 7-item scale of Strivastava et al. (2006). The peer of focal employee rated these items on the basis of the extent to which the focal employee engages in knowledge sharing behavior. Sample items are "This coworker shares his/her special knowledge and expertise with me" and "This coworker shares lots of information with me." Reliability, as measured by Cronbach's alpha for this sample was α = .95.

Control variables. Several demographic variables were controlled to exclude potential alternative explanations of the current analysis (Bernerth & Aguinis, 2016). Several previous studies suggested that individual

characteristics, such as age, gender, education, and position, from the employee and the coworker, were relevant to the proclivity toward knowledge sharing because these characteristics lead people to gain different incentives or rewards from sharing knowledge resources (Hardy & Van Vugt, 2006; Kim & Yun, 2015; Lin, 2007a; Srivastava et al., 2006). Age and tenure with coworker was measured in years, and gender was dummy coded (1 = male and 2 = female) Education was measured as a categorical variable coded as 1 for high school, 2 for 2-year collage school, 3 for bachelor's degree, and 4 for graduate degree or higher. Position was measured as a categorical variable coded as 1 for Associate, 2 for senior associate, 3 for assistant manager, 4 for manager, and 5 for senior manager or higher.

Both negative affectivity and positive affectivity are potentially confounding factors, which may affect the perception of social interactions, stresses, and strains (e.g., Duffy et al., 2002; Lakey & Cassady, 1990). An abbreviated version of the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988) was used to measure negative affectivity and positive affectivity. Participants are instructed to respond how they generally felt in terms of four positive adjectives (i.e., inspired, strong, active, excited) and four negative adjectives (i.e., distressed, afraid, jittery, upset). Reliability, as measured by Cronbach's alpha for this measure was α = .90 for negative affectivity and α = .93 for positive affectivity.

4. Analytic Strategies

4.1. Preliminary Analyses Procedures

Before testing the hypotheses, an exploratory factor analysis (EFA) was conducted to investigate the construct validity of the study variables. The study expects that the two types of coworker support (i.e., person-focused and task-focused coworker support), two dimensions of work-family conflict (WIF and FIW), and two types of task characteristics (task complexity and task ambiguity) are all distinctive factors. Moreover, confirmatory factor analysis (CFA) was utilized to assess construct validity and compare several nested models. This study also reported results using statistics designed to adjust for non-normality (Bentler, 1988): a scaled chi-square statistic for overall model fit, robust versions of the comparative fit index (CFI), the Tucker Lewis Index (TLI), root mean residual square (RMR), and the root-mean-square error of approximation (RMSEA). Good fits are indicated by RMR and RMSEA values less than .08 and TLI and CFI value greater than .90 (Hu & Bentler, 1999). Cronbach's alpha was used for all variables to demonstrate acceptable levels of inter-item consistency.

4.2. Testing Hypotheses Procedures

This study conducted several hierarchical regression analyses to test the hypotheses. To minimize problems of multicollinearity and to facilitate interpretation, the study variables before regression statistics were mean-centered (Aiken & West, 1991). First, to test the hypotheses of the main effects between the two types of coworker support (person-focused and task-focused coworker support) and knowledge sharing behavior, the study included control variables (i.e., age, gender, education, position, coworker age, coworker gender, coworker education, coworker position and tenure with coworker) in Step 1. Next, in Step 2, the study included two types of coworker support (person-focused and task-focused coworker support). Next, in order to test the moderating hypotheses, the moderating variables were entered in Step 3, and the interaction terms were included in the final step. An incremental change in criterion variance in the last step demonstrated a significant interaction term (Cohen & Cohen, 1983). Finally, following the procedure suggested by Aiken and West (1991), the interaction patterns identified by drawing separate regression lines were examined, in order to interpret the moderating effect of the moderators (i.e. abusive supervision, work-family conflict, task complexity, and task ambiguity).

Chapter 5. Results

This chapter presents the results of data analyses. This chapter begins with a discussion of preliminary analyses and descriptive statistics. This chapter then presents the results of the tests of each hypothesis and concludes with a brief summary of those results.

1. Preliminary Analyses

1.1. Discriminant Validity

1.1.1. Exploratory Factor Analysis

Explanatory factor analyses were conducted using principal component analysis with varimax rotation to test whether the two dimensions of coworker support (person-focused coworker support and task-focused coworker support), two dimensions of work-family conflict (WIF and FIW), and two types of task characteristics (task complexity and task ambiguity) were distinct from each other. As can be seen in Table 9, the factor analysis yielded two factors with eigenvalues greater than 1.0, confirming that 14 items loaded the highest on the appropriate factor and that their factor loadings exceeded .70 (factor loadings range from .70 to .85). The loadings

for the final 2-factor solution, which accounted for 84.02% of the variance. As expected, the variables of person-focused coworker support and task-focused coworker support are defined by distinct items. Furthermore, Table 10 showed two factors emerged with eigenvalues greater than1, accounting for 91.16% of the variance. 10 work-family conflict items loaded on its appropriate factor, with primary loadings exceeding .88 and cross-loadings lower than .36. In Table 11, two factors that emerged appropriately represented the task complexity and task ambiguity items, whereby primary loadings exceeded .76 while cross-loadings were lower than .11. The two factors had eigenvalues greater than 1 and accounted for 75.58% of the variance.

Table 9. Exploratory Factor Analysis of Coworker Support

Items	Mean (S.D.)	Factor	
		Person-focused coworker support	Task-focused coworker support
1. My coworkers compliment me when I succeed at work.	5.28 (1.28)	**.80**	.41
2. My coworkers listen to me when I have to get something off my chest.	5.35 (1.20)	**.84**	.37
3. My coworkers make an effort to make me feel welcome in the work group.	5.32 (1.22)	**.82**	.39
4. My coworkers make an extra effort to understand my problems and concerns.	5.21 (1.26)	**.80**	.45
5. My coworkers show concern and courtesy toward me, even when things are difficult.	5.32 (1.27)	**.80**	.48
6. My coworkers take a personal interest in me.	5.23 (1.32)	**.83**	.39
7. My coworkers take time to listen to my concerns.	5.23 (1.32)	**.81**	.42
8. My coworkers try to cheer me up when I'm having a bad day.	5.36 (1.25)	**.84**	.36
9. My coworkers assist me with heavy workloads.	5.14 (1.31)	.42	**.83**
10. My coworkers go out of their way to help me with work-related problems.	5.17 (1.29)	.36	**.85**
11. My coworkers help me out when things get demanding.	5.23 (1.23)	.51	**.78**
12. My coworkers help me when I'm running behind my in work.	5.20 (1.32)	.43	**.81**
13. My coworkers help me with difficult assignments, even when I don't directly request assistance.	5.22 (1.31)	.32	**.82**
14. My coworkers show me where things are that I need to do my job.	5.29 (1.29)	.49	**.78**
Eigen value		8.94	1.98
Variance explained (%)		66.49	17.53
Total variance explained (%)		84.02	

