FACTORS AFFECTING KNOWLEDGE-SHARING BEHAVIOR: A STUDY OF THE PRIVATE BANKS IN MYANMAR

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A Dissertation Submitted in Partial
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ABSTRACT

Title of Dissertation	Factors Affecting Knowledge-Sharing Behavior: A Study of the Private Banks in Myanmar
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This research attempts to illuminate the factors affecting the knowledge-sharing behavior of the managerial staff of private banks in Myanmar. Basically, this study was carried out with two main objectives. The first objective relates to the proposal of a model of knowledge-sharing behavior in private banks in Myanmar, and the second objective deals with testing the relationships among social capital, individual capability, knowledge-sharing intention and knowledge-sharing behaviors in Myanmar. In order to achieve the objectives, the study was conducted using a quantitative method where information was received from survey data through primary sources. More specifically, the data were collected using a self-administered questionnaire distributed to middle-level managers at private banks in Yangon, Myanmar from June to July, 2018. Drawing on data from 275 samples of middle managers of private banks, a data analysis was performed by using structural equation modeling (SEM) with AMOS with a two step-approach, in which the measurement model was evaluated by using confirmatory factor analysis (CFA) in the first step and the full structural model in the second step. The findings were achieved from the middle level managers in the context of private banks in Myanmar and the importance of social capital and individual capability was confirmed in explaining knowledge-sharing behavior. The results validate the empirical links among social capital, individual capability, knowledge-sharing intention and knowledge sharing behavior in the context of Myanmar and support the notion that social capital and individual capability have positive relationships with knowledge-sharing intention and that

social capital has a significant relationship with knowledge-sharing behavior. Moreover, this research demonstrates an indirect effect of knowledge-sharing behavior through knowledge-sharing intention. Thus, the findings of this study extend the theory related to knowledge-sharing behavior by integrating the theory of social capital and individual capacity, the latter having been paid little attention to in the literature. The managerial implications for practitioners in the banking sector are also discussed.

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ABBREVIATIONS

Abbreviations	Equivalence
AGFI	Adjust Goodness of Fit Index
Amos	Analysis of Moment Structures
AVE	Average Variance Extracted
CBM	Central Bank of Myanmar
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CMIN/DF	Chi-square Statistic Comparing the Tested Model and the Independent Model with the Saturated Mode
CR	Composite Reliability
DE	Direct Effect
Df	Degree of Freedom
GFI	Goodness of Fit Index
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IC	Individual Capability
IE	Indirect Effect
IFI	Incremental Fit Index
KSB	Knowledge Sharing Behavior
KSI	Knowledge Sharing Intention
ML	Maximum Likelihood Method
MMK	Myanmar Kyats
n	Sample Size
NFI	Normal Fit Index
NNFI	Non-Normed Fit Index
PGFI	Parsimony Goodness of Fit Index

PSD	Private Sector Development
P-value	Probability Value
R2	Square Multiple Correlation
RMR	Root Mean Square Residual
RMSEA	Root Mean Square Error of Approximation
SC	Social Capital
S.D.	Standard Deviation
S.E.	Standard Error
SDG	Sustainable Development Goals
SEM	Structural Equation Modelling
SI	Social Interaction
SL	Shared Language
SPSS	Statistical Package for the Social Sciences
ST	Social Trust
TE	Total Effect
TLI	Tucker-Lewis Index
α	Cronbach's alpha
$\chi 2$	Chi-Square Test
%	Percentage

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Today's global economy has developed in a way that an organization's knowledge base, skills set, and general performance capacity are require to be constantly changed and enhanced in order to maintain a competitive advantage. Knowledge is perceived as an important element in the establishment, sustainable development, continual growth, and consistent success of an organization. This is especially true in this age where technology, efficiency, and innovation are assets in all sectors of the economy. As knowledge becomes a component of products, services, and operations, it is necessary for the effective creation, accumulation, sharing, and handling of knowledge in order to obtain a competitive advantage. Moreover, the competitive demands of today's marketplace require the effective management of knowledge.

Moreover, sustainability has also emerged as an issue in the development agenda in today's world economy. In 2015, the United Nations outlined the Sustainable Development Goals (SDG) with a vision of achieving them by the year 2030. In order to address the key targets and to ensure their achievements, knowledge sharing is included as an important element for creating a competitive advantage in a sustainable manner. In rapidly-developing countries, private sector development (PSD) has become fundamental and essential to sustainable economic development.

For individuals, public sector organizations, and private organizations to remain competitive in this knowledge-based economy, continuously searching for, accessing, and exploiting external knowledge available from different sources, such as colleagues in organizations, educational institutions, and competitors is required. This knowledge acquisition, transferring, and sharing can be both explicit and tacit in nature.

In the currently-prevailing economic structure, organizations are required to build their capacities to create value based on intangible assets, such as technological knowledge and skills, customer loyalty, branding, and the business processes of the firm (Al-Busaidi, 2013; Chyi Lee & Yang, 2000; Hall & Hall, 2003; Lyles, 1996).

The acquisition of such intangible assets can be achieved through knowledge sharing among individuals. Therefore, organizations utilizing their inherent knowledge as an intangible asset to gain a competitive advantage perceive the sharing of knowledge as a critical process. Knowledge sharing takes place between or among the participants in organizations, such as individuals, work teams, and business units. Cabrera and Cabrera (2005) stated that knowledge sharing allows organizations to capitalize on knowledge-based resources.

However, there are many challenges that can be encountered while sharing knowledge among individuals within organizations. When working with people of different backgrounds and attitudes, it is important to understand human nature and to cooperate effectively. This process is applicable not only to the developed world with its intense competition but also is true in developing countries such as Myanmar.

Myanmar is a developing Asian nation in a transitional period, and therefore is facing many challenges related to sustainable development. One of the challenges is to achieve human capital development within the country through knowledge sharing. During 2011, Myanmar initiated sector-wide changes under an elected government. Myanmar has declared the transformation of itself by shifting its economy from a predominantly agriculture-based one to the significant industrialization of the country by 2030. There are three main measures (foreign direct investment, privatization, and industrial zones) for achieving industrial development. According to the World Economic Forum (2015) in the Global Competitiveness Report, an inadequately-educated workforce is one of the top problematic factors in doing business in Myanmar. Myanmar has been encountering challenges in the development of its human capital. Human capital development can be achieved through the sufficient knowledge possessed by individuals that are able to share their knowledge to those needy ones. Therefore, effective knowledge management has become important in Myanmar. There is still few research work concerning social capital and knowledge

sharing behavior in developing countries which include individual factors and, organizational contexts.

1.2 Significance of the Study

As mentioned, the role of knowledge is important in achieving competitiveness in our societies, particularly regarding organizations. Gaining knowledge, sharing it, and applying it can develop the capabilities of both the individual and the organization to which they belong. There are different factors and their interactions and linkages that can be identified to be involved in the processes leading to knowledge-sharing intention and consequently knowledge-sharing behavior among individuals within an organization. Although several studies on knowledge-sharing mechanisms exist, only a few have focused on developing countries.

Many scholars have studied the relationship between work environment factors and knowledge sharing, and many researchers have studied the organizational factors and individual factors that have constrained knowledge sharing. O'Dell and Grayson (1998) for example have highlighted the need for sharing knowledge internally and the negative effect of the absence of sharing knowledge within organizations. Additionally, knowledge-sharing studies have been conducted in different contexts and with different contents, especially in relation to the western developed countries.

The current study specifically focuses on the private banking sector in Myanmar and makes an attempt to analyze the relationship between knowledge-sharing intention and knowledge-sharing behavior in top local private banks. The number of private banks and the services they offer have increased phenomenally. In order that they can provide competitively high quality, fast, efficient products and services, formal and informal mechanisms to build capacities among banking staffs have developed. However, there are many rooms to fill for the staff development (GIZ, 2016).

As the banking sector is an important developing industry in the transition of Myanmar’s economy, it would be interesting to find out how knowledge sharing can play a role in this regard, and how it should improve over the current situation.

Therefore, this study was conducted in order to assess social capital and the knowledge-sharing practices prevalent in the private banking sector in Myanmar. In this study, different theories concerning knowledge sharing are considered in order to enable a better understanding of the interrelated links that exist. However, the author is aware that different approaches contributing to various aspects are possible and that no single theory is able to provide a perfect explanation of the outcomes of this field.

Traditionally, many previous studies have focused on the organization's context in developed and developing countries. However, there has been little empirical evidence concerning knowledge-sharing behavior in the developing countries context. Knowledge obtained in one socio-cultural context cannot be assumed to have the same effect as another country's context (Wasti, 1998). Therefore, it can be argued that one theoretical finding is accepted and applied in the developed countries, it could be beneficial to extend the validity of the theoretical underpinning to the other contexts such as the developing countries.

A review of the literature indicates that there has been no academic research looking into the relationships among social capital, individual capability, and knowledge sharing that has focused on Myanmar. Bourdieu (1986), Putnam (2000), and Nahapiet and Ghoshal (1998) discussed a framework of social capital theory by asserting that social relationship networks determine the dynamics and mechanisms by which social capital becomes a key resource within organizations (Adler & Kwon, 2002; Inkpen & Tsang, 2005). This indicates that social capital (SC) theory is frequently used by scholars to explain the mechanisms by which knowledge is shared between individuals. Moreover, many studies have focused on the role of individual factors, such as the willingness and motivation to share knowledge, but few studies have focused on the individual's capability. As called upon by some researchers, the current study will look into the identified research gaps by using an integrated model of social capital, individual capability, and knowledge sharing in order to evaluate the individuals' behavior.

Moreover, there has been a very limited number of researches done in Myanmar despite the relatively abundant endeavors to conduct theoretical and empirical researches on knowledge-sharing behaviors from the social capital perspective in other countries. The ongoing economic reforms following the 2011

elections have encouraged organizations to improve their employees' job performance capacities and thus build up the organizations' human capital. It is therefore necessary to study the factors affecting the knowledge-sharing behavior of employees among organizations in Myanmar.

1.3 Objectives of the Study

The main objective of this study is to identify the factors of knowledge sharing among individuals in particular in the private banks in Myanmar in a developing country context.

The specific objectives are:

1) To propose a model of knowledge-sharing behavior for the private banks in Myanmar

2) To test the relationships of social capital, individual capability, knowledge-sharing intention, and knowledge-sharing behaviors in Myanmar with special reference to private banks

1.4 Scope of the Study

This study mainly focuses on the individuals working at private banks in Yangon area. Although there are several branches of private banks in Myanmar, with the limitation of time and financial resources, this research focused on the top-five private banks in Myanmar. Based on the information from the GIZ (2018) report and the Central Bank of Myanmar Report (2017), middle-level managers from these top-five private banks were randomly selected as respondents for this research.

1.5 Contributions of the Study

The knowledge obtained from this study will add to the pool of knowledge concerning the theory and practice of knowledge management and sharing. It will also provide insight into the situation in Myanmar's banking sector context.

1.5.1 Theoretical Contributions

From a general theoretical perspective, the findings described in this research will contribute to and enrich the literature of knowledge sharing. They will also shed light on the role by which social capital can help to improve the behavior of sharing knowledge in Myanmar context.

The study examines the current practices in knowledge sharing in the context of emerging economies in developing countries. This is especially significant as this topic has not been sufficiently researched. The study positively asserts that developing the social capital of organizations is essential through knowledge-sharing processes and initiatives among organizations.

Moreover, this study also contributes to the theoretical aspects of measuring knowledge-sharing behavior. According to a review of the literature, there are many organizational social capital factors that influence knowledge-sharing behavior. Additionally, again according to the knowledge-sharing literature, there have been some limitations in exploring the combined effects of organizational factors and individual capabilities. Most of the previous studies examined the effects separately. However, this study looks into both organizational factors and individual capability and test the mediating effects of knowledge-sharing intention. Therefore, the findings will fill some of the gaps in the literature that have not been examined before on a developing country such as Myanmar.

1.5.2 Practical Contributions

This study also aims to help the practitioners of knowledge management and human resources in Myanmar that are confronting the need for effective management methods and the need to acquire a competitive advantage. This can be achieved by utilizing appropriate organizational and individual factors that have an influence on

employees' knowledge-sharing practices. In particular, the academic progress in development administration will be strengthened because organizations in developing countries will be challenged, leading to human resource development and consequently organizational success. From the results of the findings of this study conducted in Myanmar, greater understanding of the importance of social capital factors and individual capability to the enhancement of knowledge-sharing behavior will be obtained.

1.6 Organization of the Study

This study is organized as follows:

Chapter 1 is the introduction, which includes the details of the study, such as the significance and background of the study and its objectives. Additionally, it also describes and discusses the contribution made by the study.

Chapter 2 presents the political economy of Myanmar, a developing country in South East Asia and describes the banking sector and challenges of private banks in Myanmar.

Chapter 3 portrays the background of the knowledge sharing and social capital concept. It provides a general review of the theoretical and empirical literature related to the theoretical essence of the topic. Related literatures of theoretical frameworks such as knowledge sharing models, social capital, and absorptive capacity are used to investigate the knowledge-sharing behavior in the developing country context to development a conceptual framework.

Chapter 4 details the methodology part of this research. This chapter provides an account of the various aspects of the research: the research proposal design, the research instruments utilized, the study population, the units of analysis, the data collection procedure, and data analysis methods employed.

Chapter 5 provides the findings, which describe the core outputs of the study. The collection of the data, an analysis of the findings, and the testing of the hypotheses made in chapter 4 are also described. The statistics of the study are also presented in detail using an analysis of the structural equation model.

Chapter 6 is the last chapter and it is composed of the conclusions of the research conducted. A critical discussion of the findings offers insights into its

implications and an attempt is made to suggest further in-depth research. This chapter discusses some of the limitations of the study and provides recommendations for further study regarding the topic of knowledge sharing.

CHAPTER 2

BANKING SECTOR IN MYANMAR

This chapter provides an account of the banking sector in Myanmar. First, the demography and political economy of Myanmar is described. Following that, a brief history of the banking industry, the development of the sector, and current challenges facing the sector are presented along with updated data and information.

2.1 Brief History of the Development of Myanmar's Economy

Myanmar, located in South East Asia has a total area of 676,578 square kilometers, bordering Thailand, Laos, Bangladesh, India, and China. In 2017, the population of Myanmar reached to 53 million. In terms of political economy, the country falls under the lower middle-income developing countries, with a GDP of 67.43 billion USD in 2017 (GIZ, 2018). Myanmar is currently in a transition period since it was under a socialist economy until 1988 and later moved towards a market economy.

Myanmar has experienced more than two decades of a military-dominated, centrally-planned economy (1962-1988). Those were the days of isolation when struggle, suffering and the survival of hardships were imposed by the centrally-planned socialistic economy of the regime. Changes began after the uprising of 1988 when a market-oriented economy was introduced. However, tangible changes occurred only after the 2008 constitution was enacted and the first elected government was installed in 2011. The elected government launched a series of changes spanning the political, social, and economic sectors across the country. Sector-wide reform programs addressed the easing of stringent regulations and the empowering of the central bank with full autonomy.

Myanmar is rich in natural resources, labor, and has a strategic location near China and India. This has made a lot of foreign corporations keep their eyes on

Myanmar's business environment. Despite all of this, it still remains one of the least developed and poorest counties in South East Asia, and many people live in poverty. In 2012 Myanmar's per-capita gross domestic product was a mere $834, the lowest among the members of the Association of Southeast Asian Nations and just one-69th of that of top-ranked Singapore. Myanmar has declared a transformation of itself by shifting its economy from a predominately agro-based one to significant industrialization by 2030.

The stages in the Myanmar economic overhaul, essentially aimed at attracting foreign investment, have included establishing a managed float of the Myanmar Kyat in 2012, re-writing the Foreign Investment Law in 2012, granting operational independence of the Central Bank in 2013, enacting a new Anti-corruption Law in 2013, and granting licenses to thirteen foreign banks (2014-2016). Throughout the years, Myanmar's economy has fluctuated between accelerated growth following the easing of most Western sanctions in 2013-2014 and slowing down during the uncertain and unstable political situation and during other natural catastrophic factors, such as excessive floods during the rainy season. Early 2016 was a major milestone for Myanmar's banking sector as the new Financial Institutions Law was promulgated. This law reflected international best practices and it became obvious that the banking industry had taken a new direction. New private banks emerged and it is now noticeable that the banking industry is one of the rapidly-developed private-sector industries in Myanmar.

2.2 The Banking Sector in Myanmar

Operation licenses for foreign-owned banks were withdrawn in 1963 after the nationalization of private enterprises. However, in 1990, as the political situation changed, the operations of foreign banks resumed and licenses were issued to a number of foreign banks. The scene of Myanmar's banking today consists of 13 branches of foreign banks, 27 locally-owned private banks, and 4 state-owned banks. Moreover, according to data from the Central Bank of Myanmar (CBM), there are some foreign banks planning to open their representative branches in Myanmar.

In Myanmar, there are four banks owned by the state. The role of state-owned banks has not diminished greatly despite the emergence of private banks, which are

providing increasing types of services to the general population. State-owned banks are still operating with red tape. However, it is clear that there is a need for the state-owned banks to provide more appealing banking services.

There were no licenses issued in Myanmar to enable private banking businesses until 1992. In 2017-2018 the 27 privately-owned banks held a total asset of nearly 49 trillion Myanmar Kyats (MMK) or approximately 35.6 billion US dollars. This indicates that private banks are the driving factors for growth and innovation in Myanmar's banking sector.

The major private banks that are playing a role in the banking industry are Kanbawza (KBZ), Ayeyarwayd Bank Ltd. (AYA), Co-operation Bank Ltd. (CB), Myaywaddy Bank Ltd. (MWB), Myanmar Apex Bank Ltd. (MAB), and Yoma Bank Ltd., which account for more than 70% of all the private banking sector.

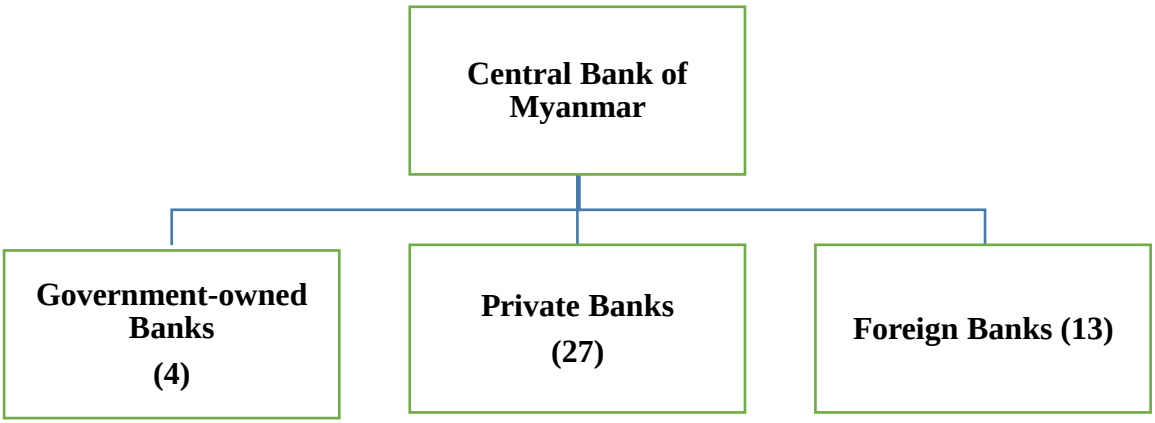

Figure 2.1 Banking Market of Myanmar (as of 2017)
Note: The Figures in the Brackets are the Number of Banks
Source: CBM, 2017.

