A MULTI-PERSPECTIVE INVESTIGATION OF THE MOTIVATIONAL MECHANISMS UNDERLYING KNOWLEDGE SHARING AND PERFORMANCE

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A Multi-perspective Investigation of the Motivational Mechanisms Underlying Knowledge Sharing and Performance

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CERTIFICATE OF ORIGINALITY

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(Signed) _____

Alice , Cheng Lan

Abstract

Individual and organizational knowledge is a key asset for organizations in today's business environment. Organizational knowledge refers to a dynamic mix of experiences, expert insights, unique know-how (Nonaka & Konno, 1998) Knowledge management as an important enabler for company success and competitive advantage has received considerable attention in recent years from both practitioners and researchers. In particular, knowledge sharing is a central process of managing knowledge (Eisenhardt & Santos, 2002) and is crucial because it helps organizations promote best practices and reduce redundant learning efforts or 'reinventing the wheel' (Hansen, 2002; McDermott and O'Dell, 2001). To remain competitive in the marketplace, organizational knowledge and expertise must be shared (Gold et al., 2001; Zack, 1999) because it is a prerequisite for innovation (Brown & Eisenhardt, 1995; Verona, Prandelli, & Sawhney, 2006), organizational learning (Senge, 2006), and the development of capabilities and best practices (Argote, Ingram, Levine, & Moreland, 2000).

Knowledge sharing behaviour among employees provides opportunities for mutual learning, which result in improved employee performance, team effectiveness and organizational performance. The main motivation in developing the argument here is the growing realization that knowledge sharing behaviour within organization is a critical process affecting employee performance achievements. While the causal

factor inducing knowledge sharing behaviour have been ranging from individual disposition to wider organizational environment, the lack of emphasis on investigating and comparing these antecedents has been surprising, particularly considering knowledge acquisition and provision these two facets of knowledge sharing behaviour simultaneously. Building on the work of goal orientations significantly impact knowledge sharing behaviour (Swift, 2011). This study proposes four dimensions of goal orientation differently related to performance rating mediated by knowledge acquisition and provision. In this study, the whole elaboration further the extant knowledge base by examining how the adoption of a goal orientation create a framework for self regulation via knowledge sharing behaviour, which are behaviour manifestations of the self-regulatory goal string process that mediate the relationship between goal orientation and performance.

Before describing the antecedent and consequences of knowledge sharing behaviour among employees, it's important to identify when knowledge sharing occurs. A critical challenge in knowledge sharing behaviour is in motivating potential providers to share their knowledge with seekers since knowledge refers to the critical resource embedded in employees that can help employees and organizations to sustain advantage on competitive environment. Strong motives can help knowledge provider overcome the perceived costs incurred in taking time and expending effort to share knowledge. Base on individual-level knowledge sharing behaviour domain, through demonstrating, examining, and comparing three dominant perspectives that account

for knowledge sharing behaviour and performance rating empirically. By identifying limitations inherent in each perspective and drawing upon the emerging research focus highlighted, this study address the existing research issues and assess our new perspective's unique explanatory power relative to previous explanations by simultaneously considering both individual trait and context factors as antecedents of the knowledge sharing engagement level and by testing whether knowledge sharing behaviour is an underlying mechanism through which these antecedents affect performance rating.

This study conducted with one knowledge intensive industry—banking. This survey covered within two division firms affiliated with one finance group: one in Shenzhen, the other in Nanjing, both of which are from China. Preliminary interviews revealed that both firms were midlevel professionals engaged in knowledge-intensive work, including research and development, financial modelling, and customer relationship management and so on. The employees involved in this survey relied heavily on colleagues for information to solve problems and coordinate work. Having sites from three different cities and branches increased our confidence in the study's external validity. Based on a sample of 322 employees in knowledge-intensive positions, we tested the effects of the dispositional goal orientations of employees on their knowledge provision and knowledge acquisition behaviours, as well as their indirect effects on performance ratings. The results showed that goal orientations accounted for a significant portion of the variations of knowledge sharing behaviours among

employees on top of the existing perspectives. Goal orientations of employees in knowledge-intensive positions also affected their performance ratings indirectly through knowledge provision and knowledge acquisition as intervening variables.

The main research question being addressed in this dissertation is the reasoning behind the organizational phenomena that why some employees engage in a high level of knowledge sharing behaviour why some employees are reluctant to do so. Building on the work of the goal orientation theory, four patterns of goal orientations play a key role in how individuals cognitively value the costs and benefits of engaging in knowledge sharing which subsequently affects their knowledge providing behaviour. This line of research has focused on the proximal consequences of goal orientation in order to better explain the mechanisms between goal orientation and distal performance outcomes. The central research objective is to establish a religious understanding to the antecedents, forming mechanisms, and consequences of knowledge sharing behaviour by opening a black box of goal orientation, eventually helping to explain the employee achievement variance.

In answering the research question, it's expected that this study will make contribution to the literature on knowledge management, social exchange theory, social network theory, and goal orientation theory. This dissertation is also expected to contribute to the opening of a new perspective to explain the whole mechanism for knowledge sharing behaviour--self regulation perspective, which differs from previous works in four important ways. First, in response to extant incomplete

discussion about knowledge sharing behaviour, major objective is to examine and compare the multiple mechanisms through which knowledge sharing behaviour is activated upon different perspectives. Second, this study offers a theoretical understanding on the conceptual model regarding the formation of goal striving process motivated by different goal orientation. Third, this research explores a new perspective by developing a theoretical model indentifying and linking cognitive-motivational factors to explain and examine knowledge sharing behaviour mechanism towards fullest potential. Last but not the least; we propose a model simultaneously considering the knowledge providing and knowledge seeking behaviour. In this way, managerial policy makers are able to learn how to precisely encourage knowledge sharing behaviour from a broader horizon and deeper level rather than a few narrow and separable focal points.

This study proposes the following implications for individuals initiating knowledge sharing practices or desiring to encourage knowledge sharing within their organizations. First, emphasizing organizational rewards (such as salary incentives, bonuses, promotion incentives, or job security) as a primary knowledge sharing mechanism is not cost-effective, because extrinsic rewards secure only temporary compliance (Alfie, 1993). This means that organizational rewards may provide temporary incentives for knowledge sharing, but is not fundamental force forming employee knowledge sharing behaviours. Second, effects to foster the learning-oriented aptitude of employees are necessary for creating and maintaining knowledge sharing culture. A highly self-regulatory staff can be established by

recruiting and selecting employees who are active learners, and who have high cognitive aptitude and self presentational.

ACKNOWLEDGEMENT

I would like to take this opportunity to thank those who helped and supported my challenging and tough research journey.

I gratefully acknowledge my co-author Prof. Law's numerous research design, theoretical suggestions, and statistical analysis techniques from Nov 2011 to now. Without his guidance and help, I would never have finished my studies and my thesis. It's him to let me insist to the end of my research trip. Particularly, I am indebted to my parents for their endless love, support, and understanding during these tough five years study.

Moreover, I thank my friends and colleagues at the Department of Building and Real Estate for their support and suggestions. I extend my thanks to the student helpers who facilitated the distribution of the questionnaires and to the interviewees and questionnaire respondents who helped complete the survey.

Compare to most other research students, my whole PhD study is filled up with hardship and resignation. I majored in Economics for my bachelor degree and get master degree in E-business and Knowledge management. After completing my contract with school of Accounting and Finance in PolyU, I was looking for a new job in educational institution and industries. During that period, Dr. Patrick Fong had a public job post recruiting for research associate for his project. Since he is conducting knowledge management which is fit for my interesting and qualified filed, I signed the contract with him. At the same time, I also got a new job in the department of management and marketing in PolyU. Considering my academic background and career development, I am more inclined to stay in business school rather than building and reseal estate department, but I insist my choose since Dr. Fong provided me offer a little bit earlier than MM department . During I was a research associate period, to

my surprise, since Dr. Fong's potential PhD students reject the PhD offer, and I become the one who filled up with this quota. Since time is very impressing that time, I do not have enough time to consider carefully whether I should take up this challenge since research student life and future is totally different from a temporary research associate job. I admit that both me and Dr, Fong do not have a carful planning for this decision and future arrangement.

During my PhD study, I met a lot of academic problems and issues, since Dr. Fong is major in qualitative study, I must design the whole research process by myself. But I did not mind it at all. In fact, since the day I begin with my PhD study, I have made the great determination to accomplish to the end no matter how difficult it is. I try to do the research design, collect literature review, and find the data source myself. However, I have a communication problem with Dr. Fong after July 2011 , worse still, his research student Jodith Leung make use of this misunderstanding to let our supervisor-student relationship into crash. Therefore, since July 2011, in addition to deal with the academic challenges, I was pushed to face a lot of difficulties and obstacles brought from this poor relationship. I never require any help during these years, I only hope to avoid further conflicting and therefore seldom contact with Dr. Fong since the beginning of 2012, only send blessing during X'mas and Thanksgiving days. The object for me is rather clear and reasonable, which is, I try to finish the PhD degree to the end and avoid troubles. Admittedly, there is no one can start and finish a PhD study totally by oneself, therefore, I asked Prof. Law's guidance for my research at the end of 2011 and start my totally new research project under his supervision. My PhD thesis topic therefore changed from social capital to knowledge sharing from then on.

After great pains and struggle, I finally got a very good job and only waiting for my PhD degree confirmation. I have stayed in HK for the lunar year for intensive revision and waited these days for your approval for revision stratification. More importantly, I have courteously highlight to my greatest extant that I am waiting for the Feb 24th

deadline for RC committee in 18th Mar, so that I can meet my conditional offer based on PhD certification requirement. However, Dr.Fong did not give me any response. Just as he said several time, you do not care my placement. I have officially asked Dr. Fong several times in 2011 and 2012 that if you have strong opposition for my study condition or personality, I can withdraw or change supervisor. He should remember that you always said that you hope me continue with my study, that's why I persist to the end to finish the tough journal until successful oral examination. To my astonishment, Dr Fong always negatively complains or traduces me in front of the public. Objectively, I do well in my PhD course, attend conference, and get good result for the thesis; personally, I never do anything to negatively influence anyone else. I never ask for any help no matter in academic or life. The only thing I hope he may help these days is that speeding up the final administrative procedure for my PhD degree. But he rejected finally.

Here are some insights and suggestions for researchers who have interest to view my thesis.

First, As a scholar, try to be objective and never impose imputation to others without concrete evidence. After all, No one is the judge.

Second, it's really shameful to make up story to attack others.

Finally, justice never fades no matter how evils try to cover it.

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Chapter 1: Introduction

1.1 Research background

The nature of firm competition and the sources of competitive advantage in many industries have shifted toward knowledge-based resources. This is particularly the case in knowledge intensive industries, wherein a firm's competitive advantage is highly dependent on its ability to generate and deploy new knowledge solutions. Many knowledge intensive firms have spent enormous amounts of time and money trying to find ways to better manage their knowledge resources. Effective leveraging of knowledge resources through the transfer and reuse of existing knowledge is an important challenge for contemporary organizations.

Organizational knowledge refers to a dynamic mix of experiences, expert insights, unique know-how, important values, and situational information (Nonaka & Konno, 1998). Knowledge is a strategically critical organizational resource that helps to build sustainable competitive advantages for organizations and employees are the reservoirs that store these resources (Argote et al, 2003; Barney, 1991; Grant, 1996). In an organization, knowledge sharing is a fundamental process through which employees can contribute to the transfer and utilization of these resources by leveraging individual knowledge into collective knowledge. The resulting collective knowledge would then be characterized as a prerequisite for innovation (Brown & Eisenhardt, 1995; Verona et al., 2006), organizational learning (Senge, 2006), and the development of capabilities and best practices (Argote et al., 2000).

Growing evidence has shown the knowledge embedded within employees, particularity in the emerging matrix organizational structure, effectiveness is dependent on how well knowledge is shared between individuals, teams, or units (Alavi and Leidner 2001, Argote et al. 2000). However, despite the emphasis on and interest in motivational factors when studying the knowledge sharing and utilization process, there are several limitations of the existing literature. There are no coherent, integrated, theoretical frameworks of the motivational factors that explain how knowledge is transferred between knowledge providers and recipients. More importantly, the documented empirical studies have rarely considered both providers and recipients simultaneously as they are engaged in the process of knowledge exchange and utilization, and then are utilized in ways that benefit performance.

Previous research has noted that organizational knowledge sharing behaviour involves important social processes (Argote et al., 2000; Lindqvist, 2005). For example, Bresnen and colleagues (2003) examine the social factors that enhance the transfer of knowledge in project-based organizations, and find that knowledge transfer in project settings relies very heavily on social forces. Following this line of research, with its focus on the social forces that underlie the knowledge management process, some researchers have turned to behavioural theories to better understand the knowledge transfer process. To this end, we begin to address existing research limitations in this study by drawing upon three complementary motivational theories and promoting a

new powerful theory to explain the motivational mechanisms underlying knowledge transfer and utilization. A wealth of evidence indicated that, a new and powerful perspective which brings out well should first highlight at least below three main focal reasons prior to unfolding the well-justified theorization.

1.1.1 Reasons for studying the knowledge sharing behavior in knowledge intensive firms

Knowledge sharing behaviour among employees provides opportunities for mutual learning (Huber, 1991), which result in improved employee performance (Reinholt et al., 2011), team effectiveness (Tsai, 2001) and organizational performance (Hansen, 2002).As the term implies, knowledge sharing presumes a relation between at least two parties, one that possess knowledge and the other that acquires knowledge. Both parties in a dyadic relationship have important strategic considerations before providing or seeking knowledge. For this reason, there have been active researches in understanding the drivers and impediments concerning employees' knowledge provision and acquisition in the literature (Bordia et al., 2006; Bock et al., 2005; Kankanhalli et al., 2005; Quigley et al., 2007; Reagans and McEvily, 2003). Previous studies have emphasized the causal factors concerning knowledge sharing behaviour from various perspectives. Extant research acknowledges the properties of knowledge itself, such as its degree of articulation and aggregation (Spender,1996) and the properties of the individuals who share (or fail to share), such as the degree of motivation, opportunity, and ability as predictors of knowledge sharing (Adler & Kwon, 2002; Argote et al., 2003; Hansen & Nohria, 2004; Nahapiet & Ghoshal, 1998;

Szulanski, 1996). Considering macro-level environmental properties, Wang and Noe (2010) provided a more comprehensive review and summarized five categories of factors that facilitate knowledge sharing. They were organizational contextual factors such as climate and rewards; interpersonal and team characteristics such as diversity and social network; cultural characteristics for knowledge sharing in multinational firms; individual characteristics such as personalities; and motivational factors such as trust and attitudes.

To frame and explore mainstream perspectives from multiple factors impacting knowledge sharing at the individual level, we identifies team characteristics, motivational factors and the individual characteristics from above five categories that dominated the knowledge sharing literature. Among various team characteristics, network centrality and tie strength are the key constructs identified for knowledge sharing to take place (Cross & Cummings, 2004). We label this as the *network perspective* in studying knowledge sharing. As for motivational factors, perceived costs and benefits, justice, and trust are the key constructs of interest. Since these scholars put heavy emphases on the social exchange between the knowledge sharing parties (Gagné, 2009), we label this as the *relational perspective* in studying knowledge sharing. The third major factor leading to knowledge sharing relates to personal characteristics of the employees such as their altruistic inclinations (McNeely & Meglino, 1994). Since this view focuses on dispositional factors of the

employees, we label this as the *dispositional perspective* in studying knowledge sharing.

1.1.2 Reasons for identifying the self regulation perspective for explaining phenomenon

Researchers have increasingly drawn on principles of self-regulation to understand motivated behaviour in organizations (Bolino, 2012; Carver & Scheier, 1998; Lord et al., 2010; Vancouver, 2008; Vancouver & Day, 2005). An established documentary view has shown that knowledge sharing enables individuals to adapt and respond to continuously changing goals and role expectations (De Stobbeleir et al., 2011; Tsui & Ashford, 1994) and improve their task performance (Chen et al., 2007). Knowledge provision and acquisition in this view are two tactics used to achieve better fit with a highly competitive environment through transferring specific expertise and accessing to best practise. This framing fits the tenets of self-regulation theory very well, because the process that employees actively engage in knowledge sharing behaviour, manifested as establishing professional image, learning best practice, acquiring task-specific feedback is consistent with self-regulation theory's emphasis on individuals' ability to guide their own goal-directed activities and performance by setting their own standards, monitoring their progress toward these standards, and seeking feedback to reduce the discrepancies between the current state and one's goal (Carver & Scheier, 1981; Vohs & Baumeister, 2004). Self-regulation scholars have recommended that such goal striving process model reflects how distal dispositional traits influence outcomes through progressively more proximal processes (Chen,

Whiteman, Gully, & Kilcullen, 2000; Kanfer & Heggestad, 1997; Vallerand, 2000; VandeWalle et al., 1999). Further, growing evidences suggest that, employees who skilled in self-regulation are more productive and can respond to the complexity and dynamic pace of their immediate environment in a timely fashion (Ashford & Tsui, 1991; Bell & Kozlowski, 2002). In this pursuit, a new perspective explaining knowledge sharing might brighten a promising avenue for examining a full spectrum of motivational and self-regulation processes that lead to knowledge sharing and performance outcome.

1.1.3 Reasons for investigating goal orientation as antecedents for knowledge sharing behaviour

Although there are strong theoretical reasons to expect a strong connection between self-regulation and goal achievement (Creed, 2009; Kanfer, 1990; Vancouver, 2000), researches have yet to verify this linkage empirically. Given that self-regulation research has highlighted the importance of goals, it has typically focused narrowly on a single task goal and has neglected the mediating tactics between goals and job performance (Porath & Bateman, 2006). In the working environment, individuals have multiple goals continuously vying for the control of attention. The impressive supports for the role of dispositional individual difference and context factors in employee performance (Janssen & Yperen, 2004) suggest this linkage should be expanded to goal orientation theory, which has become the leading paradigm in achievement motivation research (DeShon & Gillespie, 2005). Goal orientation construct has been examined as a function of trait-based individual difference, but can

be activated by a variety of situational factors, such as the task difficulty, structure and responsibility that are given (Kozlowski et al, 2001). Goal orientations are believed to create different perceptual-cognitive frameworks for how individuals approach, interpret, and respond to achievement situations (Barron & Harackiewicz, 2000; Duda, 2001; Dweck, 1999; Pintrich, 2000; Van Yperen, 2003). Different goal orientations predispose the nature, focus, and quality of self-regulatory goal striving process. Achievement goal theorists have delineated two distinct types of goals that vary as a function of how competence is defined (Dweck, 2006), namely, performance goal and learning goal. During the process of knowledge provision and acquisition, performance goals should orient the focus of self-regulation to improve performance scores; in contrast, learning goals should orient the focus of self-regulation to the task mastery and proficiency. Researchers have further distinguished each goal into a bipolar construct, which includes approach and avoidance dimensions differ as a function of valence (Elliot & Thrash, 2002). Two approach-based orientations motivate affective and cognitive processes that facilitate optimal task engagement, whereas two avoid-based orientations motivate self-protective processes that interfere with optimal task engagement (Porath & Bateman, 2006). In our subsequent interest, particularly, are the rationale and unique contribution offered by approach and avoidance distinctions on basis of knowledge sharing motivation and the resulting performance.

1.2 Research Gap

The above three perspectives stated at the beginning of this chapter have pinpointed most common competing individual factors explaining knowledge sharing. However, they have been deficient in one or more of the key issues identified below. Network perspective may be problematic as network position advantage benefits only a few key people who occupy rich resources in an organization, which little attention is paid to heterogeneity across individuals. More importantly, network position in an organization or a group is difficult to build but easy to change in today's team-based organizational structures which filled up with uncertainty and vulnerability (Gargiulo et al., 2009). Such relatively thin micro-foundation may fail to capture vital explanatory mechanism on the individual level. Thus, Reinholt et al., (2008) argues that insights in relational motivation needed to be integrated with network measures to better illustrate knowledge sharing in organizations. Empirically, scholars holding social exchange perspective verified that employees who have high level of centrality and tie strength in the network may not have knowledge sharing behaviours when there is a lack of trust and reciprocity in such networks (Gargiulo, et al., 2009; Obstfeld, 2005).Arguably, however, underlying social exchange perspective is the assumption that the positive relationship between trust and knowledge sharing behaviour is endogenous with respect to the dynamic exchange environment. However, knowledge providers and seekers are always adjusting their exchange relationship with each other to weather volatile task situations and competitive environment. Dispositional perspective, benefits from its stable attributes, rise in

response to above controversial issues. However, researchers cast altruism as a distal variable only account for knowledge provision, which remains to be an incomplete theorization in the sense that it has not shed much light on the more proximal motivation mechanism of both knowledge provision and acquisition. Failing to account for these omissions might result in inappropriate applications of above three dominant theories and inaccurate portrayals of casual order and endogeneity.

To this end, a new and powerful perspective which brings out well should first highlight at least three main foci prior to unfolding the well-justified theorization.

First, there are no coherent, integrated, theoretical frameworks of the motivational factors that explain how knowledge is transferred between knowledge providers and recipients and then is utilized in ways that benefit performance (Quigley et al., 2007). Principally, among precious perspectives, there is a common assumption that in most knowledge intensive work setting, knowledge sharing is a complex process triggered both by the static personality difference and dynamic task demands. Therefore, Following Kanfer (1991) that used a distal-proximal framework for examining trait based dispositional effects in a more theoretical context, knowledge sharing behaviour should be better predicted by simultaneously modelling the cognitive, affective and behaviour constructs to identify the whole picture of knowledge sharing phenomenon.

1.3 Research Objectives

The main objective of this study is to bridge theoretical gaps in three perspectives and proceed towards a comprehensive understanding for employee knowledge sharing continuance. Under the knowledge intensive work domain, knowledge sharing behaviour is a far higher bar than the one for exchange information, because seekers must be motivated by the goal that knowledge acquired is superior to what they already know at the risk of possible perceived incompetence judged by colleagues. At the same time, contributors must be stimulated by the goal that knowledge provided is instrumental to career enhancement at the expense of time and resources. The increasing emphasis on the processes that enable an individual to guide goal directed activities over time and across changing circumstances is emerging (Deci & Ryan, 2000), which is grounded on the premise that employees initiate and persist in knowledge sharing behaviour to the extent that they believe such behaviour will lead to desired outcomes or goals.

The knowledge shared is an intangible private asset in the context of an organization, when their efforts are neither directly measurable nor sanctionable. My research question then proposed given the extensive literature review and organization observation: Why some employees engage in a high level of knowledge sharing behaviour while others are reluctant to do so? The whole mechanism examined through the my new and promising lens of work on knowledge sharing behaviour study, I model knowledge acquisition and provision two different facets of knowledge

sharing methods in this study and link them together into a comprehensive and multi-theoretical model to discover the reasoning behind a high level of knowledge sharing behaviour and subsequent performance rating enhancement.

1.4 Research Design

In an attempt to address these important research issues discover from literature review and observation from the real world, I carry the study of the knowledge sharing behaviour within two knowledge intensives firms under the same financial group. King and Zeithaml (2003) proposed a four-step methodology for studying organizational knowledge that I follow in the present study: (1) defining scope; (2) protocol design; (3) data collection: interviews; and (4) data collection: survey.

I first defined the scope of the study. I selected research site as a large corporate bank that is highly engaged in trying to reuse knowledge as a basis for competitive advantage. Banking is a knowledge-intensive industry, in which a firm's ability to use its knowledge resources to create solutions for its clients is its main source of competitive advantage.

The second step of the study, protocol design, consisted of a number of telephone conference calls with executives at the target firm to better understand the company's knowledge management efforts and to design an appropriate research study. These conversations indicated that knowledge sharing behaviour has been increasing important for managerial practice throughout the whole company operations. How to

activate the motivators has drawn more and more attention for human resource and strategic management.

I settled on a two-phase data collection process consisting of in-depth interviews followed by a large sample survey.

In the first phase of the data collection I conducted 20 in-depth interviews with employees from various departments within a large division of the firm. Respondents in phase one were asked questions concerning the knowledge sharing motivation, obstacles, issues in their working environments. The goals of these interviews were to refine the research questions and theoretical model within the context of the research site, to identify the relevant knowledge provision and acquisition in organization setting, to become familiar with the terminology used by members of the organization in order to design a survey instrument for the second phase of the study, and to identify the appropriate sample for the survey (the survey instrument and procedure are described in detail in the chapter four method section). These interviews helped me gain an understanding of the whole knowledge sharing behaviour process and provided us with the theoretical perspectives we used to develop my conceptual model of knowledge sharing behaviour. The in-depth interviews were summarized in the chapter four in detail for my theorization in this study.

Based on these interviews, I developed a multi-theoretical model, linking knowledge acquisition and provision, as shown in our theoretical model depicted in Figure 2 of

chapter three. My theoretical model incorporates two sections, namely, extant theoretical perspective compression and a new theoretical perspective opening, each of which addresses one of two research questions. First, we use social exchange theory, social network theory, and dispositional theory to develop a set of hypotheses regarding the factors that influence the frequency with which individuals contribute their valuable knowledge to colleagues in need and individuals acquire knowledge from colleagues. In the second section of the model, we use goal orientation theory and self-regulation perspective to generate a model of the factors that explaining employees engage in different level of knowledge acquisition and provision, respectively, and in turn, self regulate these two behaviours into accordingly performance rating. To better investigate and verify the research model effectiveness proposed in this study, I then test the whole set of hypotheses introduced in chapter three. This study was conducted in three main stages: literature review, analysis of the knowledge sharing behaviour mechanism, and verification, which portrayed in figure 1 list at the end of the chapter below.

1.5 Structure of the Thesis

This paper is organized into six sections including this introduction. The next section surveys the salient literature to identify antecedents to employees' attitudes regarding knowledge sharing, and describes our data gathering activities to complement the existing literature. The third section presents the research model and develops the research hypotheses characterizing the relationships depicted in the model. The fourth section describes our research methods, while the fifth discusses the results and their implications for research and practice. The last section summarizes the study's contributions.