Table 10. Exploratory Factor Analysis of Work-family Conflict

Items	Mean (S.D.)	Factor	
		WIF [a]	WIF [a]
1. The demands of my work interfere with my home and family life.	3.15 (1.66)	**.88**	.29
2. The amount of time my job takes up makes it difficult to fulfill family responsibilities.	3.13 (1.69)	**.92**	.30
3. Things I want to do at home do not get done because of the demands my job puts on me.	3.16 (1.72)	**.91**	.30
4. My job produces strain that makes it difficult to fulfill family duties.	3.04 (1.61)	**.90**	.34
5. Due to work-related duties, I have to make changes to my plans for family activities.	3.03 (1.67)	**.86**	.35
6. The demands of my family or spouse/partner interfere with work-related activities.	2.43 (1.30)	.36	**.88**
7. I have to put off doing things at work because of demands on my time at home.	2.37 (1.26)	.34	**.89**
8. Things I want to do at work don't get done because of the demands of my family or spouse/partner.	2.31 (1.29)	.30	**.92**
9. My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime.	2.33 (1.27)	.32	**.92**
10. Family-related strain interferes with my ability to perform job-related duties.	2.24 (1.20)	.29	**.92**
Eigen value		7.42	1.70
Variance explained (%)		74.19	16.97
Total variance explained (%)		91.16	

Note. [a] WIF: work-interfering-with-family; FIW: family-interfering-with-work

Table 11. Exploratory Factor Analysis of Task Characteristics

Items	Mean (S.D.)	Factor	
		Task Complexity	Task Ambiguity
1. The job requires that I only do one task or activity at a time (R).	5.31 (1.35)	**.76**	.01
2. The tasks on the job are simple and uncomplicated (R).	5.00 (1.48)	**.85**	.02
3. The job comprises relatively uncomplicated tasks (R).	4.76 (1.43)	**.88**	.02
4. The job involves performing relatively simple tasks (R).	4.64 (1.44)	**.89**	-.09
5. There is clear explanation as of what has to be done at work (R).	2.93 (1.26)	.11	**.77**
6. I feel certain about how much authority I have on the job (R).	2.79 (1.31)	-.03	**.83**
7. I have clear, planned goals and objectives for my job (R).	2.52 (1.26)	-.05	**.88**
8. I know what my responsibilities are (R).	2.33 (1.10)	-.04	**.91**
9. I know exactly what is expected of me (R).	2.54 (1.16)	-.03	**.87**
Eigen value		3.66	2.88
Variance explained (%)		40.61	31.97
Total variance explained (%)		75.58	

1.1.2. Confirmatory Factor Analysis

To check construct validity of the 8 variables used in the model (person-focused coworker support, task-focused coworker support, abusive supervision, WIF, FIW, task complexity, task ambiguity and knowledge sharing behavior), a confirmatory factor analysis was performed to compare several nested models. These included (a) the hypothesized 8-factor model; (b) a 7-factor model with person-focused coworker support and task-focused coworker support combined; (c) a 6-factor model with person-focused coworker support and task-focused coworker support combined, and WIF and FIW combined; (d) a 5-factor model with person-focused coworker support and task-focused coworker support combined, WIF and FIW combined, and task complexity and task ambiguity combined; (e) a 4-factor model with person-focused coworker support and task-focused coworker support combined, abusive supervision, WIF, and FIW combined, and task complexity and task ambiguity combined; (f) a 3-factor model with person-focused coworker support and task-focused coworker support combined, abusive supervision, WIF, FIW, task complexity and task ambiguity combined; (g) a 2-factor model with person-focused coworker support, task-focused coworker support, abusive supervision, WIF, FIW, task complexity and task ambiguity combined; (h) a single factor model. As summarized in Table 12, the 8-factor

model showed quite good fit indexes (χ^2 = 3495.54, df =1348, p <.001; CFI = .90; TLI = .90; RMR = .07; RMSEA = .07). Values of CFI and TLI > .90 and RMR and RMSEA < .08 are considered to indicate "good fit." (Hu & Bentler, 1999). The 8-factor model exhibited better fit as assessed by chi-square difference tests, and higher CFI, TLI, RMR and RMSEA indices. These results indicated that all variables in the model exhibited sufficient discriminant validity for use in hypotheses testing.

Table 12. Comparison of Measurement Models

Model	No. of Factors [a]	χ^2	df	$\Delta\chi^2$	CFI	IFI	RMR	RMSEA
Hypothesized Model	Eight-factor model [a]	3495.54	1348		.90	.90	.07	.07
Model 1	Seven-factor model [b]	4029.08	1355	533.54***	.87	.87	.07	.08
Model 2	Six-factor model [c]	5650.63	1361	2155.09***	.80	.79	.15	.10
Model 3	Five-factor model [d]	6489.21	1366	2993.67***	.76	.75	.13	.11
Model 4	Four-factor model [e]	9063.13	1370	5567.59***	.64	.62	.25	.14
Model 5	Three-factor model [f]	9958.92	1373	6463.38***	.60	.58	.26	.14
Model 6	Two-factor model [g]	14055.78	1375	10560.24***	.40	.38	.35	.17

Note. CFI= Comparative Fit Index; TLI: Tucker Lewis Index; RMR= root mean residual square; RMSEA= root-mean-square error of approximation; ***p<.001.

[a] Eight-factors: Person-focused coworker support; Task-focused coworker support; Abusive supervision; WIF; FIW; Task complexity; Task ambiguity; Knowledge sharing behavior.

[b] Seven-factors: Person-focused coworker support and Task-focused coworker support combined; Abusive supervision; WIF; FIW; Task complexity; Task ambiguity; Knowledge sharing behavior.

[c] Six-factors: Person-focused coworker support and Task-focused coworker support combined; Abusive supervision; WIF and FIW combined; Task complexity; Task ambiguity; Knowledge sharing behavior.

[d] Five-factors: Person-focused coworker support and Task-focused coworker support combined; Abusive supervision; WIF and FIW combined; Task complexity and Task ambiguity combined; Knowledge sharing behavior.

[e] Four-factors: Person-focused coworker support and Task-focused coworker support combined; Abusive supervision, WIF and FIW combined; Task complexity and Task ambiguity combined; Knowledge sharing behavior.

[f] Three-factors: Person-focused coworker support and Task-focused coworker support combined; Abusive supervision, WIF, FIW, Task complexity and Task ambiguity combined; Knowledge sharing behavior.

[g] Two-factors: Person-focused coworker support, Task-focused coworker support, Abusive supervision, WIF, FIW, Task complexity and Task ambiguity combined; Knowledge sharing behavior.

1.2. Descriptive Statistics

Table 13 displays the means, standard deviations, and correlations and scale reliability of the variables included in the study. All study variables have high reliabilities, with Cronbach's alpha coefficients of .87 or higher. The correlations for most study variables were in the expected direction. As expected, whereas person-focused coworker support appeared to be positively correlated to the outcome variable of knowledge sharing behavior (r =.23, p < .001), task-focused coworker support was positively correlated with outcome variable of knowledge sharing behavior (r =.17, p < .01). All person-related stressors were significantly correlated with person-focused coworker support (rs ranged from -.17 to -.28). Task complexity of task-related stressors was not significantly correlated with task-focused coworker support (r =.06, *ns*.), but task ambiguity of task related stressors was significantly negatively correlated with task-focused coworker support (r = -.22, p < .001).

Table 13. Descriptive Statistics of the Variables

	Mean	S.D.	1	2	3	4	5	6	7	8
1. Person-focused Coworker Support[b]	5.29	1.15	(.96)							
2. Task-focused Coworker Support[b]	5.25	1.17	.83***	(.97)						
3. Abusive Supervision[b]	1.91	1.04	-.28***	-.26***	(.98)					
4. WIF[b]	3.10	1.58	-.17**	-.19**	.38***	(.97)				
5. FIW[b]	2.34	1.21	-.17**	-.11*	.31***	.63***	(.98)			
6. Task Complexity[b]	4.93	1.21	.08	.06	.01	.14*	.02	(.87)		
7. Task Ambiguity[b]	2.62	1.01	-.27***	-.22***	.34***	.08	.16**	-.02	(.90)	
8. Knowledge Sharing Behavior[c]	5.33	1.07	.23***	.17**	-.25***	-.09	-.01	.02	-.17**	(.95)

Note. [a] $N = 308$, employee-coworker dyads. WIF: work-interfering-with-family; FIW: family-interfering-with-work. Reliabilities are on the diagonal in parentheses. [b] These variables were measured from focal employees. [c] Coworker rating. *p<.05, **p<.01, ***p<.001 (two-tailed).