It can be noted that in the five-year period (2012 to 2017), the private banking sector grew more than six-fold. A growth of 32% was recorded during the financial years 2015-16 and 2016-17 alone. During that same period the assets of state-owned-banks (SOB) remained almost unchanged. Among them the top-three banks owned two-thirds of the market share. Again, of the 1,513 branches opened by private banks,

819 (almost half) were owned by those banks. The bank-population ratio in 2016 in Myanmar was 3.41 bank branches per 100,000 people.

Political and economic liberalization, as well as the demand for banks, have affected the speed of development of the supporting infrastructure of the banking industry. This is in addition to numerous “capacity-building” service providers. In spite of all this, there is still an obvious need to increase the number of activities and institutions providing such competency-enhancing services.

It can be seen that the banking sector plays a critical role in the government’s effort to reform Myanmar’s economy. Despite a quantitative increase in the number of private banks, the role of state-owned banks has not diminished greatly considering the latter’s outreach in deposit mobilizations in rural areas. Moreover, reform processes are also taking place in such a way that financial services are more efficiently provided.

2.3 Challenges to Private Banks

According to a GIZ (2016) report, there are some challenges facing the Myanmar banking sector that can be seen as follows:

1) To have well-sequenced, carefully-managed regulatory reform processes, such as the implementation of the new Financial Institutions Law
2) To develop human resources
3) To improve technology and infrastructure
4) To re-establish public trust

The New Financial Institutions Law (2016) has been governed with the collaboration of the government and NGOs. However, the rapid growth of private banks and the services they offer has given rise to challenges with regards to acquiring staff in sufficient quantity and qualities that are able to provide services associated with the different functions associated with Internet-based digitalized, mobile, and card banking services. Over a relatively short period of time, both employees of banks and their customers have been inundated with new IT-based banking functions and services. This means that banking professionals and staff are in need of information, education, enhanced skills, and updated knowledge related to

performing their routing functions. According to the same GIZ (2016) report, the banking sector has employed approximately 70,000 staff members and approximately 10,000 employees join the sector every year. Therefore, the lack of qualified staff in the fast-growing banking sector is one of the crucial challenges for the banks in Myanmar nowadays.

Traditionally, basic university degrees in the disciplines of economics, commerce, etc. have provided the background education for the banking profession. However, there are some skills require to fulfill the needs of banking industry such as IT skills, customer services skill and so on. Even though there is some in-house training provided in most banks, it is still insufficient to meet the needs of customer yet. Moreover there is also a need to ensure the acceptable quality of the training programs.

In order to address these skills and competency issues, employing banks provide formal capacity-building activities that may be mandatory when new services are introduced and new staff members are employed. However, day-to-day workplace knowledge-sharing is likely to take place on an informal basis. Information concerning this important element of informal day-to-day workplace knowledge-sharing activities in privately-operated domestic Myanmar banks is not available. This is therefore the rationale behind the attempt of this study to look into the level and degrees of these activities and to analyze the findings.

2.4 Chapter Summary

This chapter presents a discussion of the overall economy of Myanmar, which is the study area of this research. Myanmar is currently in a transition period, moving toward achieving a market economy. Under the newly-elected government period, the banking industry has become one of the developed private-sector industries in Myanmar at present. The role and services of private banks in Myanmar have been changing; however, the rapid growth of private banks and the services they offer has given rise to challenges with regards to acquiring staff in sufficient quantity and quality that are able to provide these services. In order to address these skills and

competency issues, employing banks provide formal capacity-building activities that may be mandatory when new services are introduced and new staffs are employed.

CHAPTER 3

LITERATURE REVIEW

This chapter comprises the review of literature for this study, and the related theories and concepts that are involved with the variables of this research. This research was conducted by adapting and applying the social capital and knowledge-based perspective. This chapter is arranged into three parts: the first part describes the literature on the knowledge-sharing intention, knowledge-sharing behavior, and social capital dimensions. In the second part, an extensive literature review of the role of the social capital factors influencing knowledge sharing is presented. After that the individual's characteristics in knowledge sharing is also taken into consideration. The last part of this chapter describes the conceptual framework, the hypotheses, and the relationships among the variables considered in the research.

3.1 Knowledge

In this intense competitive world, organizations are confronting many challenges and the knowledge possessed within the organization could be one of the important assets in this knowledge era. Knowledge should not just exist, but needs to be accumulated and distributed. Hence, knowledge sharing is important and essential in organizations. If knowledge sharing exists in organizations, human capital development will be achieved by accepting the knowledge and ultimately a competitive advantage will be gained and sustainability achieved for the organizations in this knowledge economy (Wang & Noe, 2010). Therefore, knowledge sharing among employees is crucial for organizations. If relevant knowledge is shared within organizations, it can even reduce the potential costs and can optimize their processes, while lack of knowledge sharing or the hoarding of knowledge may even be harmful for organizations and can make their processes ineffective (Riege, 2005).

3.1.1 Knowledge

Plato defined knowledge as “justified true belief” (Chisholm, 1982) and later on many scholars have debated and added to this concept. However, knowledge has been confused with data and information. Ackoff (1979) proposed the idea that knowledge lies within hierarchical level—from data to wisdom. He argued that after data and information, knowledge will be achieved and then flows as wisdom. Actually, knowledge is different and more complicated from data, while data are raw facts and statistics but not yet information, which converts the data into meaningful form. Zeleny (1987) defined data as “know nothing,” information as “know what” and finally knowledge as “know how.” Kakabadse, Kakabadse, and Kouzmin (2003) also suggested that knowledge “can be conceived as information put to productive use.” Further, Nonaka and Takeuchi (1995) defined knowledge as commitment, beliefs, and values. After that, Tiwana (2000) described knowledge as actionable information, and Chyl Lee and Yang (2000) asserted that knowledge is derived from the interpretation of one’s understanding and it can have an effect on the holder’s personality, which includes beliefs, attitudes, and behavior.

3.1.2 Types of Knowledge

Many scholars have classified knowledge according to different types, such as implicit and explicit knowledge (Polanyi, 1961). The most frequently-used types of knowledge in the literature are implicit and explicit knowledge, which are discussed and used by Polanyi (1961). According to Polanyi (1966), implicit knowledge resembles tacit knowledge, which can also be described as “experience-based” knowledge, and explicit knowledge is denoted in terms of being expressed or codified in nature.

Polanyi (1966) first discussed tacit knowledge and explicit knowledge and he discussed the importance of the tacit dimension in knowledge since all knowledge has a tacit measurement. Later, he stated that the hidden tacit ability of knowledge facilitates every explicit knowledge construct in order to understand meaning correctly. Nonaka and Takeuchi (1995) proposed the notion that tacit knowledge is difficult to formalize, difficult to share, and personal, whereas explicit knowledge is

formal and involves systematic language and is easy to be processed, transmitted, and stored.

Many organizations and the management literature have focused on tacit knowledge and have described its uniqueness. Tacit knowledge can be described as individuals' skills and habits that are held collectively in terms of an organizations' operations and professional culture. It is usually developed by learning-by-doing and it implies a positive relationship between innovation capabilities and the creative performance of a firm (Cavusgil, Calantone, & Zhao, 2003). Much of the research has shown a relationship between tacit knowledge and skills, and how to obtain the tacit knowledge *via* experience (Tschetter & Tschetter, 2010). Since it is not easy to formalize and communicate, tacit knowledge can only be developed by interacting among individuals, and by sharing knowledge with others in the same organization or society (Yang & Farn, 2009). Face-to-face communication can also be one of the ways that tacit knowledge can be acquired and shared. Moreover, an individual's beliefs can also increase the sharing of tacit knowledge. Nonaka and Takeuchi (1995) stated that tacit knowledge can be explained by behavior and that it is not easy to share, and can be diffused through the organization through imitation or practice.

Nowadays, from the perspective of the resource-based view, the accumulation of knowledge within the organizations is becoming one of the key objectives for firms to gain a competitive advantage (Barney, 1991; Peteraf, 1993). Therefore, effective knowledge management especially knowledge sharing process is becoming crucial for almost all organizations.

3.2 Knowledge Sharing

Knowledge sharing has been defined and viewed by different scholars. Some scholars view it as unidirectional while some perceive it as bidirectional. The unidirectional view is that that knowledge sharing depends upon the knowledge provider (Ipe, 2003; Tangaraja, Mohd Rasdi, Ismail, & Abu Samah, 2015; Yi, 2009). However, other scholars have assumed that knowledge sharing as an exchange between the individual that includes a two-way process (Lin, 2007; Tohidinia & Mosakhani, 2010; Van Den Hooff & De Ridder, 2004; Xiao Zhang & Jiang, 2015).

Besides, some scholars have accepted both perspectives (Tangaraja et al., 2015). Additionally, the knowledge-sharing construct can be seen in terms of sharing intention (Bock & Kim, 2002; Chiu, Hsu & Wang, 2006; Hau, Kim, Lee & Kim, 2013) and actual knowledge-sharing behavior (Lin, 2007; Ramayah, Yeap, & Ignatius, 2014; Tohidinia & Mosakhani, 2010; Yang & Farn, 2009; Yu, Hao, Dong, & Khalifa, 2013). Knowledge sharing in this sense includes the communication of individuals in the form of knowledge collecting and knowledge donating (Van Den Hooff & De Ridder, 2004). Table 3.1 summarizes the different definitions of knowledge sharing from many scholars.

In much of the knowledge-management literature, some scholars have used the terms knowledge transfer and knowledge sharing interchangeably (Al-Alawi, 2007; Hsu & Wang, 2008). Knowledge sharing is to transfer knowledge by means of experience sharing from person to person or among colleagues and team members (Madsen, Mosakowski, & Zaheer, 2003). However, some have argued and differentiated knowledge transfer and knowledge sharing (Liyanage, Elhag, Ballal, & Li, 2009; Paulin & Suneson, 2012). King and Marks (2004) for example have stated that knowledge sharing and knowledge transfer are similar in nature; however, it can be assumed that exchanges of knowledge might not have clear objectives. Van den Hooff and Huysman (2009) and Cavaliere and Lombardi (2015) believe that there can be some differences between knowledge sharing and knowledge transfer since knowledge sharing is not only the transferring but also the creating of knowledge via social interacting. Szulanski and Jensen (2006) asserted that knowledge transfer can be defined as the replication of knowledge from one person to another either identically or partially. However, Tangaraja, Mohd Rasdi, Abu Samah, and Ismail (2016) indicated that knowledge sharing is a subgroup of knowledge transfer. The researcher agrees with this fact and this study also asserts that sharing knowledge is a subgroup of knowledge transfer.

Table 3.1 Definitions of Knowledge Sharing

Authors	Definitions
Davenport and Prusak (1998)	A voluntary, conscious act of making knowledge available between two or more individuals and with others within the organization
Ipe (2003)	Knowledge sharing is basically the act of making knowledge available to others within the organization.
Yi (2009)	Knowledge-sharing behavior is a set of individual behaviors involving sharing of one's work-related knowledge and expertise with other members within one's organization.
Tangaraja et al. (2015)	Knowledge sharing is the optional behavior of individuals without forcing someone to share his/her knowledge.

Most of the knowledge in the organization exists in people's mind only. Some of the knowledge can be codified into documents; however, most knowledge is implicit. In order to assess implicit knowledge, the active participation of people that have such kind of knowledge is necessary. Yet, Gibbert and Krause (2002) asserted that knowledge sharing is voluntary and it is encouraging and facilitating. In this case, willingness or motivational factors are required for sharing knowledge. Moreover, some people are willing to share, but they do not possess the capability to do so. Yet, some people are unwilling share the knowledge they own and withhold it for many reasons (Riege, 2005). This becomes an obstacle while sharing knowledge.

There are many barriers to knowledge sharing while individuals hoard knowledge. Riege (2005) proposed potential obstacles to knowledge sharing which can be grouped as individual, organizational, and technology obstacles. He discussed the barriers as elaborate networks, free-riding, conflicting in values, and having insufficient time or facilities and sociocultural or power issues. Additionally, Ardichvili (2008) categorized knowledge-sharing barriers factors into the interpersonal, procedural, technological, and cultural. The individual's motivational behavior can be shaped by the organizational culture. Some studies have shown that even though there is evidence regarding the benefits of knowledge sharing, many

people are not willing to share their knowledge for several reasons (Ardichvili, 2008; Cabrera & Cabrera, 2002). Many scholars have found various reasons and have pointed out that organizational culture (Al-Alawi et al., 2007; O'Dell & Grayson 1998) is one of the main reasons for the reluctance to share. Moreover, Collins (2010) especially discussed the sharing or transferability problems of tacit knowledge as difficult because of its "stickiness," and because of its sensitive and intuitive nature.

There are numerous significant and extensive studies on knowledge sharing, such as studying the process, behaviors, and characteristics of enablers. This study emphasizes knowledge-sharing behavior as it can provide insights into individuals within the organization in order to improve their performance.

3.2.1 Knowledge-Conversion Process

Nonaka (1994) conceptualized the knowledge-sharing process in terms of a knowledge-conversion process where tacit and explicit knowledge expand. From the process which Nonaka (1994) called the SECI process, the knowledge-conversion process involves four modes: socialization, externalization, combination, and internalization.

1) Socialization includes the exchanging of tacit knowledge among individuals in order to transfer personal knowledge and experience, and then new tacit knowledge will be shared.

2) Externalization is where tacit knowledge is put systematically into printed official records and materials, and is known as explicit knowledge. In this way, knowledge can spread through the organization.

3) Combination is to combine the codified knowledge sources to create new knowledge which does not go beyond the company's background.

4) Finally, internalization is when an individual's explicit knowledge is internalized and modified as his or her own existing tacit knowledge.

In this way, the tacit knowledge on the individual level will change. This process is also known as the "knowledge spiral." In order to achieve the knowledge spiral process, knowledge sharing is important. Figure 3.1 exhibits the SECI process.

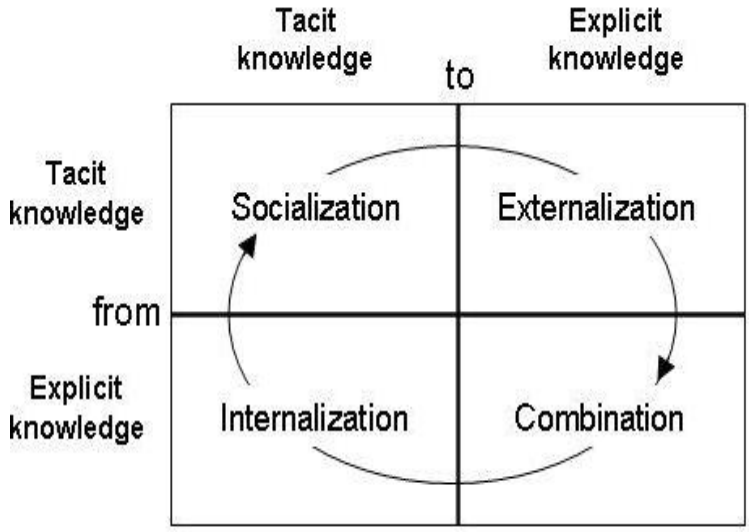

Figure 3.1 SECI Process
Source: Nonaka, 1994.

In terms of the knowledge-sharing process, it can be perceived as knowledge collecting and donating (Cavaliere, Lombardi, & Giustiniano, 2015), and the means of sharing can be face-to-face interaction, via virtual communication, through social networks, done through seminars, workshops, and conferences and discussion forums. Among the knowledge-management process, knowledge sharing is considered a key to competitive advantage for organizations (Wang & Noe, 2010).

3.2.2 Level of Knowledge Sharing

From the perspective of the knowledge-sharing level, it can be seen at the individual level, the group level, and even at the organizational level. Knowledge sharing can bridge individuals and the organization through the flowing of knowledge from individual to the organizational level (Hendriks, 1999). From the perspective of the level of knowledge sharing, at the level of sharing, the individual can be seen as both a knowledge sharer and receiver, and the directions of sharing can be unidirectional or multidirectional (Tangaraja et al., 2015). Generally, knowledge sharing should mainly emphasize the individual that has the ability to encode, relay, and interact with other individuals or teams within the organization. This study focuses on the individual's behavior for sharing knowledge.

3.2.3 Knowledge-Sharing Research

There are some theories that have been most utilized in the knowledge-management research. Most of the knowledge-sharing behavior studies have focused on psychosocial theories, human behavior theories, and organizational behavior theories. The widely used theories are self-determination theory, social exchange theory, theory of reasoned action, theory of planned behavior, communication theory, and social capital theory.

Nowadays, the theory of reasoned action (TRA) and the theory of planned behavior (TPB) have been used to study human behavior in the multidisciplinary context. The assumption of the theory of reasoned action initiated by Ajzen and Fishbein (1977) argued that the behavior can be determined by the individual's intention to perform while intention is influenced by one's attitudes and subjective norms.

In the theory of planned behavior, Ajzen (1991) integrates the initial theory by including an additional construct called "perceived behavioral control." The theory states that the determinants of behavioral action are intention and perceived behavioral control. Intentions are supposed to create the motivation that comes from individuals' willingness to perform a particular behavior. The individual's intention to become an action is influenced by three components: attitude towards a behavior, subjective norms, and perceived behavior control. There are two situations in which an individual tends to perform a certain behavior: 1) having the ability to control the behavior and 2) having a certain level of confidence that he/she can decide to perform the behavior.

The theory of planned behavior (TPB) has been applied in many fields of study and has been used to explore behavioral intention and actual behavior (Al Ziadat, 2014; Wu, Cheng, & Cheng, 2015). The theory can explain and predict the motivational influences of an individual's knowledge-sharing behavior. In the study on knowledge sharing also, many scholars have applied the theory of planned behavior to predict the factors that affect knowledge-sharing behavior among professionals (Hau, Kim, & Lee, 2016; Hau, Kim, Lee, & Kim, 2013; Lin & Lee, 2004; Ryu, Ho, & Han, 2003). Further, Lin and Lee (2004) also have employed TPB to study of knowledge-sharing behavior in relation to senior management support in

organizations. The TPB is also applied to study individual level of knowledge sharing (Hau et al., 2016; Yi, 2009).