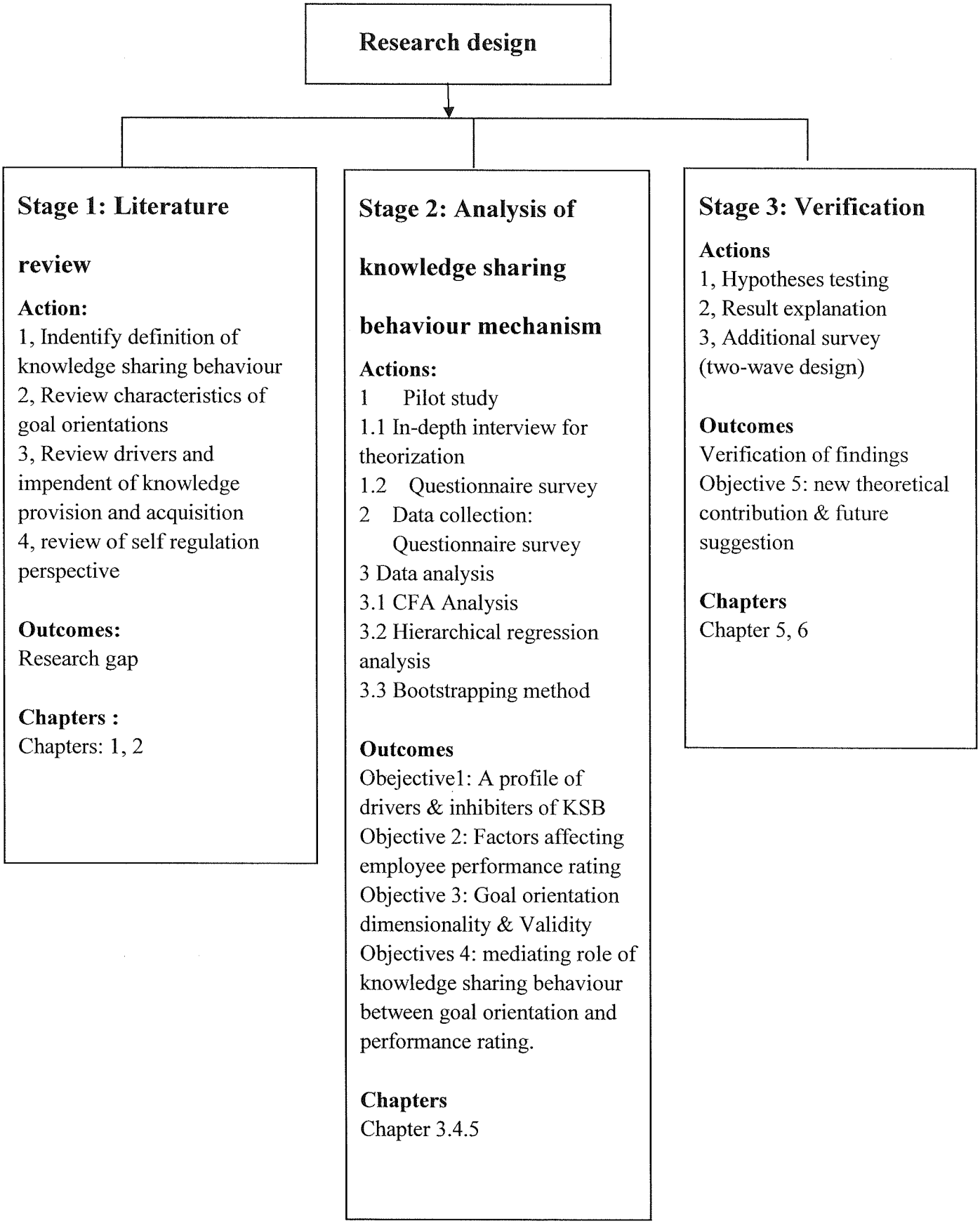

Research design
Stage 1: Literature review
Action:
1, Indentify definition of knowledge sharing behaviour
2, Review characteristics of goal orientations
3, Review drivers and impendent of knowledge provision and acquisition
4, review of self regulation perspective
Outcomes:
Research gap
Chapters :
Chapters: 1, 2
Stage 2: Analysis of knowledge sharing behaviour mechanism
Actions:
1 Pilot study
1.1 In-depth interview for theorization
1.2 Questionnaire survey
2 Data collection: Questionnaire survey
3 Data analysis
3.1 CFA Analysis
3.2 Hierarchical regression analysis
3.3 Bootstrapping method
Outcomes
Obejective1: A profile of drivers & inhibiters of KSB
Objective 2: Factors affecting employee performance rating
Objective 3: Goal orientation dimensionality & Validity
Objectives 4: mediating role of knowledge sharing behaviour between goal orientation and performance rating.
Chapters
Chapter 3.4.5
Stage 3: Verification
Actions
1, Hypotheses testing
2, Result explanation
3, Additional survey (two-wave design)
Outcomes
Verification of findings
Objective 5: new theoretical contribution & future suggestion
Chapters
Chapter 5, 6

Figure 1

1.6 Summary of the Chapter

Managing knowledge sharing has been a significant topic for contemporary organization. In the existing literature, three main theoretical perspectives are usually examined interdependently by researchers. As a result, it is difficult to view, through a coherent theoretical lens, the internal cognitive-affective mechanism illustrating the two knowledge sharing behaviour process. The main objective of this study is to bridge this gap and progress toward a comprehensive understanding of knowledge sharing behaviour continuance.

Chapter 2: Literature Review

2.1 The importance of manage knowledge in organization

2.2.1 Organizational knowledge definition

In the knowledge-based view of the firm (Grant, 1996; Spender 1996), knowledge is the foundation of a firm's competitive advantage and, ultimately, the primary driver of a firm's value. Inherently, however, knowledge resides within individuals (Nonaka and Konno 1998) and, more specifically, in the employees who create, recognize, archive, access, and apply knowledge in carrying out their tasks.

In the knowledge management literature, knowledge held at the individual level has been defined to have a variety of properties (Argote et al, 2003), including tacit versus explicit (Hansen, 1999; Reagans & McEvily, 2003). Drawing on the work of Nonaka (1994) explicated two dimensions of knowledge in organizations: tacit and explicit. Rooted in action, experience, and involvement in a specific context, the tacit dimension of knowledge is comprised of both cognitive and technical elements (Nonaka 1994). The cognitive element refers to an individual's mental models consisting of mental maps, beliefs, paradigms, and viewpoints. The technical component consists of concrete know-how, crafts, and skills that apply to a specific context. On the other hand, explicit knowledge refers to knowledge that has been articulated, codified, and stored in certain media, such as textbook, documents, and

database. It can be readily transmitted to others. In my research domain, I mainly focus on the tacit dimension part of knowledge.

2.1.2 Knowledge management in knowledge intensive firms

Knowledge management is the process of capturing, developing, sharing, and effectively using organizational knowledge (Davenport, 1994). Knowledge-based resources include all the intellectual abilities and knowledge possessed by employees, as well as their capacity to learn and acquire more knowledge. Thus, knowledge-based resources include what employees have mastered as well as their potential for adapting and acquiring new information. Unlike physical assets, the value of knowledge-based assets increases rather than decreases with more frequency usage. When there is no deliberate effort to capture and share knowledge, key information may be lost or ignored (Wachter, 1999). A knowledge-based perspective of the firm builds upon and extends the resource-based theory of the firm initially promoted by Penrose (1959) and expanded by others (Barney 1991; Conner 1991; Wemerfelt, 1984).

The knowledge-based perspective postulates that the services rendered by tangible resources depend on how they are combined and applied, which is in turn a function of the firm's know-how. This knowledge is embedded in and carried through multiple entities including organization culture and identity, routines, policies, systems, and documents, as well as individual employees resources are usually difficult to imitate

and socially complex, the knowledge based view of the firm posits that these knowledge assets may produce long-term sustainable competitive advantage.

In today's dynamic global economy, knowledge is viewed as a key strategic and competitive resource by organizations, and effective management of individual knowledge within the work place has become critical to business success (Grant, 1996). An organization that does not have formal knowledge sharing practices in place fails to leverage its employees' intellectual capital for business innovation and growth. In the past, implementing cutting-edge technology was the typical first step towards promoting knowledge sharing. However, such technological infrastructure, while essential to knowledge capture and exchange, is only effective to the extent it is utilized in a continuous manner. To achieve sustained knowledge sharing that improves organizational profitability and enhances employee performance, academic research have found that technological investments must be complemented with management practices that motivate employees to share knowledge on a continuous basis (Davenport & Prusak, 2000).

2.1.3 Knowledge sharing behaviour: knowledge acquisition and provision.

Knowledge sharing behaviour can be defined as a social interaction process, involving the exchange of employee knowledge, experiences, and skills through the whole department or organization. Knowledge sharing is an important part of building knowledge-based competitive advantage (Argote & Ingram, 2000). Researchers have identified four major mechanisms for individuals to share their knowledge in

organizations: first, contribution of knowledge to organizational databases; second, sharing knowledge in formal interactions within or across teams or work units; third, sharing knowledge in informal interactions among individuals; and fourth, sharing knowledge within communities of practice, which are voluntary forums of employees around a topic of interest (Bartol& Srivastava, 2002). Knowledge sharing often involves mutual exchanges among individuals.

Knowledge sharing can be studied and managed at organizational, group, and individual levels of analysis (Jackson, Chuang, Harden, & Jiang, 2006). The premise of the present research, however, is that organizational and group knowledge sharing are always ultimately rooted in individual behaviours and their drivers (Foss et al., 2009), more specifically, are individual motivation to share knowledge. More broadly, arguments that posit links between organizational variables, such as HRM practices, and organizational outcomes, such as organizational-level knowledge sharing, must refer to individual-level mechanism , that is, individuals' motivations, cognition, and behaviours, and the interaction among those individuals (Coleman, 1990; Elster, 1989; Felin & Foss, 2006).

Hansen (1999) defined knowledge sharing as the provision or receipt of task information, know-how and other pertinent issues. Knowledge sharing involves an exchange process with two dimensions, knowledge provision and knowledge acquisition (e.g., Gargiulo, Ertug & Galunic, 2009; Reinholt et al., 2011). When

employees share any part of their work knowledge to their colleagues, they are indulging in *knowledge provision* behaviours (Bartol & Srivastava, 2002; Bock et al., 2005). When they seek work information and know-how from colleagues, they are engaging in *knowledge acquisition* behaviours (Reinholt et al., 2011). More specific to this study, knowledge sharing behaviour refers to the engagement of individuals in an organization to provide or seek knowledge with colleagues, which emphasizing person to person mechanism.

2.2 Knowledge sharing behavior motivations

2.2.1 Drivers and impediments and knowledge sharing

The objective of this section is to deepen our understanding of the factors that facilitate or hamper employees' tendencies to engage in knowledge-sharing behaviours. The potential benefits of an effective knowledge sharing include the time and costs saved by reusing and leveraging existing knowledge rather than creating new knowledge from scratch, or the achievement of greater efficiencies and economies of scale.

A great amount of imperative drivers and impendent are classified as different rationales related to knowledge sharing research. Wang and Noe (2010) provided a more comprehensive review and summarized five categories of factors that facilitate knowledge sharing. They were organizational contextual factors such as climate and rewards; interpersonal and team characteristics such as diversity and social network; cultural characteristics for knowledge sharing in multinational firms; individual

characteristics such as personalities; and motivational factors such as trust and attitudes. The Motivations identified above have been identified as key determinant of knowledge sharing behaviour. Two broad classes of motivation – extrinsic and intrinsic have been defined and examined across various contexts and studies (Deci &Ryan, 1987).

Extrinsic motivation focuses on the goal-driven reasons, e.g. rewards or benefits earned when performing an activity (Deci &Ryan, 1985), while intrinsic motivation indicates the pleasure and inherent satisfaction derived from a specific activity. Together, extrinsic and intrinsic motivation influences individual intentions regarding an activity as well as their actual behaviours (Davis et al., 1992).

Szulanski (1996) identified lack of motivation of knowledge source as an important impediment to the transfer of best practices within an organization. It's widely examined by researchers that top three impediments for knowledge acquisition and provision are: fear of losing superiority arising due to ownership of that knowledge, perception of not being adequately rewarded for a knowledge sharing behaviour, and the consumption of time and resources that employees have to devote for such behaviour.

2.2.2 Extrinsic motivation and Intrinsic motivation of knowledge acquisition

From an extrinsic motivational perspective, individual knowledge acquisition behaviour is driven by its perceived values and the benefits of the action. When employees believe they can receive organizational rewards by competence enhancement through knowledge acquisition, they will develop more positive attitudes toward and intentions regarding this behaviour. Bartol and Locke (2000) identified several important aspects of organizational reward systems for extrinsic motivation that are useful for motivating individuals to perform the knowledge acquisition.

From an intrinsic motivational perspective, individual knowledge acquisition behaviour is evoked by the need of employees to equip functional competence and enrich professional knowledge to pave a solid foundation for long term career success in their specific work domain. Employees possess intrinsic motivation to engage in knowledge acquisition will more less sensitive to the organizational reward system or environment change, which is more stable.

2.2.3 Extrinsic motivation and intrinsic motivation of knowledge provision

From an extrinsic motivational perspective, individual behaviour is driven by its perceived values and the benefits of the action. The fundamental goals of extrinsically motivated behaviours are to receive organizational rewards or reciprocal benefits (Kowal & Fortier, 1999).Organizational rewards are useful for motivating individuals to perform knowledge provision, which can range from monetary incentives such as

increased salary and bonuses to non-monetary awards such as promotions and job security. Several organizations have introduced reward systems to encourage employees to share their knowledge, such as count knowledge contributions to performance appraisal system.

From an intrinsic motivational perspective, individual knowledge provision behaviour is evoked by the need of employees to feel competence and self-determination in dealing with their environment (Deci, 1975). Competence or self-efficacy is defined as the judgments of individuals regarding their capabilities to organize and execute courses of action required to achieve specific levels of performance (Bandura, 1986). Competence or self-efficacy can help motivate employees to provide knowledge with colleagues (Wasko & Faraj, 2005). Researchers have also found that employees with high confidence in their ability to provide valuable knowledge are more likely to accomplish specific tasks (Bock & Kim, 2002).

2.3 The positive relationship between knowledge sharing behavior and employee performances

2.3.1 The rationale for knowledge sharing behavior influence employee performances

I now turn to a detail discussion of the outcome of knowledge sharing behaviour. In knowledge-intensive company, the proprietary knowledge that resides in the minds of a company's professionals is a source of competitive advantage. A competitive

advantage from knowledge is gained through the productive internal exchange of insights that help employee think differently as they make decisions and take actions. According to self regulation theory, employees use different striving or task engagement strategies to accomplish desired outcomes such as performing well on their jobs. Impressive literature that supports the role of knowledge acquisition and provision in performance enhancement suggest that the linkage should be expanded and continued. It is surprising, however, that so little is known about the knowledge sharing behaviour employees undertake to manage and enhance their performance through progressively proximal process empirically. We now turn to the explanation of how knowledge acquisition and provision these two self regulation tactics influence employees' performance.

Employees may strive to enhance performance using knowledge provision strategy, characterized by a focus or concern for how to impress colleagues, demonstrate professionalism, and capitalize knowledge, or using knowledge acquisition strategy, characterized by a focus or concern for how to improve skills, learn lessons, and gain expertise. Both knowledge acquisition and knowledge provision involve motivation to approach or attain achievement goals, but they differ in their orientations towards how to successfully attain the goal. In some situations the use of one facet of knowledge sharing behaviour would be more beneficial than the other. For instance, when employees are at the new comer stage, or shoulder a challenging and significant assignment, they are more likely to seek out knowledge related to fulfilling the job

demands or requirement. On this side, knowledge acquisition strategy may be more beneficial than knowledge provision, as it likely leads employees to adjust to the work requirement quickly and accomplish achievement smoothly. In contrast, when employees have already built up career path, or handle manageable and controllable assignment, they are more likely to contribute knowledge to promote their professionalism and expert status. On this side, knowledge provision strategy may be more beneficial than knowledge acquisition, as it likely leads employees to actualize career potential and develop brilliant reputation. As these examples illustrate, different situations requires different knowledge sharing strategies. On most jobs, employees may face different situational requirements over time and therefore need to appropriately adopt knowledge acquisition and provision strategies at different times to maintain optimal overall job performance. In particular, the same employees may be able to engage in either strategy or shift between the two strategists to arrive the best balance for performance enhancement over time, depending on employees' exposure to particular situational stimuli at work. Principally, work-specific knowledge sharing behaviour is moderately stable over time.

Growing evidences have suggested that employees are more productive when engaging in knowledge provision. Knowledge provision is an important self regulation tactic for performance enhancement. First, given the fact that knowledge has a lifespan and can be short-lived, therefore, make use of own knowledge before it loses its value is instrumental for improving performance. Active knowledge

provision may be essential for employees to get a better understanding of functional competence, identify deficiencies more effectively, and integrate this experience into practice, which untimely should improve performance. Second, knowledge providers gain more than lose. Although there is a concern for diluting knowledge value when disseminating private professional expertise to public, knowledge provision is a synergistic process--employees get more out than you put in by learning while providing. This "double-loop" learning mode entails employees to achieve more productive solutions from multiple perspectives.

Third, in knowledge-intensive work setting, it is common that colleagues may have similar ideas with you. If employees do not make knowledge productive with the action of putting the idea into words that helps to shape and improve that idea then someone else with similar ideas will. Working collaboratively helps employees achieve more than they would do working alone by a way of promoting these ideas and making them visible to others (Ashford et al., 2003; Morrison & Bies, 1991).

Another point with which we are principally concerned in this study is the other facet of knowledge sharing behaviour--knowledge acquisition's effect on employees' performance rating. Despite some controversial view that seeking knowledge from peers frequently is an indication that such kinds of employees are not competent enough to handle their tasks independently, we posit that a high level of knowledge acquisition exert positive effect on performance rating for the following three reasons.

First, by seeking and applying best practice employees can free up time for shaping a clear picture of how to proceed in work and ideas, more strategically, to think outside of the box, consider alternatives, and generate more ideas (Madjar, 2005), thereby facilitating subsequent adjusting and improvement to ideas and routines. Knowledge acquisition, in this sense, suggests new paths to push work forward and stimulate new ideas for improving working processes.

Second, ask for a diverse number of sources for work-related problem solutions and lessons learnt from past experiences are of significant help to get new insights into work. It increases exposure to potentially differing problems and views. This diversity of input gives those who seek broadly a greater chance of coming up with more productive and effective solutions into their work and pushing the boundaries of existing knowledge.

Third, feedback seeking, which plays as an important form of knowledge acquisition, is conductive to effective performance. Explicitly, it reduces uncertainty associated with the changing nature of work, which enable employees to adapt and respond to continually changing goals and role expectation. More significantly, by reducing discrepancies between the current state and one's goals, and it is much more likely to positively correlate performance by motivating individuals and directing them toward effective performance enhancement.

2.4 Three dominant theoretical perspectives predicting knowledge sharing behavior

2.4.1 Social network theory

Social network theory is important to organizational behaviours because the organizations are embedded in complex networks of social relations (Chae et al., 2005). Both practical experience and scholarly research have made clear that social network critically effect knowledge sharing behaviour in organizations. (Martin & Tsai, 2003). Much research has focused on the characteristics of social networks as key predictors of knowledge sharing, such as network centrality, tie strength and network size (Cross & Cummings, 2004; Mors, 2010). The basic argument of the structural perspective is that employees with high centrality serve as the linking pins of other employees. They would be the centre of knowledge and would, therefore, have a higher chance of taking knowledge from and providing information to others.

In the network literature, most structural studies typically rely on either centrality or tie strength and then draw a link with the outcome (Gabbay & Leenders, 2001). Tie strength represents the strength and affiliation of the dyadic relationship (Krackhardt, 1992), whereas centrality represents the criticality of the position inside the network (Sparrowe et al., 2001). For knowledge intensive work, knowledge required for employees are often dynamic since new projects and routines ask for latest information and expertise. Employees in central network positions can, therefore, have privileged knowledge-sharing opportunities and thereby access to new

knowledge (Wasserman & Faust, 1994). Employees who are centrally positioned in a working group have a relatively high proportion of direct ties to other members, and are likely to more aware of colleagues' expertise within a network should be more easily to reach out to the right people at the right time when presented with unique challenges or opportunities. Meanwhile, employees who are more centralized in a group or department will be more likely to convey complex ideas or solutions to diverse audience and responding to their problems appropriately. Consequently, others will tend to turn to them for knowledge-sharing purposes, thereby further increasing their engagement in knowledge providing behaviour. As such, employees high in network centrality have many knowledge-sharing opportunities and are therefore likely to engage in a high extent of both knowledge providing and seeking behaviour with colleagues (Anderson, 2008).

2.4.2 Social exchange theory

Social network theorists have focused on structural properties of networks in explaining knowledge sharing behaviours. However, some scholars have questioned this link since high level of centrality and tie strength may impede the actual sharing of sharing behaviour caused by lack of trust and reciprocity in such networks (Gargiulo, et al., 2009; Obstfeld, 2005). Scholars from this social exchange perspective used a relational concept, trust, to explain employees' underlying motivation for knowledge sharing behaviours. Since knowledge sharing behaviour presumes a relation between at least two parties, one that possess knowledge and the other that acquires knowledge, both parties in a dyadic relationship have important

strategic considerations before providing or seeking knowledge. The problems for the person provide trust is whether or how much to trust the trustee. The problem for the trustee is to decide, if trusted, whether and how much to reciprocate that trust. Therefore, as an largely voluntary behaviour with uncertain rewards (Davenport et al.,1998), the sharing of knowledge can be conceptualized as an exchange where one party gives explicit or tacit knowledge such intangible currency that stored within individuals to another party.

Blau's (1964) conceptualization of exchange theory distinguishes between economic exchange relationships, which are based on strict exchanges, and social exchange relationships, which are based on long-term and unspecified exchanges of tangible and intangible obligations. Although social exchange theory has been applied to the knowledge sharing literature to help understand why and when people share knowledge (Tiwana & Bush, 2001; Bock & Kim, 2002), difficulties in defining and operationalizing the degree of social exchange have hampered the empirical study of its relationship with knowledge sharing behaviours. In this study, we posit that the level of trust is a key indicator of the degree of social exchange between two employees. While trust is not social exchange, it is one of the most important factors leading to social exchange. Consistent with Mayer, Davis, and Schoorman (1995), trust is defined here as the willingness to be vulnerable to another party when that party cannot be controlled or monitored. This definition explicitly recognizes the relationship between trust and the critical issue of risk (Deutsch, 1958), since risk is

inherent in vulnerability (Mayer and Gavin 2005). This conceptualization is well evident in most of the in-depth interviews we conducted to build up the theoretical framework of this study. For example, employees are reluctant to provide crucial knowledge to the peers they distrust for the fear of losing ownership and superiority. Additionally, individuals who provide information must trust that the given knowledge will be used appropriately. In knowledge seeking context, interpersonal trust comes into play because requestors must allow themselves to be vulnerable to their colleagues, for instance, by acknowledging their lack of knowledge in a certain domain. More importantly, the requestors may also need to trust that their colleagues will provide information that is accurate and helpful. The trust literature (Dirks & Ferrin 2001; Mayer et al 1995) has provided considerable evidence that trusting relationships lead to greater knowledge exchange: When trust exists, people are more willing to give useful knowledge (Andrews and Delahay 2000, Tsai and Ghoshal 1998) and are also more willing to listen to and absorb others' knowledge (Levin, 1999; Srinivas, 2000).

2.4.3 Dispositional theory

The third perspective about knowledge sharing behaviours is the *dispositional* approach. Scholars holding this view argue that some individuals would have strong feeling of self-efficacious and would have stronger tendency of sharing with others. There was evidence that altruistic inclinations and enjoyment in helping others motivated employees to engage in knowledge provision (Lin, 2007; Kankanhalli, Tan, & Wei, 2005). The dispositional approach has two limitations. First, it only explains

why employees would provide knowledge, but not why they would seek knowledge. Second, attributing knowledge sharing to dispositional tendencies to share does not offer a theoretical explanation of the internal psychological mechanism driving knowledge sharing among employees.

Previous research on altruism has demonstrated that people enjoy helping others (Baumeister, 1982). Truly altruistic behaviour would be motivated by concern for the well-being of others and, by implication, indifferent to one's own potential gain and benefit (Baumeister 1982). Hence, this study proposes knowledge self-efficacy and enjoyment in helping others as employees' intrinsic salient beliefs to explain knowledge sharing behaviours Enjoyment in helping others derives from the concept of altruism. Organ(1988) defined altruism as including discretionary behaviours that help specific others with organizationally relevant tasks or problems. Knowledge workers may be motivated by relative altruism owing to their desire to help others (Constant et al., 1996). Previous research shows that employees are intrinsically motivated to contribute knowledge because engaging in intellectual pursuits and solving problems is challenging or pleasurable, and because they enjoy helping others (Wasko& Faraj, 2005). Knowledge contributors who derive enjoyment from helping others may be more favourably oriented towards knowledge sharing and more inclined to share knowledge.

2.5 Summary of the theoretical limitation in extant three perspectives

As explained above, three basic perspectives were used to study knowledge sharing at the individual level in the literature.

The first one is the *network perspective*. The basic argument is that employees who are in the centre of the network, usually represented by network centrality and tie strength, would have higher chances of providing and seeking knowledge from others (Cross & Cummings, 2004; Mors, 2010).However, the usefulness of network help from this perspective is problematic. The knowledge seeker has no direct way of assessing the provider's reliability, expertise, possible strategic motives for misinformation. In a similar vein, the knowledge provider has little information about the seeker and therefore may misunderstand the request for advice, use inappropriate assumptions in generating knowledge help, or formulate knowledge using concepts or experience not shared with the seeker.

The second group of studies on knowledge sharing uses the *relational* perspective, this view of knowledge sharing is based on the basic premise that employees seeking and provide knowledge to each other with the expectations of future reciprocation. Trust is, therefore, a key factor affecting employees' knowledge sharing behaviours. There is ample evidence that when there is higher trust between the two parties, they are more willing to engage in cooperative interactions and knowledge exchange (Chiu, Hsu, & Wang, 2006; Nahapiet, S Ghoshal, 1998; Szulanski, Cappetta, & Jensen,

2004). A basic premise of the exchange perspective is that every employee tries to seek knowledge because knowledge acquisition is beneficial. However, knowledge provision is costly because time and efforts are required to share one's knowledge with colleagues. Knowledge sharing is also costly because one would lose one's ownership of the expertise and referent power once the knowledge is shared. The major reason of knowledge provision is future expectations of reciprocity from the knowledge seeker based on the trusting relationship between the parties. I question this basic assumption and argue that there are both advantages and disadvantages of knowledge provision and knowledge acquisition. Employees would weigh the cost and benefits involved when making decisions of whether to provide or acquire knowledge.

The third perspective about knowledge sharing behaviours is the *dispositional* approach. Scholars holding this view argue that some individuals would have strong feeling of self enjoyment and stratification when providing help and knowledge when colleagues in need. The dispositional approach has two limitations. First, it only explains why employees would provide knowledge, but not why they would seek knowledge. Second, attributing knowledge sharing to dispositional tendencies to share does not offer a theoretical explanation of the internal psychological mechanism driving knowledge sharing among employees.

According to the goal orientation theory (Deshon & Gillespie; 2005; Dweck & Leggett, 1988), goal orientations work as a mental framework that directs individuals'

information seeking and processing, regulatory attention, and resource allocation as well as their engagement in behaviours. Drawing on goal orientation theory, we propose that the aforementioned four types of goal orientations (e.g., Cury et al., 2006; Elliot, & McGregor, 2001) have varied impacts on individuals' interpretation of the benefits and costs of knowledge provision and acquisition, which would, in turn, affect their participation in these behaviours in the following section. We argue that the existing literature cannot fully explain the psychological mechanism of knowledge provision and knowledge acquisition. Goal orientations of employees would explain incremental variances of knowledge provision and knowledge acquisition of knowledge-intensive workers. Since network, exchange and dispositional perspectives are the three major groups of individual level factors affecting knowledge sharing in the literature, our first hypothesis is that goal orientations of employees can account for variances of knowledge provision and knowledge acquisition of employees on top of these groups of factors.

Hypothesis 1a: Goal orientations of employees explain knowledge provision of employees over and beyond that of network centrality, trust between the employees and employees' altruistic inclinations.

Hypothesis 1b: Goal orientations of employees explain knowledge acquisition of employees over and beyond that of network centrality, trust between the employees and employees' altruistic inclinations.