2. Hypotheses Testing

2.1. Main Effects

Hypothesis 1 posits that two types of coworker support would be positively related to knowledge sharing behavior. Results from model 2, in table 14, indicated that person-focused coworker support had a significant, positive effect on knowledge sharing behavior (ß = .29, $p < .01$); while, task-focused coworker support was not significantly related to knowledge sharing behavior (ß = -.08, *ns*.). Therefore, Hypotheses 1a was supported, but Hypotheses 1b was not supported.

2.2. Moderating Effects: Person-related Stressors

Hypothesis 2 predicts that the relationship between person-focused coworker support and knowledge sharing behavior would be moderated by abusive supervision in such a way that the positive relationship between person-focused coworker support and knowledge sharing behavior would be stronger for individual experiencing a moderate level of abusive supervision. Unexpectedly, the relationship between person-focused coworker support and knowledge sharing behavior was negatively (ß = -.13, $p < .05$), rather than positively, moderated by abusive supervision (see Model 4 in Table 14).

To examine this interaction, following the procedure suggested by Aiken and West (1991), the interaction patterns were graphically examined by drawing separate regression lines for three groups of employees: employees with high, medium, and low level of abusive supervision. As shown in Figure 3, the effect of person-focused coworker support on knowledge sharing behavior was both significant and positive when abusive supervision is low or 1 SD below the mean (b = .34, t = 3.04, $p < .01$), and when abusive supervision is the mean (b = .24, t = 2.49, $p < .05$). However, the effect of person-focused coworker support on knowledge sharing behavior was non-significant when abusive supervision is high or 1 SD above the mean (b = .14, t = 1.33, *ns*.). Thus, Hypothesis 2 was not supported.

Hypothesis 3 predicts that the relationship between person-focused coworker support and knowledge sharing behavior would be moderated by work-family conflict in such a way that the positive relationship between person-focused coworker support and knowledge sharing behavior would be stronger for individual experiencing a moderate level of work-family conflict. The results showed a significant moderating effect of WIF on the relationship between the person-focused coworker support and knowledge sharing behavior (ß = .16, p < .05), but a non-significant moderating effect of FIW on the relationship between the person-focused coworker support and knowledge sharing behavior (ß = -.12, *ns*.). A simple slope analysis confirms

that the effect of person-focused coworker support on knowledge sharing behavior was significant and positive when WIF is high or 1 SD above the mean (b = .32, t = 3.12, $p < .01$) and when WIF is the mean (b = .24, t = 2.49, $p < .05$). However, the effect of person-focused coworker support on knowledge sharing behavior was non-significant when WIF is low or 1 SD below the mean (b = .15, t = 1.49, *ns*.) (see Figure 3). Thus, Hypothesis 3 was not supported.

Table 14. Hierarchical Regression Examining the Moderating effects of Person-related Stressors in the relationship between Person-focused Coworker Support and Knowledge Sharing Behavior

	Knowledge Sharing Behavior			
Variables	Model 1	Model 2	Model 3	Model 4
Step 1: Control variables				
Age	.12	.14	.14	.14
Gender	-.12	-.13	-.10	-.10
Education	.03	-.01	.03	.02
Position	-.10	-.09	-.10	-.07
Coworker Age	-.17*	-.18*	-.21*	-.20*
Coworker Gender	.04	.05	.03	.04
Coworker Education	-.02	-.02	-.05	-.04
Coworker Position	.10	.12	.15	.13
Tenure with Coworker	.00	.00	.01	.00
Positive Affect	.12	.07	.03	.03
Negative Affect	-.04	-.01	.06	.07
Step 2: Main effects				
Person-focused Coworker Support (PFCS)		.29**	.29**	.30**
Task-focused Coworker Support (TFCS)		-.08	-.11	-.12
Step 3: Moderating variables				
Abusive Supervision			-.22***	-.26***
WIF			-.09	-.08
FIW			.14	.11
Step 4: Moderating effects				
PFCS X Abusive Supervision				-.13*
PFCS X WIF				.16*
PFCS X FIW				-.12
R^2	.05	.10	.14	.16
R^2 change		.05***	.04**	.02*

N = 308, employee-coworker dyads. *p<.05, **p<.01, ***p<.001.

Figure 2. Interaction of Person-focused Coworker Support and Abusive Supervision (AS) on Knowledge Sharing Behavior

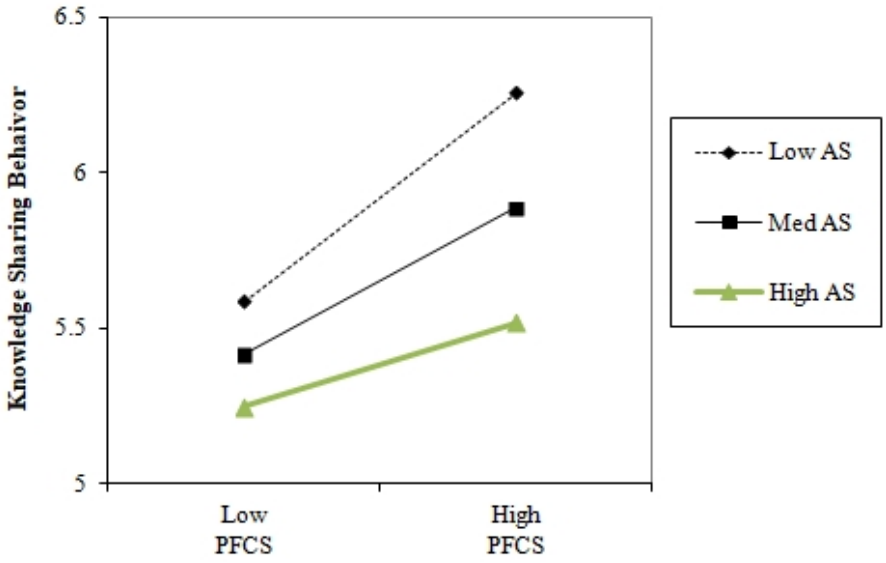
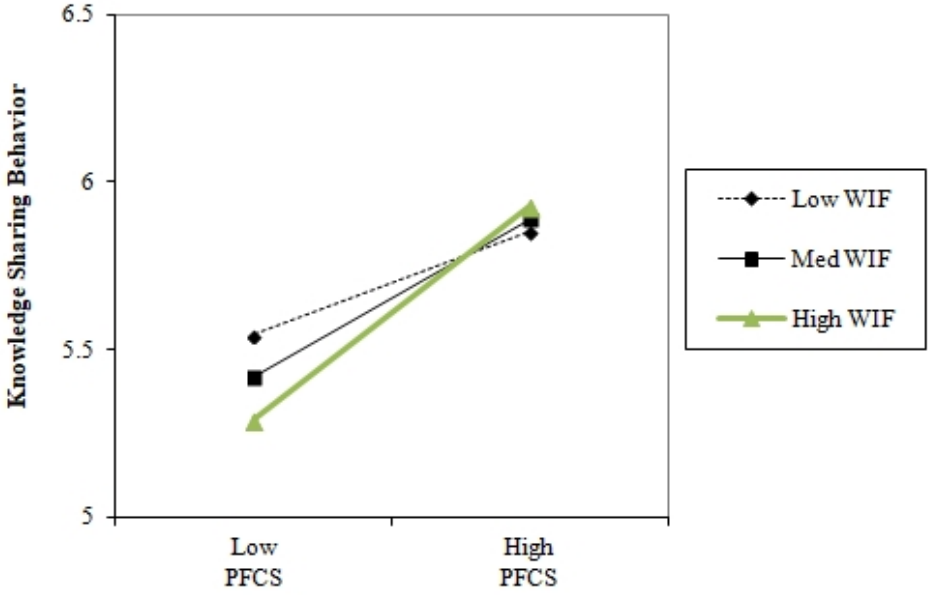