Social capital theory (Nahapiet & Ghoshal, 1998) is also widely used in studying knowledge sharing and has been used to explain a variety of pro-social behaviors; it is assumed that social capital helps to promote actions between persons or organizations. Many studies have been undertaken in order to determine the social capital factors that affect knowledge sharing (Chang & Chuang, 2011; Yu et al., 2013).

Nearly one-third of the studies in knowledge sharing research have used the above-mentioned theories (Wang & Noe, 2010). Among them, social capital theory is one of the most widely-applied theories in studying knowledge sharing. This study also applies social capital as a theoretical lens.

3.2.4 Knowledge-Sharing Process

Knowledge sharing can be seen as a process comprising knowledge-sharing intention and knowledge-sharing behavior from the perspective of planned behavior.

3.2.4.1 Knowledge-sharing Intention

According to Ajzen (1991), intention can be defined as one's motivation and willingness to be involved in certain behavior as long as that behavior can be controlled by the actor. This means that when individuals have the intentions to perform behavior that they feel they can control, those individuals will likely engage in that behavior. Willingness can be seen as behavioral intention that is related with actual knowledge-sharing behavior (Reychav & Weisberg, 2010).

3.2.4.2 Knowledge-sharing Behavior

Ajzen (1991) stated that an individual's willingness will determine his or her actual performance. In the knowledge-sharing literature, the individual's actual knowledge-sharing behavior is based on his/her motivation and willingness. This has been tested in knowledge management field and a relationship have been found between intention and behavior that is crucial for knowledge sharing regardless whether the knowledge is explicit or implicit since sharing can have a competitive advantage for both individuals and for firms (Reychav & Weisberg, 2010).

3.3 Social Capital

The concept of social capital has existed for a long time. It initially came from the concept of civil society and social connectedness. Its roots are in Bordieu's thoughts on power and resources. Social capital is widely defined and many scholars view it from different perspectives.

Social capital can be viewed as a resource for individuals to achieve relational network interaction (Nahapiet & Ghoshal, 1998; Yu et al., 2013). According to Nahapiet and Ghoshal (1998), social capital can be classified into three dimensions: structural, relational, and cognitive capital. Their classification of social capital has been used by many researchers (Chang & Chuang, 2011; Hau et al., 2013; Yu et al., 2013; Xing Zhang, Lie, Chen, & Gong, 2017).

3.4 Social Capital Theory

Many scholars have conceptualized social capital as a set of social resources rooted in relationships (Burt, 1997; Tsai & Ghoshal, 1998). Yet, some scholars have argued that social capital is more than social relationships, as it is also connected with norms and values (Coleman, 1994; Putnam, 2000).

According to Bourdieu (1986), social capital can be viewed in the say way as other types of capital, such as human capital, economic capital, and intellectual capital. He claimed that economic capital refers to money and other economic assets, and social capital to social contacts and access to networks. Adler and Kwon (2002) assumed that social capital can be invested like other capitals with the expectations of future returns.

Additionally, social capital requires maintenance, like other capitals (Coleman & Coleman, 1994; Gant, Ichniowski, & Shaw, 2002). However, some scholars have identified the differences between social capital and other capitals in the way that the social capital exists in social relationship while other types of capital can be present at the individual level (Coleman, 1994). Even it can be invested, individuals cannot trade the social capital on an open market like and is located in group (Gant et al., 2002). Therefore, many scholars have perceived social capital as a "resource"

embedded in relationships, while others have added that it not only concerns relationships but is related to social norms and social values.

Moreover, the social capital concept have been adopted in various social science disciplines, including management, and many scholars have applied the concept in their research (Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998), so that the concept is relevant in a variety of fields of study. Since social capital has been applied in numerous fields, it can be looked at according to different dimensions, levels, and types.

Social capital can be looked at from multi-dimensions**,** as stated, and most scholars have classified the dimensions as trust, rules, norms, networks, and types of social interactions. Nahapiet and Ghoshal (1998) for example classified social capital dimensions as structural, relational, and cognitive, while Liu and Besser (2003) identified them as formal and informal social ties, trust, and the norms of collective actions. Woolcock and Narayan (2000) viewed social capital from a communitarian view, a network view, an institutional view, and a synergy view.

Scholars have discussed the level at which social capital is located, from the micro level to the macro level. It is generally classified to be at the individual level, in informal social groups, and at the formal organization level and the community level (Coleman, 1994; Portes, 1998; Putnam, 2000). At the individual actor level, social capital can be described as personal investments that consist of the "potential resources inherent in an actor's set of social ties" (Kilduff & Tsai, 2003). Moreover, the types of social capital can be viewed as structural versus cognitive types and bonding versus bridging types.

3.4.1 Different Definitions of Social Capital

Various scholars have defined social capital from different perspectives. Some of the prominent definitions of social capital are shown in Table 3.2.

Table 3.2 Definitions of Social Capital

Authors	Year	Definitions
Bourdieu	**1986**	"The aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition"
Putnam	**2000**	"Social capital refers to features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions."
Fukuyama	**1995**	"Social capital can be defined simply as the existence of a certain set of informal values or norms shared among members of a group that permit cooperation among them."
Nahapiet and Ghoshal	**1998**	"The sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit"
Alder and Kwon	**2002**	"Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from information, influence, and solidarity it makes available to the actor."

Generally, social capital can be described as "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet and Ghoshal,1998, p. 243), as indicated above. However, many scholars from different disciplines have provided various definitions and different point of views, most of whom have common views, saying that social capital is embedded in the social relations between individuals (Adler & Kwon, 2002). Some view social capital as individual sources yet some perceive social capital as collective goods.

3.4.2 Dimensions of Social Capital

Based on Nahapiet and Ghoshal (1998), the dimensions of social capital comprise the structural, relational, and cognitive. The structural dimension focuses on the ways that individuals are connected among themselves and comprises social interaction and network ties. Relationship dimensions generally describe how the individual is related within a social network in terms for example of trust, obligations, and reciprocity. Many scholars perceive the shared visions, shared goals, and shared language as the cognitive dimensions that make individuals within a society have a mutual understanding and perceive commonly.

3.4.2.1 Structural Dimension

The structural dimension refers to the overall pattern of connection between actors (Nahapiet & Ghoshal, 1998). The presence or absence of network ties between actors, network configuration that describes the pattern of linkage in terms of measures, such as density, connectivity, and hierarchy can be perceived as social interaction.

Social Interaction

According to Leena and Pil (2006), structural social capital can occur when individuals are connected with each other and share information. The dimension of structural social capital involves social ties or social interaction that can form exchanges between individuals (Hall & Hall, 2003). The more individuals interact with each other, the stronger will be their social tie. This social interaction can finally formed trust among people if two actors connect over time and they build stronger trusting relationships (Tsai & Ghoshal, 1998). Moreover, from the interaction with each other they will build common interests and mutual understanding, and frequent or close interaction will create the density of relationship ties (Chiu, Hsu, & Wang, 2006; Uzzi, 1997).

3.4.2.2 Relational Dimension

Nahapiet and Ghoshal (1998) described the relational dimension as one of the social capital dimensions. They refer to this dimension as the assets formed and leveraged from social relationships. Trust, trustworthiness, norms, obligations, and identification are viewed as the factors under the relational dimension (Chang & Chuang, 2011; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). Therefore, the

relationship dimension focuses on the relations among individuals, which leads to behavior in terms of mutual respect or friendship. Among the factors that represent the relational dimension of social capital, many scholars commonly use trust and trustworthiness in their studies.

Social Trust

Many scholars have defined trust according to many dimensions, and most scholars look at trust according to three main dimensions: belief, action and decision (McAllister, 1995). Trust refers to an individual's beliefs that other members will keep their promise, not take advantage of others and behave consistently (Chiu et al., 2006). Trust can be defined as the set of beliefs that the group is well-intentioned, fair, and constructive, and is based on ethical norms (Carnevale & Wechsler, 1992). It is the belief that organizational members will help each other during difficulties (Chow & Chan, 2008). In terms of actions, trust means the members' willingness to be open to helping other members out of difficulties and not causing harm to them (Chow & Chan, 2008; Meyer, Allen, & Smith, 1993). According to Fukuyama (1995), trust is the expectation that rises in a society that is shaped with honest, cooperative, and shared norms among the members and it can be viewed in relation to the organizational culture, one that encourages people to engage in solving problems and making the job easier.

3.4.2.3 Cognitive Dimension

Nahapiet and Ghoshal (1998) described the cognitive dimension as one of the dimensions of social capital. The cognitive dimension refers to the "resources that make possible shared interpretations and meaning within a collective" (Wasko & Faraj, 2005). Shared goals, codes of conduct, shared language, and shared visions are the factors considered under the cognitive dimension (Chang & Chuang, 2011; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998; Yu et al., 2013). Again, Tsai and Ghoshal (1998) perceived the cognitive dimension as the extent of the common understanding in a society among individuals in the form of shared language, shared visions, and mutual understanding to achieve the collective goals and to help players act in proper ways in order to benefit the social system inside an organization.

Shared Language

According to Lesser and Storck (2001), a shared language is more than the language itself but also includes the underlying assumptions that are attached to daily interaction. Shared language can improve the mutual understanding among individuals since it encourages to formulate the members knowledge they do and do not know (Chang & Chuang, 2011). This can facilitate increased understanding among individuals. Individual members in an organization are likely to share their knowledge with others when they believe that they possess cognitive similarity (Nahapiet & Ghoshal, 1998).

3.5 The Organization and Knowledge Sharing

Organizations or corporations are composed of people and have different perspectives, configurations, and different performances and outcomes (Daft, 2007). These are different in terms of design, culture, and strategies. Moreover, organizations possess resources and capital such as economic resources, knowledge, human capital, social capital, and intellectual capital (Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998). While the members of organizations are trying to attain the goals of the organization, they need to utilize the resources properly. For that, organizations need to help the employees.

In the knowledge-sharing literature, most of the researchers have classified three factors that have an influence on knowledge sharing; namely, individual factors, organizational factors, and technological factors (Razmerita, Kirchner, & Nielsen, 2016). Since organizations are composed of people, this study will take into consideration the organizational factors along with the individual factors that have an influence on organizational knowledge-sharing behavior. However, technological factors are not included in this study since the focus will be on tactic knowledge only and technological factors are taken for granted for this study.

3.5.1 Individual Factors and Knowledge Sharing

Individuals are different in their abilities, capabilities, and motivations in terms of sharing knowledge and all of these differences are reflected in the absorptive

capacity of one's ability of recognizing, assimilating, and transforming to form new knowledge (Cohen & Levinthal, 1990; Lowik, Kraajjenbrink, & Groen, 2017; Ojo & Raman, 2016). According to Cohen and Levinthal (1990), absorptive capacity can be defined as the internal capability with which an individual identities, assimilates, and applies new external knowledge.

Knowledge sharing can occur among individuals, teams, and within or among organizations. Knowledge-sharing activities and processes can be seen from various perspectives. From the perspective of the communication model (Shannon & Weaver, 1949), communication can be seen to take place between two persons; that is, the source and the recipient who exchange knowledge with each other. Therefore, individuals that are participating in knowledge-sharing activities can be either the source or recipient. Thus, the individual's level, for example the source's and recipient's characteristics and capability, need to be taken into consideration in the knowledge-sharing process. Shannon and Weaver (1949) pointed out the importance of the source and recipient ability, saying for example that the source should be able to codify and transfer well. On the other hand, the recipient should have the ability to decode knowledge and adopt the knowledge. Source capabilities can be described as source experience, source expertise, and the source's willingness to share his or her knowledge (Cross & Sproull, 2004; Minbaeva, 2007). In the same way, the recipient's willingness and absorptive capability should be considered. Normally, individual experience is based on the person's skills and real-world knowledge.

Both source capability and the recipient's capability are important in knowledge sharing. Since the knowledge-provider's education and background can influence how new knowledge will be absorbed, the kind of attitudes and behavior that will change the organization (Gupta & Govindarajan, 2000) and such kind of characteristics will be included in this study. The recipient's motivation and absorptive capacity are also significant regarding the effectiveness of knowledge sharing. Recipient and source capability includes absorptive capability (Cohen & Levinthal, 1990; Minbaeva, 2007) which include prior experience and expertise. Shariq (1999) argued that in order to get the simplest knowledge, the sufficient absorptive capability of the recipient is needed. Hatch and Dyer (2004) defined recipient experience as the individual's past work experience in his or her respective

field. However, some researchers have shown that prior experience can sometimes delay the acceptance of created knowledge. Experience can reduce the cost of knowledge transfer and motivate knowledge-transfer activities. Therefore, the recipient's capability in the knowledge-sharing process is an interesting factor to study.

Within organizations, the variety of knowledge that individuals possess is based upon their education, work experience, and life experiences. Since organizations are composed of individuals, the organization's prior knowledge is built on the prior knowledge of the members in the organizations (Cohen & Levinthal, 1990). This study focuses on the individual's ability to share knowledge from the perspectives of absorptive capability. From this point of view, individual characteristics can also be seen as the independent variable for knowledge-sharing intention and actual knowledge-sharing behavior. In this study the researcher assumed that an individual can be perceived as either a source or a recipient of knowledge, and will participate in knowledge sharing.

Since tacit knowledge expertise has been found to be strongly related with experience, knowledge source experience and expertise are important factors. In this study, the researcher assumes that individuals that are participating in the knowledge-sharing process can either be a source or a recipient, or both role. Especially, representing individuals are the middle-level managers that can be seen as both knowledge provider and recipient.

3.5.2 Organizational Factors and Knowledge Sharing

Nowadays, with globalization and increasing competition among firms, the ability to learn and share knowledge is vital in order to gain a competitive advantage. Therefore, in these days of a competitive business environment characterized by intense competition, creativity, new knowledge utilization is an important element for gaining the competitive advantage (Inkpen & Tsang, 2005; Wang & Noe, 2010).

Most of the organizational factors can be subdivided into organizational culture, organizational structure, and organizational climate. Under organizational culture, there have been many factors included in previous literature that have been seen to foster and shape organizational knowledge-sharing culture. Organizational

culture, which includes values, practices, and norms, has an influence on knowledge-sharing behavior (De Long & Fahey, 2000). The most dominant factors pointed out by previous research as having an influence on knowledge sharing within organizations are social interaction, such as communication, and trust and top management support (Al-Alawi et al., 2007). The social interaction among individuals and groups can enhance knowledge sharing within organizations. Therefore, an organization's culture comprises social capital, which includes social interaction, trust among members, and shared views within the organization.

3.6 Social Capital and Knowledge Sharing

There have been many previous studies on the relationship between social capital and knowledge sharing. Nahapiet and Ghoshal (1998) for example described the crucial aspect of three dimensions of social capital for combing and exchanging knowledge; and Tsai and Ghoshal (1998) empirically confirmed the importance of social capital in resource exchange within the organization. Chow and Chan (2008) also empirically tested the importance of social capital in knowledge sharing, even in the virtual community. Many scholars have pointed out that different types of social capital enable the sharing of different kinds of knowledge (Adler & Kwon, 2002; Inkpen & Tsang, 2005). Many theories have shown statistically various determinants that influence knowledge sharing in the organization and these have been empirically tested by scholars (Chow & Chan, 2008; Hau et al., 2016; Nahapiet & Ghoshal, 1998; Xing Zhang et al., 2017).

Having close relationships, such as daily communication, interactions, observations, and monitoring, is an important component of knowledge transfer within organizations (Tamer Cavusgil, Calantone, & Zhao, 2003). Therefore, strong ties and frequent quality interactions are required in order to share knowledge successfully. Studies have examined the influence of social interaction and knowledge-sharing behavior (Chiu et al., 2006; Tsai & Ghoshal, 1998).

Nahapiet and Ghoshal (1998) pointed out that if mutual trust occurs within organizations' members, it will help knowledge to flow transparently. Trust plays a key role in the willingness of network actors to share knowledge (Nahapiet &

Ghoshal, 1998; Tsai & Ghoshal, 1998). Moreover, Chang and Chuang (2011) studied knowledge sharing in virtual communities and support the notion that trust is crucial for the attainment of resources and knowledge sharing. Actually, organizational members are expected to interact with those that are assumed to be trustworthy in sharing knowledge with. Trust is very important in establishing social relations. Davenport, Davies, and Grimes (1998) found that mutual trust among team members will solve problems regarding the barriers of knowledge communication, and assist with better exchange of knowledge in both quality and quantity and will help with knowledge communication.

3.7 Conceptual Framework

From a review of the literature and previous empirical research, a conceptual framework was constructed for the present study that includes the following: 1) a review of knowledge sharing and the critical factors influencing knowledge-sharing behavior; 2) a review of social capital theory; 3) a review of the relations among organizational factors, knowledge-sharing intention, and knowledge-sharing behavior; and 4) a review of the measurement of individual factors, knowledge-sharing intention, and knowledge-sharing behavior. The proposed model comprises the causal relationship between the antecedent factors of knowledge-sharing intention and knowledge sharing, which include the dimensions of organizational social factors such as social interaction, social trust, and shared language, and individual characteristics. In the model, social capital is treated as a second-order construct composed of social interaction, social trust, and shared language.

According to the above-mentioned conceptual framework mentioned, each of the hypotheses from the causal relationships was derived.

3.7.1 The Relationship between Social Capital and Knowledge Sharing

Chang and Chuang (2011) empirically tested the idea that social capital is a significant factor regarding knowledge-sharing intention. Nahapiet and Ghoshal (1998) stated that social interaction may influence the exchange of knowledge. Nonaka and Takeuchi (1995) focused on the important role of knowledge creation and

knowledge sharing that occurs in terms of social interactions among organization members. According to previous studies, social interaction, one of the structural dimension factors under social capital, has a positive relationship with knowledge-sharing intentions.

Many researches have described the positive relationship between social exchange and knowledge sharing. In fact, knowledge sharing involves an exchange between two individuals from the perspectives of scholars that assume that knowledge sharing is bidirectional—from the person communicating the knowledge to the person "collecting" it (Tangaraja et al., 2015; Van Den Hooff & De Ridder, 2004). Therefore, knowledge sharing emphasizes the interaction among individuals and human capital.

Studies have shown that trust has a positive influence on knowledge sharing at dyadic and team levels (Chang & Chuang, 2011; Hau et al., 2013; Inkpen & Tsang, 2005). Moreover, Choi et al. (2008) found that there is a strong relationship between trust and knowledge sharing. Chang and Chuang (2011) found that trust has a positive significant relationship with the quality of shared knowledge. Chen, Lin, and Yen (2014) also found that trust results from the historical interaction and that mutual understanding enhances understanding and the sharing of goals and ultimately achieves effective tacit knowledge sharing.