2.6 Summary of the chapter

Knowledge sharing represents the willingness of individuals in an organization to provide others the knowledge they have acquired or seek knowledge from the experienced, these two behaviour can be achieved directly, such as through network and communication, or indirectly through employees dispositional personality. I examine multiple stream of literature to help understand the relationship between motives and knowledge sharing behaviour, with a specific focus on knowledge intensive work.

Chapter 3: Identification of a new perspective explaining knowledge sharing behavior

3.1 Identifying determinants of knowledge sharing behavior

Knowledge tends to be local, sticky, and contextual (Davenport and Prusak, 1998) it is difficult to codify, since so much of it remains tacit-embodied in people, visible in routines and activities, and often un-documentable. Extensive knowledge sharing within organizations still appears to be the exception rather than the rule (Bock et al., 2005). Hoarding knowledge and looking guardedly at the knowledge offered by others are natural human tendencies. On the other hand, actively seek knowledge from peers might a sign of incompetence judgment by the colleagues and supervisors.

Through social network perspective, when people come together to accomplish work, they bring their varied tacit skills, assumptions, and knowledge to collaboration. When employees work together, knowledge moves from one person to person, each absorbing and contributing to the dynamic mix of knowledge repository. In this way, knowledge is diffused through networks, and even sometimes through networks of networks.

Through social exchange perspective, knowledge sharing was viewed as a transaction process of knowledge markets, where the knowledge buyers and sellers needed to have reciprocal benefits from the exchange (Davenport & Prusak 1975). Thus,

expected reciprocal benefits and trust were considered as the incentives for knowledge sharing.

Through dispositional perspective, some individuals would have strong feeling of self-efficacious and would have stronger tendency of sharing with others. There was evidence that altruistic inclinations and enjoyment in helping others motivated employees to engage in knowledge provision (Lin, 2007; Kankanhalli, Tan, & Wei, 2005).

From the observation and interviews from multiple sources in industry, I notice that no matter what kind of work people engaged or position occupied at work, they typically can be characterized by two common factors: first, they strive to achieve goals that make their efforts meaningful, and second, they are in the presence of colleagues. The recognition and praise from colleagues and a sense of belonging to something are also very important and foster commitment and self-esteem that a good salary alone can't guarantee (Cohen 2001). Abraham Maslow is correct. Once a person achieves adequate financial success, he or she strives for other types of rewards in a hierarchy of needs.

In order to contribute to knowledge, individuals must think that their contribution to others will be worth the effort and that some new values will be created, with the expectation of receiving some of that value for themselves (Nanhapiet and Ghoshal,

1998). These personal benefits or private rewards are more likely to accrue to individuals who actively participate and help others (Von Hippel &Von Krogh ,2003). Thus, the expectation of personal benefits can motivate individuals to contribute knowledge to others in the absence of personal acquaintance, similarity, or the likelihood of direct reciprocity (Constant el al., 1996).

3.2 Goal orientation in organizational research

3.2.1 Goal orientation conceptual and empirical foundation

The three perspectives shown above basically summarized major arguments in the literature in explaining the antecedents underlying employees' knowledge sharing behaviours. Based on our in-depth interviews with employees in knowledge intensive industries, we have identified an important element affecting knowledge sharing that is not covered in the above perspectives. In the discussion below, we would discuss this new perspective that reframed the motivation mechanism by focusing on the endogenous driver of external recognition during the knowledge sharing process. We would incorporate goal orientation theory into self regulation perspective to provide a theory-based test of the validity of this new perspective.

A recent McKinsey Quarterly survey (2012) unveils that employees view three noncash elements as core non-monetary motivators — praise from immediate managers, leadership attention, and a chance to lead projects or task forces. These three nonfinancial motivators underscore an opportunity that unique forms of

achievement goals are instrumental in affecting job performance through knowledge seeking and providing behaviours. Based on the survey and our in-depth interview results, we argue that employees may use knowledge seeking and providing as an instrument to show to others, especially supervisors, their abilities, potentials and performance. But before we theorize the impact of achievement goals on knowledge sharing behaviours and job performance using this instrumental perspective, we would discuss the construct of goal orientation, which plays critical roles in explaining this phenomenon.

Originally developed in the educational psychology literature to explain differences in student learning behaviours (Dewck &Dweck,1978), goal orientation has become one of the most frequently studied motivational variables in applied psychology and is currently the dominant approach in the study of achievement motivation (DeShon &Gillespie,2005). Dweck and Leggett (1988) proposed two types of goals: *learning goals*, to develop competence by acquiring new skills and mastering new situations and *performance goals*,to demonstrate and validate one's competence by seeking favourable judgments and avoiding negative judgments. Persons adopt performance goals for task engagement aim at demonstrating one's ability relative to others. Task performance is viewed as a means to an end; that is, the proving of one's superior ability. In contrast, persons adopt a learning goal orientation for task engagement aim for increasing one's competence via task mastery. Performance improvement is viewed as an end in itself. Being high on learning orientation is associated with a

belief that ability is malleable and can be developed with effect and practice. When it comes to achievement situations, individuals who are high on learning orientation typically attempt to increase their competence by developing skills and a mastery of the task. Effort is seen as a way of increasing one's ability and, in turn, one's performance. Being high on performance orientation is associated with a belief that ability is fixed and unchangeable, individuals who are high on performance orientation often see little unity in devoting effort on tasks in which they perceive they have low level of ability (Dweck, 1989). Goal orientation has been used to understand and predict learning and adaptive behaviour in a wide variety of context, including training (Brown, 2001), sales performance (VandeWalle et al., 1999), feedback seeking (VandeWalle & Cummings, 1997).

Regardless of its vast applications, there are three major controversies in the goal orientation literature. First, there are inconsistencies among scholars of whether goal orientation is a dispositional characteristic of the individuals or a situational choice depending on circumstances of the environment. There is considerable evidence of goal orientation existing as a stable individual difference (e.g., Button et al., 1996; Vande Walle, 1997), but goal orientation can also be influenced by situational cues about effort, competition, evaluation standards, and rewards (Ames, 1992; Nicholls, 1984). Second, traditional approaches to predict the motivation process have mostly been limited to understand the pursuit of a single goal dimension, largely neglecting the issues of how individuals allocate resources back and forth across competing goal

over time. Recently, there were increasing supports that performance and learning goals are neither mutually exclusive nor contradictory (Button et al., 1996; Heyman & Dweck, 1992). Third, goals are hierarchically structured such that higher level goals specify the purpose of action and lower level goals provide increasingly specific actions required to accomplish the higher level goals (DeShon & Gillespie, 2005). As such, the reason why individuals adopt one of these goals over the other possible achievements goal is often not well specified.

Apart from individual level goal orientation research, there is an increasing interest in understanding how to enhance creativity in organization. In seeking to have a holistic understianding of creativity, scholars have recently resorted to goal orientation theory (Gong, Huang, & Farh, 2009). Three distinct individual goal orientations have been chosen to discuss: a learning goal orientation, which focusing on functional competence development; a performance approach goal orientation, which focusing on getting favorable evaluations ; and a performance avoidance goal orientation, which focusing on avoiding mistakes and negative evaluations. For previous research, Researchers has shown that individual level learning goal has a positive relationship with individual creativity, on the other hand, the individual level performance approach goal as well as individual performance avoidance goal do not have such positive relationship.

3.2.2 Goal orientation dimensionality: Dual bipolar dimensions

Basically, achievement goals can be differentiated on two fundamental dimensions: one dimension is about how competence is evaluated or defined; the other is related to how competence is valenced (Elliot, & McGregor, 2001). According to the first dimension, goal orientation is bifurcated into *learning goal orientation*, which is characterized by an emphasis on an acquisition of new skills and knowledge, and *performance goal orientation*, which focuses on demonstrating competence and performance to others. On the other hand, both learning and performance goal orientations are further classified into approach and avoidance versions (Elliot and Church, 1997; Elliot and McGregor, 2001). People with *approach* goals are directed to seek positive outcomes while those with *avoidance* goals are directed to avoid negative outcomes. This results in four combinations of goal orientations of individuals.

In the discussion below, this study follows recent empirical research that call for this 2 x 2 achievement goal framework (Cury et al., 2006) by crossing the performance-learning distinction with the approach-avoidance distinction. This results in four possible goal orientations. Employees who are high in performance approach goal orientation (PPGO) try to attain high performance and positive performance impression from others. Those who are high in performance avoidance goal orientation (PAGO) focus on avoiding negative performance impressions. Employees who are high in learning approach goal orientation (LPGO) concentrate on learning

for the sake of enriching their knowledge basis. Those who are high in learning avoidance goal orientation (LAGO) strive to learn in order not to fall behind others and be phased out in the organization. With these understandings, we will now turn to a discussion of how goal orientations would affect performance through knowledge sharing behaviours.

3.2.3 Goal orientation definition: dispositional trait versus situational characteristic

Initial theoretical formulations of goal orientation described it as dispositional (e.g., Nicholls, 1989), varying as a function of one's stable (Robins & Pals, 1998) implicit theory of intelligence (Dweck, 1986, 1989). However, some of those same researchers manipulated participants' theories of intelligence in laboratory settings (Dweck & Leggett, 1988). It seems logical goal orientation could exist as both a trait and a state, with trait goal orientation having a direct effect on state goal orientation (Payne et al., 2007). Across organizational studies, goal orientation is most often conceptualized as a disposition and measured as a trait-like individual-difference variable. However, the stability of dispositional goal orientation over time has yet to be determined. The meta-analysis (Payne et al., 2007) shown that goal orientation is relatively stable over time like some dispositional variables, such as big five personality.

3.3 Goal orientations as antecedents of knowledge sharing behavior

3.3.1 Performance-prove and performance-avoid orientation and knowledge provision

Individuals with high performance-prove or performance-avoid goal orientations usually have high other-referenced focus (Dweck, 1999; Nicholls, 1975). They refer highly to others' judgments and evaluations and try to manage their competence impression on others. On the other hand, they hold entity theory of ability, that is, ability is an immalleable trait and it is rather difficult to alter one's capabilities (Dweck, 1986; Dweck and Leggett, 1988). Therefore, high performance-oriented individuals would strive to impress others rather than improve themselves.

A high performance-prove goal orientation (PPGO) directs one's attentions to demonstrate superiority to others and attain positive competence impressions. In knowledge-intensive work, knowledge of task-relevant information and know-how is a key component of employee competence (Gargiulo et al., 2009). Providing knowledge to colleagues can be a beneficial means to display superior competence and establish professional reputations. Although there are costs of knowledge provision, performance-prove-oriented employees focus on relevant positive outcomes and benefits of impressing others. They would take advantages of sharing knowledge to colleagues to show their ability and capability and enhance their reputation. By providing knowledge to colleagues, employees with high PPGO would show their competence and gain favourable evaluations (Flynn, 2003; Swift, Balkin, & Matusik, 2010).

In contrast to performance-prove employees, I argue that individuals high in performance avoid goal orientation are less likely to provide knowledge. A Performance-avoid Goal Orientation (PAGO) involves others-referential standards with an emphasis on avoiding incompetent impressions from others. Avoidance form of performance goal orientation would elicit self-protective process, such as especially sensitive to negative or failure-relevant information and cautious not to look incompetent in achievement situations (Elliot et al., 1999; Van de Walle, 1997). With an uncertainty about the value of personal knowledge and how it will be received, employees with high PAGO pay great attention to the costs of sharing knowledge. They would dwell on concerns such as, "what if I make mistakes in appearance of others" and are afraid of being challenged or questioned by others during the knowledge provision process (Deshon & Gillespie, 2005; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Lee, Sheldon, & Turban, 2003). On top of worrying about making mistakes and showing incapability in the knowledge provision process, PAGO employees would also concern about their relative incompetence when their colleagues possess the same degree of knowledge as they do. If they withhold their knowledge and not share with others, their chances of being behind others or phased out would be lower. In sum, performance-avoid goal orientations evoke threat appraisal and low competence expectancies (Elliot, 1999; Elliot & Covington, 2001; Elliot & McGregor, 2001; Pintrich, 2000; Rawthorne & Elliot, 1999). As a result, PAGO employees would be less willing to provide knowledge to colleagues. In support of our arguments, Bordia et al. (2006) found that evaluation

apprehension, a kind of anxiety based on fear of negative evaluations, is negatively related to knowledge providing. Ardichvili, Page and Wentling (2003) showed that employees hesitate to contribute their knowledge out of fear of criticism or not being sure that their contributions are important, relevant or completely accurate.

These discussions above lead to the second group of hypothesis;

Hypothesis 2a: PPGO is positively related to knowledge provision behaviour.

Hypothesis 2b: PAGO is negatively related to knowledge provision behaviour.

3.3.2 Performance-prove and performance-avoid orientation and knowledge acquisition

With regard to knowledge acquisition behaviors, we contend that employees high in PPGO are less likely to seek knowledge from others for three reasons. First, with an emphasis on creating competent impressions on others, high PPGO employees would be reluctant to engage in knowledge acquisition because seeking help is a signal of incompetence. There are some empirical supports for this PPGO-threats-avoidance argument in the literature. On a sample of 203 students, Ryan and Pintrich (1997) found that students who were focused on goals external to the task (e.g., performance goal orientation) were reluctant to ask for help in the classroom to avoid perceived inability. Second, the basic premise behind performance goal orientation is that competence is fixed and inelastic (Dweck, 1986). PPGO employees would, therefore, have low motivations of learning from others based on such a fatalistic view. Third, employees who are high in PPGO have a desire to achieve a high level of

performance with minimal efforts. They would avoid difficult tasks and favour achievable ones. In fact, PPGO employees have negative emotions towards difficult tasks (Elliott and Dweck, 1988). As a result, high PPGO employees would have lower perceived needs for knowledge acquisition.

For employees endorsing high PAGOs, we posit that they are also less likely to source knowledge from others. Seeking knowledge from peers means admitting ignorance on a given topic. It highlights personal deficiencies and a lack of professionalism (Borgatti, 2003). This is especially terrible for high PAGO employees, who are highly concerned with self-protection and afraid of disclosing incompetence. As a result, high PAGO employees would have lower motivation of knowledge acquisition.

The discussion above leads to the third group of hypothesis below;

Hypothesis 3a: PPGO is negatively related to knowledge acquisition behaviours.

Hypothesis 3b: PAGO is negatively related to knowledge acquisition behaviours.

3.3.3 Learning-prove and learning-avoid orientation and knowledge provision

Individuals with a dominant learning-prove goal orientation (LPGO) strive to learn for the sake of expanding their knowledge base and advancing their capabilities (Elliott and Church, 1997; Elliot and McGregor, 2001). Learning-prove-oriented individuals have strong motives of self-improvement and a strong desire to seize opportunities to develop and grow. In our context of knowledge-intensive work, the act of knowledge provision can stimulate learning of knowledge providers. When they engage in the deliberation, presentation, and discussion during the knowledge providing process,

they can re-examine their knowledge and get more insights (March, 1991; Nonaka, 1994). A strong LPGO would direct employees' attention towards the benefits of providing knowledge in terms of advancing their mastery. Swift, Balkin, and Matusik (2010) and Wang and Noe (2010) suggested that knowledge provision can be seen as a good learning opportunity for high LPGO employees from which they can deepen their own understanding and also learn from others in the process. Prior studies suggested that individuals with a high LPGO are more likely to actively engage in work-related discussions (Gray and Meister, 2004). Due to the valence of approaching the potential benefits, together with such a learning-while-teaching mindset, high LPGO employees are more likely to engage in knowledge provision behaviors.

In contrast, individuals with a dominant Learning-Avoid Goal Orientation (LAGO), strive to avoid deterioration of their knowledge and skills or falling behind of others in their competences (Cury, et al., 2006; Elliot, 1999; Elliot & McGregor, 2001). According to Elliott and McGregor (2001), learning-avoid orientations evolve countervailing motivations where a desire to learn is inhibited by a focus on the costs and fear of making mistakes (see, e.g., Deshon & Gillespie, 2005; Janssen & Prins, 2007). With regard to knowledge provision, learning-avoid goals direct attentions towards the potential costs of providing knowledge to others instead of discovering potential learning opportunities. To LAGO employees, knowledge provision is time and resource consuming, and diverts them from their own jobs. High LAGO employees are also afraid of making mistakes and knowing the inadequacy of their expertise (Swift, Balkin, & Matuski, 2010). In addition, providing knowledge to

others makes their possessed knowledge shared and induces the risks of making them less valued (Poortvliet, 2007). Therefore, we posit that PAGO individuals are hesitant to engage in knowledge provision behaviors. In support of our arguments, it was found that individuals who pursued avoidance goals would report more negative affect and anxiety and were not engaged in the interesting aspects of the task owing to their focus on avoiding undesirable events (e.g., Elliot & McGregor, 2001; Linnenbrink & Pintrich, 2000).

The discussion above leads to the fourth group of hypothesis below;

Hypothesis 4a: LPGO is positively related to knowledge provision behaviors.

Hypothesis 4b: LAGO is negatively related to knowledge provision behaviors.

3.3.4 Learning-prove and learning-avoid orientation and knowledge acquisition

According to Elliot (1999), learning goal orientations entail a focus on absorbing knowledge and improving competence constantly. In contrast to performance goal-oriented people, individuals with high learning goal orientations hold an incremental theory of ability, that is, they believe that personal knowledge and skills can be expanded through increased efforts (Elliott & Dweck, 1988). Meanwhile, people who strive for learning goals hold a self-referenced focus. They predominantly compare their current achievements with their past achievements (DeShon and Gillespie, 2005; Nicholls, 1975). We argue that employees with a high LPGO would

seek more knowledge out of a high motive of self-improvement and a pursuit of constant learning. High LPGO employees are more likely to direct attentional resources and efforts towards learning behaviors (Gray & Meister, 2004). Consistent with their belief that competence can be improved through learning, high LPGO individuals would exert efforts to search for information and advices so as to improve their competence. Prior studies suggested LPGO employees often actively devote themselves into developmental occasions, such as seeking feedback from others and engaging in work-related discussions (e.g., Janssen & Prins, 2007; Gray & Meister, 2004).

In contrast to LPGO, incompetence is the focal point of regulatory attention for employees with Learning Avoid Goal Orientation (LAGO) (Elliot &McGregor, 2001). With a motivation for learning to avoid incompetence, employees with high LAGO strive not to elude their knowledge base and skills or have their development stagnated. With a high valence for avoiding failure, employees with high LAGO strive to avoid losing one's skills and abilities or having their development stagnate, forgetting what one has learned, misunderstanding material, or leaving a task incomplete or unmastered (Elliot, 1999). With respect to seeking knowledge from colleagues, these employees are compelled to maintain and improve their expertise and knowledge basis. I propose that they would strive to achieve so by continuously searching and sourcing knowledge from their colleagues. Based on the above arguments, I hypothesize that:

Hypothesis 5a: LPGO is positively related to knowledge acquisition behaviours.

Hypothesis 5b: LAGO is positively related to knowledge acquisition behaviours.

To sum up the attributes and classification of goal orientation, more importantly, the relationship of goal orientation with knowledge acquisition and provision respectively, I streamline the literature in the following table 1 for summery and review.

Goal orientation	KS providing	KS seeking
Performance-prove : 1,Others-referential 2,positive(approaching success) 3, Ability is fixed	Positive Concerned with showing that s/he can perform better than other colleagues and enjoying others at work are aware of how well s/he is doing : (1)Show off/ impress others, sense of superiority and authority (mainly to all colleagues) (2)Reputation of professionalism for special filed (mainly to working partners and especially for his/her supervisor)	Negative Achieve high level of performance with appearance of little efforts. People around may question about the professionalism if s/he seeks for task-specific help within her/his own domain
Performance-avoid 1,Others-referential 2,negative(avoiding failure) 3, Ability is fixed	Negative Avoid the situations where they risk demonstrating their incompetence for a specific area or receiving a negative evaluation from others. Fear of losing knowledge ownership and superiority when imitable knowledge acquired by the recipients increase. Desire to avoid the disproving of one's competence and to avoid negative judgments if the knowledge provided is incorrect or incomplete	Negative Would rather prove the ability on a task that can do well at rather than to try a new task Avoid taking on tasks /learn new knowledge if there is a chance that would appear rather incompetent to others. When s/he doesn't understand something at work, I prefer to avoid asking what might appear to others to be 'dumb' questions that I should know the answer already.
Learning-prove 1,self-referential/task referential 2,negative(avoiding failure) 3, Ability is malleable	Positive Learning while teaching: Develop skills and abilities, advance one's learning when others' problem/question relevant to his/her own domain or have potential value to discover something beneficial for future career. The thinking and discussing process itself enhance mastery of such kind of problem and may inspire some useful knowledge for coming new tasks.	Positive Strive to develop oneself by acquiring new skills, mastering new situations and improving one's competence. Opportunity to do challenging work that entails various kind of knowledge. Try harder and learn more when s/he works on a task that failure to complete before. Try different approaches/knowledge to solve a complex/difficult problem.
Learning-avoid 1,self-referential/task referential 2,postive(approaching success) 3, Ability is malleable	Negative Reluctant to devote time and resources to provide expertise. Avoid the competition or crowding out by others whose capacity is growing by the learning and seeking knowledge.	Positive Avoid the situation that his/her skills and abilities are deteriorating. Compelled to improve through learning from others' experience to follow up with the trend and avoid diminishing capacities.

Table 1

3.4 Knowledge sharing behavior and employee performance

In knowledge-intensive organizations, employees are required to apply knowledge from multiple sources on complex tasks. Productivity in such organizations, to a large extent, depends on the development and application of new knowledge from employees with specialized knowledge (Blackler, 1995). Individual job performance in knowledge-intensive work is a product of acquiring, processing, and applying knowledge to solve complex problems through innovative solutions (e.g., Cross, & Cummings, 2004; Gargiulo, Ertug, & Galunic, 2009; Hedberg, 1990; Zuboff, 1988). Knowledge work is complex and situation-specific, and it seldom has one single correct solution. As a result, it is difficult to quantify the results of work performance (e.g., Alvesson, 1993; Orlikowski, 2002; Schon, 1983). In the following section, we argue that both knowledge provision and knowledge acquisition play important roles in improving performance levels of those engaged in knowledge-intensive work.

Employees in knowledge-intensive work are often involved into projects of complex problems that require a high degree of cooperation (Drucker, 1999; Quinn, 2005; Davenport, 2005; Orlikowski, 2002; Quinn, 2005). Employee collaboration, especially knowledge sharing among colleagues, is an essential element for successful task accomplishment (Srivastava, Bartol, & Locke, 2006). From the organization's perspective, a significant component of the tacit knowledge that the organization acquires is embedded in individual employees, such as employees' experiences and know-how, which cannot be documented in papers, systems, and medias (Argote & Ingram, Levine, Moreland, 2000). As a result, knowledge sharing is widely

considered as an important performance requirement of employees, especially for those who work in knowledge-intensive tasks. From the organization's knowledge based viewpoint, the more an employee engages in knowledge provision, the higher would be the employee's contribution to the organization. Based on these arguments, we contend that knowledge provision has a positive influence on performance ratings for employees in knowledge-intensive work. There were some indirect empirical supports to the above arguments. At the team level, there was ample evidence that knowledge sharing among employees led to higher team performance (Choi, Lee & Yoo, 2010; Srivastava & Bartol, 2006). At the individual level, Kang, Kim and Chang (2008) found that knowledge provision was directly related to employees' self-evaluated work performance.

I argue that knowledge acquisition has an even more direct relationship with performance of employees. In knowledge-intensive work, knowledge requirements are often dynamic in nature. For successful accomplishment for work tasks, timely access to needed expertise and high-quality information is vital (Burt, 1992; Gargiulo, Ertug, & Galunic, 2009; Wu, Yehk, & Hung, 2012). Those employees who are actively involved in seeking required knowledge would have higher chances to acquire up-to-date knowledge and novel insights. With effective knowledge acquisition, an employee can more easily tap into and capitalize on relevant information and know-how to solve problems, thereby achieving higher work performance. There were some supports for this proposed relationship in the literature.

Quigley et al. (2007) showed that those who received more knowledge exhibit higher level of performance in experiment settings.

Based on above argument, I draw the sixth group of hypothesis;

Hypothesis 6a: knowledge provision behaviour is positively related to performance ratings.

Hypothesis 6b: knowledge acquisition behaviour is positively related to performance ratings.

3.5 Self regulation theoretical perspective

3.5.1 Self regulation theory at work

Self-regulation refers to the proximate motivational processes by which persons influence the direction, amount, and form of committed effort during task engagement (Kanfer, 1990). Self-regulation enables persons to modify their goals and learning strategies as conditions require. In organizations, practicing managers want people to achieve high performance levels; organizational psychologists accordingly are interested in individuals' regulation of their own levels of job performance (Vancouver, 2000). But despite knowing what is important for people to self-regulate at work, industrial organizational psychologists know little about how people attempt to do so and, especially, how it can be done most effectively. In this study, I aim to demonstrate that different goal orientations differentially predict subsequent job performance, as mediated by two specific self-regulatory knowledge sharing behaviours, knowledge acquisition and knowledge provision.

Organizational scholars have relied on either individual difference *or* situational variables when studying employee performance outcomes (e.g., Hofmann & Stetzer, 1996; Probst, 2002, Wallace & Vodanovich, 2003), and thus we have not yet fully understand the unique or combined influences of person and situational variables. Since knowledge is embedded in people and is highly related to individual's evaluation of their interaction within the social setting. Within this domain, knowledge exchange, manifested here as knowledge provision and acquisition, is a social process. In line with this cognitive and affective (person and situation) view, researchers have proposed that self-regulatory mechanisms could help explain how both individual difference and contextual factors influence work performance (Mitchell, 1997; Zohar, 2000), yet these propositions remain to be tested empirically. Self-regulation is defined as processes that enable an individual to guide his or her goal-directed activities over time and across changing circumstances, including the modulation of thought, affect, and behaviour (Kanfer, 1990; Karoly, 1993; Zimmerman, 2001). But despite knowing what is important for people to self-regulate at work, industrial organizational psychologists know little about how people attempt to do so and, especially, how it can be done most effectively. Answering the theoretical and managerial importance pressed above, the work motivation literature has identified two main self regulation processes: goal choice and goal striving process (Kanfer, 1990; Mitchell& Daniel, 2003). Applying Johnson et al. (2011), I conceptualized that goal choice as a process of deciding where and how to allocate effort on a task, while goal striving as a mechanism that consist of the persistence of

effort in pursuit of the chosen goal. Goal orientation, a form of goal choice (Chen, Thomas, & Wallace, 2005), represents how people perceive and respond to achievement situations (Dweck&Leggett, 1988). Meanwhile, the goal-striving process may be a particularly useful aspect of self regulation to study in terms of personality influences. Such self regulation efforts are continually required in the workplace, as employees attempt to accomplish various goals and assignment. Scholars have discussed the importance of explicating the intermediate motivational mechanism that mediate the relationship of goal orientation and job performance.

3.5.2 Knowledge acquisition and provision as two types of self regulation tactics

According to the social cognitive theory (Bandura, 1986), self-regulation is not an isolated process of one's self-motivation or self-judgment for goal attainment. Rather, individuals' cognitive and social factors are intertwined to facilitate knowledge acquisition and provision. Self regulation scholars have recommend that such processes models be hierarchically organized and reflect how distal dispositional traits influence outcomes through progressively more proximal processes (Vandewalle et al., 1999).Specifically, four goal orientation patterns and both knowledge provision and acquisition are posited to reside in the larger domain of approach and avoid motivations. Building upon these theoretical linkages, I assume that goal orientation four sub-dimensions predispose employees to use self regulation tactics in pursuit of their approach and avoid forms of knowledge sharing behaviour, subsequently lead to specific performance outcome.