Figure 3. Interaction of Person-focused Coworker Support and WIF on Knowledge Sharing Behavior



2.3. Moderating Effects: Task-related Stressors

Hypothesis 4 predicts that the relationship between task-focused coworker support and knowledge sharing behavior would be moderated by task complexity in such a way that the positive relationship between task-focused coworker support and knowledge sharing behavior would be stronger for individual experiencing a moderate level of task complexity. As can be seen in Table 15 (Model 4), the moderating effect of task complexity between task-focused coworker support and knowledge sharing was significant (ß = .14, $p < .05$). A simple slope test showed that the effect of task-focused coworker support on knowledge sharing behavior was not significant in all three groups of employees: employees with high (b = .06, t = .57, *ns*.), medium (b = -.04, t = -.42, *ns*.), and low level of task complexity (b = -.14, t = -1.33, *ns*.) (see Figure 4). Thus, Hypothesis 4 was not supported.

Hypothesis 5 predicts that the relationship between task-focused coworker support and knowledge sharing behavior would be moderated by task ambiguity in such a way that the positive relationship between task-focused coworker support and knowledge sharing behavior would be stronger for individual experiencing a moderate level of task ambiguity. As indicated in Table 15, the moderating effect of task ambiguity between task-focused coworker support and knowledge sharing was significant, but the

direction was the opposite of that which is expected (ß = -.14, p<.05). A simple slope test showed that the effect of task-focused coworker support on knowledge sharing behavior was not significant in all three groups of employees: employees with high (b = -14, t = -1.29, *ns*.), medium (b = -.04, t = -.42, *ns*.), and low level of task complexity (b = .06, t = .62, *ns*.) (see Figure 5). Thus, Hypothesis 5 was not supported.

Table 15. Hierarchical Regression Examining the Moderating effects of Task-related Stressors in the relationship between Task-focused Coworker Support and Knowledge Sharing Behavior

	Knowledge Sharing Behavior			
Variables	Model 1	Model 2	Model 3	Model 4
Step 1: Control variables				
Age	.12	.14	.15	.15
Gender	-.12	-.13	-.14*	-.14*
Education	.03	-.01	.00	.00
Position	-.10	-.09	-.11	-.10
Coworker Age	-.17*	-.18*	-.19*	-.19*
Coworker Gender	.04	.05	.06	.05
Coworker Education	-.02	-.02	-.02	-.03
Coworker Position	.10	.12	.13	.12
Tenure with Coworker	.00	.00	.00	-.01
Positive Affect	.12	.07	.03	.04
Negative Affect	-.04	-.01	.01	.02
Step 2: Main effects				
Person-focused Coworker Support (PFCS)		.29**	.27**	.32**
Task-focused Coworker Support (TFCS)		-.08	-.07	-.10
Step 3: Moderating variable				
Task Complexity			-.01	-.04
Task Ambiguity			-.11	-.09
Step 4: Moderating effects				
TFCS X Task Complexity				.14*
TFCS X Task Ambiguity				-.14*
R^2	.05	.10	.11	.14
R^2 change		.05***	.01	.03**

N= 308, employee-coworker dyads. *p<.05, **p<.01, ***p<.001.

Figure 4. Interaction of Task-focused Coworker Support and Task Complexity on Knowledge Sharing Behavior

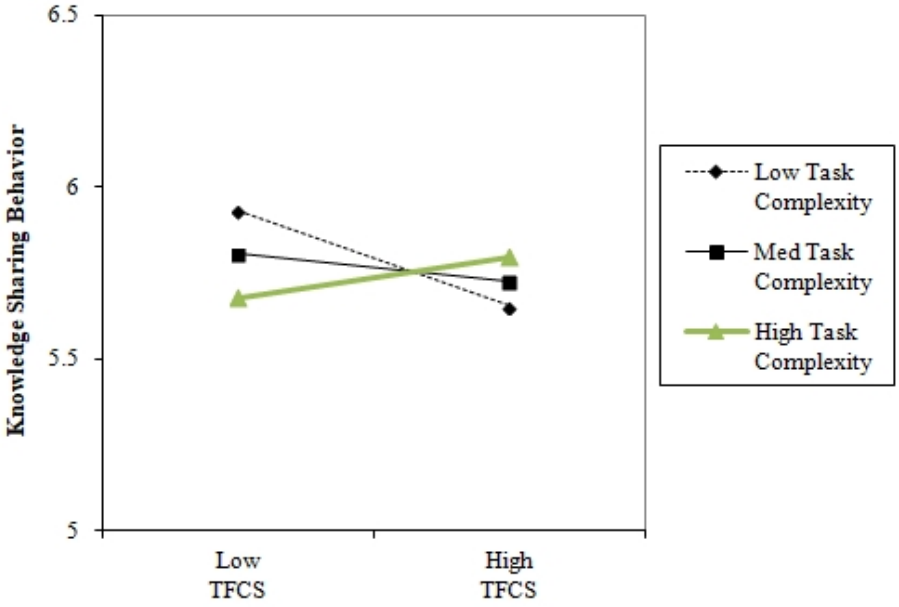
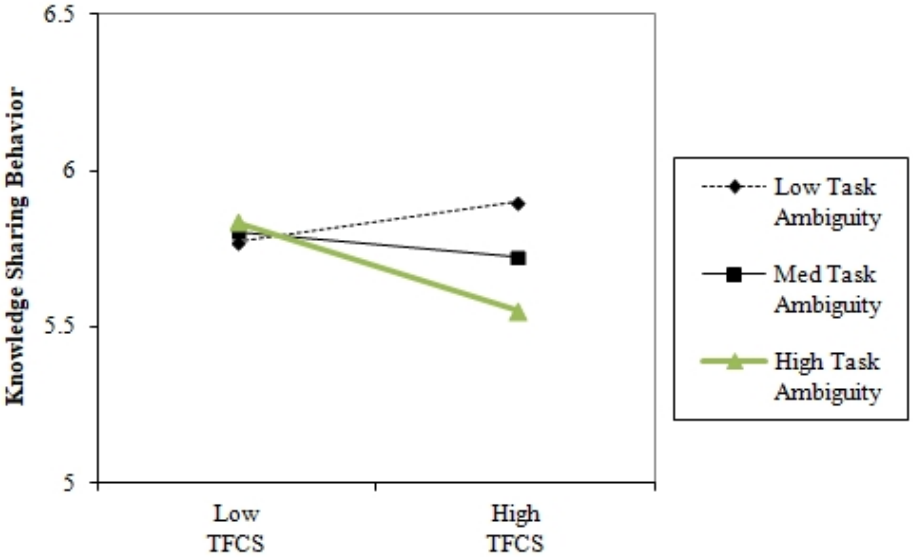


Figure 5. Interaction of Task-focused Coworker Support and Task Ambiguity on Knowledge Sharing Behavior



2.4. Summary of Results

Table 16 presents the results of hierarchical regression analysis from hypotheses testing. The main effects of coworker support on knowledge sharing behaviors was partially supported; person-focused coworker support was positively related to knowledge sharing behavior (H1a), but task-focused coworker support was not significantly related to knowledge sharing behavior (H1b). Among 4 moderating effects, two moderating effects of work-family conflict and task complexity were positively significant (H 3 and H 4). Another two moderating effects of abusive supervision and task ambiguity were significant, but the direction was the opposite of that which is expected (H2 and H5).