The role of shared language is an interesting issue in social capital context (van Dijk, Hendriks, & Romo-Leroux, 2016). According to van Dijk et al. (2016), study in Europe and Asia revealed differences in the level of shared language. The findings showed that shared language in Asian offices has a more significant effect on knowledge sharing than European offices. Since this study will be carried out in Myanmar, which is an Asian country, and will be interesting to find out if shared language has a significant relationship with knowledge-sharing behavior.

According to previous studies, the dimensions of social capital have a significant effect on knowledge-sharing intention. Hau et al. (2013) asserted for example that the social dimension affects knowledge sharing collectively. Chang and Chuang (2011) found that individuals that share the same language have a better quality of shared language. Individuals in the banking industry, to take an example, may make use of shared understanding to build their jargon in order to enhance the

efficiency of communication. Many professionals, such as medical doctors and engineers, also use their own jargon in their daily work life.

Therefore, as seen in previous research, the social capital dimensions reflected by social interaction, social trust, and shared language in the Myanmar banking sector also might have an influence knowledge-sharing intention and behavior. From these aspects, the following hypotheses were developed.

Hypothesis 1: Social capital has a positive relationship with knowledge-sharing intention.

Hypothesis 2: Social capital has a positive relationship with knowledge-sharing behavior.

3.7.2 The Relationship between Individual Capability and Knowledge Sharing

Previous studies have been carried out on the relationship between individual characteristics and knowledge-sharing behavior. Individuals experiences, expertise, willingness, dissemination, and absorptive capability have been studied (Cohen & Levinthal, 1990; Minbaeva, 2007). Individuals with motivation to share knowledge invariably have a positively-significant outcome on knowledge sharing (Gupta & Govindarajan, 2000). Further, Martin and Salomon (2003) has indicated that assimilation is needed together with the sources' willingness.

Many scholars have found that absorptive capacity is one of the major determinants of the knowledge transfer process in organizations (Cohen & Levinthal, 1990). Scholars have discussed the idea that individuals with absorptive capacity, such the ability to recognize, assimilate, and apply knowledge, can promote innovation via knowledge sharing (Ojo & Raman, 2016). In this study, the researcher assumes that individuals that are participating in the knowledge-sharing process can either be the source or the recipient or play both roles. According to Al-Busaidi (2013), professionals with sufficient knowledge on particular matters will develop the intention to share their knowledge and can actually provide that knowledge to other professionals that have interest in that. When an individual has confidence in his or her capability and believes that he or she has the capacity to share knowledge, the outcome is the intention to share. In the banking industry, employees should have

sufficient knowledge related to their work and should have the ability to understand their work based on their previous experience. Those that have such kind of ability will have the intention to share their knowledge and subsequently actual knowledge-sharing performance will occur. From this preposition, the following hypotheses have been derived.

Hypothesis 3: Individual capability has a positive relationship with knowledge-sharing intention.

Hypothesis 4: Individual capability has a positive relationship with knowledge-sharing behavior.

3.7.3 The Relationship between Knowledge-sharing Intention and Knowledge-sharing Behavior

Many previous studies' findings were mainly supported by the theory of planned behavior (Ajzen, 1991), which proposed the cause of behavior is intention. There is a positive relationship between employees' desire to share their knowledge and their actual knowledge-sharing behavior (Ajzen, 1991; Bock, Zmud, Kim & Lee, 2005; Hau et al., 2016; Reychav & Weisberg, 2010). Scholars such as Reychav and Weisberg (2010) empirically examined the relationship between tacit knowledge-sharing intention and actual knowledge-sharing behavior in order to gain a competitive advantage for the individual and firms and they found that there was a positive relationship. However, Yang and Farn (2009) empirically showed that tacit knowledge-sharing intentions do not have a significant effect on tacit knowledge-sharing behavior. Again, Hau et al. (2016) found that employees' intentions towards tacit knowledge sharing have a positive effect on their tacit knowledge sharing by studying multiple industries. Additionally, it was found that there was also a significant association between knowledge-sharing intention and knowledge-sharing behavior in public organizations (Castaneda, Ríos, & Durán, 2016).

Some of the studies have been conducted in banking industries in different countries, such as Greece, Indonesia, and Jordan; however, some of the researchers studied only knowledge-sharing intention but not actual knowledge-sharing behavior (Al Qeisi & Al Zagheer, 2015; Chatzoglou & Vraimaki, 2009). Again, Abdillah, Lin,

Anita, Suroto, and Hadiyati (2018) found that knowledge-sharing intention has a significant positive effect on knowledge-sharing behavior.

These studies have been tested in different industries and mostly are from developed countries. Additionally, there has been some discrepancy among the studies on the relationship between knowledge-sharing intention and knowledge-sharing behavior. In order to test this in the developing country and banking industry context, the following hypothesis was developed:

Hypothesis 5: Employees' intention to share knowledge is positively related to knowledge-sharing behavior.

Knowledge-sharing intention and behavior can be influenced by social capital and it can be assumed from the theory of planned behavior perspective that intention can be perceived as an important factor in performing a certain behavior. Some studies on social capital have shown the direct effect on knowledge sharing (Chang & Chuang, 2011; Liu, Cheung, & Lee, 2016; Wasko & Faraj, 2005), while others have argued the mediating effect of knowledge-sharing intention. However, not many studies have empirically tested the mediation role of knowledge-sharing intention (Abdillah et al., 2018; Mafabi, Nasiima, Muhimbise, Kasekende, & Nakiyonga, 2017). It can be assumed that if employees have sufficient strength of social capital in organizations, they will be motivated to share the knowledge and that motivation or desire will later on become actual knowledge-sharing behavior.

Moreover, very few studies have found the mediating role of knowledge-sharing intention Xing Zhang et al. (2017) found that social capital positively influences knowledge-sharing intention through motivation in the health profession. Xing Zhang et al. (2017) showed that individual motivation has a mediating effect on knowledge sharing. In this study, the mediation effect of knowledge-sharing intention will be tested on both social capital and individual capability from the above perspective, the following hypotheses were developed:

Hypothesis 6: Knowledge-sharing intention mediates the relationship between social capital and knowledge-sharing behavior.

Hypothesis 7: Knowledge-sharing intention mediates the relationship between individual capability and knowledge-sharing behavior.

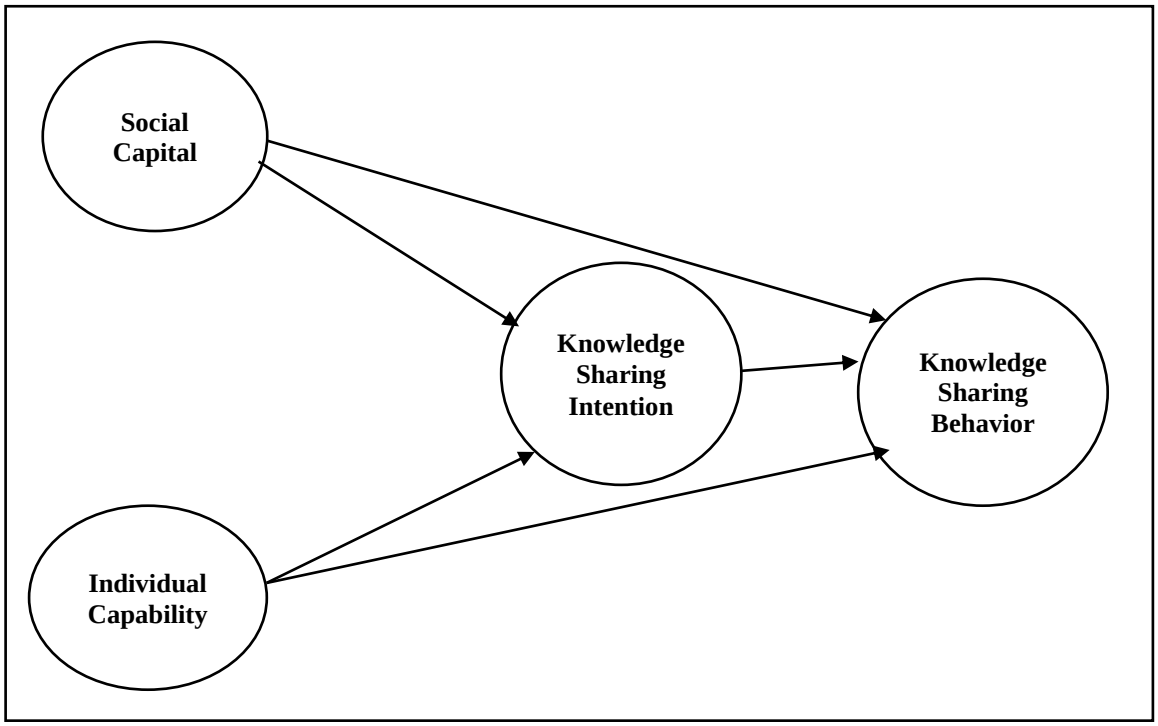

Figure 3.2 Conceptual Framework Developed by the Researcher

3.8 Chapter Summary

This chapter illustrates the details of the literature that are mainly used in this dissertation. First, the chapter describes knowledge and its importance. Since knowledge is perceived as an important asset of an organization, it needs to be managed effectively. From knowledge management literature, knowledge sharing among employees was seen to be crucial for organizations. The knowledge-sharing construct can be seen in terms of sharing intention and actual knowledge-sharing behavior. Secondly, social capital theory and its application to knowledge sharing research was presented. Among various perspectives of social capital, three dimensions, namely the structural dimension, the relational dimension, and the cognitive dimension described by Nahapiet and Ghoshal (1998), were applied. Thirdly, the absorptive capacity literature was discussed in order to describe the individual's capability in the knowledge-sharing process. Based on an intensive literature review, the operational definitions of the variables were described and the conceptual framework and hypotheses for this study were finally drawn for conducting the research.

CHAPTER 4

RESEARCH METHODOLOGY

In this research methodology chapter, how the sampling method was designed, which research instruments were used, what kind of data collection method was applied, and the data analysis procedures are discussed. The operationalization of the key constructs, the designing of the questionnaire, and the pretesting will also be described. Each variable's measurement and the purification of measures are included as well. Finally, the data analysis procedures are presented.

4.1 Research Design

A quantitative research method was used in conducting this study and information was collected by distributing a set of self-administered questionnaires. The quantitative study in this research attempts to find the causal relationships among the variables, such as social capital factors, individual factors, knowledge-sharing intention, and knowledge-sharing behavior. The survey generally aimed to assess trends, opinions, beliefs and attitudes, and to follow up with an analysis. This survey study can be classified as longitudinal and cross-sectional depending on the time frame used. Because of the time and budget limitations, this research was conducted as a cross-sectional study where all of the measurements were carried out at one specified time. In this way, multiple outcomes could be analyzed despite the data being collected only once from a selected group. Moreover, using cross-sectional survey do not need long period of time and less cost compared to longitudinal study (Zikmund, 2003).

It was anticipated that some errors could occur in the survey that can affect the accuracy of the study. Zikmund (2003) noted that the sources of survey error include random sampling errors and systematic error. Random sampling errors can occur due to variations in the selected samples for research while systematic (non-sampling)

error results from the respondents and administrative issues. The issue of possible errors can be minimized by using carefully designing the research.

Since this study was based on the quantitative method using a survey data set, there were possibilities of sampling errors. By using a standardize procedure, the chance of sampling errors occurring were reduced. Coverage errors and sampling errors were minimized by carefully determining the sample size and selecting the respondents. In order to reduce measurement error, the questionnaires were prepared cautiously. Therefore, the following steps were carried out carefully in this research: defining the target population, deciding the sampling frame, selecting the sampling methods, determining the sample size, and choosing the respondents.

4.1.1 Unit of Analysis and Targeted Population

The unit of analysis was employees from private banks in Myanmar. Specifically, they were the middle-level managers who were working at top private banks in Yangon, Myanmar. Therefore, the unit of analysis was at the individual level in this study. In the studied private banks, there were 24 private banks with approximately 33,367 employees all over the country (GIZ 2017). Table 4.1 shows the top private banks and a list of their employees.

Table 4.1 Top Private Banks in Myanmar

Name of Bank	No. of Employees
Kanbawza (KBZ)	111,111
Ayeyarwady Bank Ltd.(AYA)	3,500
Co-operation Bank Ltd.(CB)	5,255
Myawaddy Bank Ltd.(MWD)	2,088
Myanmar Apex Bank Ltd. (MAB)	2,600
Global Treasure Bank	1,817
Yoma Bank Ltd.	2,221
United Amara Bank	1,400
Asia Green Development Bank	2,400

Table 4.1 (Continued)

Name of Bank	No. of Employees
Myanmar Oriental Bank	975
Total of Top 10 Banks	**33,367**

Source: GIZ, 2017.

4.1.2 Sampling Design

Sampling was chosen as a subset of representative entities from a larger population and this was crucial in determining the data collection procedures in the research. The samples were the segment of population. In most forms of survey research, selecting a sample of the population under study is required for statistically validating and generalizing a particular characteristic of the population. Obtaining good samples was challenging.

4.1.3 Sampling Strategy

This research study applied the non-probability sampling approach. In a quantitative survey design, determining the sample size and dealing with nonresponse bias are required (Kotrlik & Higgins, 2001).

4.1.4 Sample Size

Sample size determination is important in research since it represents the population and obtaining a large sample size is preferable since this can reduce sampling errors that can occur because of the differences between the sample scores and population scores.

According to Malhotra and Peterson (2014), the researcher needs to consider many factors that help to determine the appropriate sample size, such as the type of research, the number of parameters to be estimated, the type or nature of the statistical analysis, the accuracy or the permissible error of estimation and the resources required (Diamantopoulos & Schlegelmilch, 2000; Neelankavil, 2015). This study was concerned with the nature of statistical analysis since the Structural Equation

Modeling (SEM) was employed to test all of the hypothesized relationships. The other factors included the sample sizes used in similar studies and resource constraints. Since structural equation modeling requires a large sample size, the minimum required sample size was 200 complete data (Hair, Tatham, Anderson, & Black, 1998). However, the general rule of thumb is 10 to 15 respondents per parameter, depending on the model complexity (Ho, 2006). In addition, the sample size requirements for latent constructs were also taken into account for the models with latent variables. Hence, this study has 28 parameters, and the sample size was determined to be 280.

4.1.5 Respondent of the Study

As mentioned above, the target sample for this study was mid-level staff in the banking industry in Myanmar. Even though there is no perfect definition of "middle manager," many focus on the hierarchy within the organizations. The researcher believed that the middle managers' role in organizations is important in taking part in knowledge-sharing activities and behaviors by bridging the top and front-line employees. Therefore, middle managers' knowledge-sharing behavior would have an important role in the organization that would be relevant for the samples in this research. Additionally, the nature of the industry selected for this study was also appropriate since the blooming of the industry in current years in the country significantly demonstrates knowledge-sharing behavior. There are three categories of banks in the Myanmar banking sector: government banks, private banks, and foreign banks. Among them, government banks still follow the bureaucratic procedures and are difficult to assess. Foreign banks were allowed to operate beginning in 2015 and there are 13 foreign banks in Myanmar. However, they are not allowed to fully operate yet. Moreover, the foreign banks have opened only one branch each with few numbers of staff. Therefore, this category of bank was not considered in this survey. Of all the 678 branches of private banks all over the country, with more than 30,000 employees, this study focused only the employees at the top-five private banks in Yangon.

4.2 Method of Data Collection

The data collection was conducted using a self-administered questionnaire which was distributed to middle-level managers in private banks in Yangon, Myanmar within two months, from June to July, 2018. At the beginning of the survey, the researcher visited the banks, explained the purpose of the study, and requested cooperation in filling out the questionnaires. The data collection was carried out from survey data through primary and secondary sources.

In order to approach the banks, two introductory cover letters were prepared. The first one originated from the National Institute of Development Administration. References were made to outline and explain the purposes and scope of the study; and the other cover letter was from the researcher to request approval from authorized persons from each bank. The questionnaires were then distributed along with the two cover letters. Assurances were made that the information collected through the questionnaires would be kept confidential. For ethical purposes, respondents were requested to sign a document ensuring that they fully understood the nature of the research and that they would not be held liable for their responses.

4.3 Research Instrument

Self-administered questionnaires were chosen to use as the main survey instrument for the current study. The questionnaires were carefully designed in order to reduce any problems. The targeted respondents of this research were individuals from Myanmar where Myanmar is used as the main medium of communication and is the official language. In designing the questionnaires scaling techniques should be taken into consideration for measurement equivalence across cultures since translation equivalence can have impacts on the findings. There are many translation techniques for cross-culture research that involve different languages and some needed to be adopted in this study. Werner and Campbell (1970) mentioned some approaches, such as forward translation, back translation, committee translation, and so on (Brislin, 1970; Campbell, Brislin, Stewart, & Werner, 1970; Douglas & Craig, 2007; Triandis, 1972). For this study, back-to-back translation was the most suitable technique.

The original questions were initially written in English and they were translated into Myanmar and checked by a lecturer from the university who was not only bilingual but also had knowledge in the related field of study. This enabled her to check the translated technical terms. Since most international research requires back translation and follow-up discussion techniques, the translated Myanmar questionnaires in this study were re-translated into English with the help of a professor from an English department in Myanmar. Following that, modified variations of meanings and words were employed. Later, another bilingual lecturer in business and management studies reviewed the modified questionnaires in both Myanmar and English in order to check their content validity.

Most of the study questionnaires were based on previously-used scholarly questions and relevant statements were selected and used to fit the context. Initially 39 questions were developed for this research. The first part of the questionnaires concerned basic information about the respondents. The second part was intended to assess the social capital in the organizations, individual capability, and perception of knowledge sharing.

The questionnaires were in statement form, requesting the respondents to make a tick mark to indicate their level of agreement with each statement. The levels ranged from 1) Strongly disagree to 2) Disagree, 3) Neither disagree nor agree, 4) Agree, and 5) Strongly agree. This is known as a Likert scale and this is very popular and easy to administer. Most researchers use 5- or 7-point rating scales. In this study a five–point scale was used to be consistent with the majority of other studies.

4.4 Operationalization of Variables and Measurement

According to Babbie (2013), conceptualization means the process of the specification of the meaning of the particular terms used in the research study. Since the broad aim of a quantitative research study is to enable generalization of the findings in relation to the targeted population, clarity concerning the intended matter that needs to be assessed is essential. However, most concepts used in a specific study are only suitable for the purpose of that particular research study (Babbie, 2013). Therefore, all of the variables of the present study were defined to fit its purpose.

The independent variables in this study included organizational factors and individual characteristics, while knowledge-sharing intention and knowledge-sharing behavior served as the dependent variables.