As elaborated above, according to goal orientation theory, people use different striving strategies to accomplish desired outcomes such as performing well on their jobs. Individual may strive to accomplish tasks using a knowledge provision strategy, characterized by a focus on how to impress colleagues, demonstrate professionalism and capitalize knowledge, or using a knowledge acquisition strategy, characterized by a focus on how to improve skills, learn lessons and master task. When employees engage in knowledge acquisition, they regard the opportunity to learn as a means to the goal of performing rating enhancement, in that they believe performing well would allow them to protect the functional competence (PAGO) and avoid negative diminishing outcome (LAGO). On the other hand, employees engage in knowledge provision, they view display competence as a means to the goal of performing rating enhancement, in that they believe performing well would allow them to actualize career potential (LPGO)and develop brilliant reputation (PPGO). Although different goal orientations may drive knowledge provision and knowledge acquisition in different direction, knowledge sharing behaviour is captured by the behaviour manifestations of these motives, as opposed to the motives themselves. In addition, knowledge sharing behaviour is different form performance, in that it captures behaviour and not the evaluations of behaviour effectiveness.

3.5.3 The mediation role played by knowledge sharing behaviour between goal orientation and employee performances

The work motivation literature has identified two main self regulation processes: goal choice and goal striving (Kanfer, 1990). These self regulation processes involve how

people act and react in the pursuit of goal. Specifically, goal choice involve the process of deciding where and how to allocate task-related effort, whereas goal striving has do with actually allocating and sustaining effort in the pursuit of goal accomplishment. As it stands now, some scholars have noted that the function of self-regulation in mediating goal orientation and performance is not well understood (Johnson et al., 2011). To echo this call for the mediation role played by knowledge sharing behaviour between goal orientation and employee performances, this study's primary purpose is to investigate how an individual proceeds from goal orientation toward achievement through the goal striving process. While previous research has found multiple mediators of the goal-orientation performance relationship, no study has examined the behavioural strategies knowledge sharing behaviours associated with the self-regulation strategies leading to enhanced performance rating.

To address above issues, I present a dynamic model of achievement goal orientation, in which goal orientations are dynamically constructed in achievement situations through the integration of three main components: goal choice, knowledge sharing behaviours, and employee performance. An integration of these three components implies that goal orientation involves the purpose for engagement, the actions to pursue that purpose, and the outcomes brought from the engagement. My basic assumption is that action is directed towards attainment of goals. Goal are hierarchically structured within the employees, such that high-level goals (performance versus learning goal choice) are distal desired states that target for specific achievement, and lower level goals are means to obtain the higher level goals

that drive self-regulation actions , namely as knowledge sharing behaviours, at a given point of time. Each goal orientation in the resulting four-dimensional conceptualization is presumed to provide a distinct perceptual-cognitive framework leading to different process and outcome in achievement setting (Elliot, & McGregor, 2001). In my subsequent interest, particularly, are the rationale and unique contribution theorized to affect how individuals set and strive toward goals, in turn, influence accordingly knowledge sharing behaviour.

Ground on the premise that self regulation tactics are of little value if people cannot motivate themselves to use them and self regulation tactics are also of no value unless they increase effectiveness, I hypothesized that self-regulation is seen to mediate between an goal orientations and performance.

For the knowledge acquisition domain, employees with high learning-prove and learning-avoid goal orientation tend to use adaptive self-regulatory patterns, such as maintaining effort to seek knowledge to develop competence, and then, increase work-domain productivity. On the other hand, employee with high performance-avoid and performance-prove goal orientation incline to adopt maladaptive self-regulatory patterns, such as avoiding risk to seek knowledge to protect their competence judged by peers, and then, decrease the chance to learn from best practice for performance enhancement.

For the knowledge provision domain, employees with high learning-avoid and performance-avoid tend to use avoidance form of self regulation, such as protecting expertise to hoard knowledge, as in the case of learning-avoid orientation is to withhold knowledge privacy to avoid elimination , and then lose the opportunity to boost field expertise while knowing and teaching others work-specific problem ; or as in the case of performance-avoid orientation is to keep knowledge superficial compared with peers, and then, ,decrease self presentation benefits that eventually contribute to performance rating; On the other hand, employees with high learning-prove and performance-prove incline to adopt approach form of self regulation, such as promoting and providing knowledge to peers in need , as in the case of learning-prove orientation is to further learning and develop competencies, and then, increase functional competence for performance enhancement; or as in the case of performance-prove orientation is to get favourable comparisons with others, and then increase self presentation benefits that eventually contribute to performance rating.

Up to here, I have postulated that the four types of goal orientations differentially affect knowledge provision and knowledge acquisition of employees. I also argue that the effect of goal orientations on knowledge provision and knowledge acquisition would be transferred to affect individual performance. In other words, goal orientations of employees would have different levels of performance with their differential tendency to acquire and share knowledge on their jobs. For example, PPGO employees are performance driven. Because of their performance orientation,

they would actively share performance with their co-workers (Hypothesis 2a). With such aggressive attitude towards knowledge provision, they would be considered as important performance contributors in the organization, and as a result, have high performance ratings. Since there are four goal orientations and two knowledge sharing dimensions, there are a total of eight indirect effects. However, it should be noted that some of these indirect effects may work in opposite directions, making the overall effects of a certain goal orientation on performance less apparent. For example, employees who are high in PPGO would engage in more knowledge provision behaviour, and would result in higher performance. Meanwhile, PPGO also leads to less knowledge acquisition behaviour, which may hamper performance. To be clear, we list out all the specific indirect relationships below:

Hypothesis 7a: There is an indirect effect of PPGO, knowledge provision and performance ratings. PPGO has an positive relationship with knowledge provision, which, in turn, has a positive relationship with performance ratings.

Hypothesis 7b: There is an indirect effect of PAGO, knowledge provision and performance ratings. PAGO has a negative relationship with knowledge provision, which, in turn, has a positive relationship with performance ratings.

Hypothesis 7c: There is an indirect effect of PPGO, knowledge acquisition and performance ratings. PPGO has a negative relationship with knowledge acquisition, which, in turn, has a positive relationship with performance ratings.

Hypothesis 7d: There is an indirect effect of LAGO, knowledge acquisition and performance ratings. LAGO has a positive relationship with knowledge acquisition, which, in turn, has a positive relationship with performance ratings.

Hypothesis 7e: There is an indirect effect of LPGO, knowledge provision and performance ratings. LPGO has a positive relationship with knowledge provision, which, in turn, has a positive relationship with performance ratings.

Hypothesis 7f: There is an indirect effect of LAGO, knowledge provision and performance ratings. LAGO has a negative relationship with knowledge provision, which, in turn, has a positive relationship with performance ratings.

Hypothesis 7g: There is an indirect effect of LPGO, knowledge acquisition and performance ratings. LPGO has a positive relationship with knowledge acquisition, which, in turn, has a positive relationship with performance ratings.

Hypothesis 7h: There is an indirect effect of LAGO, knowledge acquisition and performance ratings. LAGO has a positive relationship with knowledge acquisition, which, in turn, has a positive relationship with performance ratings.

3.6 The model explaining the knowledge sharing behaviour

In the final component of the chapter three, I develop and test theory for the motivators of knowledge sharing behaviour by providers and seekers in predicting performance rating .In sum, while part of this investigation is a replication of the established relationship between particular goal orientations and performance, the more important aspect is an examination of how goal orientation relates to job

performance through the self-regulation tactics of behaviour as reflected by knowledge provision and acquisition. See Figure 1 for the theoretical model

The model summarized in Figure 2 is an integration of three motivational perspectives—social network theory, social exchange theory, and dispositional theory—each selected because of its applicability in understanding a specific aspect of the knowledge sharing behaviour between providers and recipients. This study develops the specific hypotheses that form the basis for the model I test.

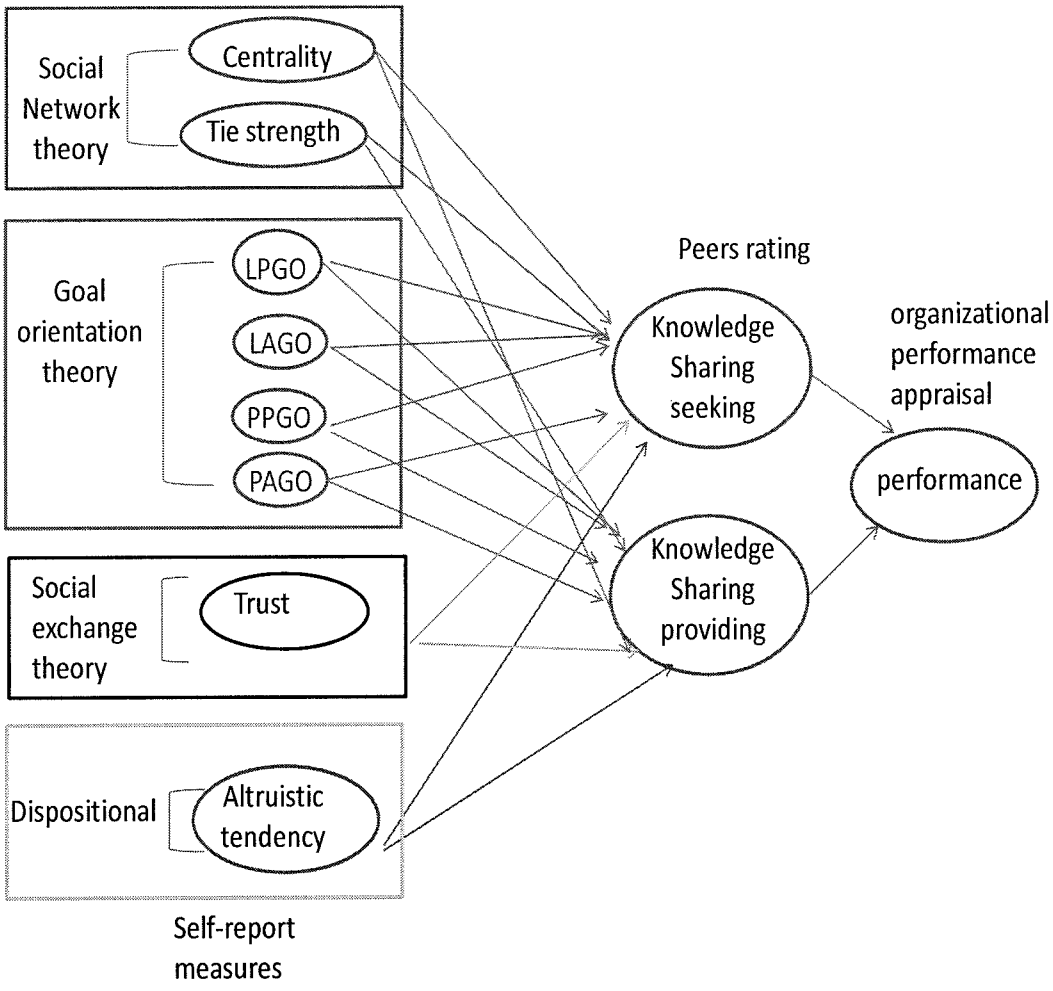


Figure2: Theoretical model for knowledge sharing behaviour mechanism

3.7 Summary of the Chapter

With a few exceptions, researchers have rarely explored the mechanisms through which goal orientation influences individual performance. To further develop this line of inquiry, I explore the mechanisms through which four goal orientation patterns related to performance rating respectively. The present study attempts to extend past findings and probe the mediating mechanisms between goal orientation and employees performance enhancement.

Chapter 4: Research Methodology

4.1 Scope of the Chapter

This chapter explains design and implementation of research methods. It begins by the reasoning of sampling and participants' selection, followed by Pilot study for in-depth interview, questionnaire survey, and data collection. Finally, I introduce the measures for all variables this study investigated.

4.2 Selection of research method

This study grounded on the scientific method, which is a body of techniques for investigating phenomena, acquiring new knowledge, or correcting and integrating previous knowledge (Goldhaber & Nieto 2010). This method rigidly arises from wildly observed phenomena in a specific domain, a discussion of the fundamental processes including: observe and describe the phenomena, determination of the causes, prediction from the theorization, and explanation of the result. This study use scientific method to transform ideas, hunches, and questions, I term as hypothesis, into scientific knowledge. To be termed scientific, this method must be based on empirical and measurable evidence subject to specific principles of reasoning.

4.2.1 Organizational phenomena appropriate for quantitative method

There are both qualitative and quantitative approaches to doing social research. Although both approaches share basic principles of science, the two approaches differ in significant ways. More specifically, quantitative approach focus on variables, reliability is key value free, and theory and data are separate, on the other hand, qualitative approach focus on interactive processes and events, authenticity is key values are present and explicit, and theory and data are fused. Each method has its strengths and limitations. Since quantitative research captures the structural factors that determine how employee attributes and behaviours are produced can be analyzed, it is also possible to control for the effects of extraneous variables that might result in misleading interpretations of causality, and clear documentation can be provided regarding the content and application of the survey instruments so that other researchers can assess the validity of the findings. On the other hand, qualitative data are too intangible to interpret and present for my research idea, such as issues of anonymity and confidentiality can present problems when presenting findings, Research quality is more easily influenced by the researcher's personal biases and idiosyncrasies, and findings can be more difficult and time consuming to characterize in a visual way.

The phenomena I observed and research question concerned captured the essence of quantitative study. Therefore, the whole study adopts quantitative methodology. No

matter what approach adopt, I try to be systematic in gathering data, and to use the idea of comparison extensively. Conducting research requires following steps in sequence.

My research start with a general observation from the knowledge-intensive firms, while organizations advocate knowledge sharing culture, some employees are willing to engage such behaviour, on the other hand, some employees are reluctant to so . There is social dilemma when weighting the cost and value of knowledge sharing behaviour. Having this issue in mind, the next step is narrow this topic down and focus on a specific research question that can be addressed in this study. This requires a careful review of the relevant literature (Chapter two) and developing hypothesis (Chapter three). Designing the study requires making decisions about the types if sample to select, how to measure relevant factors, and what technique (survey or experiment) to employ. At this stage, theory informs decision making (Chapter four). After designing this study, I begin to collect data. Once the data are collected and input into a transferable format, analyzing data is a curial step (Chapter 5). This part end up with a large quantity of software-generated output that provides me with a condensed picture of the data and I need to give meaning to and interpret the data. By looking at the analyzed data, using background knowledge on the research question , and drawn on the theory selected , I answer the original research question proposed after observation. The final step is informing others the description of study,

comparing the result of this study with precious studies, discover the limitations, and draw out its wider implication (Chapter six).

4.2.2 Research questions appropriate for a survey

There two primary forms of method for quantitative research, survey and experiments. The survey is the most widely used data gathering technique in social science. Survey research developed within the positivist approach to social science, especially for behaviour study. Surveys are appropriate for research questions about self-reported beliefs or behaviours. Survey researchers sample many respondents who answer the same questions, measure many variables, and test multiple hypotheses. The association among variables is measured with statistical techniques. By contrast, in experiments, researchers place people in small groups, test one or two hypotheses with a few variables, control the timing of the treatment, note the associations between the treatment and dependent variables, and control for alternative explanations.

In my research domain, I observed and identified mechanism explaining employee's knowledge sharing behaviour in knowledge intensive work. The basic steps in my survey research can be divided into the steps outlined below. In the first phase, I develop an instrument---a survey questionnaire. After thorough literature review, I conceptualize and operationalize variables concerning my research topic as questions.

When preparing a questionnaire, I pilot test the questionnaire with a small set of respondents similar to those in the final survey. After the planning phase, I locate the sampled respondent using human resources email system. I accurately record answers or responses immediately after the data collection period finished.

4.3 Organizational Setting and Participants

One of the most prevalent and effective prevalent manifestations of knowledge sharing behaviour among employees is knowledge intensive firms. The relationships between goal orientations, knowledge sharing behaviour, and the outcome of job performance were examined in a field study conducted in a stated commercial bank in China. Having samplings from two firms affiliated under this financial institution based on different Chinese culture increase our confidence in the study's external validity. Preliminary interviews, observation, and existing documentation on the organization confirmed that work in each setting was highly knowledge intensive and collaborative. Having negotiated access to the company through senior human resource director, we visited the branches and conducted interviews with more than 20 employees to better understand the contexts and to develop survey on instruments to test our hypotheses. Preliminary interviews revealed that the sampling were midlevel professionals engaged in wide range of knowledge intensive work in different functions undertaking in total 36 branches of banks, including risk management, administration, research and development, financial modelling,

customer relationship management and so on, who relied heavily on colleagues for information to solve problem and coordinate work.

4.4 Survey preparation

4.4.1 The logic of survey research

The purposes of this survey is as follows: first is to refine my research questions; second is to provide information for the questionnaire design; third is to obtain the latest information about the motives and challenges on knowledge sharing behaviour taking place knowledge intensive industry, forth is to obtain a better understanding of knowledge intensive workers and improve the questionnaire design; and finally is to refine the implementation of the questionnaire survey.

To achieve the first three purposes, in-depth face-to-face interviews was employed. More information and clarifications can be obtained in this manner. I completed my first version for questionnaires based on my research question and literature review.

To obtain a better understanding of refine the design and implementation of the questionnaire (as stated in the last two purposes), a pilot survey was conducted. From the perspective of questionnaire design, the pilot survey can test if the questions are intelligible and easy to answer. The content of the questionnaire can also be improved. By calculating the average time required for completion by the respondents, the length of the questionnaire can be modified. From the perspective of questionnaire

distribution, experience about how to handle questionnaire survey can be gathered. Consequently, a final version for the large-scale questionnaire was achieved.

4.4.2 In-depth interview

The In-depth interviewing I conducted is a qualitative research technique that involves conducting intensive individual interviews with a small number of employees to explore their various perspectives concerning my knowledge sharing behaviour research. The thoughts and information that they talked about the operations, processes, and outcomes happened in their specific work domain is especially important and pragmatic for investigating the mechanism for motivating knowledge sharing behaviour and employee performance. I hereby list and summarized in the following part, which including main motivating forces and obstacles, manifested in micro level and macro level, respectively.

Motivating forces for Knowledge sharing behaviour (Micro level):

1, Follow up supervisor's style or meet his expectation

I will definitely share knowledge or help those who need relevant knowledge (even if he or she doesn't directly ask me for help) if my supervisor advocate knowledge sharing behaviour or he display intrinsically or extrinsically that it's one of his criterions for an excellent employee.

2, Self-actualization needs

Self fulfilment of show off, sense of authority (mainly to all colleagues)

Reputation for special filed (mainly to close work partners and especially for his supervisor)

Win the organization recognition that I am valuable for the firm competitiveness and thus could avoid the possibility of dismissal in this highly competitive and uncertain environment.

3, Self learning by solving others interesting problems

When a colleague arise an interesting problem that relevant to my own career or have potential value to discover something beneficial for my future progress, I will be happy and take more time to discuss with him or her. The thinking and discussing process itself enhance my understating of such kind of problem and may inspire some useful knowledge for my own use.

4, Reciprocity benefits and expectation

I need to provide some knowledge to those information seekers who had provide me some help before. At the same time, when I meet his or her request this time, I may turn to them for help more directly and successfully. At least, I may have the expectation that the people I helped may not hurt my benefits or bring me some trouble in future, although this expectation doesn't always play its way from my former experience.

Obstacles for Knowledge sharing behaviour (Micro level):

1, Ownership maintenance

Sometimes, I am reluctant to share crucial knowledge for the fear of losing ownership, a position of privilege, superiority.

Imitable knowledge acquired by the recipient increase the risk of elimination and lowers the possibility for promotion in highly competitive talent market, especially for those people who equipped with equivalent background, experience, and social ability. They all competing with me, I need to protect my status and intellectual property in this organization

2, Uncertainty brought from Opportunism and information asymmetry

I am not willing to devote time and resources to provide my expertise when I am not sure whether my expertise corresponds to information seekers problems. In addition, I don't like to be solely "used" by other people who should have taken some effects to tackle this problem on his own.

3, Reputation concern

In most cases, I won't seek for knowledge help if this problem is within my own specific area as people will question about my professionalism.

4, Negative organizational environment

I regard my colleagues as a portion of the whole organization. I don't have motivation to help colleagues if the organization treats me unequally. The negative working atmosphere I perceived from the organization (or the supervisor) will directly lower my wiliness to share my knowledge with people around.

5, Lack of reward from the organization

Besides some formal work-related consultation and help, this informal knowledge contacts unusually need to take my time and resources. I am not feeling good when I am not being adequately rewarded for hardworking and helping, on the other hand, I still need to provide help to those information seekers.

Motivating forces for Knowledge sharing behavior (Macro level):

Knowledge sources (Knowledge Provision) dimension

1, Organizational culture (organizational reciprocity norms)

I am working with the organizational culture in which shared commitment is built not necessarily through stable individual relationships but, rather, through an overarching organizational philosophy that emphasizes teamwork, shared learning, and collective high-performance. Work criterion and norms for selecting and rewarding for employees are directional for knowledge sharing.

2, Perceived organizational support (Positive working atmosphere)

The human resources practice and decisions (rewards and arrangement) extend to me over time from the organization (mostly from the powerful supervisors) accumulate my perception of the working environment as a whole. In addition, my growing depends on the experienced and coworker's guidance to a large extent. It's my pleasure to share my relevant experience with colleagues as a feed back to the beneficial training I received from this organization.

3, Leadership style

Appraisal and reward system

Acknowledging the value of sharing knowledge, the contributions people made, and increasing awareness about the importance of not hoarding information or knowledge all aligned.

Promotions to leadership positions act as firm wide signal, the fact employee A's promotion shows supervisors what values, approaches, and ways of working management looks for. When promoted individuals have demonstrated their knowledge sharing behaviour, others will try to learn and absorbs this behaviour.

4, Organizational design

1) Trustworthy and Openness brought form knowledge system;

The context of how organizational knowledge transfer can be leaky (pass readily from one to anther) as well as sticky (fail to move). Much of the leakiness comes from the trust between individuals. Knowledge system displays the signal that knowledge sharing activities are unstoppable, given the unprecedented social technologies and the culture it bring with it of increasingly informal knowledge sharing practices. Therefore, it's useless to concern about my own knowledge will be imitated by others and then I lose my own advantage because I cannot avoid others sharing behaviour if I refuse to share.

When I post some answers or experience to employee's questions in knowledge system, colleagues around will have a positive perception that I am knowledgeable and helpful, more importantly, leave a good impression for my superior as he or she will always viewing these systems.

2) Career path

Peers could be promoted at the same if we finished the common goal successfully. I don't need to concern about the situation that employee A won out over employee B when finishing a cooperative project.

Promotions and money reward system based on peers provide the intended results of a greater propensity to cooperation and more palpable sense of group identity (from

self-interest consideration: people are more likely to help the group if they benefit financially from better group performance.

3) Hierarchical proximity

We can achieve benefits from knowledge sharing primarily within own corporate knowledge systems. Organizations derive substantial benefits from deploying these social technologies in employee interaction which integrated tightly into employees work flows. Information is shared more readily and less hierarchically, collaboration across organizational silos is more common, and tasks are more often tackled in a project-based fashion

Knowledge recipients (Knowledge Acquisition) dimension:

1, Learning curve:

In a knowledge intensive firm, it's my duty and obligation to continuously learn from experienced employees. Knowledge doesn't flow freely or uniformly in organization. Some knowledge can't be obtained or get through just by searching internet and books. Seeking out various kinds of information and relevant experience from partners, colleagues or supervisors are essential for a qualified consultant growing.

2, Functional interdependence and Task complexity

Seeking information from others is indispensable when the given task or problem involves various and interdependent knowledge that beyond one person's capacity. Usually, I will consult with several colleagues with relevant background and I never hold the expectation that one or two person's suggestion may tackle this problem completely. It's pragmatic to rely on group wise, on one hand, I can avoid the uncertainty that some person whom I am always prone to for suggestion may not perfectly cover my problem and he or she may not available for this specific time, one the other hand, I think it's a good opportunity to know some new colleagues through seeking information. For consultants, we need to handle a wide ranging field of cases, I need to learn and equip myself with all round expertise.

3, Organizational culture

By participating in an organization, the new comer discovers its actual norms and values, which may not manifestly displayed to the outside. Understanding and adopting organizational norms, values, and aims is an essential part of become a connected and productive member of an organization. One important influence on the success of that assimilation is a predisposition to those values and norms. When a new comer learns the knowledge sharing culture the given organization advocated and experienced that colleagues around really do comply with certain values, he or she is most likely to follow. And when a particular behaviour becomes a genuine norm, the

ever present social pressure of how everybody does things around here reinforces conformity

4, Communications and involvement (A sense of membership)

Colleagues interacted through common room informal chanting, lunch, and events to share and create knowledge, and effective knowledge sharing was facilitated through effective interaction practice. Shared knowledge and learning that was synthesized to create even more knowledge.

4.3.3 Questionnaire Survey

Based on the literature review, in-depth interview, and the pilot study, a final questionnaire was designed with all closed-ended questions. The respondents are all full time employees who have formal working contracts with the organization. Transfer of expertise are seen as a dyadic exchange of knowledge between a source and a recipient in which the characteristics of the source and receipt as well as the environment that they work within both matter. Base on this setting, I structured the four-paged survey stage into three sections first is for peer-rated part, the next two pages being the self-rated part, the third part covering employees' perception for the knowledge environment they work in.

4.5 Data Collection

4.5.1 Sampling

Data collection took place from June 2012 to Jan 2013 and took 10-20 minutes to complete for each participant. We sent coded questionnaires using the database created by HR officer and researcher. Every participant received a specific survey included a cover letter that guaranteeing the management would not see their individual responses. One week after mailing each survey, we sent a reminder to participants who had not yet returned their completed survey. A total of 402 out of 480 participants (representing an 83.7% response rate) complete the entire survey. Of the 402 questionnaires, 80 questionnaires are invalid as they were lack of matching data rated by paired employees who fail to deliver their complete questionnaires to us. We finally get 322 resulting in an initial pool of 322 employees (representing a 67% response rate).

The demographic profile of the subordinates and supervisors was as follows: 47 % female; 83% with university education or above; 44% in the age range from 20 to 29, 40% from 30 to 39 years, and 16% from 40-49 years. Rank range from analyst to director(35% entry level, 55% middle level, 10% manger level) A range of tenure with their present employer was noted (17 %, <1 year; 56 %; 1-3 year; 27% >3 years) . The participants were from 34 various departments ranging from sales, operations, credit, IT, strategy to human resources management office.

4.5.2 Procedures

Three days prior to administration, human resource director sent out an official email notification and endorsement of the research survey requesting that encouraging all employees participate completely and indicating that all response would be completely confidential.