Table 16. Summary of Results

No.	Hypotheses	Prediction	Result
H1a	Person-focused coworker support → Knowledge sharing behavior	+	Supported
H1b	Task-focused coworker support → Knowledge sharing behavior	+	Not supported
H2	Person-focused coworker support X Abusive supervision → Knowledge sharing behavior	+ Moderation	Not supported (Opposite direction)
H3	Person-focused coworker support X WIF → Knowledge sharing behavior	+ Moderation	Not supported
	Person-focused coworker support X FIW → Knowledge sharing behavior	+ Moderation	Not supported
H4	Task-focused coworker support X Task complexity → Knowledge sharing behavior	+ Moderation	Not supported
H5	Task-focused coworker support X Task ambiguity → Knowledge sharing behavior	+ Moderation	Not supported (Opposite direction)

Chapter 6. Discussion

From the results that are described in the previous chapter, the purpose for this chapter is to elaborate how the findings from this study contribute to the literature on knowledge sharing behavior and social support. A number of theoretical and practical implications are presented. Study limitations and suggestions for future researches are discussed one by one in the following section.

1. Two Dimensions of Coworker Support

In the knowledge-based view, knowledge is considers as the key resource of firm's competitive advantage (Davenport & Prusak, 1998; Grant, 2002; Spender & Grant, 1996). This recognition of knowledge proves the need for processes that increase the creation, sharing, and leveraging of individual and collective knowledge (Drucker, 1993). However, an organization's capability to leverage its knowledge effectively depends on its people because individuals are the primary holders and movers of knowledge (Nonaka, 1994). Accordingly, an individual employee's knowledge sharing is critical for the success of an organization's knowledge management (Wang

& Noe, 2010).

Although knowledge sharing is synergistic collaboration of individuals in terms of exchanging knowledge and jointly creating new knowledge (Boland & Tenkasi, 1995), it represents a paradigmatic social exchange situation known as a “social dilemma” because this action could benefit the collective but may undermine the position and advantage of knowledge contributors (Cabrera & Cabrera, 2002). As knowledge (expertise) is a source of power (Davenport, 1997; French & Raven, 1959), an individual may reluctance to share it with others. In this mixed motivation situation, individuals have to decide whether to cooperate with others in providing knowledge for the common interest or to compete with others in hoarding knowledge for their own success and advantages. To solve this knowledge sharing dilemma, many researchers have identified the factors that influence people’s willingness to share their knowledge (eg., Wang & Noe, 2010). However, relatively few studies examined the role of coworker on knowledge sharing behavior (e.g., Boh & Wong, 2015; Kim & Yun, 2015; Zhang & Jiang, 2015).

As organizations have undergone extensive flattening of taller organizational restructuring, the work needs more frequent and more meaningful lateral interactions (Cascio, 1995; Payne, 2007; Takeuchi et al., 2011). Reflecting changes in the work environment, researchers have

highlighted the role of coworkers (e.g., Chiaburu & Harrison, 2008). Thus, this study focused on the importance of coworkers by proposing the coworker support as a critical factor when employees face the dilemma of whether or not to engage in knowledge sharing behavior.

This study proposed that two types of coworker support have a positive impact on knowledge sharing behavior. Based on the norm of reciprocity (Homans, 1974) and the target similarity theory (Lavelle et al., 2007), individuals who perceive their coworker's care about them (person-focused coworker support) and informational help to overcome task problems (task-related coworker support) reciprocate for the positive treatment by reinvesting their resources to share their knowledge that benefit their coworkers. In the dyad data between focal employee and coworker, the complex pattern of the results with coworker support variables should interpret the correlations of coworker support variables versus the regressions of coworker support variables.

Since person-focused coworker support and task-focused coworker support are both facets of the same higher order construct, such as coworker support, it is obvious that the two variables have positive relationship. This implies that the unique effect of each predictor on the outcome can be suppressed by the positive relationship between the predictors. Specifically, this study found that the relationship between task-focused coworker support

and knowledge sharing behavior was masked by the correlation between person-focused coworker support and task-focused coworker support (r = .83 p < .001), because of the fact that person-focused coworker support was significantly related to knowledge sharing behavior (ß = .29, p < .01) while task-focused coworker support was not significantly related to knowledge sharing behavior (ß = -.08, *ns*.).

In fact, person-focused coworker support and task-focused coworker support are highly correlated, because certain levels of both are usually present in supportive coworkers. However, this study attempted to demonstrate that there are critical differences between the two dimensions. Instead of arguing that individuals indicate whether they perceive that person-focused and task-focused coworker support will cluster separately from evaluations, this study simply suggests that there is meaningful differences in predictive relationships among dimensions of a higher order factor. Thus, the results of this study demonstrated that dimensions of a higher order factor have different relationships with a criterion of interest

As presented in Table 13, two types of coworker support are positively correlated with knowledge sharing behavior. However, person-focused coworker support (r =.23, p<.001) is more strongly correlated with knowledge sharing behavior than is task-related coworker support (r =.17, p<.01). Although this study did not test for such effects here, it is entirely

plausible that the strong social ties or relational bonds that typically characterize associations among coworkers may make it easier to understand the strong effects of person-related coworker support over task-related coworker support on knowledge sharing behavior. A long tenure with coworkers is an especially significant determinant of reciprocating decisions. Previous literature suggests that good relationships or good personal bonds with coworkers are believed to be the support function most related to extra-role behavior, such as helping or OCB (Burleson, 2003). Thus, when individuals have good relationships or good personal bonds with coworkers, features of the person-related dimension of coworker support that are important are weighted more heavily than features of the task-related dimension of coworker support. To fully explain these results, future studies need to compare the effects of the two dimensions of coworker support on knowledge sharing under the conditions of strong connections with coworkers in low task engagement vs. the conditions of weak personal connections with coworkers in high task engagement. From the findings, the study shows the important role of coworker supportive behavior in influencing knowledge sharing behavior. In particular, an employee who perceives that his/her coworker cares (person-focused coworker support) reciprocates into sharing knowledge that benefits his/her coworker.

2. Moderating Effects: Person-related Stressors

Based on target similarity framework (Lavelle et al., 2007), this study suggests the potential boundary conditions that explain the circumstances under which the two dimensions of coworker support are related to providing knowledge sharing behavior. Specifically, abusive supervision and work-family conflict are chosen as a critical person-related boundary factors to enhance the positive effects of person-focused coworker support on knowledge sharing behavior; while, task complexity and task ambiguity are selected as an important task-related boundary factors to increase the positive effects of task-focused coworker support on knowledge sharing behavior.