4.4.1 Dependent Variables

Knowledge-sharing intention and knowledge-sharing behavior were measured as the dependent variables of this study. In knowledge sharing, there is the individual's intention to share knowledge and the actual sharing of the knowledge. Previous research has studied the relationship between knowledge-sharing intention and the knowledge-sharing behavior for different types of knowledge. Reychav and Weisberg (2010) for example studied the interrelation between intention and behavior to share tacit knowledge and found its importance for the firm's competitive advantage. Since the variables used in this study were trait-related factors that could not be directly observed, this study followed the commonly-used perceptual measures from previous validated studies.

4.4.1.1 Knowledge sharing intention

Knowledge-sharing intention was conceptualized as the willingness of individuals in an organization to share with others the knowledge they have acquired or created (Bock et al., 2005). In this study, the measures for the intention to share knowledge were adopted from Bock and Kim (2002) and Bock et al. (2005).

4.4.1.2 Knowledge-sharing behavior

Knowledge-sharing behavior is regarded as a set of individual behaviors where individuals share their work-related knowledge with other members within the organization, which can ultimately be effective for the organization (Yi, 2009). In terms of the knowledge-sharing behavior discussed in the present study, measures were adapted from previous studies and the constructs have been validated by many scholars (Ramayah et al., 2014; Yi, 2009). The constructs have been used in research in different countries, such as Turkey, Spain, Malaysia, India, the United Kingdom, Germany, and Sri Lanka, and also in different industries such as consumer goods companies, hotels, higher learning institutes, biotechnology industries, and the telecommunication industry. All of the constructs used in this study were based on upon previously-validated instruments.

4.4.2 Independent Variables

The independent variables comprised organizational factors that could be measured through social capital, such as social interaction, social trust, and shared language from Nahapiet and Ghoshal (1998); and individual capability such as absorptive capacity from Cohen and Levinthal (1990) was the individual factor used in this study.

4.4.2.1 Social Interaction

Social interaction can be conceptualized as the interaction between members through network ties. For the social interaction in this study, there were five questions using a five-point Likert scale adopted from Chang and Chuang (2011) measuring the proximity among the members, frequency and the length time spent in interacting, the strengths of the relations of members, and the channels of communication.

4.4.2.2 Social Trust

This study examines social trust in the organization. Social trust refers to the interpersonal facets of trust, such as the belief that members will help others out of difficulties, will not take advantage of others, are willing to help one to achieve collective goals, will not be harmful to their work and will help tackle thorny problems, and act in line with the objectives of the organization and be honest. Since trust is the basic foundation for knowledge sharing, it is believed that trust is the dimension of social capital that directly influences knowledge sharing.

Therefore, this study defined social trust as the belief that the organizational members will help each other with difficulties (Chow & Chan, 2008). Social trust was measured using seven items from Chang and Chuang (2011) and Chiu et al. (2006).

4.4.2.3 Shared Language

Shared language is the cognitive dimension of social capital that includes of mutual understanding among individuals in a social network. The measurement items for shared language questions were adopted from (Chang & Chuang, 2011) . Shared language can be measured in terms of the usage of common terms and jargon while communicating among members that have the same technical background to understand and communicate in an understandable manner.

4.4.2.4 Social Capital

Many other studies have used the dimensions of social capital as independent variables separately (Chang & Chuang, 2011; Chow & Chan, 2008); however, they can have a combined effect on knowledge sharing. He, Qiao, and Wei (2009) proposed the combined effect of social ties, shared goals, and social trust as second-order constructs and also Hau et al. (2013) adopted social capital as a second-order formative variable comprising social ties, shared goals, and social trust. In this study, the researcher used the social capital dimensions of social interaction, social trust, and shared language combined since it was not necessary to go the same changes in the three dimensions (Hau et al., 2013). Therefore, social capital here is treated as a second-order reflective construct comprising social interaction, social trust, and shared language.

4.4.2.5 Individual Capability

Absorptive capacity of individuals is one of the factors that have a potentially profound impact on the individual's behavior regarding knowledge sharing. Absorptive capacity is generally defined as one's ability to recognize, assimilate, and transform to form new knowledge (Cohen & Levinthal,1990). It is treated as the individual's capability to share knowledge in this study and was measured as the individual's the ability to absorb to learn new knowledge, possessing knowledge, and having previous experience and a level of expertise.

Table 4.2 Variables, Meaning, and Items

Variables	Meaning	Item	Adapted Sources
Social Interaction	The interaction among members through network ties	• Proximity • Length of spending time • Communication frequency • Strength of relationships • Channels of communication	• (Chang & Chuang, 2011; Chiu et al., 2006)
Social Trust	The belief that the organizational members will help each other with difficulties	• Belief in not taking advantage of others • Belief in keeping promises • Trustworthiness of sharing ideas and feelings • Feeling comfortable in depending on others • Respecting each other • Helping each other in difficult situations	• (Chang & Chuang, 2011; Chiu et al., 2006)
Shared Language	The mutual understanding among individuals in a social network	• Usage of common terms • Communicating in an understandable manner • Having the same technical background	• (Chang & Chuang, 2011; Chiu et al., 2006)

Table 4.2 (Continued)

Variables	Meaning	Item	Adapted Sources
Individual Capability	The ability to value, assimilate, and apply new knowledge	• Identifying, valuing, assimilating, applying new knowledge • Ability to learn new knowledge • Possess knowledge • Previous experience • Expertise level	• (Cohen and Levinthal, 1990)
Knowledge-Sharing Intention	The willingness of individuals in an organization to share with others the knowledge they have acquired or created	• Intend to share experience or know-how • Intend to provide knowledge at request • Willingness of employees to share tacit knowledge	• (Bock & Kim, 2002; Bock et al., 2005)
Knowledge-sharing behavior	Knowledge-sharing behavior is a set of individual behaviors involving sharing one's work-related knowledge and expertise with other members within one's organization.	• Share know-how with each other • Share informally • Share information upon request • Share frequently • Discussing views both in person and in virtual meetings	• (Bock & Kim, 2002; Bock et al., 2005)

4.5 Methods of Data Analysis and Procedures

4.5.1 Methods of Data Analysis

Upon the data completion from the questionnaire collected from both the pre-test and the main survey, Cronbach's alphas for each construct of the item measures used in the questionnaire were performed using SPSS in order to test the reliability of the measures. The descriptive statistics were obtained by using SPSS to analyze the respondents' profiles. Then the variables were tested the reliability of the measures and the validity that reflected the constructs using SEM (AMOS). After that, structural modeling was assessed in order to understand the relationships among the variables.

4.5.2 Data Analysis Procedure

Descriptive statistics were applied for the initial analysis of the study. After that confirmatory factor analysis was performed to establish the measurement model, and finally SEM path analysis for finding the structural model was then applied in accordance with the support of the findings from the factor analysis. For the data analysis, SPSS was used to enter the data and to analyze the descriptive statistics. SEM (AMOS) was used for the measurement model to test the construct validity and the structural model to examine the relationship between the independent variables and dependent variables.

Structural equation modeling is the second generation of multivariate analysis and is superior to first-generation multivariate analysis. It is a combination of factory analysis and multiple regression and is more powerful since it can test many relationships at one time (Hair et al., 2010). Further, SEM can test the overall model fit rather than testing coefficients individually. Finally SME has the ability to model mediating variables.

According to Hoyle (2005), SEM is a "comprehensive statistical approach to testing hypotheses about the relationships among observed and latent variables." Since this study included many exogenous variables and endogenous variables, it was suitable to employ SEM. It can provide an estimation of the simultaneous relationships among the multiple and interrelated variables (Ho, 2006). SEM is relevant to the interdependent nature of variables; that is, a variable can be of a

dependent nature in one relationship but can become an independent variable in the next relationship.

There is a two-step approach to SEM: the measurement model and the structural model (Hair et al., 1998). In the measurement model, confirmatory factor analysis was conducted to test the construct validation. In the structural model, the hypotheses were tested. This two-step approach maximizes the interpretability of both measurement and structural modes. When the results of the measurement model come out adequately, it can be assumed that the assessment of the hypothesized structural model will work well (Byrne, 2001).

Table 4.3 The Development of the Items in the Questionnaire

Section	Variables Names	Number of Items	Adapted Sources
1	Demographic Profile of Respondents	8	Researcher's own constructed items
2	Social Interaction	5	(Chang & Chuang, 2011; Chiu et al., 2006)
3	Social Trust	6	(Chang & Chuang, 2011; Chiu et al., 2006)
4	Shared Language	3	(Chang & Chuang, 2011; Chiu et al., 2006)
5	Individual Capability	6	(Cohen & Levinthal, 1990)
6	Knowledge-Sharing Intention	3	(Bock & Kim, 2002)
7	Knowledge-Sharing Behavior	7	(Bock & Kim, 2002; Bock et al., 2005)

4.5.3 Pre-Testing/Measure of Internal Consistency

After designing the questionnaires, they are used in the pre-test before conducting the main research. Pretesting is to test the questions on a small sample of respondents in order to detect and remove possible problems (Malhotra & Briks,

2007). Possible problems can occur due to misunderstanding the questions, skipping a series of questions, or misinterpreting the instructions for filling out the questionnaires (Zikmund, 2003), and if detected it can improve the questionnaire. After that, the questionnaire were tested and retested to make sure that the questions were reliable and valid measurements were applied. Babbie (2013) argues that it is not necessary for all pre-test respondents to be representative samples as long as the questionnaire is relevant to them. As Babbie (2013) suggested, the pre-test was implemented by distributing the questionnaires to 30 respondents that were middle level managers in banking industry and some academicians. The respondents were requested to complete the whole questionnaire and to provide any comments as well as to suggest any problems or misunderstandings they had in answering the item questions, wording, length of time taken to answer the questions, the format, the sequence of questions and difficulty.

After obtaining the pre-test data, a revision was made based on the comments obtained from the pre-test. Next, the researcher checked the completeness of all the questionnaires and cleaned the data. The SPSS program was used to run the frequency, descriptive, and scale reliability tests.

4.5.4 Statistical Treatment of the Data

The collected questionnaires were coded and recorded into the SPSS 19 program. After that the data-purification process was done by checking for missing data and removing outliers.

4.5.4.1 Handling Missing Data and Outliers

In survey research, there can be problems of missing data as not all the respondents answer every item or question on questionnaires. Even if it is a common problem in many studies, it should be taken into consideration carefully because misleading interpretations can occur (Schreiber, 2008). Therefore, it is important to examine missing data and to find ways to address the problem for further data analysis. Generally, three techniques are used to handle missing values: listwise deletion, pairwise deletion, and imputation. Listwise deletion totally deleted from the analysis even if the case has one piece of information missing, and therefore this technique will reduce the sample size significantly (Pallant, 2013). In the pairwise

deletion technique, a case will not be totally deleted. As long as certain values are existing for a particular analysis, the case will not be deleted regardless of missing values. The imputation technique calculate the mean value for the variable and inputted this value to every missing value. However, if the number of missing values is high, this technique should not be employed as it can distort the results (Pallant, 2013). Normally, missing data less than 10% of each case or observation can be ignored (Raymond & Roberts, 1987), and variables with 50% or more missing data should be deleted (Hair et al., 1998). In this study, there are only 3 cases found as missing values and deleted as pairwise deletion since it will not reduce the sample size significantly. For the structural equation modeling analysis, missing values were replaced with means to be able to perform modification of the model.

The outliers were removed using AMOS. The function of the Mahalanobis distance or the observations that were farthest from the centroid was used in removing outliers. The Mahalanobis distance can be used to detect the outlier dataset on the distance of observation to the average of all variables (Mahalanobis, 1936). Therefore, the datasets with $p < 0.05$ were removed (Bollen, 1990). After the data cleaning process, out of 297 samples, 275 were left for further analysis, which was above the required sample size of 275.

4.5.5 Internal Consistency and Validity

All multiple item measures require a "purification process" (Churchill, 1979). In order to ensure item purification, assessing the reliability and validity testing the proposed measures are required.

Moreover, the issues of validity and reliability of the instrument play one of the most significant roles in quantitative research (Babbie, 2013). Validity is "the extent to which any measuring instrument measures what is intended to measure," while reliability refers to "the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trials." Especially in social research, validity and reliability are important since the constructs in social theory are often ambiguous and sometimes not directly observable. Therefore, though a multi-item scale was newly developed or adopted from existing scales and was used in the present research, it was necessary to evaluate it for its reliability and validity.

4.5.5.1 Reliability Testing

Reliability concerns the tendency toward consistency of the results given by repeated measurements. Therefore, reliability refers to the scale's ability to provide consistent results. In order to assess reliability, the researcher examines item reliability, internal consistency, and construct reliability. This can be done by using confirmatory factor analysis, extracting factors with the examination of the correlation, factor loadings, and the communalities for each scale. Item reliability is to assess the reliability of a measurement item. This is the assessment of the items of a construct have acceptable fit on a single factor solution (Hair et al., 1998). Therefore, "squared multiple correlations" and "item-to-total" correlations were examined. Next, the reliability of the multi-item scales were assessed for internal consistency. Cronbach's alpha was checked for the internal consistency of the instrument. The alpha coefficient of reliability provides "a coefficient of inter-item correlations, that is, the correlation of each item with the sum of all the other relevant items" (Cohen, Monion, & Morrison, 2002, p. 148). For construct reliability, composite reliability and average variance extracted were applied. Composite reliability (CR) is the summation of all the indicator loadings of the construct divided by the composites (Bagozzi & Yi, 1988). Average variance extracted (AVE) refers to "the amount of variance captured by the construct in relation to the amount of variance due to measurement error" (Fornell & Larcker, 1981).

4.5.5.2 Validity Testing

There are different ways to assess validity, such as content validity, face validity, criterion-related validity, and construct validity. In the present study, the items and scales were used from previous studies and confirmed with a professor for content and face validation. Construct validity refers to "the extent to which a scale correctly measures what it is supposed to measure" (Churchill, 1979). It is required to examine the construct validity if there is no universal agreement or absolute acceptance for defining the constructs to be measured (Cronbach & Meehl, 1955). In this study, the construct validity of the instrument was examined using confirmatory factory analysis. The fundamental purpose of CFA is to test the construct validity of the instrument or measurement model (Hair et al., 1998). There are three types of construct validity: nomological validity, convergent validity, and discriminant

validity. Nomological validity can be used to test the correlations among the latent constructs. Convergent validity indicates how well the multi-items of a construct represent the concept. Three indicators—factor loadings, average variance extracted, and construct reliability—can be used to estimate the value of convergent validity.

Table 4.4 Statistical Analysis Plan

Hypothesis Statement	Statistical Treatment
Hypothesis 1: Social capital has a positive relationship with knowledge-sharing intention.	SEM
Hypothesis 2: Social capital has a positive relationship with knowledge-sharing behavior.	SEM
Hypothesis 3: Individual capability has a positive relationship with knowledge sharing.	SEM
Hypothesis 4: Individual capability has a positive relationship with knowledge-sharing behavior.	SEM
Hypothesis 5: Employees' intention to share tacit knowledge is positively related to tacit knowledge-sharing behavior.	SEM
Hypothesis 6: Knowledge-sharing intention mediates the relationship between social capital and knowledge-sharing behavior.	SEM
Hypothesis 7: Knowledge-sharing intention mediates the relationship between individual capability and knowledge-sharing behavior.	SEM

4.6 Chapter Summary

This chapter presented a detailed description of the research methods used in the study. Starting with a basic introduction of the research methods, the chapter described how this research was conducted by using a survey research design and how information was received from primary and secondary sources. The research was based on the quantitative method and the unit of analysis was middle-level managers from private banks in the Yangon area in Myanmar. The preparation of questionnaires and distribution to the sampled respondents were presented in detail. Additionally, determination of sample size and the operational definitions of the variables were also discussed. Moreover, the methods of the data analysis, such as the analysis procedures for using the structural equations modeling, pre-testing, and statistical treatment of the data were also included in detail. After discussing internal consistency and validity, the chapter ends with a statistical analysis plan. The next chapter will present the results of the reliability and validity of the measures by using confirmatory factor analysis, the measurement model assessment, and the results of the hypotheses by using structural model testing.

CHAPTER 5

RESEARCH RESULTS

After the data collection process, this research performed three analyses: a descriptive statistical analysis for summarizing the characteristics of the respondents; confirmatory factor analysis for assessing the reliability and construct validity, including both convergent and discriminate validity, and testing the hypotheses by using structural equation modeling. Therefore, this chapter presents the results of these analyses.

5.1 Characteristics of the Respondents

The respondents for this research were middle-level managers working in the top private banks in Yangon, Myanmar. The respondents' gender, age group, and educational level and work experience were asked about in the questionnaire. A total of 370 sets of questionnaires was distributed, and 297 responses were received, which was 80.27% of the response rate. After deleting unusable responses and removing the outliers by using Mahalanobis distance, there were 275 useable responses for further analyses. The remaining sample size was still acceptable for SEM analysis. Table 5.1 describes the characteristics of these respondents.

Table 5.1 Demographic Profile of the Respondents

Variable	Classification of Variable	Frequency	Percent
Gender	Male	77	28%
	Female	198	72%
	Total	**275**	**100%**
Age	20-29	88	32%
	30-39	119	43.3%
	40-49	69	21.5%
	50-59	9	3.3%
	More than 60	0	0
	Total	**275**	**100%**
Education Level	Bachelor	227	82.6%
	Master	48	17.4%
	Ph.D.	0	0%
	Total	**275**	**100%**

Out of the 275 samples, the majority—42.6%—ranged from 30 to 39 years of age and 32.6% were between the age 20 and 29 years; 22.5% were aged between 40 and 49 years, and 3.4% ranged from 50 to 59 years of age. According to the data, most of the middle-level managers were above 30 years of age in the banking industry in Myanmar.

In terms of gender, this study comprised 30.2% males and 69.8%. The number of males and females was disproportionate. This is common in the banking industry, especially in the Myanmar context where most of the banking staff are females.

When educational level was analyzed, it was found that the majority of the respondents held a bachelor's degree, which accounted for 82.6%, while 17.4% were master degree holders. Most mid-level managers' education level is a bachelor's degree in the business environment in Myanmar.

5.2 Descriptive Statistics

First of all, descriptive and correlation statistics were produced in order to examine the distribution of the variables and bivariate association between the observed items. A descriptive data analysis was carried out using the Statistical Package for the Social Science version 19.

A description of the characteristics of the six variables—social interaction, social trust, shared language, individual capability, knowledge-sharing intention, and knowledge-sharing behavior—is presented in Table 5.2.