Survey data were collected via three-stage survey and using multiple sources. The first survey represents data from subordinates, which administrated via company e-mail attaching survey ID number created by researcher .We collected survey data according to our grouping list from internal HR system attached with a cover letter that explained the objective of the survey, provided assurances of anonymity, and advised respondents of voluntary nature of participation in the study. Second, respondents in the supervisor role were asked to fill up the same questionnaire as their subordinates two weeks after we collected all complete subordinate questionnaires. Both subordinate and supervisor questionnaires were directly replied to our researcher email box sponsored by this company's internal communication system. Third, as noted in the development of our hypotheses, the key question is testing the presence of causes and the demonstration of effects; we attempted to adopt employee's performance rated by immediate supervisors and higher managers at an appropriate time lag. With endorsement by the managing director, we obtained records of the employee's three main performance dimensions who had completed the above two

stage survey as well as their corresponding demographic information from the employee annual performance report six months after the first round survey. HR officer voluntarily provided us with the last four digits of the employee staff ID number combined with their performance records, which we used to match survey responses to the performance records and all the relevant information held in strict confidence. This method allowed us to reduce common method bias of respondent s by separating responses for the outcome and predictor variables.

The first peers rating section consist of three target-specific constructs, including knowledge sharing behaviour, network centrality and tie strength, trust are perceived as collective and shared phenomenon, are referent shift consensus construct. With the departmental manger's guidance, we prepared a grouping list indicating employees name, working ID, survey ID and paired group for further matching use in data base , which meant meeting flowing three condition : (1) dyadic grouping is based on immediate supervisor's knowledge about the KS relationship between group members to ensure paired participants could have interactions with their peers that could supply reverent data on knowledge sharing behaviour, (2) To limit the burden on the participates for accuracy, mostly one person has four chances to evaluate by the other given employee (3) to keep the objective evaluation, each employee was evaluated by three other team members in the same department selected by department manager (three colleague name were printed on top of the peers rating part).

4.5.3 Sampling frame

For this study, I sampled knowledge workers in two separate organizations under the same financial group: a unit of a medium size bank based in Shenzhen China; and the headquarters of this finical group based in Nanjing, China. All employees in each organization were invited to participate in the study since both organizations recognize knowledge sharing between their employees as critical to the performance and success of the organization.

Due to the time-intensive and resources-limited nature of the study, the selection of the organizations was partially based on convenience. However, utilizing two organizations from different functional organizations, one for operational function and one for strategically function, helps external validity and increases the generalizability of the findings. Any individual differences between participants and non-participants, as well as industry and company differences, will be statistically controlled for allowing for inferences to be drawn between the sample and the general population.

Prior to administering the survey, the survey instrument was reviewed by academics familiar with the content areas and pilot tested with a group of knowledge workers and their supervisors from the two organizations. The purpose of the pilot study was to test the survey instrument and its psychometric properties, thereby ensuring that both the existing measures and the new measures demonstrate construct validity. The

pilot study involved a total of 20 employees from the two participating organizations followed with an item-by-item debriefing session with 2 of the HR officers from each organization. Survey data were collected via three surveys and using multiple sources to avoid the common method bias. Survey data were collected via three surveys using multiple sources, including employee survey, supervisor survey, and employee performance rating survey respectively. Respondents were ensured confidentiality and all surveys were accessible only by me.

4.5.4 Questionnaires items formulation

To increase the construct validity and the external validity of the study, when possible I utilized measures previously used in empirical literature and subjected to scrutiny regarding their propensity to measure the intended variables (Huselid, 1995; O'Reilly, Chatman & Caldwell, 1991; Reagans & McEvily, 2003). Measures developed for the study, such as the knowledge orientation measures, were adapted from existing measures (Van de Walle, 1997) and subjected to a pilot study and factor analysis to ensure the construct validity of the measures. Construct validity is the extent the variables are measured appropriately, in accordance with existing research practices, and measure the actual variable. Reliability tests (coefficient alpha) ensure internal reliability for the items in the same scale and were determined for all constructs, even those previously validated in the literature. One issue concerning construct validity is common method variance which is discussed in a separate section after the measures are presented.

Questionnaire items used in this survey represents data from the knowledge source and recipient behavioral perspective and was administered to all employees. The first-stage survey was conducted to measure knowledge sharing behaviour from peers perspective. The second survey aims to investigate knowledge sharing behavior from supervisor perspective. The third survey examines the knowledge sharing behaviour from employees' corresponding performance perspective. However, because

collecting the data was a three-stage survey process, there was a risk that respondents to the first survey would not complete the second survey. As a result, it was determined that the risk of non-response to the second survey, possibly resulting in insufficient knowledge sharing data, outweighed the risk of bias in the survey item responses and the knowledge source general knowledge sharing items were included in the first survey.

4.6 Measures

This study developed measurement items by adopting scales that had been validated in prior studies, modifying them to for our context of knowledge sharing behaviour. A broad and thorough literature review ensured the reliability and validly of multiple–item scales measurement. In-depth consultation with department experts and feedback obtained when piloting the questionnaire helped refine the choice of sampling, identify the most reverent items, and several proper wording given the empirical context.

This study used a standard translation and back translation procedure to assure the equivalence of measures in English and Chinese version of the questionnaires. We tested the Chinese version of our questionnaire with ten employees from the target organization. On the basis of feedback obtained from the pilot study, a few items were reworded to clarify their meaning. To guard against item priming or item context effects on the survey, we varied the order of items measured for each construct and placed different item scales together.

This study adapt most of the survey items from pre-existing scale in the literature .The items comprising the scales described generally bellow are detailed the in table 1, in the results section. Participants rated the items on a 7 point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree) to indicate the extent to which they agree with the items.

4.6.1 Dependent Variables

Employee performance

The study's framing utilized participants immediate supervises as the referent rather than some more general performance indicators which are common held in banking industry, such as attendance checking, departmental profitability, and personal sales record. Items adopted from the employee performance appraisal system established by the organization, which assess multi-dimensional performance that are predictive of performance-related and attitudinal job outcome.

Performance was assessed using a composite of three dimensions. 12-item scale operationalized for individual ability, attitude and managerial aptitude in the workplace respectively. First, with respect to ability dimension, three items refer to decision marking skill, three items refer to core and functional competence, three items refer to productivity, and three items refers to navigating skill. Secord, with respect to attitude dimension, three items refer to coach-ability, three items refer to driving, three items refer to aspiring, and three items refers to sustainability. Third, with respect to managerial aptitude dimension, three items refer to time management, three items refer to stress management, three items refer to group management, and three items refers to professionalism management.

4.6.2 Independent Variables

Network Centrality

Following widely accepted measures from social network literature for soliciting an employees' network centrality perceived by peers, which covers three dominant dimensions: degree centrality, betweenness centrality, closeness centrality. Respondent were asked to evaluate three colleagues printed on top of his or her questionnaire successively the extent to which they agree with the items. The first item measured for degree centrality, which is conceptualized as the number of direct contacts an employee is connected to (Freeman, 1979). More specifically, the item we used is "this employee has high degree of interaction with other colleagues." The second item measured for betweenness centrality, which is conceptualized as the frequency an actor lies on the shortest path between other actors in the network (Freeman, 1979). Appropriate to our setting, the item we asked is "this employee plays a key role in connecting the collaboration among colleagues."The third item measured for closeness centrality. According to Freeman (1979), closeness centrality measures how many steps on average it takes for an individual to reach everyone else in the network. Individuals who have high closeness centrality measures can most efficiently make contact with others in the network. The item measured for this construct is "this employee can get familiar with other colleagues quickly." Reliability for the scale is .89.

Tie Strength

Tie strength is a concept ranging from weak ties at one extreme to strong ties at the other—characterizes the closeness and interaction frequency of a relationship between two parties (Granovetter 1973, Hansen 1999), here a knowledge seeker and knowledge source This variable was operationalized through peers-rating. We asked the employee to Knowledge seeking. To identify an employee's tie strength with peers, we used D.Z. and Cross (2004) 3-item scale to capture the tie relationship. One sample items is "How close was your working relationship with this person."

Trust

Knowledge sharing presumes a relation between at least two parties, one that possess knowledge and the other that acquires knowledge. Both parties in a dyadic relationship have important strategic considerations before providing or seeking knowledge. The problems for the employee who provide trust is whether or how much to trust the trustee. The problem for the trustee is to decide, if trusted, whether and how much to reciprocate that trust. Therefore, each party, but especially the knowledge provider, makers decisions based on the reciprocal expectation about the recipients. To this end , the trust relationship between the respondent and three target specific employees that paired for him or her was evaluated with a version of two-dimensional scale developed by (D.Z. and Cross , 2004), Benevolence-based trust and Competence-based trust respectively. Benevolence-based trust was adapted from three items used by Johnson et al. (1996). These items are similar to those used by

Mayer and Davis (1999).A sample item is "I assumed that he or she would always look out for my interests." Competence-based trust was taken from the two top loading items used in McAllister's (1995) cognition based trust. A sample item is "I believed that this person approached his or her job with professionalism and dedication." Cronbach's $\alpha = .87$.

Altruism

We measured altruistic behaviours of the employees using six items from Wayne, Shore and Liden (1997). A sample item is "This employee assists me with my duties." Reliability for this scale is .92.

Goal Orientations

Individual differences in goal orientation were assessed by administering scales for measuring learning and performance goal orientation developed by Janssen and Prin (2007). It consists of ten items for learning orientation and ten items for performance orientation. Both of which have typically been portrayed by both approach forms and avoid forms. Sample items for performance-approach goal orientation include "I achieve at higher levels than others." Sample items for performance-avoid goal orientation include "I make no bad impression on others." On the other hand, sample items for learning-approach goal orientation include "I can develop myself." Sample items for Learning-avoid goal orientation include "I perform tasks with little risk of failure." Reliability for the scale of PPGO is .91. Cronbach's α for the scale of

PAGO is .91. For LPGO, Reliability for this scale is .94. With regards to LAGO, Cronbach's α is .90.

4.6.3 Mediating Variables

Knowledge sharing behaviour

Knowledge providing and seeking measures from the above adopted from but modified from self-rating scale to peers rating: the conceptual rationale for using an aggregated measure of variables in this study is that every employee's knowledge providing and seeking behaviour is a collective and shared phenomenon among peers. Gupta and Govindarajan (2000) pointed out the importance of distinguishing between receiving and contributing knowledge. Appropriate to the context of this study, the variable knowledge providing and seeking were operationalized through peers rating. Accordingly, for the knowledge providing, we asked employees to indicate the extent to which colleague that selected by the immediate employer for him had contributed knowledge to peers. We use seven items from (Yang and Chen, 2007) to measure knowledge providing behaviour .The items include explicit knowledge sharing: a sample item is "this employee shares business proposals and reports with each other." And also the implicit knowledge sharing; a sample item is "this employee shares know-how from work experiences with others."

For the other knowledge sharing behaviour , we used three items adopt from(Vries et al. 2006) to measure how frequently employee engage in knowledge seeking behaviour , A sample item is "When I need certain knowledge, I ask my colleagues

about it."The initial measurement is four-item scale, however, we delete one item named "He asks his colleagues about their abilities when he need to learn something" which the meaning is quite confusing reflected by the pilot study. The original scale has four items. We deleted one item in our main survey ("He asks his colleagues about their abilities when he needs to learn something") after conducting our pilot study for two reasons. First, this does not seem to be related to knowledge acquisition directly. Second, many respondents in our pilot test reflected that the actual meaning of this item was confusing. Reliability for this adapted scale is .93.

4.6.4 Control Variables

To construal for the possibility that socio-demographic difference in the predictor and outcome variables might lead to spurious relationship, gender(1, "male," 0, "female"), age (in years), and organization tenure(in years), education (1, "colleague,"2 , "bachelor," 3, "graduate"), Ranking (1, "analyst," 2, "associate," 3, "departmental manger,"4, "principle ,"5 "manager") were entered as covariates in the analysis

4.7 Common Method Variance

Most researchers agree that common method variance, for example, variance that is attributable to the measurement method rather than to the constructs the measures represent, is a potential problem in behavioural research. The most likely causes of method bias and result from the fact that the predictor and criterion variables are obtained from the same source or ratter. Some methods effects result from the fact that the respondent providing the measure of the predictor and criterion variable is the

same person. This type of self-report bias may be said to result from any artificial covariance between the predictor and criterion variable produced by the fact that the respondent providing the measure of these variables is the same.

Because common method biases can have potentially serious effects on research findings, I obtain measures of the independent variables, dependent variables, and mediating variables from different sources. Specifically, all the independent variables adopt from self-report measures, all the dependent variables tested through organizational objective performance appraisals, and all the mediating variables were arrived from peers-rating report, respectively.

4.8 Summary of the Chapter

This chapter introduces the study area and explains the implementation of the research methods. The reasons for choosing the methods for each research stage are explained. A pilot study is conducted and a questionnaire survey was distributed in two firms, Nanjing and Shenzhen, respectively. All the relevant measures were introduced in this chapter.

Chapter 5: Data analysis and results

5.1 Data Analysis

This chapter presents the data collected using the methods described in the previous chapter as well as the data analyses and the results from the data analyses. The chapter is divided into three sections: an initial exploration of the data, hypothesis testing, and a summary of the findings.

5.1.1 Descriptive Statistics, Correlations and Reliability

Table 2 presents the means, standard deviations, and correlations between the study variables. Table 2 shows that knowledge acquisition behaviour was significantly correlated with Performance avoid goal orientation (PAGO) ($r = -.23$, $p<0.05$), learning prove goal orientation (LPGO) ($r = 0.67$, $p<0.05$), Learning avoid goal orientation (LAGO) ($r = .40$, $p<0.05$). On the other hand, knowledge provision behaviour was significantly correlated with performance prove goal orientation (PPGO) ($r = .44$, $p<0.05$) ,Performance avoid goal orientation (PAGO) ($r = -.38$, $p<0.05$), learning prove goal orientation (LPGO) ($r = 0.57$, $p<0.05$), Learning avoid goal orientation (LAGO) ($r = -.21$, $p<0.05$).

Table 2

	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	31.67	6.42	_												
2. Edu	1.98	.54	.12	_											
3. Rank	1.94	.90	.50	.22	_										
4. Tenure	2.12	1.17	.41	.15	.33	_									
5. Centrality	4.96	.74	-.13	.02	.03	-.05	_								
6. Trust	4.83	.56	-.12	.03	.07	-.03	.47	_							
7. Altruism	5.00	.89	-.04	-.07	.07	-.10	.12	.18	_						
8. PPGO	5.29	.80	-.08	.09	.06	-.17	.22	.14	.26	_					
9. PAGO	5.15	.77	.04	-.02	.02	-.05	-.21	-.04	.09	.01	_				
10. LPGO	5.50	.95	.03	.06	.22	.03	.12	.29	.49	.18	-.08	_			
11. LAGO	4.78	.98	.09	-.11	.13	.03	-.12	.03	.02	-.27	.07	.16	_		
12. KAB[a]	5.03	1.12	-.04	-.01	.20	.11	.16	.30	.32	-.05	-.23	.67	.40	_	
13. KPB[b]	4.99	1.16	-.07	.07	.18	.03	.34	.30	.37	.44	-.38	.57	-.21	.47	_
14. performance	84.40	5.88	-.06	.04	.21	.05	.26	.29	.37	.23	-.31	.60	.08	.69	.74

Note: N=322.
Correlations >= |.12| is significant at the .05 level; a correlations>= |.15| is significant at the .01 level.
a.KAB = knowledge acquisition behaviour; b. KPB = knowledge provision behaviour.

5.1.2 Confirmatory Factor Analysis

Apart from the employees' demographics and performance ratings which were secondary data, the measures in this study came from two sources. Goal orientations, and altruism were rated by the focal employees; network centrality, trust, knowledge provision behaviour and knowledge acquisition behaviour were rated by peers, with each focal employee evaluated by three close partners. Therefore, two sets of confirmatory factor analysis (CFAs) were conducted to examine the factorial structures of employees' self-ratings and peer-ratings separately. For self-report measures, results of the CFA show a satisfactory fit with the data (χ^2 (88) = 701.27, CFI = .93, TLI = .93, RMSEA = .07, SRMR = .05). All indicators have significant loadings on their respective latent factors. To confirm the theoretical model of goal orientations, I specified a nested model by combining items of LPGO and LAGO to one latent factor. CFA results show that this model fits the data significantly worse, $\Delta\chi^2$ (4) = 959.93 ($p < .01$). I further tested another nested model by combining PPGO and PAGO. This model also fits the data significantly worse, $\Delta\chi^2$ (4) = 991.32 ($p < .01$). Thus, my data supports the proposed four-factor model of goal orientations. For peer-rating measures, the proposed four-factor structure fitted the data very well (χ^2 (54) = 260.97, CFI = .99, TLI = .98, RMSEA = .04, SRMR = .03). All indicators loaded on their respective factors significantly. These results supported that the scales used in this study measure distinct constructs.

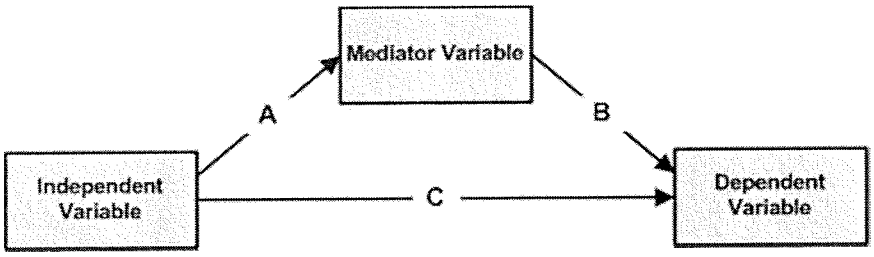
5.1.3 Aggregation Tests

Since I use peer ratings to measure individual knowledge provision behaviour and knowledge acquisition behaviour, I need to aggregate the peer-rating scores. In support of the aggregation, inter-rater reliability indices showed satisfactory reliability for both knowledge provision behaviour (ICC[1] = .92 and ICC[2] = .98) and knowledge acquisition behaviour (ICC[1] = .98; ICC[2] = .96). Accordingly, we averaged the peer ratings to get the scores of individual knowledge provision behaviour and knowledge acquisition behaviour. Each peer also reported their trust of the focal employee as well as their perceived centrality of the focal employee. The ICC[1] and ICC[2] of the centrality measure was .39 and .72 respectively. LeBreton and Senter (2008) suggested that ICC[1] greater than .25 and ICC[2] greater than .70 might be considered as basic criteria for data aggregation. Since both ICC [1] and ICC [2] for centrality met these required standards, I aggregated the peer ratings of centrality across the ratters. However, the case for aggregation of trust is slightly different. Since trust is embedded in dyadic relationships, there is no theoretical requirement that everyone should consider a certain employee as trustful. The averaged trust score across the three peers was, therefore, only an estimate of the averaged level of trust of the focal employee by his or her close colleagues. There is no theoretical need for inter-ratter agreement of this construct among the peers' ratings.

5.1.4 Hierarchical regression model

A hierarchical regression approach was chosen due to its superiority relative to zero-order correlations in assessing the direction and strength of association between variables (Hair et al, 1998). Hierarchical regression is a variation of linear regression analysis where multiple variables, or groups of variables, are entered in steps. A three-step regression analysis was employed where the control variables were entered as a first step, the independent variables were entered as a second step, and the mediating variables were entered as a third step.

5.1.5 Bootstrap Method for Testing Meditating effect



To test whether knowledge acquisition behaviour and provision behaviour mediated the relationship between goal orientations and employee performance rating, I followed Baron & Kenny (1986) classic three-step mediation regression procedures logic. Mediation analyses are employed to understand a known relationship by exploring the underlying mechanism or process by which one variable (*X*) influences another variable (*Y*) through a mediator (*M*). Such an intervening variable is called a mediator. In order for either full or partial mediation to be established, the reduction in variance explained by the independent variable must be significant as determined

by one of several tests, such as the Sobel test. Sobel's test is calculated to determine if the relationship between the independent variable and dependent variable has been significantly reduced after inclusion of the mediator variable. The bootstrapping method (Preacher& Hayes, 2004) provides some advantages to the Sobel's test, primarily an increase in power. The Preacher and Hayes Bootstrapping method is a non-parametric test. As such, the bootstrap method does not violate assumptions of normality and is therefore recommended for small sample sizes. Bootstrapping involves repeatedly randomly sampling observations with replacement from the data set to compute the desired statistic in each resample. Over hundreds, or thousands, of bootstrap re-samples provide an approximation of the sampling distribution of the statistic of interest. This method provides point estimates and confidence intervals by which one can assess the significance or non-significance of a mediation effect. Point estimates reveal the mean over the number of bootstrapped samples and if zero does not fall between the resulting confidence intervals of the bootstrapping method, one can confidently conclude that there is a significant mediation effect to report.

5.2 Hypothesis Testing and Results

Based on the initial data exploration, it is now possible to conduct data analyses to test the hypotheses and determine whether a hypothesis is supported or not with a high degree of statistical conclusion validity. The hypotheses were tested using the following statistical methods: hypotheses 1a-b were tested using linear regression,

hypotheses 2a-b, 3a-b, 4a-b, and 5a-b were tested using hierarchical regression analysis, and hypothesis 6a-b and 7a-b was tested using bootstrapping method.

Table 2 presents the means, standard deviations, and zero-order Pearson correlations of the focal variables. In general, the correlations among the variables were as expected.

5.2.1 Four Perspectives Explanatory Power Comparison: Goal Orientation---Knowledge Sharing Behavior (Hypotheses 1a-1b)

I conducted hierarchical multiple regression analyses to show that the proposed model of goal orientations can explain knowledge sharing beyond the established perspectives (i.e., network centrality, trust, and altruism) and test specific hypotheses regarding the effects of goal orientations on knowledge provision and knowledge acquisition. Table 3 shows the results of the hierarchical regression analyses. Model 3 and Model 6 in Table 3 show that after controlling for network centrality, trust and altruism, goal orientations explain significant variances of knowledge provision (ΔR^2 = .36, $p < .01$) and knowledge acquisition (ΔR^2 = .40, $p < .1$) respectively. Hypothesis 1 was supported.

5.2.2 Main Effect of Goal Orientation on Knowledge Sharing Behavior

5.2.2.1 Performance-prove and Performance-avoid goal orientation----Knowledge Provision (Hypotheses 2a-2b)

5.2.2.2 Performance -prove and Performance-avoid goal orientation----Knowledge Acquisition (Hypotheses 3a-3b)

5.2.2.3 Learning-prove and Learning-avoid goal orientation---- Knowledge Provision (Hypotheses 4a-4b)

5.2.2.4 Learning-prove and Learning-avoid goal orientation---- Knowledge Acquisition (Hypotheses 5a-5b)

Hypothesis 2 predicts that PPGO is positively related to knowledge provision and PAGO is negatively related to knowledge provision. As shown in Model 3 in Table 3, this hypothesis was supported for both PPGO (β = .26, $p \leq .01$) and PAGO (β = -.33, $p \leq .01$). Hypothesis 3 predicts that both PPGO and PAGO of employees would be negatively related employees' knowledge acquisition behaviours. Model 6 of Table 3 shows that PPGO of employees has negative effects on knowledge acquisition (β = -.11, $p \leq .01$). PAGO of employees also has negative effects on knowledge acquisition (β = -.18, $p \leq .01$). Hypothesis 3 was supported. Hypothesis 4 predicts the effects of LPGO and LAGO of employees on knowledge provision behaviours. Model 3 of Table 3 shows that LPGO of employees has positive effects on knowledge acquisition (β = .43, $p \leq .01$). In contrast, LAGO of employees has negative effects on knowledge acquisition (β = -.18, $p \leq .01$). Hypothesis 4 was supported. I predict in Hypothesis 5

the effects of LPGO and LAGO of employees on their knowledge acquisition behaviours. Model 6 of Table 3 shows that LPGO of employees has positive effects on knowledge acquisition (β = .55, $p \leq .01$). Similarly, LAGO of employees has significant positive effects on knowledge acquisition (β = .29, $p \leq .01$). Hypothesis 5 was supported.

Table 3: Results of Hierarchical Regression Analysis for Knowledge Provision *Behaviour and Knowledge Acquisition Behaviour*

	Knowledge Provision Behaviour			Knowledge Acquisition Behaviour		
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
age	-.21**	-.13*	-.08	-.23**	-.17**	-.15**
education	.04	.05	-.03	-.06	-.04	-.02
org. ten	.02	.07	.07	.11	.15**	.10*
rank	.27**	.17**	.11*	.29**	.21**	.09*
centrality		.23**	.09*		.01	.02
Trust		.11*	.06		.22**	.09*
Altruism		.32**	.10*		.27**	.07
PPGO			.26**			-.11**
PAGO			-.33**			-.18**
LPGO			.43**			.55**
LAGO			-.18**			.29**
R^2	.06	.27	.63	.08	.22	.62
ΔR^2	.06**	.21**	.36**	.08**	.14**	.40**

Note: *N=322.* * $p < .05$; ** $< .01$.

5.2.3 Knowledge Sharing Behaviours and Employee Performance Ratings

5.2.3.1 Knowledge sharing behavior----------Employees Performance (Hypotheses 6a-6b)

5.2.3.2 Knowledge provision mediate the positive relationship between Performance-prove Goal Orientation (PPGO) and performance rating (Hypotheses 7a)

5.2.3.3 Knowledge provision mediate the negative relationship between Performance-avoid Goal Orientation (PAGO) and performance rating (Hypotheses 7b)

5.2.3.4 Knowledge acquisition mediate the negative relationship between Performance-prove Goal Orientation (PPGO) and performance rating (Hypotheses 7c)

5.2.3.5 Knowledge acquisition mediate the negative relationship between Performance-avoid Goal Orientation (PAGO) and performance rating (Hypotheses 7d)

5.2.3.6 Knowledge provision mediate the positive relationship between Learning-prove Goal Orientation (LPGO) and performance rating (Hypotheses 7e)

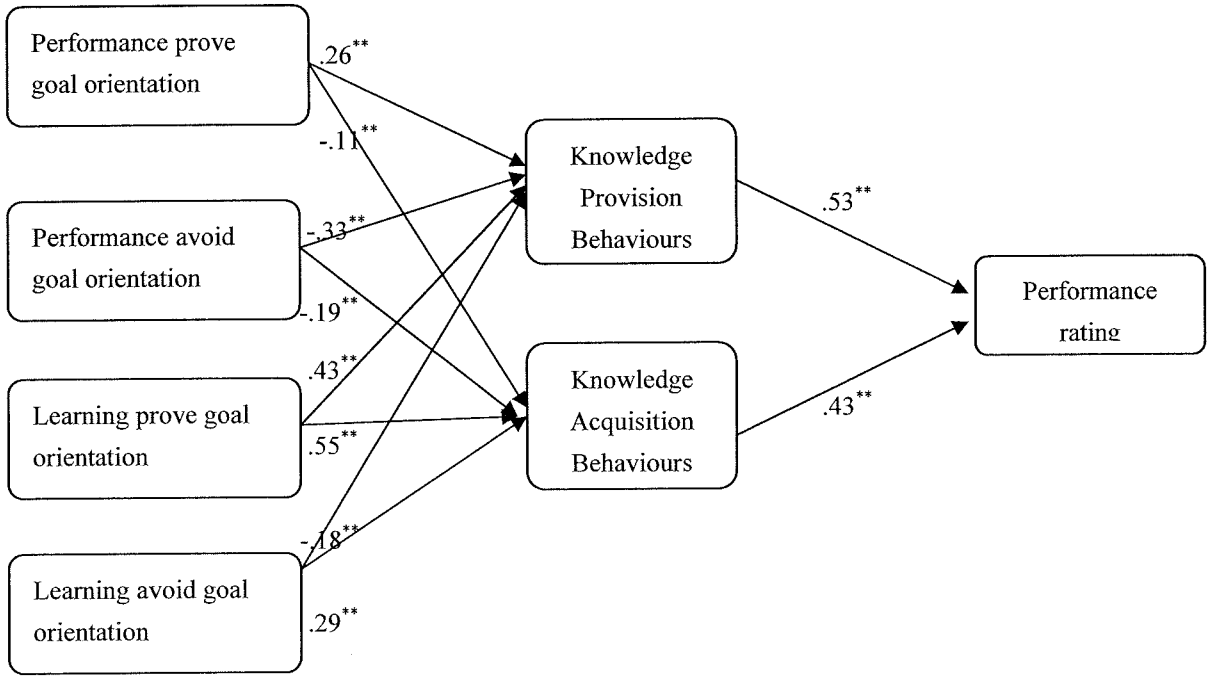
5.2.3.7 Knowledge provision mediate the negative relationship between Learning-prove Goal Orientation (LAGO) and performance rating (Hypotheses 7f)

5.2.3.8 Knowledge acquisition mediate the positive relationship between Learning-prove Goal Orientation (LPGO) and performance rating (Hypotheses 7g)

5.2.3.9 Knowledge acquisition mediate the positive relationship between Learning-avoid Goal Orientation (LAGO) and performance rating (Hypotheses 7h)

Since Hypothesis 6 and 7 involves indirect effects of employees' goal orientations on their knowing sharing behaviours, I tested these hypotheses with path analysis using Mplus 7 (Muthén & Muthén, 2012). In this path analysis, I controlled for the same demographic variables as well as network centrality, trust and altruism. Figure 3 shows the estimates from the path analysis. Hypothesis 6 predicts the relationships between employees' knowledge provision and acquisition behaviours and their performance ratings. As shown in Figure 3, after taking into account all the control variables and goal orientations, knowledge provision has a significantly positive relationship with performance ratings ($\beta = .53, p \leq .01$); knowledge acquisition is also found to be positively related to performance ratings ($\beta = .43, p \leq .01$). Hypothesis 6 was supported.