Among two dimensions of work-family conflict, WIF only strengthens the positive relationship between person-focused coworker support and knowledge sharing behavior. However, FIW shows non-significant results. These different results may relate to an unfinished argument on the pattern of relationships between work–family conflict and domain-specific consequences. Cross-domain effects of work–family conflict on outcomes are traditional viewpoint (eg., Frone, et al., 1992), which have dominated this literature. Specifically, the cross-domain perspective implies that conflict coming from one domain (e.g., WIF)

predominantly affects the other domain (e.g., family). More recently, scholars have suggested a matching perspective that challenges the traditional views of cross-domain effects (Amstad et al., 2011; Shockley & Singla, 2011). This matching perspective argues that work–family conflict is mainly causing problems in the domain where the conflict comes from (e.g., FIW on family-related outcomes). Specifically, while directions of WIF are associated with work-related outcomes, directions of FIW are associated with family-related outcomes. Recently, in order to provide evidence for resolving these controversies, Nohe et al. (2014) conducted a meta-analytic test. The results of their study supported the matching perspective, which the work-related strain had stronger effect on WIF than on FIW. Thus, as considering knowledge sharing behavior as work-related outcome, the results of this study are in line with the matching perspective. The high level of WIF is a critical situational cue to activate the focal employee's cost–benefit evaluation of investing resources to share knowledge. A moderate level of work–family conflict also increases arousal and engagement in the cost–benefit evaluation context. Taken together, under high and moderate level of WIF, employees actively engage in knowledge sharing behavior because these two levels stimulate motivational arousal to evaluate the benefits of reinvesting their resources into future returns from coworkers. In short, further studies need to investigate the relative merits of the two perspectives

and also examine the boundary conditions to explain under which cross-domain relationship or matching perspective affect stronger.

One unexpected finding of this study is the moderating effect of abusive supervision on the relationship between person-focused coworker support and knowledge sharing behavior. This study found that, in contrast to the prediction, the positive relationship between person-focused coworker support and knowledge sharing behavior was stronger at the lower levels of perceived abusive supervision than at the higher levels of perceived abusive supervision. One interpretation of this finding is that abusive supervision may be a strong situational factor (eg., Kim & Yun, 2015), that facilitates a climate that abused individuals have questioned the intention of coworkers' motivations whether are well-intentioned or simply benign (Margolin & Gordis, 2000). Consistent with these observations, victims of domestic abuse are less likely to value coworkers' support in comparison with their nonabused counterparts (Lee et al., 2015; Tepper et al., 2004; Wu & Hu, 2009). Consequently, victims of abusive supervision have troubles trusting their coworkers, family members, and other individuals who are the valuable sources of social support. To apply this logic to the results, as shown in Figure 2, nonabused individuals are more likely to absorb coworker support and thus more likely to reciprocate the allocation of their resources to the sharing of knowledge.

The second interpretation of this finding is based on COR theory (Hobfoll, 1989), which explains that idndividulas perceive psychological stress if they experience the actual loss, threat of resource loss, or the failure of resource gain after investing their resources. Abusive supervisors may be a critical source, which actively create unreasonable demands and threatening circumstances (Aryee et al., 2008; Kim et al., 2015; Tepper et al., 2004). Under abusive supervision, employees should spend substantial energy and effort to deal with the interpersonal stressor rather than investing on their core job tasks or engaging in discretionary behavior such as knowledge sharing behavior (Aryee et al., 2008; Lee et al., 2015). These patterns cause consumptions of the psychological resources of employee and finally exhaustion. As an example study, recently, Lee et al. (2015) introduced emotional exhaustion as a critical psychological mechanism to explain the relationship between abusive supervision and knowledge sharing. Specifically, they revealed that abusive supervision causes the emotional exhaustion of subordinates. This emotional exhaustion could lead subordinates to decrease voluntary behaviors such as knowledge sharing as a way of conserving their resources. Consistent with this logic, when individuals experience abusive supervision, employees must expend lots of time and energy dealing with “managing upwards” to overcome this anxious and threaten situation. This drain on their resources highlights the cost of

sharing their knowledge to coworker, and in turn, taking away from their willingness to share their knowledge. Consequently, they are likely to conserve resources perceived from coworkers rather than invest additional resources for the future return, as a means of recovering the resources losses. Consistent with this line of thought, nonabused employees have more resources to absorb coworker support and are thus more likely to allocate resources to reciprocate for the positive treatment from coworkers, as shown in Figure 2.

3. Moderating Effects: Task-related Stressors

While an examination of these person-related moderating effects may tell an interesting story, the moderating effects of two task-related stressors have opposite results on the relationship between task-related coworker support and knowledge sharing behavior. The factors of task complexity and task ambiguity depict significant, yet very different, patterns of moderated results. Consistent with the prediction, task complexity is positively moderated by the relationship between task-focused coworker support and knowledge sharing behavior. Complex tasks contain challenging demands associated with a particular task and require workers to use a number of multifaceted skills. Consequently, task complexity increases the

importance of task-focused coworker support because it focuses on issues linked to the variety of problems requiring resolution and to the amount of information and the number of alternatives that an employee must assess to fulfill a task. Consequently, the benefits of sharing knowledge with supportive coworkers are highlighted.

The results of this study showed that, in contrast to the prediction, task ambiguity is negatively moderated by the relationship between task-focused coworker support and knowledge sharing behavior. One interpretation of this finding is that the different features and values streaming from hierarchical position create different perceptions and reactions. Whereas vertical relationships originates in authority ranking (Fiske, 1992), coworker exchanges come from the norm of reciprocation (Gouldner, 1960). Given this, the supervisor is formally the strongest person in the workplace, who can exert substantial influence over their subordinates. Based on their legitimate authority, the supervisor has powers of controlling valuable resources (e.g., budget and scheduling) and outcomes (e.g., performance appraisal and salary) that are important for employees (Eisenberger et al., 2002). However, coworkers have no hierarchical authority over one another, and thus the room for them to reduce the burden of unclear scope of responsibilities, behavioral responsibilities, and the hierarchy of responsibilities is much smaller. Specifically, social support

from supervisors has a vital effect on reducing role ambiguity because their main tasks are to provide information and guidance about prescribed expectations, authorities, and individual goals (Rizzo et al., 1970; Tubre & Collins, 2000). Whereas social support from a supervisor rather than coworker support is critical for the clarification of formal job expectations, coworkers, rather than the supervisor, are most likely to jointly develop informal job roles. Consequently, rather than social support from coworkers, social support from a supervisor may function as a significant resource that mitigates an employee's behavioral strains in response to task ambiguity.

Another possible explanation for these opposite results relates to the previous research by Cavanaugh et al. (2000); they developed a two-dimensional framework. In their framework, there are two different work demands such as challenge-related stressors and hindrance-related stressors. Challenge-related stressors are characterized as facilitating feelings of fulfillment and challenge in the workplace. The examples of challenge-related stressors are task complexity, s high workload, time pressure, job scope, and high responsibility. However, hindrance-related stressors refer to demands that intervene in an individual's capabilities to fulfill goals and jobs. The examples of hindrance-related stressors are organizational politics, red tape, task ambiguity, and concerns about job security. LePine et al. (2005) coded and examined meta-analysis with 185 independent studies to analyze

stressor-criterion relationships. Their study found not only the positive effects of challenge-related stressors with job satisfaction and organizational commitment, but also negative effects of challenge-related stressors with employee intentions to quit and actual turnover. Their study also revealed not only the negative effects of hindrance-related stressors with employee job satisfaction and organizational commitment, but also the positive effects of hindrance-related stressors with employee intentions to quit, turnover, absenteeism, and tardiness. In line with this perspective, task complexity (challenge-related stressor) is related to high motivation. Employees have high tendency to believe that there is a positive relationship between expanded efforts and formal recognition or experience personal accomplishment. Consequently, under this challenge-related stressor (eg., task complexity), individuals are able to see coworker support as helpful behavior for providing professional advice and useful equipment, which results in a strong normative sense of reciprocating to the supportive coworker. However, hindrance-related stressor is related to low motivation. Employees do not have high tendency to believe the positive relationship between expended efforts and the likelihood of meeting them. Consequently, individuals who face conflicting task demands they are likely to appraise as facing the potential to prevent from personal gain, which promotes negative emotions and resource loss or threat. Under this hindrance-related stressor

(eg., task ambiguity), individuals are overwhelmed by stress, so they do not have room to see coworker support as helpful behavior in order to reciprocate by sharing knowledge. Negative emotions and a drain on resources make the cost of sharing knowledge with coworkers more salient and decreases engagement in reciprocating with knowledge sharing. Given that, it is possible that task complexity positively moderates by the relationship between task-focused coworker support and knowledge sharing behavior, task ambiguity negatively moderates by that relationship.