Table 5.2 Descriptive Statistics of the Study Variables

Constructs	Observed Variables	Mean	S.D
Social Interaction	• SI1. I maintain close social relationships with the members in the organization.	3.95	0.7
	• SI2. I spend a lot of time interacting with some members in the organization.	3.21	0.9
	• SI3. I have frequent communication with some members in the organization.	3.97	0.58
	• SI4. I know some members in the organization on a personal level.	3.56	0.89
	• SI5. I usually interact and communicate with members from different departments in the organization.	3.66	0.78

Table 5.2 (Continued)

Constructs	Observed Variables	Mean	S.D
Social Trust	• ST1. I believe that the members in the organization will not take advantage of others even when the opportunity arises.	3.55	0.94
	• ST2. I believe that the members in the organization will always keep the promises they make to one another.	3.58	0.83
	• ST3. I feel that the members in the organization are truthful in sharing their ideas, feelings, and hopes.	3.27	0.86
	• ST4. If I have difficulties at work, I can freely talk to the organization members and I know that they will respond constructively and caringly.	3.81	0.73
Shared Language	• SL1. The members in my organization use common terms or jargon when sharing information.	3.91	0.7
	• SL2. The members in my organization communicate in an understandable manner to share information.	3.69	0.71
	• SL3. My colleagues have the same technical background in relation to the field of our work as I do.	3.54	0.72

Table 5.2 (Continued)

Constructs	Observed Variables	Mean	S.D
Individual Capability	• IC1. I had the required general knowledge on the job what I am currently working.	3.81	0.67
	• IC2. I have substantial work experience in related areas.	3.85	0.62
	• IC3. I have acquired some level of expertise in related areas.	4.1	0.53
Knowledge-Sharing Intention	• KSI1. I intend to share my experience or know-how from work with other organizational members in the future.	4.26	0.54
	• KSI2. I will provide my know-where or know-whom at the request of other organizational members.	4.25	0.59
	• KSI3. I will share my know-how from work with my co-workers.	3.99	0.61
Knowledge-Sharing Behavior	• KSB1. My colleagues in my organization share know-how from their work experience with each other.	3.76	0.73
	• KSB2. I share the information I have with my colleagues when they ask me to.	3.88	0.81
	• KSB3. I share expertise from my education or training with my co-workers.	3.92	0.67

Table 5.2 (Continued)

Constructs	Observed Variables	Mean	S.D
	• KSB4. In my organization, new content and knowledge are shared or posted frequently among members.	3.05	0.99

5.3 Statistical Assumption Testing

This study applied second-generation multivariate techniques, structural equation modeling. The assumptions of SEM include multivariate normality, absence of outliers, and linearity relationship among variables (Hair et al., 1998; Tabachnick et al., 2007). In order to know whether the basic assumptions were met, multivariate inferential analysis, such as normality and multicollinearity tests, were used initially.

5.3.1 Normality Test

In multivariate analysis, normality is the fundamental statistical assumption that needs to be examined. This refers to "the shape of the data distribution for an individual metric variable and its correspondence to the normal distribution" (Hair et al., 1998, p. 71). There are two measures that describe the shape of the distribution: skewness and kurtosis. Skewness indicates the balance of the distribution, while kurtosis refers to the flatness or peakedness of the distribution. Therefore, skewness and kurtosis were used to examine the normality of the data distribution in this study. The skewness and kurtosis statistics being within minus one to plus one confirmed an acceptable level of normality of the observed items. The results revealed that the assumptions of normality was not met; however, this is not an uncommon case since the research applied the maximum likelihood method (ML), which is accept to use for a modest violation of assumptions (Hoyle, 1995; Kline, 1998).

5.3.2 Multicollinearity Test

The next required assumption was multicollinearity. When independent variables are highly correlated, there will be cause multicollinearity issue. In order to check for multicollinearlity, the correlation matrix was identified. Hair et al. (1998) argued that the presence of a correlation of 0.8 and above indicates a multicollinearity problem. Table 5.3 shows the correlation matrix. The correlation matrix shows that the observed items also had a significant correlation among them. However, the correlations among the independent variables were below 0.8 and so multicollinearlity was not a problematic.

Table 5.3 Correlations of Variables

	N	Mean	S.D.	1	2	3	4
1. Social Capital	275	3.67	0.76	1			
2. Individual Capability	275	4.06	0.60	0.295**	1		
3. Knowledge-Sharing Intention	275	4.16	0.58	0.514**	0.454**	1	
4. Knowledge-Sharing Behavior	275	3.56	0.83	0.597*	0.329**	0.628**	1

Note: ** Correlation was significant at the 0.01 level (2-tailed)

* Correlation was significant at the 0.05 level (2-tailed)

5.4 Measurement of Reliability and Validity

After testing the statistical assumptions for the SEM and obtaining satisfactory results, the next step was to run the SEM analysis. According to Anderson and Gerbing (1988), a two-step approach was followed in this study. This approach is the measurement model to be estimated initially and fixed in the second stage when the structural model is estimated. Therefore, the first step was to assess reliability and construct validity, including both convergent and discriminate validity by using confirmatory factor analysis from the SPSS and SEM.

In order to assess the reliability of the measurement item, item-to total correlations was initially examined. If the correlations among variables were small, it

was unlikely that they shared common factors and items with low correlations were thus eliminated. Since all of the item- to total correlations were above 0.4, it means that every item had sufficient reliability.

Regarding the scale reliability, Cronbach's alpha was checked. The Cronbanch's alpha coefficient refers to the consistency of a scale. The Cronbach Alpha obtained from the SPSS provides "a coefficient of inter-item correlations, that is, the correlation of each item with the sum of all the other relevant items" (Cohen et al., 2007, p. 148). According to Tabachnick et al. (2007) and Hair et al. (1998), the alpha provides any covariance among items as a true score variance. The Cronbach's alpha with a value that is greater than 0.6 is acceptable (Malhotra & Birks, 2007) and some authors suggest that it should be 0.7 or higher (Hair et al., 1998). A commonly-acceptable Cronbrach's alpha value is as follows: $\alpha > 0.9$ = excellent, $0.8 > \alpha > 0.9$ = good, $0.8 > \alpha > 0.7$ = acceptable, $0.7 > \alpha > 0.6$ = questionable and $0.6 > \alpha > 0.5$ = poor (Cronbach, 1957). It was found that all of the coefficient alphas ranged from 0.731 to 0.849, which was above the minimum cutoff suggested by Nunnally and Bernstein (1994). The alpha values for all the variables of the instrument are presented in the following table.

Composite reliability (CR) and average variance extracted (AVE) were computed in order to assess construct reliability. Composite reliability can be computed as the sum of the squared standardized factor loadings for each construct divided by the sum of error variance terms for each construct plus the squared sum of factor loadings. The value higher than 0.7 indicates good reliability, meaning that all of the measured variables consistently belong to a single construct (Bagozzi & Yi, 2012; Hair et al., 1998). From the composite reliability and Cronbach's alpha values, internal consistency reliability can be assessed. Therefore, Cronbach's alpha was considered as the lower bound and composite reliability as the upper bound of the internal consistency reliability. All of the composite reliabilities for each of the constructs were above 0.7, which demonstrated good reliability.

In order to confirm the convergent validity, average variance extracted was computed. According to Bagozzi and Yi (1988), AVE values above 0.5 are desirable. The AVE can be calculated as the summation of all squared standardized factor loadings divided by the number of items. Almost all of the AVE values met the minimum values.

The assessment of discriminant validity can be evaluated by comparing the square root of the AVE of each construct by the value of the correlation estimate square between two constructs. The AVE values should be higher than their highest correlation with any other constructs from Fornell-Larcker criterion. The CFA results satisfied the discriminant validity.

When comparing the first-order construct and second-order construct for social capital, composite reliability of second-order construct for social capital comprising of SI, ST and SL yields 0.96 and AVE 0.5 appeared to be better than first-order constructs. The other two first order constructs, knowledge-sharing intention and knowledge-sharing behavior result 0.9 and 0.7 respectively which meets the threshold recommended by Bagozzi and Yi (2012). Table 5.4 presents a summary of the reliability and validity of the scales.

Table 5.4 Summary of the Reliability and Convergent Validity of the Scales or Variables of the Instrument

Factor	No. of Items	Cronbach's α	CR	AVE
Social Capital	12	0.818	0.97	0.5
Individual Capability	3	0.735	0.89	0.5
Knowledge-Sharing Intention	3	0.766	0.9	0.53
Knowledge-Sharing Behavior	4	0.7	0.7	0.4

5.5 Assessment of Measurement Model

When constructing the model in AMOS, the latent variables are represented by a circle whereas the manifest or observed variables are shown in rectangles. The arrows drawn from the latent variables to the manifest (observed) variables indicate the relationships among variables.

For assessing the measurement model fit, the confirmatory factor analysis was conducted using SEM. Assessment the reflective measurement models includes finding composite reliability to evaluate internal consistency, individual indicator reliability, and checking the outcome of average variance extracted (AVE) to evaluate convergent validity. The assessment of the reflective measurement models also includes discriminant validity.

First of all, from the confirmation factor analysis from SEM, the factor loadings were derived. Factor loadings are the correlations between the original variables and the factors, and are the key to understanding the nature of a particular factor (Hair et al., 1998). Factor loadings that are 0.50 or greater are considered significant whereas loadings greater than 0.30 are considered to meet the minimum level (Hair et al., 1998). Factor loadings that are less than 0.3 are considered to be not substantial (Kim & Mueller, 1978). Tabachnick and Fidell (2013) suggested that the acceptable cut-off value for factor loadings is above 0.32. It was found that some of the items in the present study had low factor loadings, which made for a poor fit of the original measurement model. Therefore, some of the items with very low loadings were deleted.

After completing the first step and knowing that the measurement model was operating adequately, the researcher can then have more confidence in the findings related to the assessment of the structural model (Byrne, 2001). This two-step approach has been recommended by many scholars (Anderson & Gerbing, 1988) as it can detect interpretational confounding in the presence of misspecification. Additionally, it can assess fundamental misclassifications of the measurement model. Moreover, the assessment of the structural model fit can be carried out as well. Finally, it can provide a framework for formal comparison of the substantive model of

interest with the most likely theoretical alternatives, and the second step is performing the hypothesis testing.

5.5.1 Social Capital

Social capital was theorized to consist of three sub-constructs: social interaction (SI), social trust (ST), and shared language (SL). In terms of social interaction, the standardized factor loadings are shown in the table. There are five items to measure social interaction. The factor loadings for social interaction ranged from 0.54 to 0.61. Cronbach's alpha yielded 0.741, which represented a sufficient consistency in the construct and implied that the measurement items could be combined.

Table 5.5 Scale Assessment and CFA Results for SI

Constructs and Items	Standardized Factor Loadings
Social Interaction (CR= 0.82 , AVE= 0.37)	
SI1: I maintain close social relationships with the members in the organization.	0.61
SI2: I spend a lot of time interacting with some members in the organization.	0.71
SI3: I have frequent communication with some members in the organization.	0.58
SI4: I know some members in the organization on a personal level.	0.54
SI5: I usually interact and communicate with members from different departments in the organization.	0.56

For social trust, the standardized factor loadings are shown in the table. There are four items to measure social trust. The factor loadings for social trust ranged from 0.748 to 0.806. Cronbach's alpha yielded 0.849, which represented a sufficient

consistency in representing the construct and implied that the measurement items could be combined.

Table 5.6 Scale Assessment and CFA Results for ST

Constructs and Items	Standardized Factor Loadings
Social Trust (CR=0.88, AVE=0.59)	
ST1: I believe that the members in the organization will not take advantage of others even when the opportunity arises.	0.748
ST2: I believe that the members in the organization will always keep the promises they make to one another.	0.78
ST3: I feel that the members in the organization are truthful in sharing ideas, feelings, and hopes.	0.806
ST4: Overall, I feel that I can trust my colleagues in the organization completely.	0.748

Regarding shared language, the standardized factor loadings are shown in the table. There are three items to measure shared language. The factor loadings for shared language ranged from 0.61 to 0.80. Cronbach's alpha yielded 0.749, which represented a sufficient consistency in the construct and implied that the measure items could be combined.

Table 5.7 Scale Assessment and CFA Results for SL

Constructs and Items	Standardized Factor Loadings
Shared Language (CR=0.86, AVE= 0.51)	
SL1: The members in my organization use common terms or jargon when sharing information.	0.72
SL2: The members in my organization communicate in an understandable manner to share information.	0.80
SL3: My colleagues have the same technical background in relation to the field of our work as I do.	0.61

Even though social trust and shared language achieved a satisfactory level of AVE, social interaction showed a moderate level of AVE. Therefore, the three items were treated as social capital. The scale of social capital involved three sub-scales: social interaction, social trust, and shared language. There were five items for social interactions, which were labeled as SI1, SI2, SI3, SI4, SI5. Social trust comprised four items, namely ST1, ST2, ST3, ST7, while shared language was labeled as SL1, SL2, and SL3.

After that one factor model and the hierarchical models were compared. From the comparison between the first-order CFA and the second-order CFA for social capital, the second order CFA was found to have a better model fit, with AVE= 0.5 and CR= 0.97. Therefore, this study used social capital as the second-order construct.

Table 5.8 Scale Assessment and CFA Results for SC

Constructs and Items	Standardized Factor Loadings
Social Capital (CR= 0.97, AVE=0.5)	
Social Interaction	0.53
Social Trust	0.63
Shared Language	0.91

Figure 5.1 presents the standardized estimates for the measurement model of social capital with 12 items reflecting social interaction, social trust, and shared language.

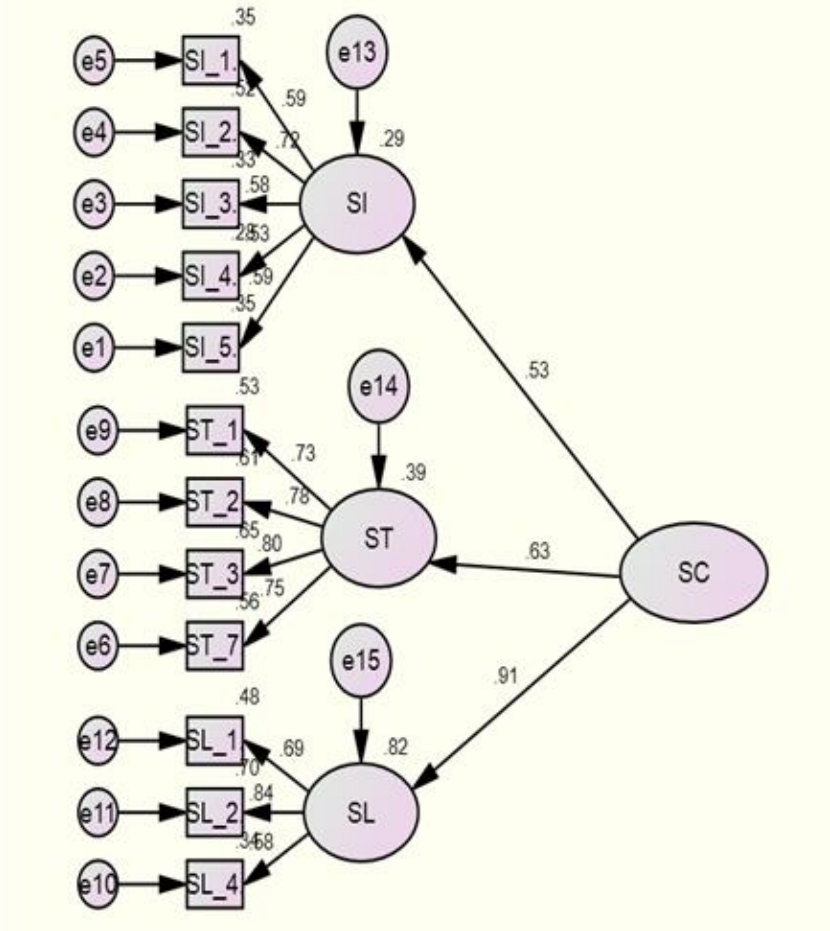

Figure 5.1 Measurement Model of Social Capital

5.5.2 Individual Capability

In terms of individual capability, the standardized factor loadings are shown in the table. There are three items to measure individual capability. The factor loadings for individual capability ranged from 0.67 to 0.75. The Cronbach's alpha yielded 0.735, which represented a sufficient consistency in the construct and implied that the measure items could be combined. Three items of individual capability were deleted as they had very low factor loadings and the following three items remained.

Table 5.9 Scale Assessment and CFA Results for Individual Capability

Constructs and Items	Standardized Factor Loadings
Individual Capability (CR= 0.89, AVE=0.5)	
IC1: I have the acquired general knowledge for the job I am currently doing.	0.67
IC2: I have substantial work experience in related areas.	0.75
IC3: I have acquired some level of expertise in related areas.	0.68

5.5.3 Knowledge-Sharing Intention

For knowledge-sharing intention, the standardized factor loadings are shown in the table. There are three items to measure knowledge-sharing intention. The factor loadings for knowledge-sharing intention ranged from 0.63 to 0.81. Cronbach's alpha yielded 0.766, which represented a sufficient consistency in the construct and implied that the measure items could be combined.

Table 5.10 Scale Assessment and CFA Results for Knowledge-Sharing Intention

Constructs and Items	Standardized Factor Loadings
Knowledge-Sharing Intention (CR= 0.9, AVE= 0.53)	
KSI1: I intend to share my experience or know-how from work with other organizational members in the future.	0.81
KSI2: I will provide my know-where or know-whom at the request of other organizational members.	0.72
KSI3: I will share my know-how from work with my co-workers.	0.63

5.5.4 Knowledge-Sharing Behavior

For knowledge-sharing behavior, the standardized factor loadings are shown in the table. There are four items to measure knowledge-sharing behavior. The factor loadings of knowledge-sharing behavior ranged from 0.5 to 0.61. Cronbach's alpha yielded 0.7, which represented a sufficient consistency in the construct and implied that the measure items could be combined.

Table 5.11 Scale Assessment and CFA Results for Knowledge-Sharing Behavior

Constructs and Items	Standardized Factor Loadings
Knowledge-sharing Behavior (CR= 0.7 , AVE=0. 4)	
KSB1: My colleagues in my organization share know-how from their work experience with each other.	0.61
KSB2: I share my expertise from my education or training with my co-workers.	0.53
KSB3: In my organization, new content and knowledge are shared or posted frequently among members.	0.5
KSB4: My co-workers discuss their views and provide responses during meetings and via social media in the organization.	0.56

5.5.5 Evaluation of Overall Model Fit

The two components of the SEM comprised the measurement model and structural model and both of the models needed to assess whether each of the models fit. In the measurement model, the latent variables or unobserved variables were set by at least two or more indicators or observed variables (Hoyle, 1995). By conducting a confirmatory factor analysis for this model, a pattern could be obtained by which each measured or observed variable loaded on a particular latent or unobserved variable (Hair et al., 1998). The structural model shows the relationships between the one latent variable with the other latent or unobserved variables. It also indicates the pattern with which the particular latent variable influenced the changes in the value of certain latent variables in the model and whether it directly or indirectly influenced changes. The path coefficient showed a significant level. According to the structural model, the model modification was carried by correlating the error terms. However, the need for modifications has to be meaningful and justifiable (MacCallum, 1995). In SEM (AMOS), and there were different goodness of fit measures that could be classified according to three types: absolute overall model fit, incremental fit, and parsimonious measure.