Figure 3. *Path Coefficients of the Proposed Model*[a,b]



Note:

** $p < .01$.

[a] For the reason of brevity, I did not present the controlled effects of the demographics, network centrality, trust and altruism on knowledge sharing behaviours and performance ratings here.

[b] all path coefficients are standardized coefficients.

5.2.4 Mediating effect of knowledge sharing behaviour between goal orientation and performance ratings

Hypothesis 7 involves a total of eight sub-hypotheses of the indirect effects of the four goal orientations on performance ratings through knowledge provision and knowledge acquisition of the employees. Table 4 shows the effect sizes of these eight indirect effect estimates, their bootstrap confidence intervals and their corresponding hypotheses. For example, the first row in Table 4 shows the indirect link PPGO→ knowledge provision→ performance (H_{7a}). The last row of Table 4 shows the indirect link of LAGO→ knowledge acquisition → performance (H_{7h}). As shown in Table 4, the eight indirect effects, in the order as presented in Hypotheses 7, were .14, -.17, -.05, -.08, .23, -.10, .24 and .12 respectively. Since the sampling distributions of the indirect effects do not follow any known distribution form, we used the bootstrapping method recommended by Edwards and Lambert (2007) to estimate confidence intervals for the hypothesized indirect effects. These bias-corrected confidence intervals were estimated based on 2,000 bootstrap replications of re-sampling using Mplus 7. Results in Table 4 indicated that all eight indirect effects were significant at the .05 level. Hypothesis 7 was supported.

Table 4. *Summary of Estimates and Confidence Intervals for Indirect Effects*

Hypothesis	Indirect effect	Estimates	Confidence Interval
7a	PPGO→KPB→Perf.	.14	[.09, .18]
7b	PAGO→KPB→Perf.	-.17	[-.23, -.12]
7c	PPGO→KAB→Perf.	-.05	[-.09, -.01]
7d	PAGO→KAB→Perf.	-.08	[-.11, -.04]
7e	LPGO→KPB→Perf.	.23	[.16, .30]
7f	LAGO→KPB→Perf.	-.10	[-.14, -.05]
7g	LPGO→KAB→Perf.	.24	[.17, .30]
7h	LAGO→KAB→Perf.	.12	[.08, .17]

Note:KAB = knowledge acquisition behavior; b. KPB = knowledge provision behavior.
Perf. = performance rating.

5.3 Validity of analysis

An important consideration in this empirical study is the research design. The main purpose of the research design is to maximize the validity of the study, specifically internal, external, construct, and statistical validity (Cook & Campbell, 1979). The presence of these four types of validity enhances the conclusions drawn from the results of the study. The four sections that constitute this chapter, research design, measures, common method variance, and statistical analyses, illustrate how validity is being maximized for this study.

5.3.1 Research design validity

Sample:

For this study, I sampled knowledge workers from two separate organizations under one financial institution group: a unit of a large size state-owned bank based in Nanjing, China. All employees in each organization were invited to participate in the study since both organizations recognize knowledge sharing behavior between their employees as critical to the performance and success of the organization.

Due to the time-intensive and cost-consuming nature of the study, the selection of the organization was partially based on convenience. However, utilizing two companies from different provinces helps establish external validity and increases the generalizability of the findings. Any individual differences between participants and non-participants, as well as company differences, will be statistically controlled for

allowing for inferences to be drawn between the sample and the general population.

Survey and Data Collection:

The large-scale study was administered in June 2012. To increase the response rate, the four-contact procedure for survey administration suggested by Dillman (2000) was used. However, because the data were collected via multiple surveys and from multiple sources, Dillman's (2000) four-step procedure was modified as follows:

1. An email was sent from a high-level executive in each of the firms indicating the purpose and importance of the study and asking for participation. The confidentiality of all responses was guaranteed.
2. Three business days later a second email was sent to the designated population of knowledge workers which included the URL to the initial survey.
3. Seven business days after the first survey was distributed, a second email was sent thanking respondents for their participation and reminding those who had not responded to complete and submit the initial survey by a specified date.
4. Five business days later, a final email was sent to those that had not completed and submitted their second survey and to supervisors reminding them to submit their survey.

Employees who completed both the first survey were entered into a luck drawing for a gift worth about HKD 200, Human resource officers from two firms also received an

souvenir and executive summary describing their organization's results and comparing their results to the other organization that participated in the study. The executive summary is expected to provide each organization with a better understanding of how their internal environment supports knowledge sharing by detailing the effect of their human resource management practices and organizational environment on the knowledge goals their employees adopt and their knowledge sharing behavior.

Control variables:

Based on a review of the literature on knowledge management, social network theory, dispositional theory, social exchange theory, and goal orientation theory, I identified variables likely to affect knowledge sharing behavior. Including centrality, trust, atrium variables as control variables in the study and statistically controlling for their effects increases both the study's statistical validity and the study's internal validity. Internal validity is the extent to which causal inferences can be drawn and represents the degree to which the study is free from measurement errors due to extraneous variables (Cook & Campbell, 1979). The variables included in the study are described in detail at Chapter four.

Common method biases:

Survey data were collected via two-phase surveys and using multiple sources. Respondents were ensured confidentiality and all surveys were accessible only by me. The first-phase survey represents data from the knowledge sources and providers perspective and was distributed to all employees from these two companies. It included variables on the centrality, ties strength, trust, atrium, and knowledge sharing behavior from peers rating. More specifically, with the help of the HR manager and department managers, we prepared a grouping list indicating employees' name, working ID, survey ID and colleagues who are paired up with them for peer ratings. Each respondent was asked to rate the centrality, trust and knowledge sharing of three peers designed by us. These peers were identified as close work colleagues of the focal respondent as suggested by their department managers. Employees' goal orientations and altruistic inclination were obtained by self-rating of each participant. However, there was a risk that one respondent rate the employee while that employees don't completed the rating for the dyadic matching As a result, it was possible to result in insufficient knowledge sharing data, outweighed the risk of bias in the survey item responses. The second-phase survey, customized for each employee that responded to the first survey, included official performance evaluation items corresponding to each employee who finished the self-repot rating part. Performance ratings of the employees were obtained from company records six months after the survey was conducted.

Common method variance was minimized by using validated measures where possible and following the two procedures. First, data was collected from multiple sources. In this study, every specific employee was rated by three other colleagues who have close collaboration with the focal employee before. After getting those peers rating, I aggregated all the ratings and then arrive the average rating for each measurement. Second, separation of measurement was included in the research design by collecting the measures from employees and their corresponding performance rating via two surveys administered at different points in time and conducting a pilot study and a large-scale study. A research design that separated measurement in time mitigates the potential problems associated with consistency motif, social desirability, or stimulus cues, all identified as potential causes of common method variance (Podsakoff & Organ, 1986).

5.3.2 Research result validation

To verify the findings from Stage 1 (Literature review) and Stage 2 (Analysis of housing settlement of migrant workers) mentioned in research design figure from Chapter one, both post-hoc interviews and additional survey were employed. Post-hoc interviews were conducted with supervisors whose subordinates have completed the questionnaire and additional survey (two–wave design) conducted with some voluntary employees who have participated in the large-scale survey. To verify the information obtained from the employees, the interview questions with the supervisor were divided into two parts; first, whether the peers-rating score for the focal employee is corresponding to the perception from supervisor's view. Second, whether the evaluation scores are corresponding to the perception from supervisor's view. Those interviews validate the perceptions and opinions of the respondent's behavior from one more perspective. There are three objectives to achieve through the interview with supervisors : 1) to compare the findings from the questionnaire survey with supervisors perspective , 2) to discover and understand the more complete rationale behind knowledge sharing behavior , and 3) to enrich and broaden the managerial implication for this study.

Compared with the interviews conducted with supervisors, the additional survey for voluntary employees is more focus on the reliability of the measures. With the additional survey, I ask the respondents four main components, including perceived

supervisor knowledge sharing support, self rating of knowledge sharing behavior, self regulatory focus, and perceived knowledge characteristics. This supplementary survey is composed of predetermined questions exclusively, and the order of the questions is standardized. Finally, I successfully collected 120 copies of valid questionnaires to add the reliability of the first survey. There are three reasons for employing this two-wave method. First, the purpose of this stage is to verify the findings of Stages 1 and 2. Detailed information about the knowledge–intensive attributes attached in the focal organization, organizational knowledge sharing environment, and employee dispositional perception for knowledge sharing behavior was obtained through this additional questionnaire survey. Thus, this study may conclude a more precise statistical result and implication from the knowledge intensive domain. Second, I have collected every employee's knowledge sharing behavior from three other colleagues rating, however, the amount of information obtained from that specific employee's own rating is more sufficient and credible when comparing self rating with peers rating. This method benefits the comparison of the responses in that more valid information can be obtained to verify the previous survey findings. Finally, observing the same construct from different viewpoints in parallel (self rating Vs peers ratting) promote and develop the complementary strengths.

Causality is always the most important and controversial issue when conducting management related research, especially for organizational behavior (OB) research.

It's much easier for research designers to draw the several links together, map out the research modeling, and arrive at the so called causality through statistical package tools. However, more and more scientific researchers begin to advocate more accurate, rigid and scientific research methodology to elaborate the 'genuine' causality. And that's why a growing of famous journals start to reject papers only investigate causality through cross-sectional data analysis. When conducting my research topic, I took great pains to adopt advance methodology to arrive at a relatively scientific causality. My solution could be manifested into two main parts. On the theoretical part, goal orientations, knowledge sharing behavior, and performance rating these three constructs are not isolate with each other or mutually exclusive, in contrast, they have overarching and causal relationships consequently. More specifically, goal orientation determines a choice made by employees when approaching success or avoiding failure, and then knowledge sharing behavior plays a vital role as tactics to express and process these motivations, in turn, knowledge provision and knowledge acquisition behavior increase or decrease employee performance rating to different extent. This casual link illustrates nested theatrical foundation more smoothly and accurately. On the methods part, rather than using cross-sectional data, I adopted two-wave research design. I measured goal orientation scales and knowledge sharing behaviors scales first, and then got the performance rating six months later. This two –wave design survey could examine the causality much more scientifically since the 'cause' and 'effect' are contiguous in time. Nowadays, time series data analysis is increasingly became a strategic means of robust explanation for causality. For the

research forward, it's might be a promising way to measure the antecedents, behavior, and consequence in different time zone. Although it definitely imposes the burden on research data collection, it paves a good way for research excellence.

5.4 Summary of the Chapter

The logical and sequential arrangement of the use of different research methods at different stages is presented in Figures. This chapter introduces the study area and explains the implementation of the research methods. The reasons for choosing the methods for each research stage are explained

Chapter 6 Conclusion and Discussion

6.1 Contribution for This Study

Draw upon three distinct motivational theories, each of which is suited for understanding a specific element of the motivational process for knowledge providers and recipients. To keep those focal points and limitation mentioned in mind, the present study contributes to the existing research on knowledge sharing by addressing the deficiencies noted at the chapter two and chapter three.

The first theoretical contribution comes in the form of demonstrating, examining, and comparing three dominant perspectives that account for knowledge sharing behaviour and performance rating empirically. By identifying limitations inherent in each perspective and drawing upon the emerging research focus highlighted, I address the existing research issues and assess the new perspective's unique explanatory power relative to previous explanations by simultaneously considering both individual trait and context factors as antecedents of the knowledge sharing engagement level and by testing whether knowledge sharing behaviour is an underlying mechanism through which these antecedents affect performance rating.

Our second contribution involves the opening up a self-regulatory perspective that connect the trait-state linkage that individuals undertake to engage in knowledge sharing and then enhance their performance. Rather than social network or social exchange theory which generally emphasizes between-person differences (Organ et

al., 2006) and without giving enough consideration to the underlying cognitive, affective, or unconscious processes that may drive knowledge sharing behaviour, self-regulation theory emphasizes within-person variation (Carver & Scheier, 1998). Accordingly, I use this theoretical lens to understand the within-person processes that occur over time in determining why employees will engage in higher or lower levels of knowledge sharing behaviour and to explain how employee performance rating vary as a function of knowledge sharing engagement. More importantly, goal orientations play as malleable constructs that individuals can use strategically to better self-regulate (Bolino, 2012). In contrast, purely dispositional approaches or theories typically do not consider underlying processes or dynamics that may be essential for understanding how people respond to different situations and for developing effective interventions (Aspinwall & Staudinger, 2003).This perspective, uniquely, integrates significant aspects of self-regulation and goal orientation theory. These two nested theories form the foundation of our framework, and capture a common assumption that is notable in knowledge intensive work setting where employees require adaption to the working environment. Using this lens, the role of knowledge provision and acquisition as two self-regulation tactics lies in that knowledge sharing process exert their influence throughout the entire achievement sequence by pushing work forward and stimulating productive solutions for work. To carry this logic further, our current study will investigate that knowledge sharing behaviour plays as an explanatory process involved in mediating the effects of distal constructs on employee performance, which was rarely tested before. More specifically, the added value is

that it explicates to what extent a high level of knowledge provision or acquisition entails employees to be more effective in terms of performance enhancement. This perspective develops new insights into a motivational mechanism that affects how trait-based dispositional motivations guide their self-regulatory process through knowledge acquisition and provision, which, in turn, impact performance rating in the complex dynamic environment ultimately.

The third theoretical contribution of this study is that I further the extant knowledge base by examining how the adoption of goal orientation establishes a framework for goal striving process via self-regulation mechanism in achievement situations. Scholars have discussed the importance of explicating the intermediate motivational mechanism that mediates the relationship of individual difference with job performance (Kanfer, 1990). Given this focus, Payne et al. (2007) noted that the function of self-regulation in mediating goal orientation and performance is not well understood and the researchers called for research on the topic. Employing a self-regulation perspective allows us to investigate what cognitive-dynamic motivation proceeds from knowledge sharing behaviour toward achievement through the goal striving process. Previous research has found multiple mediators between the goal-orientation and performance relationship (e.g., self-efficacy, regulatory focus, goal setting; Chen et al., 2000; Johnson, 2011, Phillips & Gully, 1997). Particularly, VandeWalle and colleagues (1999) found that goal setting, effort, and planning were important self-regulation tactics between goal orientation and sales performance.

More recently, Stobbeleir and his colleagues (2011) regard that feedback-seeking behaviour as a possible additional mechanism explaining the effects of individual differences and context factors on creative performance. As it stands now, no study we are aware of has examined the knowledge sharing behaviours, which play the role as self-regulation tactics and elaborate linkages between goal orientation and performance. Flowing from these beliefs, knowledge sharing behaviours steer an employee towards meeting an established goal and capturing the behavioural manifestations of self-regulatory motives, as opposed to the motives themselves (i.e., how, as opposed to why, people engage in certain goal striving behaviours). Therefore, the core contribution of this study is the role of knowledge sharing behaviour as a mediating process between goal orientation and performance.

The research also provides for two more specific contributions to the knowledge sharing literature that focus on enhancing employee performance outcomes.

First, while knowledge provision and knowledge acquisition dimensions are two facets of knowledge sharing and result in different outcome in work place, the extant empirical research focuses exclusively on knowledge provision dimension and has rarely considered both providers and seekers simultaneously as they engage in the process of knowledge exchange and utilization (Quigley et al., 2007). Echoing Rerinholt et al., (2011) recently has observed, knowledge sharing is not a unidimensional continuum. We fill this void by building a new theoretical framework

and test hypotheses pertaining to both the acquisition and provision of knowledge for a complete understanding for the whole mechanism.

Second, this study rely on the nine sub-dimensional official performance appraisal recording from our sampling, including domain-specific goal achievement, abilities and attitude manifested in their in-role work. This study investigates the effects of knowledge sharing behaviour motivated by four different goal orientation patterns on multidimensional in-role performance outcomes that is substantially a more difficult, complex, and dynamic knowledge-intensive work setting.

The results of this study showed that four patterns of employee goal orientations significantly associated with employee knowledge sharing behaviour engagement, more importantly, this linkage can expand to enhancement of performance rating.
The implications for practitioners and researchers and the limitations of this study are discussed below.

6.2 Theoretical Implication

First of all, goal orientation theory, which has a long tradition in research and has been applied to explain many aspects of work-related behaviour, has been extended to explain knowledge sharing behaviour, which is one of the central processes in creating competitive advantages of knowledge-intensive companies. Whereas previous work on knowledge sharing has mainly looked at organizational and

environmental factors as antecedents, this study extends previous studies aiming at understanding the individual influencers of knowledge sharing. In this study, a theoretical model explaining how goal orientations impact knowledge sharing via knowledge sharing behaviour was developed. Consistent with goal theory (Dweck, 1986) and as our hypotheses predicted, the four patterns of goal orientations, performance prove-avoid orientation and learning prove-avoid orientation, have a significant negative or positive impact on behaviour.

Furthermore, scholars have discussed the importance of explaining the intermediate motivational mechanisms that mediate the relationship of an individual difference with performance rating. However, there are very limited understanding of the mechanisms that mediate the relationship of goal orientation and performance.

In this study, I investigated how employees self-regulate in ways through knowledge acquisition and provision that enhance their job performance. Ground on the premise that self regulation tactics are of little value if people cannot motivate themselves to use them and self regulation tactics are also of no value unless they increase effectiveness, I hypothesized that self-regulation is seen to mediate between an goal orientations and performance.

Researchers (Ames & Archer, 1988) have suggested that a learning goal orientation predisposes individuals to use self-regulation tactics in pursuit of their mastery focus.

on the other hand, performance goal orientation should be less predisposed to use self regulation tactics in pursuit of their image focus. Consistent with Kanfer (1990), I define self regulation as the cognitive process that determines the transformation of the motivational force into behaviour and performance. In this study, I further the extant knowledge base by examining how the adoption of a goal orientation pattern creates a framework for self regulation via knowledge sharing behaviour, which are behaviour manifestation of the self –regulatory goal-staring process that mediate the relationship between goal orientation and performance rating.

Overall, the findings of this study contribute to a better and through understanding of knowledge sharing behaviour in the knowledge intensive workplace and, more specifically to the impact of goal orientations on the individual's knowledge sharing behaviour with colleagues. It also illuminates the relationship between personality traits and goal orientations. Thus, our results contribute to literature on personality and educational psychology as well as organizational behaviour and knowledge sharing. It has been shown that stable individual differences (personality traits) are related to important orientations of individuals and therefore their behaviour in the workplace.

6.3 Managerial Implications

This study proposes the following implications for individuals initiating knowledge sharing practices or desiring to encourage knowledge sharing within their organizations. There is several significant practical implications result from this study orientated around employee selection, recruitment, and training section on work place.

To begin, the findings suggest that motivating knowledge sharing behaviour can be achieved through employees recruiting standards that emphasize learning-oriented aptitude. Such motivational traits might be reinforced through emphasizing knowledge sharing behaviour in performance appraisals, recognizing those who actively go out of their way to share their know-how with peers, and praising those who continuously seek work-related knowledge from peers. A highly self-regulatory staff can be established by recruiting and selecting employees who are active learners, and who have high cognitive aptitude and self presentational.

Another practical implication is that encouraging potential knowledge providers and recipients to contribute or seek knowledge may not directly translate into a willingness to apply knowledge into performance enhancement use. As two facets of the self regulation tactics, knowledge provision and acquisition play as two-looped learning modes for enhancing performance rating. This finding suggest that organizations can help create conditions for superior performance by setting high

performance standards and ensuring that those who are given high goals have access to valuable knowledge.

The third practical implication that can be derived from organizations is to consider the fact that highlighting the importance of taking one's goal orientation into account when selecting employees; for specific tasks where knowledge has to be shared to build competitive advantages learning-oriented people should be hired. Based on company routine, emphasizing organizational rewards, such as salary incentives, bonuses, promotion incentives, or job security, as a primary knowledge sharing mechanism is not cost-effective, because extrinsic rewards secure only temporary compliance (Alfie, 1993). This means that organizational rewards may provide temporary incentives for knowledge sharing, but is not fundamental force forming employee knowledge sharing behaviours. Effects to foster the application of contributing knowledge sharing behaviour into employee performance appraisal are necessary for creating and maintaining knowledge sharing culture. To reward knowledge management through a formal compensation system, organizations needed to create a flexible structure that allowed it to make payments to employees who demonstrated effective acquisition, application, and sharing of knowledge.

Finally, it is also important for managerial level pay attention to the self-regulation framework is the need to address the impression management concern of the foal employees. For example, employees may be resultant to seek work-related knowledge

for fear of exposing weakness. Organizing can address this concern by encoring and reinforcing knowledge sharing behaviour through the creation of norms favoring such behaviour s and the promotion of role models by supervisors. The existence of such a norm leads to greater knowledge sharing behaviour in a group setting. Top managers can also model the desired behaviour and reward such kind of employees that set such an example.

6.4 Limitations and Directions for Future Research

This study does have a number of limitations that future research might address. To begin , the sample was drawn from 322 employees in two banks affiliated in one organization Hence, the research model should be tested further using samples from different organizations, since cultural differences among organizations influence employee perceptions regarding knowledge sharing, behaviour and further testing thus would provide a more robust test of the hypotheses. Second, based on a sample of 322 respondents, several significant results have been obtained. However, a larger sample that brings more statistical power would have allowed more sophisticated statistical analysis. The study findings should thus be verified with a larger sample to increase generalizability. Third, our research has focus on one level of analysis at a time, single-level approaches potentially overlook important multilevel relationships, such as the influence that organizational factors (e.g., reward systems) may have on the individual-level motivation of knowledge providers and seekers or the influence that emergent properties at the group level (e.g., leadership style) may have on the

individual level of knowledge sharing behaviour. Forth, this research focused exclusively on dyadic knowledge sharing behaviour in individual level. In this way, we were able to directly model motivational influences on knowledge providers and recipients in the interest of building middle-range motivation theory. Future research might productively extend our research by focusing on the motivational mechanisms influencing knowledge sharing within a larger group or team context in which decisions are often based on integrating different sources of knowledge.

Constrained by operations limitation, I was able to only obtain a single, overall measure of each person's performance. This aggregate rating restricts our ability to develop a nuanced view of relationships between individual knowledge sharing behaviour and dimensions of performance. It also potentially introduces measurement bias. However, in terms of construct validity, I feel this limitation is mitigated by the multiple observations of performance that informed each rating. The rating was not solely a product of one person's feeling toward another but derived from peer evaluations, supervisor project ratings, and objective metrics such as attendance. I also note that this is a measure of job performance within an organization as opposed to career related outcomes.

The results from this study add to the growing literature on knowledge sharing and utilization by providing insights into the motivational mechanisms associated with both the knowledge providers and recipients. In particular, by demonstrating and

comparing several existing theories of knowledge sharing behaviour and considering their inherent limitations, the findings constitute a contribution toward the development of a middle-range motivation-based theory that explains knowledge sharing and corresponding performance rating. I hope that future research will continue to utilize an integrative multilevel approach in seeking to develop a more comprehensive understanding of the motivational complexities underlying knowledge sharing, utilization, and, ultimately, performance.

6.5 Summary of the chapter

This study adopted goal orientation theory as theoretical basis to explain how trait-like determinant affect the knowledge sharing behaviour. The implication arrived from this research indicate that, rather than just encouraging or mandating knowledge sharing behaviour, fostering the motivation to seek and provide knowledge must precede. The pursue of this research is to develop an understanding of the factors that support or constrain the individual's knowledge sharing behaviour in the organization and how this behaviour eventually influence employee performance rating.

Chapter 7 Appendix

Appendix one: Measurement scales

Measurement items (Following the questionnaire order)

One, Social network perspective

Tie Strength

1 How close was your working relationship with this person?

2 How often did you communicate with this person?

(1=daily; 2=twice a week; 3=once a week; 4=twice a month; 5=once a month; 6=once every 2nd month; 7=once every 3 months or less (or never))

3 To what extent did you typically interact with each person?

Network centrality

1 This employee has high degree of interaction with other colleagues.

2 This employee plays a key role in connecting the collaboration among colleagues.

3 This employee can get familiar with other colleagues quickly.

Two, Social exchange perspective

Trust

Benevolence-based Trust

1 I assumed that he or she would always look out for my interests.

2 I assumed that he or she would go out of his or her way to make sure I was not damaged or harmed.

3 I felt like he or she cared what happened to me.

Competence-based Trust

1 I believed that this person approached his or her job with professionalism and dedication.

2 Given his or her track record, I saw no reason to doubt this persons competence and preparation.

Three, Knowledge Sharing Behaviour

Knowledge providing

1 This employee shares business proposals and reports with each other.

2 This employee shares business manuals, models, and methodologies with each other.

3 This employee shares each other's success and failure stories.

4 This employee shares business knowledge gained from news, magazines, and journals.

5 This employee shares know-how from work experiences with each other.

6 This employee shares each other's know-where and know-whom.

7 This employee shares expertise obtained from education and training.

Knowledge seeking

1 When he needs certain knowledge, he asks his colleagues about it.
2 He likes to be informed of what his colleagues know.
3 When a colleague is good at something, he asks them to teach him how to do it.