4. Theoretical Implications

The findings from the current study extend the existing literature in several ways. First, this study extends the literature on individual knowledge sharing behavior by investigating important interactions taking place among peer employees who have no hierarchical authority over one another. The results of this study stressed the importance role of social influence on knowledge sharing behavior at the workplace. This is consistent with the argument that the informal relationships at workplace have a strong effect on employees' work outcomes (Chiaburu & Harrison, 2008). Researchers have examined the influences of social context at work. However, the importance of coworkers has been comparatively neglected. Coworkers' influence on

focal individuals has not fully summarized and organized. Thus, the findings of this study enable researchers to understand knowledge sharing behavior by adopting a dyadic or interpersonal focus. This study also revealed that the different types of coworker support are an important antecedent of knowledge sharing behavior among coworkers.

Second, this study uses social exchange theory (Blau, 1964) combined with the target similarity framework (Lavelle et al., 2007) to more fully understand and predict coworker support with regard to knowledge sharing behavior. At the outset, this study frames the source specifications among antecedents, moderators, outcomes, and the study of interactions between multifoci processes. Based on these frameworks, the model from this study makes two major assertions. This study suggests that a coworker is a specific target and employees are motivated to engage in attitudes and behaviors that are favorable to the target. An individual's motivation for sharing knowledge with a coworker comes from the immediate target beneficiary of the person's knowledge sharing behavior. An employee's knowledge sharing behavior results from the desire to reciprocate the positive actions of a coworker. Next, this study identifies person-related moderators (abusive supervision and work-family conflict) and task-related moderators (task complexity and task ambiguity) as matched constructs to make the primary relationships stronger.

Third, the study contributes to social support literature by investigating two types of coworker support simultaneously to examine the true effects of specific coworker support behavior on knowledge sharing behaviors. Despite the fact that as a concept, coworker support is a meta-construct, previous research has failed to utilize a comprehensive structure for covering its dimensions and examining its effects on outcomes. To bridge this gap in the extant literature, this study finds that employees indeed differentiate between person-focused and task-focused coworker support and that these two types of coworker support differently influence decisions of knowledge sharing behavior. Specifically, the results reveals that person-focused coworker support is a significant positive result on knowledge sharing behavior after controlling for another types of coworker support. However, task-focused coworker support does not show significant positive result on knowledge sharing behavior after controlling for person-focused coworker support.

Fourth, this study also provides some supports for the target similarity model when two foci are investigated. When the social exchange variables and intended beneficiary are matched across constructs, relationships between social exchange variables (ex., coworker support) and extra-role behavior (ex., knowledge sharing behavior) are generally stronger (Masterson et al., 2000; Becker & Kernan 2003; Lavelle et al., 2007).

Accordingly, the present study demonstrates the value of a target similarity approach when two foci (person-focused and task-focused coworker support) are simultaneously interacted with the two constructs of person-related and task-related stressors. As expected, work-family conflict and task complexity shows positive moderating effects. Interestingly, however, the directions of moderating effects of abusive supervision and task ambiguity are opposite of that which is expected. The results from this study are important in suggesting that the influence of a coworker support on knowledge sharing behavior should be understood in terms of the extent to which the relevant situation provides cues to increase one's reciprocating decisions. Overall, by taking a more precise approach of the target similarity model, this study may further enhance the ability to understand and predict these forms of behavior.

5. Practical Implications

This study has several practical implications. Knowledge sharing does not always flow as smoothly as one would hope. The willingness of individuals to contribute their own knowledge to a shared repository tends to be rather low. That's because knowledge sharing behavior may create social dilemma situation (Cabrera & Cabrera, 2002). For that reason, organizations often confront difficulties in facilitating knowledge sharing behavior. To

overcome these difficulties, this study suggests the role of coworker support to solve the social dilemma situations of knowledge sharing. The decision of sharing their knowledge is likely affected to some extent by those of their coworkers. As many organizations have adopted team-based and flatter organizational structures, coworkers have become an organization's most salient agents for employees to interact with (Takeuchi et al., 2011). Thus, organizations should pay more attention to the effects of coworker, who can shape the employee's perceptions, attitudes, and behaviors. Specifically, when organizations manage the perceptions of the individual and his/her coworker, they need to manage their relationship as a dyad, rather than just concentrating on the individual alone.

Leaders may need to reconsider task characteristics when they allocate task activities, because employees have different tendency to respond stressful situations. The results from this study demonstrate that under high task complexity employees are likely to share their knowledge in the context of high level of task-focused coworker support, while employees with high levels of task-focused coworker support are likely to decrease their level of knowledge sharing when tasks are ambiguous. According to this pattern, it might be practical to organize and allocate the tasks in consideration of their relation with coworkers.

6. Study Limitations and Recommendations for Future Research

The present research also has shortcomings. Given the cross-sectional nature of the research design, the causal impact of coworker support on knowledge sharing behavior is uncertain. This temporal implication of coworker support requires longitudinal or preferably field-experimental research designs in order to further empirically validate the current conceptual framework.

The study may not include all of the possible variables that may determine knowledge sharing behavior. While it is not my intention to test a comprehensive model of coworker influence, future studies could include additional team related variables on the relationship between coworker influence and knowledge sharing behavior, such as team climate. There are different social networks that can create impacts on individual behaviors. In this regard, stronger social influence occurs in work teams (Fulk, 1993). Team climate has long been viewed as the most critical sources of social influence that influences employee behavior in the team context (West & Anderson, 1996). Team climate is composed of three dimensions: affiliation, trust, and innovation (Hulsheger et al., 2009). Moreover, since the study suggests the important positive role of coworker support in increasing

knowledge sharing behavior, it would be worthwhile to consider other types of coworker influence in future research. For example, coworker social undermining behavior appears to be potential main factor that allows minimizing the benefits of sharing knowledge and maximizing the costs of sharing knowledge.

This study focused on the positive side of coworker support in increasing knowledge sharing behavior. It would be worthwhile to consider an alternative side of coworker influence in future research. Coworker support can drive not only an intrinsic motivational process by satisfying employees' needs for autonomy, but also an extrinsic motivational process by increasing the probability to reach work goals (Schaufeli & Bakker, 2004). However, coworker help can be a source to threaten one's self-image or esteem and create feelings of inadequacy (Fisher, Nadler, & Whitcher-Alagna, 1982). In the similar vein, stress-as-offense to self theory (SOS; e.g., Semmer et al., 2005; Beehr et al., 2010) argues that individuals respond poorly to environmental stressors because stressors harm their positive self-images. Coworker support could not only make another party feeling of obligations to reciprocate the supportive party, but also create feeling of dependence on the supportive party. The feelings of dependent on the supporter may place receiver in an inferior position, consistent with threats to a positive self-concept in SOS theory. According to SOS theory, therefore,

future studies could extend the notion that supportive interactions may actually threaten the recipient's sense of self, causing worse stressors for the focal employee compared to the stressors alone.