The absolute overall model fit basically compares the hypothesized model with no model at all. Chi-square (χ^2), the goodness of fit index (GFI), the root mean square residual (RMSR), and root mean square error of approximation (RMSEA) are the indicators for assessing the absolute overall model fit. CMIN or χ^2, represents the discrepancy between the unrestricted sample variance matrix and the restricted covariance matrix (Byrne, 2001) and is the most commonly-reported fit index (Breckler, 1990). The higher the probability associated with χ^2, the closer is the fit between the hypothesized model and a perfect fit (Byrne, 2001). According to Kline (1998), the value of χ^2/degree of freedom ratio should be less than 3. It has also been suggested that researchers have different acceptable ranges of χ^2/DF, which range from 2 to 5 (Byrne, 2001). However, χ^2 is sensitive to sample size and large samples are critical to obtaining precise parameter estimates and its values are not interpretable in a standardized way because χ^2 theoretically has no upper bound and its lower bound is always zero (Kline, 1998). Moreover, when the data are non-normal, the

results of significance tests tend to be significant too often and true models are likely to be rejected (Kline, 1998).

The goodness of fit index is a measure of the relative amount of variance and covariance explained by the model (Byrne, 2001). The value of GFI ranges from 0 to 1 and the value close to 1 indicates a good fit (Byrne, 2001).

The root mean square error of approximation takes into account the error of approximation and gives the error per degree of freedom of the fit of the population covariance matrix implied by the model to the population covariance matrix itself (Byrne, 2001). It has been used for large samples or a large number of observable variables and Hair et al. (1998) suggested that the lower the value, the better will be the fit. It has been indicated that a value less than 0.05 is a good fit, while values ranging from 0.1 to 0.08 indicate a mediocre fit and those greater than 0.1 indicate a poor fit (Byrne, 2001). According to (Ho, 2006), the values ranging between 0.05 and 0.08 are acceptable, and those between 0.08 and 0.10 indicate a moderate fit with the model.

The incremental fit measures compare the proposed model with another model specified by the researcher (Hair et al., 1998). The non-normed fit index, also known as the Tucker-Lewis index (TLI), takes the degree of freedom theoretically into account (Styles, 1998). It has the major advantage of reflecting model fit very well at all sample sizes (Bentler, 1990). Similarly, the comparative fit index (CFI) is the best index as it has small sampling variability and estimates the relative difference in non-centrality with a small bias. Both NNFI and CFI values close to 1 indicate a very good fit (Arbuckle & Wothke, 1999). The normed fit index (NFI) is interpreted in the same way as the CFI but may be less affected by sample size (Kline, 1998). All of the above mentioned values range from 0 to 1 (Byrne, 2001) and a value of 1 indicates a perfect fit (Arbuckle & Wothke, 1999). Generally, the incremental fit indices are acceptable when the values are greater than 0.9 (Ho, 2006).

According to theory, the measurement model is appropriate for conducting the final analysis when all of the values of the above-mentioned fit reach the acceptable levels. However, it is not necessary to report the entire set of the fit index (Byrne, 2001); only certain indicators are presented in the research. According to (Kline, 1998, p. 130) χ^2, GFI, NFI, CFI and NNFI (TLI). χ^2, p-value, CFI, RMSEA and

TLI are recommended to report. The CFI and RMSEA are the most frequently-reported fit indices (Hair et al., 1998). Hence, χ^2, GFI, TLI, CFI, NFI, and RMSEA were used as the goodness of fit indices in this study. The most commonly-used fix indices for large sample sizes that are greater than 250 and the number of observed variable more than or equal to 30 indicates acceptable at RMSEA <0.07 and CFI of 0.90 or higher (Hair et al., 1998).

Table 5.12 AMOS Indicators of Adequate Fit

Indicators	Hair et al. (1998)	Byrne (2001)
p-value (the probability of getting as large a discrepancy as occurred with the present sample)	Sensitive to the sample size	A high probability associated with χ^2
CMIN/DF (the minimum discrepancy divided by its degree of freedom)	The range of 1 to 2 is commonly accepted as an adequate fit. The range of 2 to 5 indicates a reasonable fit.	Not recommended to be used as an indicator
RMSEA (Root Mean Square Error of Approximation)	The value of about 0.05 or less is preferable; 0.08 or less is acceptable	Less than 0.05
NFI (Normed Fit Index)	Value close to 1	Between 0.95 and 1
CFI (Comparative Fit Index)	Value close to 1	Between 0.95 and 1
GFI (Goodness of Fit Index)	Value close to 1	Value close to 1
TLI (Tucker and Lewis Index)	Value close to 1	Between 0.95 and 1

5.5.6 Measurement Model for Fit Indices

The originally-proposed model included five items for social interaction, seven items for social trust, four items for shared language, six items for individual capability, three items for knowledge-sharing intention, and five items for knowledge-sharing behavior. When testing the original measurement model and a good fit with the data was not found—$\chi 2$ = 824.925 CMIN/DF = 2.279; NFI = 0.752; TLI = 0.822; CFI= 0.84; RMSEA = 0.068—compared with the suggested acceptable values. Thus, the poorly-fitting model was revised in order to obtain acceptable levels of the goodness-of-fit statistics. Some of the items were deleted and the remaining items and their loadings are shown in the respective tables. The revised model shows the results: $\chi 2$ = 354.43; CMIN/DF = 1.846; NFI = 0.849; TLI = 0.908; CFI= 0.923; RMSEA = 0.056. Finally, the revised model showed acceptable values of the model fit statistics, as suggested by several researchers. Therefore, the revised model was considered to be acceptable for conducting the final analysis. A comparison of the original and revised model fit statistics with the values is presented in Table 5.13.

Table 5.13 Comparisons of the Measurement Models

	Original		**Revised**	
	Original	**Revised**	**Revised 1**	**Revised 2**
Chi-square (χ^2)	824.925	416.28	377.966	354.430
Degree of Freedom	362	194	193	192
p-value	0	0	0	0
CMIN/DF	2.279	2.146	1.958	1.846
NFI	0.752	0.823	0.839	0.849
TLI	0.822	0.875	0.895	0.908
CFI	0.841	0.895	0.913	0.923
RMSEA	0.068	0.065	0.059	0.056

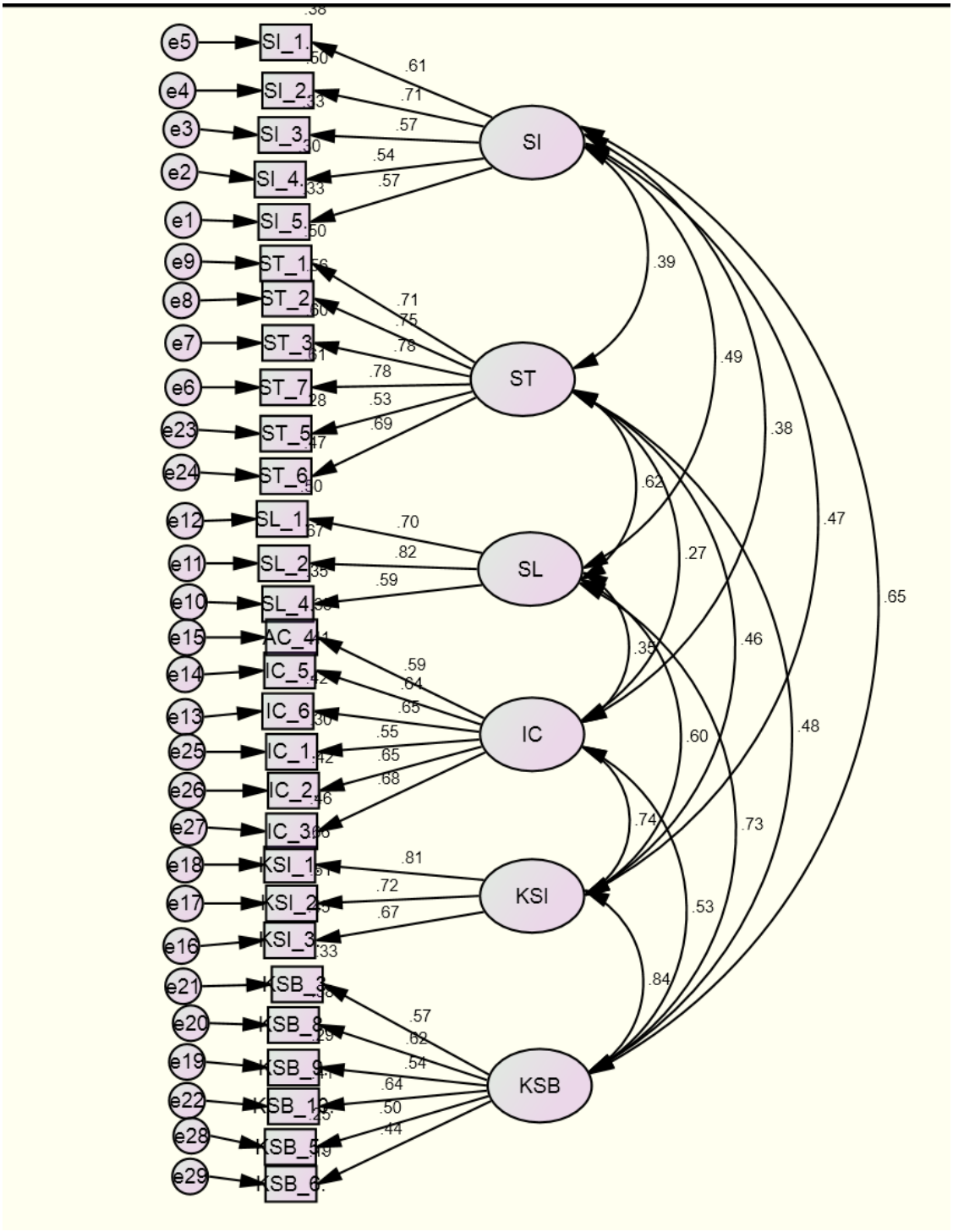

Figure 5.2 The Original Measurement Model

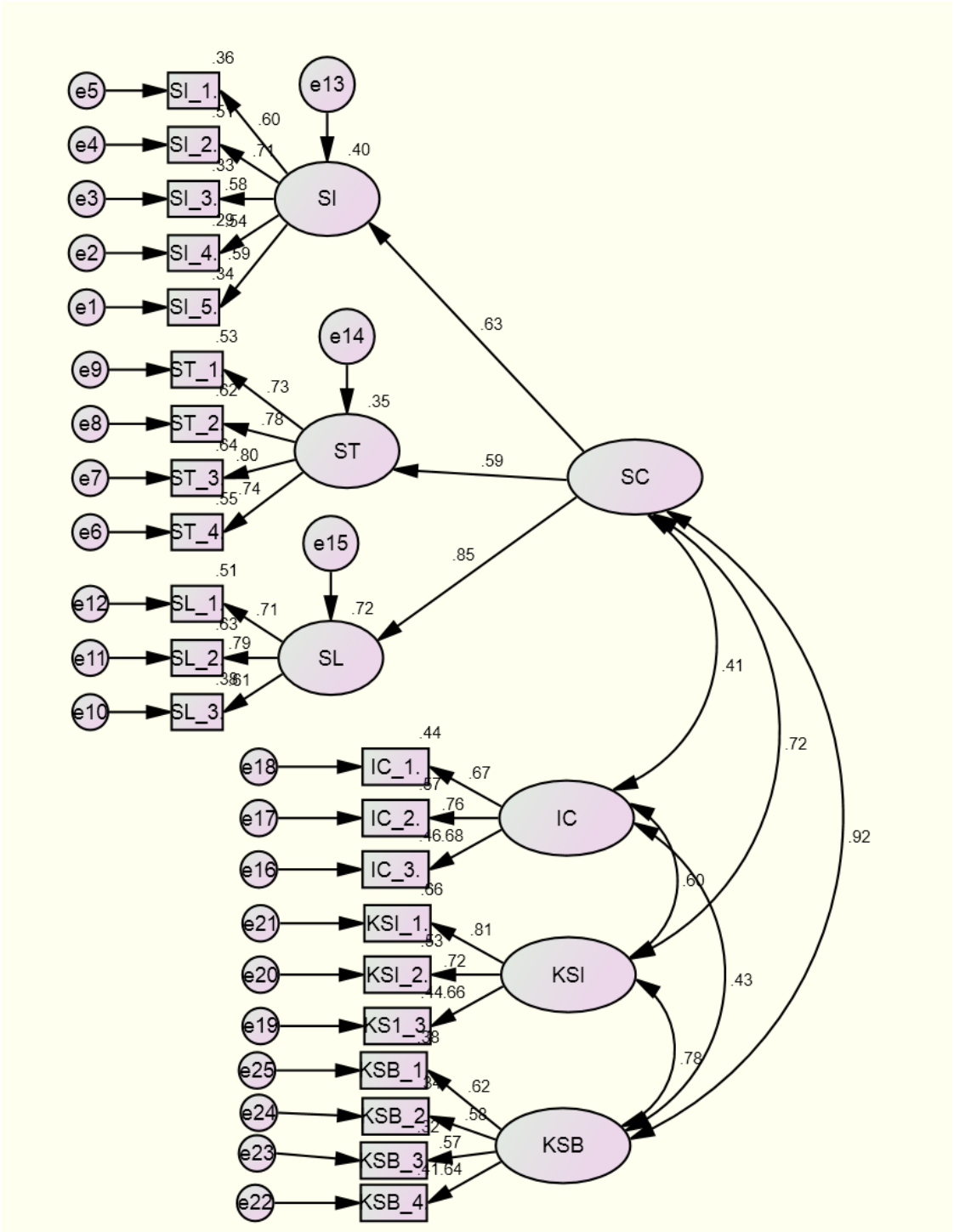

Figure 5.3 The Modified Measurement Model

5.6 Assessment of the Structural Model

The second step of the SEM analysis was to examine the proposed relationship of the social capital factors and individual capability factors in terms of knowledge-sharing intention and knowledge-sharing behavior and to explore the direct, indirect, and total effects of knowledge-sharing intention.

There was one second-order latent (or unobserved) variable, 6 first-order latent (or unobserved) variables, and 22 manifest (or observed) variables, which were hypothesized to be included in the model. The second-order latent variable was social capital, which was reflected by three first-order latent variables: social interaction, social trust, and shared language. The latent variable social interaction was reflected by five manifest variables (SI1, SI2, SI3, SI4, and SI5). Social trust was reflected by four manifest variables (ST1, ST2, ST3, and ST4), and shared language was reflected by three manifest variables (SL 1, SL2, and SL3).

The latent variable individual capability was reflected by three manifest variables (IC1, IC2, IC3), while knowledge-sharing intention (KSI1, KSI2, KSI3) was also reflected by three manifest variables. Knowledge-sharing behavior was reflected by four manifest variables (KSB1, KSB2, KSB3, and KSB4).

5.6.1 Hypothesized Model

In the SEM, a path diagram was used to show the relationships among those constructs and to test the hypothesized model. A path diagram can illustrate the causal relationships among the constructs. According to Hair et al. (1998), there are two assumptions that underlie path diagrams: the existence of relationships among constructs and the nature of the relationship can be assumed to be linear. Path analysis is also capable of exploring the specific direct, indirect, and total effects of each independent on the dependent variables. The direct effect shows the relationship between the independent variable and dependent variable. Moreover, as Hoyle (1995) suggests, if one of the dependent variables for direct effect in the model can be the independent variable in another direct effect, suggesting the possibility of indirect effect where the effect of an independent variable on a dependent variable through

one or more intervening or mediating variables. By adding the direct and indirect effect of the independent variables, the total effect can be obtained.

Figure 5.4 presents the hypothesized model of the study derived from the theoretical framework. In the theoretical framework, it was proposed that social capital comprises social interaction, social trust, and shared language. Social capital is related to knowledge-sharing intention and knowledge-sharing behavior. Individual capability also has a relationship with knowledge-sharing intention and knowledge-sharing behavior. Therefore, social capital and individual capability were hypothesized as exogenous variables as these variables were not influenced by other variables in the model. The other variables, namely knowledge-sharing intention and knowledge-sharing behavior, were assumed to be endogenous variables because they may interact with one other. The casual relationships among the variables or scales described above were examined through the model. Further, the mediation effect of knowledge-sharing intentions was tested.

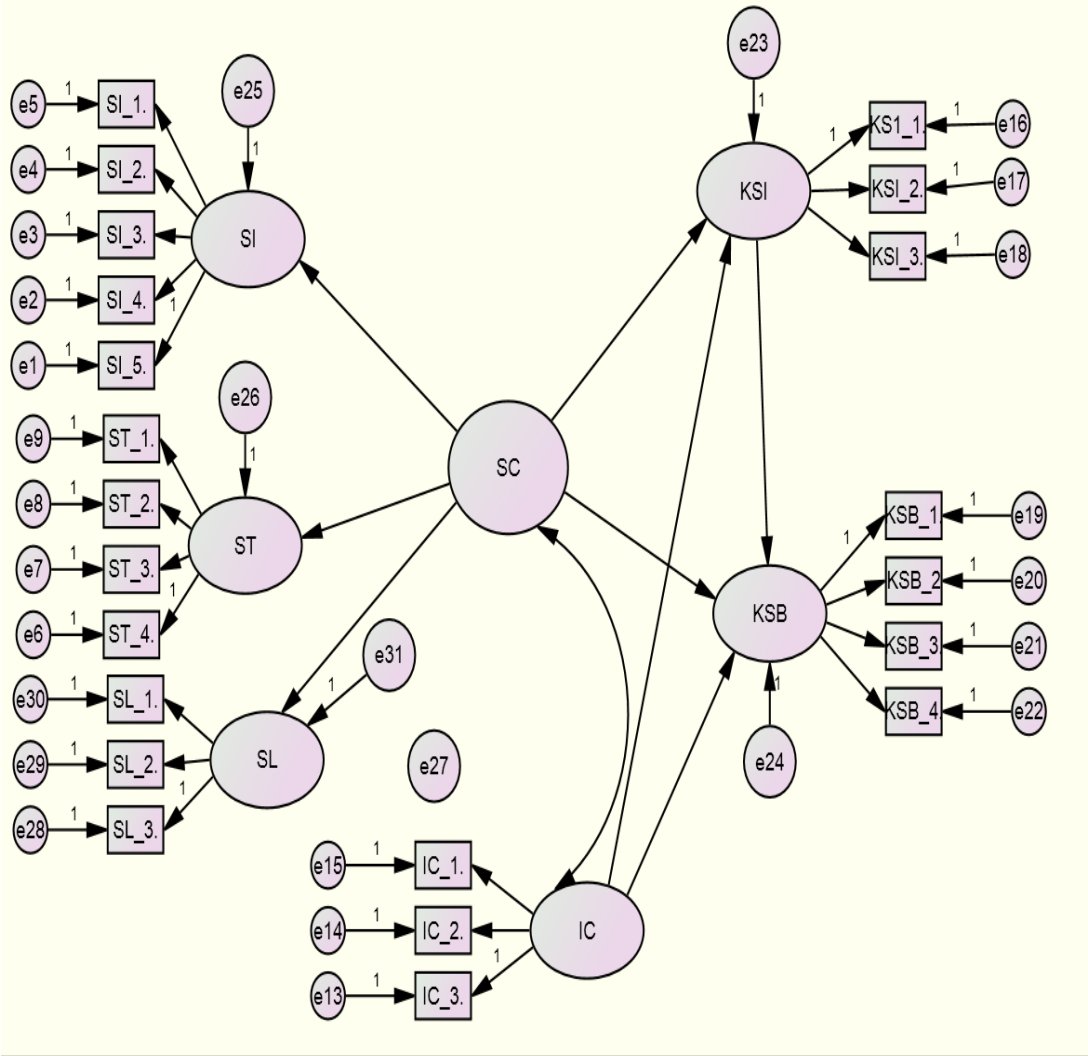

Figure 5.4 Hypothesized Model

5.6.2 Results of the Structural Model

The results of the structural model are presented in Table 5.14 and Figure 5.5. In the Table 5.14, the main outcomes and their predictors, and the evaluated fit indices, are presented. These indices involve the unstandardized estimates (b), standard errors (se), critical ratio (C.R) and the standardized estimates (β). At the significant level of 0.05, if the magnitude of C.R is higher than 1.96, it is considered to be significant; if the magnitude of C.R is higher than 2.58, it is considered to be significant at the level of 0.01. The significance level (*p*) values are also presented.