Four, Goal orientation

Performance-approach goal orientation

1. I achieve at higher levels than others
2. I perform better than others
3. I am more competent compared to others
4. I receive better performance appraisals than others
5. I am the best

Performance-avoidance goal orientation

6. I make no bad impression on others
7. I do not lose my face in front of others
8. Others do not think I am doing badly at work
9. I do not look incompetent towards others
10. Others do not think I achieve at lower levels than they do

Learning-approach goal orientation

11. I can develop myself
12. I perform tasks from which I learn a lot
13. I can establish competence
14. I feel I am improving
15. I can learn as much as possible

Learning-avoidance goal orientation

16. I perform tasks with little risk of failure
17. I perform tasks I entirely control
18. I have to do a task I am certainly able to manage
19. I have to do tasks that are easy to perform
20. I make no mistakes

Five, Altruism

1, This employee takes the initiative to orient new employees to the department even though it is *not* part of his/her job description.
2,This employee helps others when their work load increases (assist others until they get over the hurdles) even when he/she is not required to do so.
3,This employee helps others with their work when they have been absent even when he/she is *not* required to do so.
4, This employee willingly attends functions *not* required by management, but which help its overall image.
5, This employee volunteers to do things *not* formally required by the job.
6, This employee assists me with my duties.

Six, Regulatory Focus

Work Regulatory Focus Scale

1. I concentrate on completing my work tasks correctly to increase my job security. .
At work I focus my attention on completing my assigned responsibilities
3. Fulfilling my work duties is very important to me.
4. At work, I strive to live up to the responsibilities and duties given to me by others.
5. At work, I am often focused on accomplishing tasks that will support my need for security.
6. I do everything I can to avoid loss at work.
7. Job security is an important factor for me in any job search.
8. I focus my attention on avoiding failure at work.
9. I am very careful to avoid exposing myself to potential losses at work.
10. I take chances at work to maximize my goals for advancement.
11. I tend to take risks at work in order to achieve success.
12. If I had an opportunity to participate on a high-risk, high-reward project I would definitely take it.
13. If my job did not allow for advancement, I would likely find a new one.
14. A chance to grow is an important factor for me when looking for a job.
15. I focus on accomplishing job tasks that will further my advancement.
16. I spend a great deal of time envisioning how to fulfill my aspirations.
17. My work priorities are impacted by a clear picture of what I aspire to be.
18. At work, I am motivated by my hopes and aspirations.

Seven, Norm of reciprocity (NR)

1. I know that this member will help me, so it's obligator and fair to help other.
2. When I share knowledge with this member, I believe that he would help me if I need it.

3 . When I share knowledge with this member, I believe that my queries for knowledge will be answered in the future.

Eight, The Attitude of Management

1. My manager always behaves as a good example in sharing his knowledge to others.
2. My manager supports me in sharing knowledge with colleagues in other departments.
3. My manager allows me to share my knowledge with my colleagues though it may influence the present job process.
4. My manager tells us how to share my personal knowledge within the organization.
5. My manager often encourages me to share my knowledge by means of interpersonal chats or group meetings.
6. My manager tells us where to find knowledge needed at work.
7. My manager encourages us to provide useful information and knowledge to the company.

Nine, Knowledge characteristics

Knowledge tacitness
1 A useful manual or document describing my area of expertise could be easily written.
2 Extensive documentation describing critical parts of my area of expertise exists in our company.
3 Standardized procedures for applying my expertise to address applied problems could be easily developed.
4 Extensive documentation describing how to apply my expertise to address applied problems exists in our company
5 Extensive documentation describing how to apply my expertise to address applied problems exists in our industry

Knowledge specificity
1 The knowledge required for the work and tasks is confidential.
2 The knowledge required for the work and tasks is created in house.
3 The knowledge required for the work and tasks is tailored to meet the specific work.

Knowledge complexity
1. The knowledge used in your department requires prior learning in other technologies and related knowledge
2. Description of the knowledge used in your department requires a large amount of information
3. The knowledge used in your department is technologically sophisticated and difficult to implement
4. The knowledge used in your department is complex (vs. simple)

Task interdependence
1 I frequency must coordinate my efforts with this team members.
2 Goal attainments for this team member helps goal attainment for me.
3 For me to perform well, we must communicate well.
4 To achieve high performance, it is important to rely on each other.
5 Jobs performed by us are related to one another.
6 Success for me implies success for this team member.

Ten, Negative Affectivity

1 Distressed
2Upset
3 Guilty
4 Scared
5Hostile
6 Irritable
7 Ashamed
8 Nervous
9 Jittery
10 Afraid

Appendix two : Questionnaire

Phase 1

KNOWLEDGE SHARING BEHAVIOUR SURVEY

Dear employees,

The aim of this survey is to investigate the employees' motivation and organizational contexts underlying employees' knowledge sharing behaviour.

It is through your participation that we will be able to learn more about how organizations to manage and promote knowledge sharing behaviour and as such to enhance employee performance.

There are TWO sections in this survey and should take approximately 10-20 minutes to complete. All of the items in the questionnaire followed 5-point scales, please Indicate the extent to which you agree with the following statements. (SD = strongly disagree, N = neither agree nor disagree, SA = strongly agree)

This survey will be conducted during In accordance with privacy ordinance, data collected through questionnaires will be based on anonymous principle and kept in strict confidence. No one will be identified by the reader and the reference number is coded for matching purpose only.

Thank you very much for participating in this survey!

Alice, Cheng Lan

Section one (Peers rating)

In this section, you will be paired with three other colleagues listed the name below, please rate the following questions based on your collaboration with them.

Colleague 1_____, Colleague 2_____, Colleague 3_____

Please indicate the extent to which you agree with each of the following statements. (1 = strongly disagree, 4 = neither agree nor disagree, 7= strongly agree).

	Colleague 1	Colleague 2	Colleague 3
How close was your working relationship with this person?			
How often did you communicate with this person?			
To what extent did you typically interact with each person?			
This employee has high degree of interaction with other colleagues.			
This employee plays a key role in connecting the collaboration among colleagues.			
This employee can get familiar with other colleagues quickly.			
I assumed that he or she would always look out for my interests.			
I assumed that he or she would go out of his or her way to make sure I was not damaged or harmed.			
I felt like he or she cared what happened to me.			
I believed that this person approached his or her job with professionalism and dedication.			
Given his or her track record, I saw no reason to doubt this person competence and preparation.			
When he needs certain knowledge, he asks his colleagues about it.			
He likes to be informed of what his colleagues know.			

He asks his colleagues about their abilities when he need to learn something.			
This employee shares business proposals and reports with each other.			
This employee shares business manuals, models, and methodologies with each other.			
This employee shares with other's his success and failure stories.			
This employee shares business knowledge gained from news, magazines, and journals.			
This employee shares know-how from work experiences with others			
This employee shares with others know-where and know-whom.			
This employee shares expertise obtained from education and training.			
This employee takes the initiative to orient new employees to the department even though it is *not* part of his/her job description			
This employee helps others when their work load increases (assist others until they get over the hurdles) even when he/she is not required to do so			
This employee helps others with their work when they have been absent even when he/she is *not* required to do so.			
This employee willingly attends functions *not* required by management, but which help its overall image.			
This employee volunteers to do things *not* formally required by the job			

Section two (Self reports)

Please indicate the extent to which you agree with each of the following statements. (1 = strongly disagree, 4 = neither agree nor disagree, 7= strongly agree).

	Rating
21. I achieve at higher levels than others	
22. I perform better than others	
23. I am more competent compared to others	
24. I receive better performance appraisals than others	
25. I am the best	
26. I make no bad impression on others	
27. I do not lose my face in front of others	
28. Others do not think I am doing badly at work	
29. I do not look incompetent towards others	
30. Others do not think I achieve at lower levels than they do	
31. I can develop myself	
32. I perform tasks from which I learn a lot	
33. I can establish competence	
34. I feel I am improving	
35. I can learn as much as possible	
36. I perform tasks with little risk of failure	
37. I perform tasks I entirely control	
38. I have to do a task I am certainly able to manage	
39. I have to do tasks that are easy to perform	
40. I make no mistakes	

Section three (additional survey)

Please indicate the extent to which you agree with each of the following statements. (1 = strongly disagree, 4 = neither agree nor disagree, 7= strongly agree).

	Rating
1. I concentrate on completing my work tasks correctly to increase my job security.	
2. At work I focus my attention on completing my assigned responsibilities	
3. Fulfilling my work duties is very important to me.	
4. At work, I strive to live up to the responsibilities and duties given to me by others.	
5. At work, I am often focused on accomplishing tasks that will support my need for security.	
6. I do everything I can to avoid loss at work.	
7. Job security is an important factor for me in any job search.	
8. I focus my attention on avoiding failure at work.	
9. I am very careful to avoid exposing myself to potential losses at work.	
10. I take chances at work to maximize my goals for advancement.	
11. I tend to take risks at work in order to achieve success.	
12. If I had an opportunity to participate on a high-risk, high-reward project I would definitely take it.	
13. If my job did not allow for advancement, I would likely find a new one.	
14. A chance to grow is an important factor for me when looking for a job.	
15. I focus on accomplishing job tasks that will further my advancement.	
16. I spend a great deal of time envisioning how to fulfil my aspirations.	
17. My work priorities are impacted by a clear picture of what I aspire to be.	
	Rating
18. At work, I am motivated by my hopes and aspirations.	
1. I know that this member will help me, so it's obligator and fair to help other.	
2. When I share knowledge with this member, I believe that he would help me if I need it.	

3 . When I share knowledge with this member, I believe that my queries for knowledge will be answered in the future.	
1.My manager always behaves as a good example in sharing his knowledge to others.	
2. My manager supports me in sharing knowledge with colleagues in other departments	
3. My manager allows me to share my knowledge with my colleagues though it may influence the present job process.	
4. My manager tells us how to share my personal knowledge within the organization.	
5. My manager often encourages me to share my knowledge by means of interpersonal chats or group meetings.	
6. My manager tells us where to find knowledge needed at work.	
7. My manager encourages us to provide useful information and knowledge to the company.	
1 A useful manual or document describing my area of expertise could be easily written.	
2 Extensive documentation describing critical parts of my area of expertise exists in our company.	
3 Standardized procedures for applying my expertise to address applied problems could be easily developed.	
4 Extensive documentation describing how to apply my expertise to address applied problems exists in our company	
5 Extensive documentation describing how to apply my expertise to address applied problems exists in our industry	
	Rating
1 The knowledge required for the work and tasks is confidential.	
2 The knowledge required for the work and tasks is created in house.	
3 The knowledge required for the work and tasks is tailored to meet the specific work.	
1. The knowledge used in your department requires prior learning in other technologies and related knowledge	
2. Description of the knowledge used in your department requires a large amount of information	
3. The knowledge used in your department is technologically sophisticated and difficult to implement	
4. The knowledge used in your department is complex (vs. simple)	

1 I frequency must coordinate my efforts with this team members.	
2 Goal attainments for this team member helps goal attainment for me.	
3 For me to perform well, we must communicate well.	
4 To achieve high performance, it is important to rely on each other.	
5 Jobs performed by us are related to one another.	
6 Success for me implies success for this team member.	
To what extent the term list below describe your mood now	**Rating**
1 Distressed	
2Upset	
3 Guilty	
4 Scared	
5Hostile	
6 Irritable	
7 Ashamed	
8 Nervous	
9 Jittery	
10 Afraid	

Appendixes 3: Chinese version

員工問卷

敬启者：

這份研究问卷的目的在于探讨员工性格，组织情境和知识共享的行为。知识在本次研究中特指和工作业务有关的技能，信息及经验. 知识共享特指员工间提供或寻求与工作有关的技能，信息或经验.

这是一项学术性的研究，與公司的管理當局完全无关。當您回答這份問卷後，我們會立刻交由电脑处理并同时把用于随机配对用途的记名方式全部转化为学术编码，進行整体分析，**您在問卷上填寫的任何一個題目，我們都會絕對保密。**請您放心填答。

問卷共分為三個部份，大约需要用 10 至 20 分钟完成。每一部份前面都有說明，請仔細閱讀該項說明後，才開始作答。這並不是考試，**每一個題目都沒有所謂「對或錯」的答案，您只要仔細按照您的實際情形填答即可。**貴公司的許多朋友都在帮忙填写這份問卷，恳请您也能拨冗协助。

非常謝謝您！並敬祝 健康快樂，萬事如意！

程岚

一. 员工互评

请根据由电脑随机抽出的三位派发给你的员工 给予其评分，填在方格内。1 代表非常不同意，2 代表很不同意，3 代表有点不同意，4 代表介乎同意和不同意之间，5 代表有点同意，6 代表很同意，7 代表非常同意。

同事一:；同事二:；同事三:；

	同事一	同事二	同事三
1. 你和这位员工的工作职能关系非常密切。……	☐	☐	☐
2. 除工作沟通外，你平日与这位员工的交流非常频繁。……	☐	☐	☐
3. 除工作交流外，你和这位员工的互动很多。……	☐	☐	☐
4. 这位员工在你所在的小组或部门中非常善于社交。……	☐	☐	☐
5. 这位员工在你所在的小组或部门中经常会起到连接纽带的作用（如促进陌生的同事或部门之沟通）。……	☐	☐	☐
6. 这位员工在你所在的小组或部门中可以很快地和其他同事或部门打成一片。……	☐	☐	☐

	同事一	同事二	同事三
1. 我相信他会我为我着想。……	☐	☐	☐
2. 我相信他会尽力使我不会受到伤害。……	☐	☐	☐
3. 我感觉他会关心发生在我身上的事。……	☐	☐	☐
4. 我相信他对工作是忠诚奉献并且专业的。……	☐	☐	☐
5. 根据他過去的表現，我沒有理由會怀疑他的能力。……	☐	☐	☐

请根据你对以上三位同事的认识给予评价（1-7 代表不同意到同意）：

	同事一	同事二	同事三
1. 当他需要特定知识的时候，他会向同事请教。……	☐	☐	☐
2. 他喜欢同事们把他们学到的知识告诉他。……	☐	☐	☐
3. 当他需要学习知识的时候，他会向同事求教。……	☐	☐	☐
4. 他会分享商业计划书或报告给同事。……	☐	☐	☐
5. 他会分享业务手册/指南，模型和方法给同事。……	☐	☐	☐
6. 他会分享他的成功与失败故事给同事。……	☐	☐	☐
7. 他会把从报纸/杂志/期刊上获得的商业知识分享给同事。……	☐	☐	☐
8. 他会把从工作经验中获得专业知识/技术诀窍分享给同事……	☐	☐	☐
9. 他会告诉同事“从哪里”和“向谁”获得帮助。……	☐	☐	☐
10. 他会把从教育及培训中获得的专业知识和技能分享给同事。……	☐	☐	☐

二. 自我评估

以下问题是关于你对自己的**期望**，请给予评分。1 代表非常不同意，2 代表很不同意，3 代表有点不同意，4 代表介乎同意和不同意之间，5 代表有点同意，6 代表很同意，7 代表非常同意。请在最合适的答案上划线或打圈。

	不同意						同意
1. 我期望比其他人的成就更高。……	1	2	3	4	5	6	
2. 我期望我的工作表现比其他人好。……	1	2	3	4	5	6	7
3. 我期望我比其他人更有能力。……	1	2	3	4	5	6	7
4. 我期望我比其他人获得更多工作绩效上的褒奖。……	1	2	3	4	5	6	7
5. 我期望我是最出色的。……	1	2	3	4	5	6	
6. 我期望我不会给其他人留坏影响。……	1	2	3	4	5	6	7
7. 我期望我不会在其他人面前丢脸。……	1	2	3	4	5	6	7
1. 我期望其他人不会觉得我的工作的执行力差。……	1	2	3	4	5	6	7
9. 我期望在其他人眼中我不会是没能力的。……	1	2	3	4	5	6	7
10. 我期望其他人不觉得我的工作成就比他们差。……	1	2	3	4	5	6	7
11. 我期望我可以不断完善自己。……	1	2	3	4	5	6	7
12. 我期望我在工作中可以学到很多知识。……	1	2	3	4	5	6	7
13. 我期望我可以塑造我的能力。……	1	2	3	4	5	6	7
14. 我期望我感觉我在不断进步。……	1	2	3	4	5	6	7
15. 我期望我可以尽可能多学点知识。……	1	2	3	4	5	6	7
16. 我期望 我在履行任务时有极少的失败风险。……	1	2	3	4	5	6	7
17. 我期望我承担一些在自己掌控范围内的任务。……	1	2	3	4	5	6	7
18. 我期望我期望我完成自己完全可以驾驭的任务。……	1	2	3	4	5	6	7
19. 我期望我被指派的工作是简单易行的。……	1	2	3	4	5	6	7
20. 我期望我不犯任何错误。……	1	2	3	4	5	6	7

1. 即使这并不是我工作的职责所在, 我会主动使新员工适应/熟悉部门情况。……	1	2	3	4	5	6	7
2. 即使我没有被要求这么做，我会在工作伙伴工作量过多时主动提供帮助（协助他克服一些困难）。……	1	2	3	4	5	6	7
3. 即使我没有被要求这么做，当工作伙伴有事不在岗位时，我会主动接手一些他们的工作 。……	1	2	3	4	5	6	7
4. 即使这并不是公司管理层所要求的，我会主动参与有利于宣传公司形象的一些社交活动。……	1	2	3	4	5	6	7
5. 即使这些并不是我的工作职责，我会为公司做一些义务活动。……	1	2	3	4	5	6	7
6. 我会协助工作伙伴完成任务。 ……	1	2	3	4	5	6	7

第三部分（自愿填写）： 以下题项是对自身行为的描述，请根据您的意见进行评分。1 代表非常不同意，2 代表很不同意，3 代表有点不同意，4 代表介乎同意和不同意之间，5 代表有点同意，6 代表很同意，7 代表非常同意。请在最合适的答案上打圈。

	不同意						同意
1 我专注于准确完成我的工作任务以增加我的工作安全感。…	1	2	3	4	5	6	7
2. 在工作中，我专注于完成我的职责所在。……	1	2	3	4	5	6	7
3. 完成我的工作职责对我来说非常重要。……	1	2	3	4	5	6	7
4. 在工作中，我竭力不辜负其他人对我指派的职责和任务。…	1	2	3	4	5	6	7
5. 在工作中，我会经常专注于完成可以给我增加工作安全感的任务。……	1	2	3	4	5	6	7
6. 我尽一切可能去防止工作的任何失败/损失。……	1	2	3	4	5	6	7
7. 工作的稳定性是我寻找一份工作的重要因素。……	1	2	3	4	5	6	7
8. 在工作中，我专注于避免失败/损失。……	1	2	3	4	5	6	7
9. 我在工作中非常谨慎，以避免使自己遭受潜在风险/损失。.	1	2	3	4	5	6	7
10.我会在工作抓住机遇，以最大限度地推进我的目标。……	1	2	3	4	5	6	7
11.我为了取得成功，会倾向于在工作中承担风险。……	1	2	3	4	5	6	7
12. 如果我有机会参加一个高风险，高回报的项目上，我肯定会争取它。……	1	2	3	4	5	6	7
13. 如果我的工作没有个人提升/进步的空间，我可能会找一份新的工作。……	1	2	3	4	5	6	7
14. 成长/进步的机会是我寻找一份工作的重要考虑因素。……	1	2	3	4	5	6	7
15. 我集中精力完成可以让我有进一步晋升的工作任务。……	1	2	3	4	5	6	7
16. 我花了很多时间去展望/设想怎样实现我的理想。……	1	2	3	4	5	6	7
17. 我对于理想的清晰构想，会对工作的优先次序施加影响。…	1	2	3	4	5	6	7
18. 在工作中，激励我的是希望和理想。……	1	2	3	4	5	6	7

以下题项是你的观点的描述，请根据您的意见进行评分。

	不同意						同意
1. 帮助别人是确保他(她)今后可以帮助我的最好策略。……	1	2	3	4	5	6	7
2. 我不会做对别人不利的事，以确保他们也不会对我不利。……	1	2	3	4	5	6	7
3. 我害怕我曾经对他(她)不好的人会报复我。……	1	2	3	4	5	6	7
4. 如果我努力工作，我会期望有相应回报。……	1	2	3	4	5	6	7
5. 如果我称赞或恭维某人，我会期望他(她)也会同样做。……	1	2	3	4	5	6	7
6. 我避免对人无礼，因为我不想被人无礼对待。……	1	2	3	4	5	6	7
7. 如果我帮助一些游客，我希望他们会对我的友好表示感谢。……	1	2	3	4	5	6	7
8. 如果我对某个人不好，他(她)应该会寻求报复。……	1	2	3	4	5	6	7
9. 如果我不给小费，一般服务员将不会为我提供好的服务。……	1	2	3	4	5	6	7

岗位测评

请根据您对以下题项评分，1代表非常不同意，2代表很不同意，3代表有点不同意，4代表介乎同意和不同意之间，5代表有点同意，6代表很同意，7代表非常同意。

以下问题是关于你所在团队的直属领导的知识共享行为，请根据您所感受到的填写：

	不同意						同意
1. 我的领导在分享知识给其他同事这个方面一直是楷模。……	1	2	3	4	5	6	7
2. 我的领导支持我分享知识给其他同事。……	1	2	3	4	5	6	7
3. 虽然这可能会影响我的工作进程，我的领导容许我分享我的知识给其他同事。……	1	2	3	4	5	6	7
4. 我的领导告诉我们如何在组织内分享我个人的知识。……	1	2	3	4	5	6	7
5. 我的领导常常鼓励我通过同事间交谈或小组会议的方式来分享我的知识。……	1	2	3	4	5	6	7
6. 我的领导会告诉我去哪里搜寻和我工作有关的知识。……	1	2	3	4	5	6	7
7. 我的领导提倡鼓励我给公司提供有用的信息和知识。……	1	2	3	4	5	6	7

请根据您对自身工作领域/岗位的理解给予评分：

	不同意						同意
1. 我所在工作岗位的专业技能可以用一些工作指南或文档简单清楚地介绍。……	1	2	3	4	5	6	7
2. 在公司的文件/资料库，我可以找到很多介绍我所在专业岗位的核心技术。……	1	2	3	4	5	6	7
3. 标准化程序，以此用来把我的专业知识应用于解决实际问题，是容易地开发的。……	1	2	3	4	5	6	7
4. 公司里存在着很多形式/载体，比如文件/资料库，可以介绍怎样把我的专业知识以解决应用问题。……	1	2	3	4	5	6	7
5. 我们行业里存在着很多形式/载体，比如文件/资料库，可以介绍怎样把我的专业知识以解决应用问题。……	1	2	3	4	5	6	7
6. 我所在的岗位，很多工作和任务所需的知识是保密的。……	1	2	3	4	5	6	7
7. 我所在的岗位，很多工作和任务所需的知识是在内部建立的。	1	2	3	4	5	6	7
8. 我所在的岗位，很多知识的工作和任务的要求会特别定制，以满足具体的工作需求。……	1	2	3	4	5	6	7
9. 我的岗位运用的知识，需要一定的技术及相关知识作为基础。	1	2	3	4	5	6	7
10. 我所在岗位运用的知识，需要大量的信息才能描述/介绍它。	1	2	3	4	5	6	7
11. 我所在岗位运用的知识，是技术先进并且难以执行的。……	1	2	3	4	5	6	7
12. 我所在岗位运用的知识是复杂的。……	1	2	3	4	5	6	7
13. 我必须经常与工作上的伙伴协调自己的努力。……	1	2	3	4	5	6	7
14. 团队成员的工作目标实现也会同时帮助我工作目标实现。	1	2	3	4	5	6	7
15. 为了工作表现顺利，我和工作伙伴必须保持舒畅的交流沟通。	1	2	3	4	5	6	7
16. 为了有好的工作表现，我和团队成员的互相扶持是很重要的.	1	2	3	4	5	6	7
17. 我工作上的工作表现和团队成员的工作表现是有联系的。…	1	2	3	4	5	6	7

18. 我工作上的成功也意味着团队成员工作上的成功。…… 1 2 3 4 5 6 7

四· 本题项中从1至11小题请随意选5或者6或7都可以，以下题项是你的觀點的描述，请根据您的意见进行评分。1代表非常不同意，2代表很不同意，3代表有点不同意，4代表介乎同意和不同意之间，5代表有点同意，6代表很同意，7代表非常同意。

	不同意						同意
1. 当我需要特定知识的时候，我会向同事请教。……	1	2	3	4	5	6	7
2. 我喜欢别人把他们学到的知识告诉我。 ……	1	2	3	4	5	6	7
3. 当我需要学习知识的时候，我会向其他的同事求教。……	1	2	3	4	5	6	7
4. 我会向擅长某项技能/业务的同事请教问题。……	1	2	3	4	5	6	7
5. 我会分享商业计划书或报告给工作伙伴。……	1	2	3	4	5	6	7
6. 我会分享业务手册/指南, 模型和方法给工作伙伴。……	1	2	3	4	5	6	7
7. 我会分享我的成功与失败故事给工作伙伴。……	1	2	3	4	5	6	7
8. 我会把从报纸/杂志/期刊上获得的商业知识分享给工作伙伴。……	1	2	3	4	5	6	7
9. 我会把从工作经验中获得专业知识/技术诀窍分享给工作伙伴。……	1	2	3	4	5	6	7
10. 我会告诉工作伙伴“从哪里”和“向谁”获得帮助。……	1	2	3	4	5	6	7
11 我会把从教育及培训中获得的专业知识和技能分享给工作伙伴。…	1	2	3	4	5	6	7

五. 以下是一組用作形容不同感受和情緒的詞語。請用下列的量表去表達你在過去的半年內感受到此种情绪的程度。

	极少						极其多
1. 苦恼的 ……	1	2	3	4	5	6	7
2. 情緒不安的 ……	1	2	3	4	5	6	7
3. 有內疚感的 ……	1	2	3	4	5	6	7
4. 受惊吓的 ……	1	2	3	4	5	6	7
5. 有敌意的……	1	2	3	4	5	6	7
6. 容易发怒的 ……	1	2	3	4	5	6	7
7. 慚愧的……	1	2	3	4	5	6	7
8. 神经紧张的……	1	2	3	4	5	6	7
9. 颤悚的……	1	2	3	4	5	6	7
10. 害怕的 ……	1	2	3	4	5	6	7