Lastly, although this study did not directly evaluate focal employees' attribution, coworker support may also interpret in negative ways. Employees could rationalize coworker behavior via their own perceptions of coworker intentions (Thomas & Pondy, 1977), thus differentiating their responses. Because of the same status, employees may view coworker support as a political behavior or self-enhancing behavior (Fandt & Ferris, 1990; Ng & Sorensen, 2008; Tepper et al, 2004). For example, Ferris et al. (1995) suggested that employees perceive OCB differently with organizational politics through their attributions of intentionality. When individuals observe others' behaviors as prosocial behavior, they are likely to attribute sincerity to the other's intention. However, when individuals observe others' behavior as political or impression management behavior, they are likely to attribute self-interest and manipulation to the other's intention. Thus, when employees attribute coworker support as self-serving or self-interest, the cost of sharing knowledge is highlighted. Consequently, the employee reduces his/her intention to reciprocate the coworkers, and coworker support may have weak relationship with knowledge sharing behavior. On the other hand, when an individual labels the coworker support

as altruistic motive, the individual views the coworker as a significant human resource and highly appreciate the coworker. The individual is likely to provide more knowledge to help coworkers to reciprocate their support. Coworker support is reciprocated as a resource investment when employees are pleased with the behavior, and is published when they are displeased. Thus, when employees interpret coworker support as an altruistic motive, the risk of reinvesting their resources perceived from coworkers is reduced and the possibilities of reciprocating are increased. It may be fruitful to investigate the interpretations of coworker support, since attributions of the coworker's intent help to define the reciprocity issue for a party and enable one to estimate how effectively different reciprocity behaviors will be in dealing with the other party.

7. Conclusion

In conclusion, this study enriches the conception of knowledge sharing behavior by taking a target similarity framework; examining two different dimensions of coworker support and constructing relevant moderating factors in one framework. Notwithstanding its limitations, it is hoped that the interesting findings obtained from this study prompt other researchers to further deepen the understanding of coworker influence and

knowledge sharing behavior in organizations.

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국문초록

동료지원과 지식공유에 관한 연구

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지식중심의 경제인 오늘날, 많은 조직들은 팀제를 도입하거나 계층을 단순화 하는 등의 수평적 조직구조로 변화하고 있다. 그 결과 개인 중심의 반복적이고 단순한 과업에서 점차 복잡하고 구성원들간의 긴밀한 상호작용을 요하는 과업으로 직무 특성이 변화하고 있다. 이러한 실무에서의 흐름에 따라 동료의 중요성에 대한 관심이 증가하고 있다. 따라서, 본 연구는 지식공유에 동료가 미치는 영향력에 대한 심도 있는 연구를 목적으로 한다.

조직구성원들은 자신이 가지고 있는 지식을 공유함에 있어서 사회적 딜레마에 봉착한다. 구성원들의 지식공유는 공동의 이익을 위한 협조적인 행동이면서, 동시에 구성원 자신에게는 전문성에서 발휘되는 권력을 상실하게 되는 불이익을 초래하기도 한다. 따라서, 구성원들로 하여금 자신의 지식을 공유하게 만드는 선행요인으로 두 가지 다른 차원의 동료지원을 실증적으로 검토하고자 한다. 또한 두 가지 다른 차원의 동료지원이 지식공유에 미치는 영향을 강화 시켜주는 상황적 변수들을 고찰하고자 한다. 타겟 유사성 이론(target similarity theory)에 따르면, 구성개념들간의 관계는 구성개념들이 같은

대상이거나 집중하는 차원과 내용이 일치할 때 그 관계가 강해진다고 설명한다. 이 이론에 따라서, 본 연구는 사람관련 동료지원이 지식공유에 미치는 영향을 강화시켜주는 조절변수로 사람과 관련된 스트레서인 상사의 비인격적인 감독과 과업-업무 갈등을 채택하여 그 영향을 검토하고자 한다. 또한 과업관련 동료지원이 지식공유에 미치는 영향을 강화시켜주는 조절변수로는 과업과 관련된 스트레서인 과업 복잡성과 과업 불확실성을 채택하여 그 영향을 검토하고자 한다.

본 연구의 가설 검증을 위해 한국에 위치한 다양한 기업을 대상으로 설문조사를 실시하였다. 설문은 구성원 및 그들의 동료들로 구성된 쌍에게 배포되었으며, 최종적으로 308쌍의 자료가 분석에 사용되었다. 위계적 회귀 분석을 활용하여 분석한 결과, 사람중심 동료지원이 지식 공유에 정적인 관계를 가지는 반면, 과업중심 동료지원은 지식공유에 통계적으로 유의하지 않은 것으로 나타났다. 타겟 유사성 이론을 바탕으로 한 조절효과의 결과는 다음과 같다. 상사의 비인격적 감독은 사람중심 동료지원과 지식공유의 관계를 부적으로 조절했으며, 과업-업무 갈등은 사람중심 동료지원과 지식공유의 관계를 정적으로 조절했다. 또한 과업 복잡성은 과업중심 동료지원과 지식공유의 관계를 정적으로 조절했으며, 과업 불확실성은 과업 중심 동료지원과 지식공유의 관계를 부적으로 조절했다.

본 연구의 기여점은 다음과 같다. 첫째, 지식공유를 예측하는 중요한 선행변수로 동료의 영향력을 고찰하였다. 이는 동료가 구성원의 인식, 태도와 행동에 영향을 미친다는 것을 의미하며, 따라서 기업들은 동료와의 관계에 대한 지속적인 관심을 기울여야 할 필요가 있다. 둘째, 동료의 지원을 두 가지 다른 차원으로 구분하여 각각이 지식 공유에 미치는 영향에 대해 고찰하였다. 지원행동이 메타-구성개념 임에도 불구하고 기존의 연구는 지원행동의 차원을 구분하여 각 차원이 미치는

영향에 대한 연구가 미흡하였다. 본 연구는 이러한 한계를 극복하기 위해 설계되었으며, 사람중심 동료지원과 과업중심 동료지원이 지식공유 결정에 미치는 다른 영향을 확인하였다. 셋째, 사람관련 유사한 구성개념들과 과업관련 유사한 구성개념들간의 상호작용을 통해 지식공유에 있어서 타겟 유사성 이론을 증명하였다는 점에서 이론적 의의를 제공한다. 마지막으로 본 연구는 동료지원이 지식공유에 미치는 영향력을 강화 시키는 조절변수들을 제시하였다. 이는 과업환경에서 지식공유 딜레마를 극복하기 위한 설명을 제공하였으며, 지식 공유를 활성화 시키는 방법을 제시한 점에서 실무적인 의의를 가진다.

본 연구는 이러한 기여점에도 불구하고 몇 가지 연구의 한계점을 가지고 있다. 횡단연구 설계로 인해 인과관계를 명확히 주장하는데 한계가 있다. 또한 지식공유 딜레마를 해결하기 위한 동료지원 이외에 다른 동료의 영향력에 관한 변수를 고려하지 않았다. 끝으로 보다 다양한 측면에서 조절변수에 대한 검토가 이루어질 필요가 있다. 향후에는 이러한 한계점을 보완하는 연구가 추가적으로 이루어져 동료의 영향력이 지식공유에 미치는 영향에 대한 이해가 한층 깊어지기를 기대해 본다.

주요어: 사람중심 동료지원, 과업중심 동료지원, 지식공유, 상사의 비인격적 감독, 업무-가정 갈등, 과업 복잡성, 과업 불확실성

학 번: 2011-30168