Figure 1

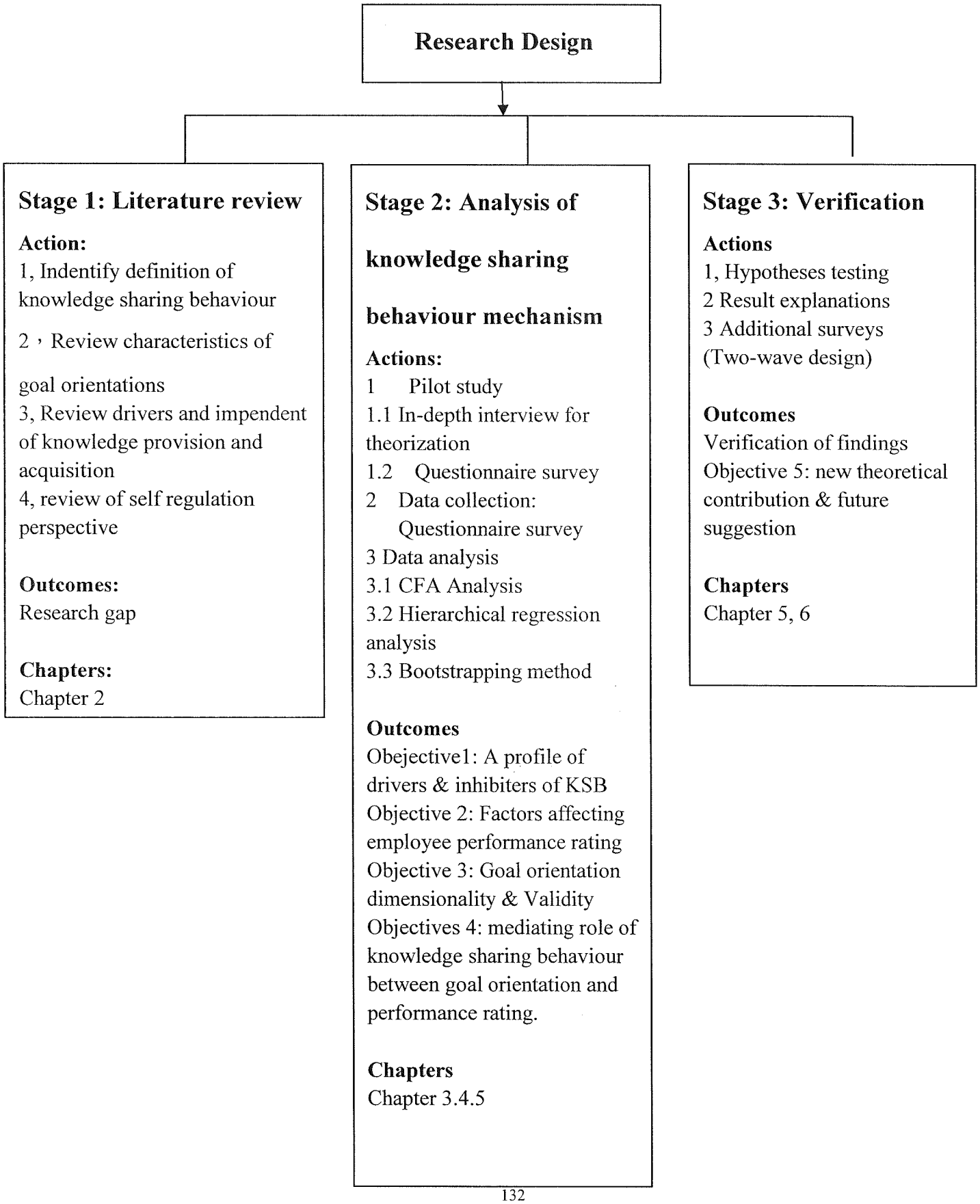

Research Design
Stage 1: Literature review
Action:
1, Indentify definition of knowledge sharing behaviour
2 , Review characteristics of goal orientations
3, Review drivers and impendent of knowledge provision and acquisition
4, review of self regulation perspective
Outcomes:
Research gap
Chapters:
Chapter 2
Stage 2: Analysis of knowledge sharing behaviour mechanism
Actions:
1 Pilot study
1.1 In-depth interview for theorization
1.2 Questionnaire survey
2 Data collection: Questionnaire survey
3 Data analysis
3.1 CFA Analysis
3.2 Hierarchical regression analysis
3.3 Bootstrapping method
Outcomes
Obejective1: A profile of drivers & inhibiters of KSB
Objective 2: Factors affecting employee performance rating
Objective 3: Goal orientation dimensionality & Validity
Objectives 4: mediating role of knowledge sharing behaviour between goal orientation and performance rating.
Chapters
Chapter 3.4.5
Stage 3: Verification
Actions
1, Hypotheses testing
2 Result explanations
3 Additional surveys (Two-wave design)
Outcomes
Verification of findings
Objective 5: new theoretical contribution & future suggestion
Chapters
Chapter 5, 6

Figure 2

Theoretical modelling explaining knowledge sharing behaviour

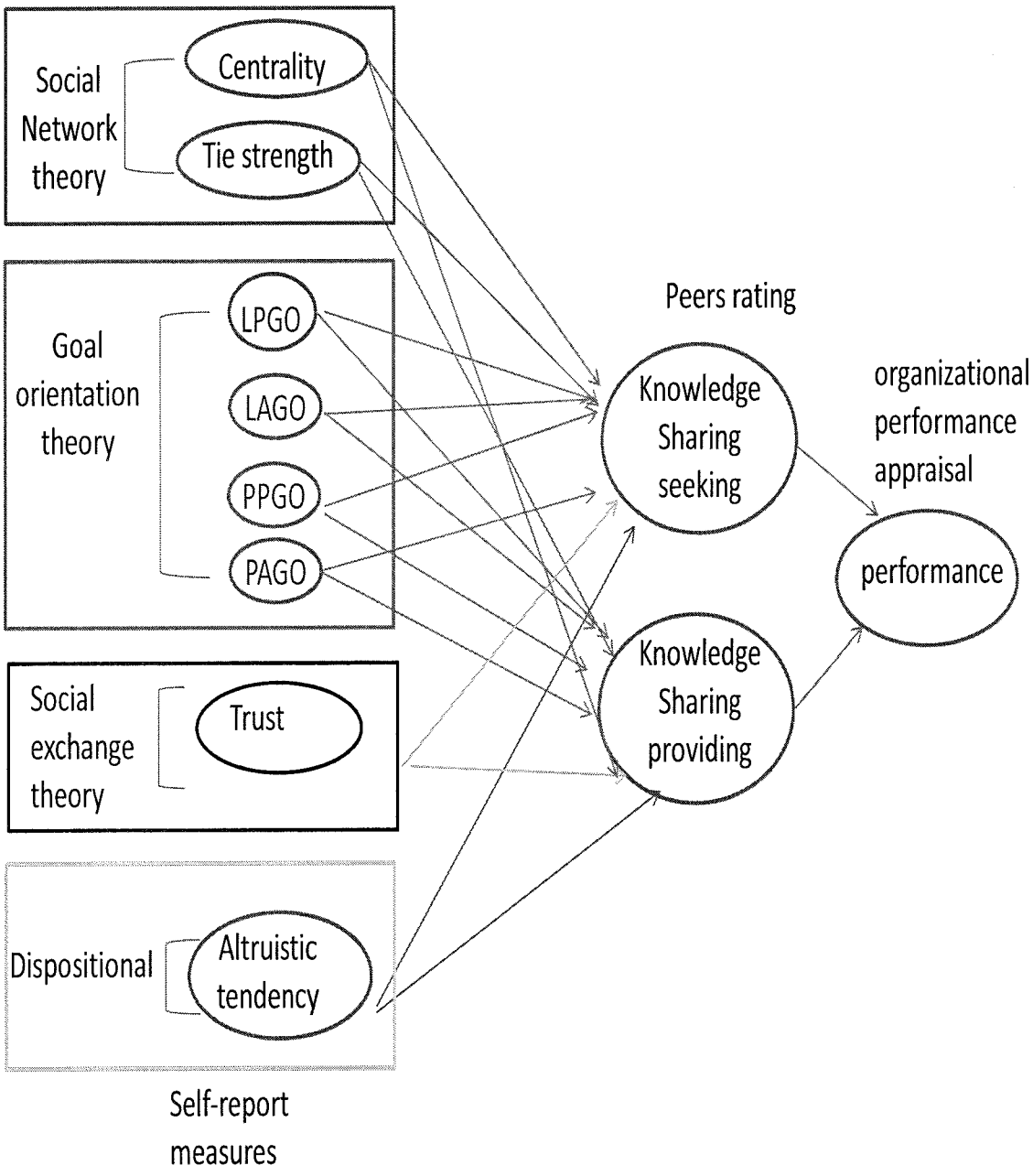
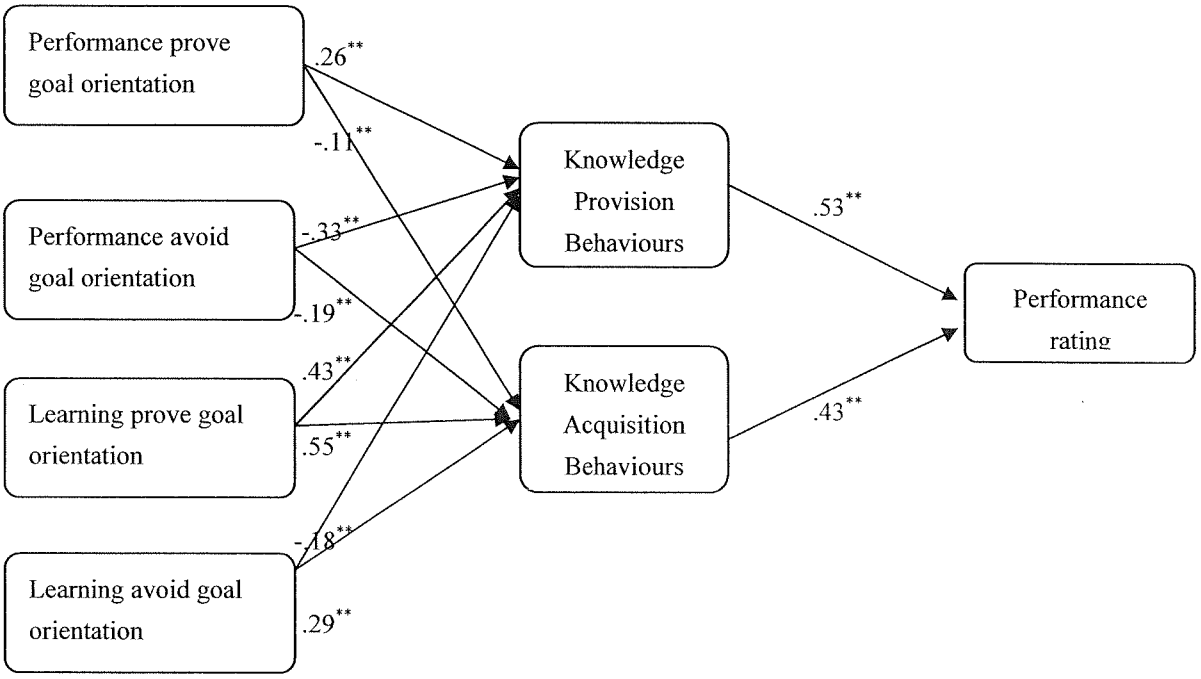


Figure 3. ***Path Coefficients of the Proposed Model*** [a,b]



Note:

** $p < .01$.

[a] For the reason of brevity, we did not present the controlled effects of the demographics, network centrality, trust and altruism on knowledge sharing behaviours and performance ratings here.

[b] all path coefficients are standardized coefficients.

Table 1

Goal orientation	KS providing	KS seeking
Performance-prove : 1,Others-referential 2,positive(approaching success) 3, Ability is fixed	Positive Concerned with showing that s/he can perform better than other colleagues and enjoying others at work are aware of how well s/he is doing : (1)Show off/ impress others, sense of superiority and authority (mainly to all colleagues) (2)Reputation of professionalism for special filed (mainly to working partners and especially for his/her supervisor)	Negative Achieve high level of performance with appearance of little efforts. People around may question about the professionalism if s/he seeks for task-specific help within her/his own domain
Performance-avoid 1,Others-referential 2,negative(avoiding failure) 3, Ability is fixed	Negative Avoid the situations where they risk demonstrating their incompetence for a specific area or receiving a negative evaluation from others. Fear of losing knowledge ownership and superiority when imitable knowledge acquired by the recipients increase. Desire to avoid the disproving of one's competence and to avoid negative judgments if the knowledge provided is incorrect or incomplete	Negative Would rather prove the ability on a task that can do well at rather than to try a new task Avoid taking on tasks /learn new knowledge if there is a chance that would appear rather incompetent to others. When s/he doesn't understand something at work, I prefer to avoid asking what might appear to others to be 'dumb' questions that I should know the answer already.
Learning-prove 1,self-referential/task referential 2,negative(avoiding failure) 3, Ability is malleable	Positive Learning while teaching: Develop skills and abilities, advance one's learning when others' problem/question relevant to his/her own domain or have potential value to discover something beneficial for future career. The thinking and discussing process itself enhance mastery of such kind of problem and may inspire some useful knowledge for coming new tasks.	Positive Strive to develop oneself by acquiring new skills, mastering new situations and improving one's competence. Opportunity to do challenging work that entails various kind of knowledge. Try harder and learn more when s/he works on a task that failure to complete before. Try different approaches/knowledge to solve a complex/difficult problem.
Learning-avoid 1,self-referential/task referential 2,postive(approaching success) 3, Ability is malleable	Negative Reluctant to devote time and resources to provide expertise. Avoid the competition or crowding out by others whose capacity is growing by the learning and seeking knowledge.	Positive Avoid the situation that his/her skills and abilities are deteriorating. Compelled to improve through learning from others' experience to follow up with the trend and avoid diminishing capacities.

Table 2: *Descriptive statistics and Correlations among Variables*

Table 2

	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	31.67	6.42													
2. Edu	1.98	.54	.12	_											
3. Rank	1.94	.90	.50	.22	_										
4. Tenure	2.12	1.17	.41	.15	.33	_									
5. Centrality	4.96	.74	-.13	.02	.03	-.05	_								
6. Trust	4.83	.56	-.12	.03	.07	-.03	.47	_							
7. Altruism	5.00	.89	-.04	-.07	.07	-.10	.12	.18	_						
8. PPGO	5.29	.80	-.08	.09	.06	-.17	.22	.14	.26	_					
9. PAGO	5.15	.77	.04	-.02	.02	-.05	-.21	-.04	.09	.01	_				
10. LPGO	5.50	.95	.03	.06	.22	.03	.12	.29	.49	.18	-.08	_			
11. LAGO	4.78	.98	.09	-.11	.13	.03	-.12	.03	.02	-.27	.07	.16	_		
12. KAB[a]	5.03	1.12	-.04	-.01	.20	.11	.16	.30	.32	-.05	-.23	.67	.40	_	
13. KPB[b]	4.99	1.16	-.07	.07	.18	.03	.34	.30	.37	.44	-.38	.57	-.21	.47	_
14. performance	84.40	5.88	-.06	.04	.21	.05	.26	.29	.37	.23	-.31	.60	.08	.69	.74

Note: N=322.
Correlations >= |.12| is significant at the .05 level; a correlations>= |.15| is significant at the .01 level.
a.KAB = knowledge acquisition behaviour; b. KPB = knowledge provision behaviour.

Table 3: Results of Hierarchical Regression Analysis for Knowledge Provision *Behaviour and Knowledge Acquisition Behaviour*

	Knowledge Provision Behaviour			Knowledge Acquisition Behaviour		
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
age	-.21**	-.13*	-.08	-.23**	-.17**	-.15**
education	.04	.05	-.03	-.06	-.04	-.02
org. ten	.02	.07	.07	.11	.15**	.10*
rank	.27**	.17**	.11*	.29**	.21**	.09*
centrality		.23**	.09*		.01	.02
Trust		.11*	.06		.22**	.09*
Altruism		.32**	.10*		.27**	.07
PPGO			.26**			-.11**
PAGO			-.33**			-.18**
LPGO			.43**			.55**
LAGO			-.18**			.29**
R^2	.06	.27	.63	.08	.22	.62
ΔR^2	.06**	.21**	.36**	.08**	.14**	.40**

Note: *N=322.* * $p < .05$; ** $< .01$.

Table 4. ***Summary of Estimates and Confidence Intervals for Indirect Effects***

Hypothesis	Indirect effect	Estimates	Confidence Interval
7a	PPGO→KPB→Perf.	.14	[.09, .18]
7b	PAGO→KPB→Perf.	-.17	[-.23, -.12]
7c	PPGO→KAB→Perf.	-.05	[-.09, -.01]
7d	PAGO→KAB→Perf.	-.08	[-.11, -.04]
7e	LPGO→KPB→Perf.	.23	[.16, .30]
7f	LAGO→KPB→Perf.	-.10	[-.14, -.05]
7g	LPGO→KAB→Perf.	.24	[.17, .30]
7h	LAGO→KAB→Perf.	.12	[.08, .17]

Note:KAB = knowledge acquisition behavior; b. KPB = knowledge provision behavior.
Perf. = performance rating.

Chapter 8: REFERENCES

REFERENCES

Andrews, K. M., & Delahaye, B. L. (2000). Influences on knowledge processes in organizational learning: The psychosocial filter. ***Journal of Management Studies***, *37*(6), 797-810.

Alvesson, M. (1993). Organizations as rhetoric: Knowledge-intensive firms and the struggle with ambiguity. ***Journal of Management studies***, *30*(6), 997-1015.

Ardichvili, A., Page, V., & Wentling, T. (2003). Motivation and barriers to participation in virtual knowledge-sharing communities of practice. ***Journal of knowledge management***, *7*(1), 64-77.

Argote, L., & Ingram, P. (2000). Knowledge transfer: A basis for competitive advantage in firms. ***Organizational behaviour and human decision processes***, 82(1), 150-169.

Argote, L., Ingram, P., Levine, J. M., & Moreland, R. L. (2000). Knowledge transfer in organizations: Learning from the experience of others. ***Organizational Behaviour and Human Decision Processes***, 82(1), 1-8.

Argote, L., McEvily, B., & Reagans, R. (2003). Managing knowledge in organizations: An integrative framework and review of emerging themes. ***Management science***, 49(4), 571-582.

Bartol, K. M., & Srivastava, A. (2002). Encouraging knowledge sharing: The role of organizational reward systems. ***Journal of Leadership & Organizational Studies***, 9(1), 64-77.

Bock, G. W., Kankanhalli, A., & Sharma, S. (2006). Are norms enough? The role of collaborative norms in promoting organizational knowledge seeking. ***European Journal of Information Systems***, *15*(4), 357-367.

Bock, G. W., Zmud, R. W., Kim, Y. G., & Lee, J. N. (2005). Behavioural intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. ***MIS quarterly***, 87-111.

Bordia, P., Irmer, B. E., & Abusah, D. (2006). Differences in sharing knowledge interpersonally and via databases: The role of evaluation apprehension and perceived benefits. ***European Journal of Work and Organizational Psychology***,*15*(3), 262-280.

Brislin , R. W., (1986). The wording and translation of research instruments. In W.J. Lonner & J.W. Berry (Eds.), ***Field methods in cross-cultural research***. Beverly Hills: Sage.

Burgess, D. (2005) What motivates employees to transfer knowledge outside their work unit? ***Journal of Business Communication***, 42(4), 324-348.

Button, S. B., Mathieu, J. E., & Zajac, D. M. (1996). Goal orientation in organizational research: A conceptual and empirical foundation. ***Organizational behaviour and human decision processes***, 67(1), 26-48.

Cabrera, E. F., & Cabrera, A. (2005). Fostering knowledge sharing through people management practices. ***The International Journal of Human Resource Management***, *16*(5), 720-735.

Cabrera, A., Collins, W. C., & Salgado, J. F. (2006). Determinants of individual engagement in knowledge sharing. ***The International Journal of Human Resource Management***, *17*(2), 245-264.

Chiu, C. M., Hsu, M. H., & Wang, E. T. (2006). Understanding knowledge sharing in virtual communities: an integration of social capital and social cognitive theories. ***Decision support systems***, 42(3), 1872-1888.

Choi, S.Y., Lee, H., and Yoo, Y. (2010). The impact of information technology and transactive memory systems on knowledge sharing, application, and team performance: A field study. ***MIS Quarterly***, 34(4), 855-870.

Cross, R., & Cummings, J. N. (2004). Tie and network correlates of individual performance in knowledge-intensive work. ***Academy of Management Journal***, *47*(6), 928-937.

Cross, R., & Parker, A. (2004). ***The hidden power of social networks: Understanding how work really gets done in organizations***. Harvard Business Press.

Cury, F., Elliot, A. J., Da Fonseca, D., & Moller, A. C. (2006). The social-cognitive model of achievement motivation and the 2× 2 achievement goal framework. ***Journal of Personality and Social Psychology***, *90*(4), 666.

DeShon, R. P., & Gillespie, J. Z. (2005). A motivated action theory account of goal orientation. ***Journal of Applied Psychology***, 90(6), 1096.

De Vries, R.E., Hooff, B. van den & J.A. de Ridder .2006. Explaining knowledge sharing, the role of team communication styles, job satisfaction and performance beliefs. ***Communication Research***, 33:115-135.

Dillman, D. A. 2000. Mail and Internet Surveys: The Tailored Design Method (2nd Ed). New York: John Wiley & Sons, Inc.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. ***Psychological review***, *95*(2), 256.

Dweck, C. (2000). ***Self-theories: Their role in motivation, personality, and development***. Psychology Press.

Elliot, A.J. (1999). Approach and avoidance motivation and achievement goals. ***Educational Psychologist***, 34, 149-169.

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. ***Journal of Personality and Social Psychology***, 54, 5-12.

Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. ***Journal of personality and social psychology***, *72*(1), 218.

Elliot, A. J., & McGregor, H. A. (2001). A 2× 2 achievement goal framework. ***Journal of personality and social psychology***, *80*(3), 501.

Galunic, C., Ertug, G. & Gargiulo, M. 2012. The positive externalities of social capital: Benefitting from senior brokers, ***Academy of Management Journal*** , 55(5): 1213-1231

Farr, J. L. (1993). Informal performance feedback: Seeking and giving. ***Personnel selection and assessment: Individual and organizational perspectives***, *163*, 180.

Foss, N. J., Husted, K., & Michailova, S. (2010). Governing knowledge sharing in organizations: Levels of analysis, governance mechanisms, and research directions. ***Journal of Management Studies***, *47*(3), 455-482.

Gargiulo, M., Ertug, G., & Galunic, C. (2009). The two faces of control: Network closure and individual performance among knowledge workers. ***Administrative Science Quarterly***, *54*(2), 299-333.

Gong , Y., Kim, T.-Y., Zhu, J., and Lee, D.R.(2012) . A multilevel model of team goal orientation, information exchange, and creativity. ***Academy of Management Journal***, 2011.0177

Goodman, P. S., & Darr, E. D. (1998). Computer-aided systems and communities: mechanisms for organizational learning in distributed environments. ***Mis Quarterly***, 417-440.

Gray, P. H., & Meister, D. B. (2004). Knowledge sourcing effectiveness. ***Management Science***, 50(6), 821-834.

Hansen, M. T. (1999). The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits. ***Administrative science quarterly***, *44*(1), 82-111.

Hansen, M. T., Mors, M. L., & Løvås, B. (2005). Knowledge sharing in organizations: Multiple networks, multiple phases. ***Academy of Management Journal***, *48*(5), 776-793.

Ho, D.Y. (1976) On the concept of Face. ***American Sociological Journal***, 81(4), 867-884.

Ipe, M. (2003). Knowledge sharing in organization: A conceptual framework. ***Human Resource Development Review***, 2, 337-359.

Janssen, O., & Prins, J. (2007). Goal orientations and the seeking of different types of feedback information. ***Journal of Occupational and Organizational Psychology***, *80*(2), 235-249.

Johnson, J. L., J. B. Cullen, T. Sakano, & H. Takenouchi. 1996. Setting the stage for trust and strategic integration in Japanese-U.S. cooperative alliances. ***Journal of International Business Studies***. 27 981–1004.

Kang, Y., Kim, S., & Chang, G. (2008) The impact of knowledge sharing on work performance: An empirical analysis of the public employees' perceptions in South Korea. ***International Journal of Public Administration***, 31(14), 1548-1568.

Kankanhalli, A., Tan, B. C., & Wei, K. K. (2005). Contributing knowledge to electronic knowledge repositories: an empirical investigation. ***Mis Quarterly***, 113-143.

LeBreton, J.M. & Senter, J.L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. ***Organizational Research Methods***, 11(4), 838-839.

Levine, S. S., & Prietula, M. J. (2012). How Knowledge Transfer Impacts Performance: A Multilevel Model of Benefits and Liabilities. ***Organization Science***, *23*(6), 1748-1766.

Lin, H. F. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. ***Journal of Information Science***, 33(2), 135-149.

Lu, L., Leung, K., & Koch, P. T. (2006). Managerial knowledge sharing: The role of individual, interpersonal, and organizational factors. ***Management and Organization Review***, *2*(1), 15-41.

Matzler, K., & Mueller, J. (2011). Antecedents of knowledge sharing–Examining the influence of learning and performance orientation. ***Journal of Economic Psychology***, 32(3), 317-329.

Mayer, R. C., J. H. Davis, F. D. Schoorman. 1995. An integration model of organizational trust. ***Academy of Management Review***. 20 709–734.

Mors, M.L. (2010). Innovation in a global consulting firm: When the problem is too much diversity. ***Strategic Management Journal***, 31, 841-872.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. ***Academy of management review***, 23(2), 242-266.

Nonaka, I, and Noboru K. (1998) 'The concept of "ba": Building a foundation for knowledge creation'. ***California Management Review***, 40(3), 40-54.

Obstfeld, D. (2005) Social networks, the Tertius lungens orientation, and involvement in innovation. ***Administrative Science Quarterly***, 50(1), 100-130.

Polanyi, M. (1983). ***The tacit dimension.*** New York: Doubleday.

Poortvliet, P. M., Janssen, O., Van Yperen, N. W., & Van de Vliert, E. (2007). Achievement goals and interpersonal behaviour: How mastery and performance goals shape information exchange. ***Personality and Social Psychology Bulletin***, *33*(10), 1435-1447.

Quigley, N. R., Tesluk, P. E., Locke, E. A., & Bartol, K. M. (2007). A multilevel investigation of the motivational mechanisms underlying knowledge sharing and performance. ***Organization Science***, *18*(1), 71-88.

Reinholt, M., Pedersen, T., & Foss, N. J. (2011). Why a central network position isn't enough: the role of motivation and ability for knowledge sharing in employee networks. ***Academy of Management Journal***, 54(6), 1277-1297.

Ryan, A.M., & Pintrich, P.R. (1997). "Should I ask for help?" The role of motivation and attitudes in adolescents help seeking in Math class. ***Journal of Educational Psychology***, 89(2), 329-341.

Srivastava, A., Bartol, K. M., & Locke, E. A. (2006). Empowering leadership in management teams: Effects on knowledge sharing, efficacy, and performance. ***Academy of Management Journal***, *49*(6), 1239-1251.

Swift, M., Balkin, D. B., & Matusik, S. F. (2010). Goal orientations and the motivation to share knowledge. ***Journal of Knowledge Management***, *14*(3), 378-393.

Szulanski, G., Cappetta, R. and Jensen, R. J. (2004). 'When and how trustworthiness matters: knowledge transfer and the moderating effect of causal ambiguity'. ***Organization Science***, 15, 600–13.

Tsai, W. (2001). Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. ***Academy of Management Journal***, *44*(5), 996-1004.

VandeWalle, D. (1997). Development and validation of a work domain goal orientation instrument. ***Educational and Psychological Measurement***, *57*(6), 995-1015.

Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. ***Human Resource Management Review***, *20*(2), 115-131.

Wayne, S. J., Shore, L. M., & Liden, R. C. 1997. Perceived organizational support and leadermember exchange: A social exchange perspective. ***Academy of Management Journal,*** *40*(1), 82.

Wasko, M. M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. ***MIS quarterly***, 35-57.

Wittenbaum, G. M., Hollingshead, A. B., & Botero, I. C. (2004). From cooperative to motivated information sharing in groups: Moving beyond the hidden profile paradigm. ***Communication Monographs***, *71*(3), 286-31

Wu, W. L., Yeh, R. S., & Hung, H. K. (2012). Knowledge sharing and work performance: A network perspective. ***Social Behaviour and Personality: an international journal***, *40*(7), 1113-1120.

Yang, C., & Chen, L. (2007). Can organizational knowledge capabilities affect knowledge sharing behaviour? ***Journal of Information Science***, 33: 95-109