Table 5.14 Variables and Scales: Structural Model Results

Outcome	Predictor(s)	SE	C.R	*p*	β
Knowledge-Sharing Intention	Social Capital	0.117	5.609	***	0.590
	Individual Capability	0.094	4.494	***	0.362
Knowledge-Sharing Behavior	Social Capital	0.171	3.532	***	0.554
	Individual Capability	0.108	-1.281	0.2	-0.12
Knowledge-Sharing Behavior	Knowledge-Sharing Intention	0.161	3.717	***	0.607
Social Capital	Social Interaction	0.135	5.583	***	0.618
Social Capital	Social Trust	0.148	6.085	***	0.583
Social Capital	Shared Language				0.860

Note: p < 0.10+, p < 0.05*, p < 0.01**, p < 0.001***

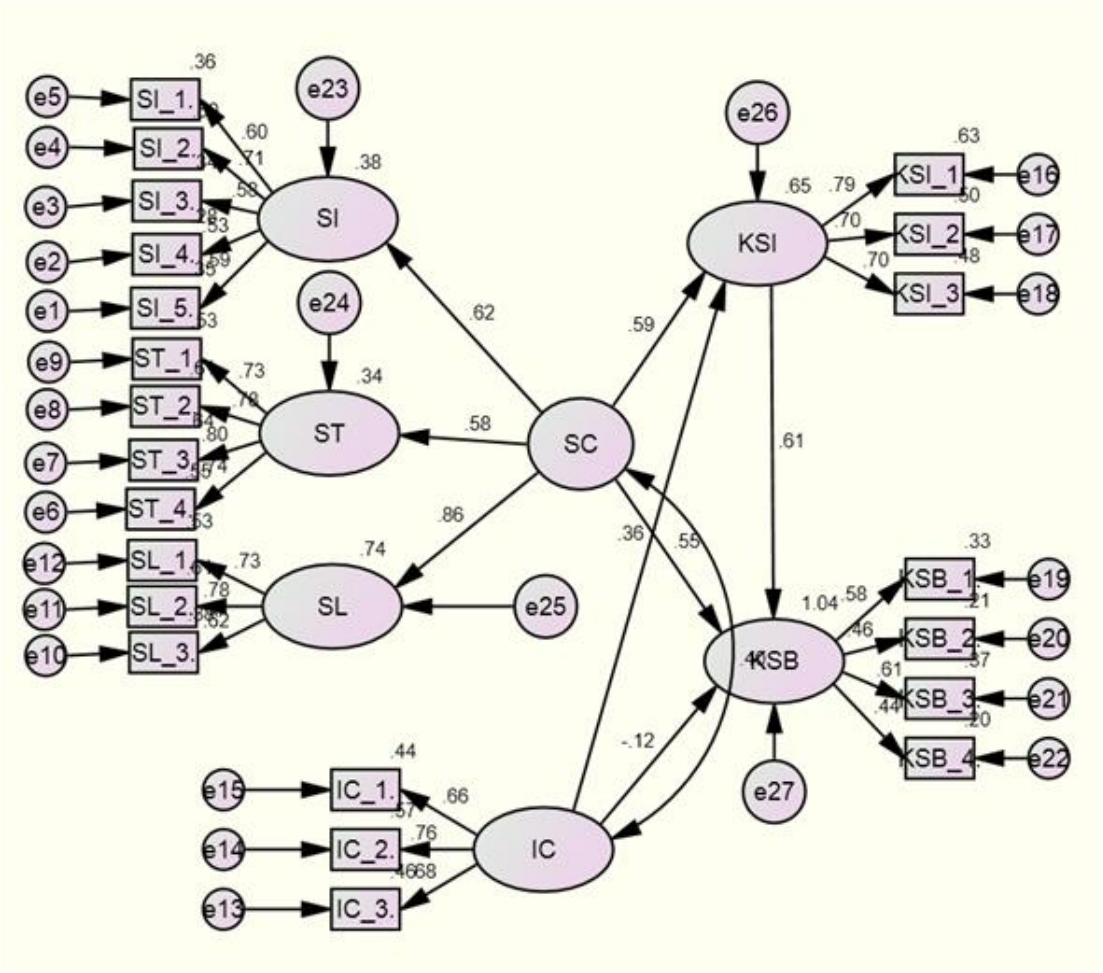

Figure 5.5 Results of the Hypotheses Testing

Table 5.15 Model Fit

Model	CMIN	DF	P-Value	CMIN/DF	GFI	TLI	CFI	RMSEA
Model Fit with Mediation Effect	395.52	200	0.000	1.978	0.885	0.89	0.903	0.060

5.6.2.1 Results of Direct Effects of the Structural Model

The structural model SEM analysis shows the following results for the hypotheses derived from Chapter 3. Two variables were found to have a direct effect on knowledge-sharing intention. There variables were social capital and individual capability. Additionally, these two variables had a direct effect on knowledge-sharing behavior.

In the first two hypotheses, the effect of social capital on both the attitudinal and behavioral elements of knowledge sharing was predicted, such as knowledge-sharing intention and knowledge-sharing behavior. In Hypothesis 1, it was postulated that a higher level of social capital would be positively and significantly associated with knowledge-sharing intention. As predicted, the results of the path analysis on AMOS indicated that there was a strong, significant relationship between social capital and knowledge-sharing intention ($\beta = 0.590$, $p < 0.001$), suggesting that social capital is vital for motivation knowledge sharing. Thus, the results supported H1.

Similarly, in Hypothesis 2, this study predicted that social capital would have a positive relationship with the behavior associated with knowledge sharing. Consistent with expectations, the results showed that social capital strongly and significantly influenced the behavior associated with knowledge sharing ($\beta = 0.554$, $p < 0.001$), thus providing support for Hypothesis 2.

Again this study predicted the effect of the individual capability factor, which is absorptive capacity, on both the intentional and behavioral outcomes of knowledge sharing. In Hypothesis 3, this study hypothesized that individual capability would have a positive relationship with knowledge-sharing intention. In line with the

prediction, the results revealed that individual capability had a significant positive relationship with knowledge-sharing intention (β =0.362, $p<0.001$). These results then provided support for H3.

As for the same effect on behavioral outcomes, in Hypothesis 4, this study maintained that individual capability would have a positive relationship with knowledge-sharing behavior. Contrary to the expectation, individual capability did not appear to have a significant relationship with knowledge-sharing behavior (β = -0.120, $p>0.01$). Hence, support for Hypothesis 4 was rejected.

Subsequent to the direct effect of the antecedent variables, such as social capital and individual capability, on the outcome variables, such as knowledge-sharing intention and behavior, the relationship between knowledge-sharing intention and behavior was further explored. In doing so, in Hypothesis 5, this study predicted that employees' intention to share their knowledge would be positively related to knowledge-sharing behavior. According to the path analysis results from AMOS, consistent with our prediction, the null hypothesis failed to be rejected because the relationship between knowledge-sharing intention and knowledge-sharing behavior was positively significantly weak (β= 0.607, $p< 0.001$). In other words, knowledge-sharing intention is important for knowledge-sharing behavior to take place, thereby supporting H5. The results obtained for all of the direct effects from the SEM analysis are presented in Table 5.16.

5.6.2.2 Results of the Indirect Effects of the Structural Model

In this structural model, knowledge-sharing intention can be seen as a mediating variable on knowledge-sharing behavior because in the previous analysis of the direct effects, it was indicated that social capital and individual capability significantly predicted the mediating variable, i.e. knowledge-sharing intention, thus providing support to continue further mediation tests for each model. In other words, social capital and individual capability can have an indirect effect on knowledge-sharing behavior through knowledge-sharing intention. In order to test the mediation effects, mediation analyses were conducted using antecedent variables such as social capital and individual capability as predictors of the mediating variables. The findings for the indirect effects were obtained by testing Hypotheses 6 and 7.

As for the indirect effect of knowledge-sharing intention on social capital and knowledge-sharing behavior, in Hypothesis 6, it was proposed that knowledge-sharing intention would mediate the relationship between social capital and knowledge-sharing behavior. The results indicated that social capital yielded a positive path coefficient for knowledge-sharing intention (β=0.590, $p < 0.001$) and there was a positive path coefficient from knowledge-sharing intention to knowledge-sharing behavior (β=0.607, $p < 0.1$). The indirect effect from social capital to knowledge-sharing behavior through knowledge-sharing intention then was 0.359 (0.590*0.607). Similarly, the direct effect of social capital on knowledge-sharing behavior was positive and significant (β =0.554, $p < 0.001$). Thus, when comparing the direct effect, i.e. β= 0.554, with the total effect, which was 0.913 (direct effect = 0.554+indirect effect = 0.359), the total effect was slightly higher than the direct effect (0.913Vs 0.554). Given the fact that both the direct and total effects showed a significant and total effect slightly higher than the direct effect, it can be concluded that knowledge-sharing intention serves as a partial mediator between social capital and knowledge-sharing behavior. Thus, Hypothesis 6 was partially supported. This implies that the stronger is the social capital in the organization, mediated by more knowledge-sharing intention of employees, the more will the knowledge-sharing behavior be achieved within the organization.

Subsequent analysis was performed in order to explore the indirect effect of knowledge-sharing intention between individual capability and knowledge-sharing behavior in Hypothesis 7 by postulating that knowledge-sharing intention mediates the relationship between individual capability and knowledge-sharing behavior. The results showed that individual capability yielded a positive path coefficient on knowledge-sharing intention (β=0.362, $p < 0.001$). A positive path coefficient from knowledge-sharing intention to knowledge-sharing behavior (β=0.607, $p <0.001$) was also detected. However, the relationship between individual capability and knowledge-sharing behavior was insignificant and negative (β =-0.120, $p< 0.1$). Overall, when comparing the direct effect (β =-0.120) with the total effect (direct effect (0.12) + indirect effect 0.219 = 0.099), the total effect of individual capability on knowledge-sharing behavior appeared to be higher than its direct effects (0.099 vs. -0.12). Therefore, it can be concluded that knowledge-sharing intention

fully mediates the relationship between individual capability and knowledge-sharing behavior. This indicates that the more capability that individuals have, mediated by greater knowledge-sharing intention, the more that knowledge-sharing behavior will be achieved within the organization. Overall, this evidence provides full support for Hypothesis 7. The results of the mediation analysis are presented in Table 5.16 and Table 5.17.

Table 5.16 Indirect Effect from Social Capital to Knowledge-Sharing Behavior

		Beta Estimate	**P-value**
Before Mediator (Direct Effect)	KSB ← SC	0.554	0.001
After Mediator (Indirect Effect)	KSI ← SC KSB← KSI	0.359	0.001
Total Effect		**0.913**	

Table 5.17 Indirect Effect from Individual Capability to Knowledge-Sharing Behavior

		Beta Estimate	**P-value**
Before Mediator (Direct Effect)	KSB ← IC	-0.12	0.2
After Mediator (Indirect Effect)	KSI ← IC KSB← KSI	0.219	0.001
Total Effect		**0.099**	

Table 5.18 Summary of the Hypotheses Results

Hypotheses	Accept/Reject
Hypothesis 1: Social capital has a positive relationship with knowledge-sharing intention.	**Support**
Hypothesis 2: Social capital has a positive relationship with knowledge-sharing behavior.	**Support**
Hypothesis 3: Individual capability has a positive relationship with knowledge-sharing intention.	**Support**
Hypothesis 4: Individual capability has a positive relationship with sharing behavior.	**Not Support**
Hypothesis 5: Employees' intention to share their tacit knowledge is positively related to tacit their knowledge-sharing behavior.	**Support**
Hypothesis 6: Knowledge-sharing intention mediates the relationship between social capital and knowledge-sharing behavior.	**Support**
Hypothesis 7: Knowledge-sharing intention mediates the relationship between individual capability and knowledge-sharing behavior.	**Support**

5.7 Chapter Summary

This chapter presented a detailed description and analysis of the data. The data have presented the characteristics of the respondents, which include gender, age, and educational level. Out of 370 questionnaires, 275 were useable for further analysis. A bivariate analysis of the data was also conducted for the independent and dependent variables included in this study, such as cross tabulation, and correlations were also presented. A structural equations model was employed to test the measurements of reliability and validity by using the measurement model, and the hypotheses were tested using structural model in AMOS. The measurement models assured the reliability and validity of the constructs used in this study, and from the structural model assessment, five out of seven hypotheses were accepted. The direct and indirect

effects of the determinants were also examined. Having tested the model fit and examined the significance of the model parameters, this chapter presented the important factors that have an impact on knowledge-sharing behavior. The next chapter will provide a thorough discussion and explain the results with the support of the theoretical perspectives, previous empirical findings, and contextual relevance.

CHAPTER 6

DISCUSSION AND RECOMMENDATIONS

In this chapter, the key findings and conclusions of the study are presented initially. Next, the summary of the findings in relation to the research objectives will be discussed. Then, based on the results of the data analysis, a discussion of the findings will be presented based on the previous studies mentioned in the literature review. This will be followed by recommendations for academicians on the theoretical, and for practitioners on practical, implications of the findings. Finally, this chapter will point out the limitations of the study and conclude with directions for future studies that could fill the gaps derived from the current study.

6.1 Conclusion

This research is a study of the causal relationships and identifying factors affecting knowledge-sharing behavior in Myanmar with two specific objectives. The first objective was to propose a model of knowledge-sharing behavior in private banks in Myanmar, and the second objective was to test the relationships among social capital, individual capability, knowledge-sharing intention, and knowledge-sharing behavior in Myanmar.

In order to achieve the objectives, this study was conducted using the quantitative method for which information was collected *via* survey data through primary and secondary sources. The data were collected using self-administered questionnaires distributed to middle-level managers at private banks in Yangon, Myanmar from June to July, 2018. Out of 350 distributed questionnaires, 297 sets were returned, out of which 275 sets were found to be complete for analysis. The questionnaire consisted of 36 questions. The data analysis was done using structural equation modeling. The first step of the analysis was evaluating the measurement

model by using confirmatory factor analysis, and the second step was concerned with testing the full structural model using SPSS 19 and AMOS 18.

There were two endogenous variables. The first one was knowledge-sharing intention, which consisted of three observed variables: the intention to share know-how, the intention to provide knowledge upon request, and the willingness to share knowledge. The second one was knowledge-sharing behavior, which consisted of five observed variables, which were sharing know-how with each other, sharing informally, sharing upon request, and sharing frequently, and sharing views both face to face and in virtual meetings.

In order to explore the effect of the exogenous variables, two exogenous variables were chosen. One was social capital, which consisted of three dimensions made up of social interaction, social trust, and shared language. For these dimensions, the observed variables were be comprised of five items for social interaction, six items for social trust, and three items for shared language. The other exogenous variable was individual capability, which was captured by five items.

After conducting the data analysis, the findings confirmed that there was a significant relationship between social capital and knowledge sharing as a whole, which is in line with many previous findings (Alder & Kwon, 2002; Chang & Chuang, 2011; Inkpen & Tsang, 2005). To be specific, social capital has a positive relationship with knowledge-sharing intention. This study also found that social capital has a significant relationship with not only knowledge-sharing intention but also with knowledge-sharing behavior. This research filled the gap in the findings of Hau et al. (2013) by extending knowledge-sharing behavior. For individual capability, there was a positive relationship with knowledge-sharing intention; however, it was found that there was no significant relationship between individual capability and knowledge-sharing behavior. Moreover, individual capability was seen to have an indirect relationship with knowledge-sharing behavior through knowledge-sharing intention. Therefore, the study found that knowledge-sharing intention plays not only a direct but also a mediating role as well in actual knowledge-sharing behavior.

6.2 Summary of the Findings

This study adapted the knowledge management literature, social capital theory, and absorptive capacity theory to examine the knowledge-sharing behavior of organizational members in the banking industry of a developing country, Myanmar. The findings were achieved from the middle-level managers in the context of private banks in Myanmar. The results of the findings supports the importance of social capital and individual capability in explaining knowledge-sharing behavior. The results validate the empirical links among social capital, individual capability, knowledge-sharing intention, and knowledge-sharing behavior in the Myanmar private banking sector context. Thus, the findings of this study extend the theories which had limited their attention to the factors influencing knowledge-sharing behavior, as well as provide useful managerial applications for private banks in Myanmar and policymakers in developing countries.

After performing a series of analyses in Chapter 5, the conceptual development in Chapter 3 was slightly restructured for model fit. The findings from the revised model are discussed in detail in this chapter.

There are organizational factors and individual factors that have an effect on knowledge sharing. The organizational factors will be taken into consideration from the perspective of social capital, while the individual factors will be looked according to the capability of individuals within the organization.

Regarding the relationship between social capital and knowledge sharing, the study found that there is a direct positive relationship between social capital and knowledge-sharing intention as well as knowledge-sharing behavior. Moreover, the relationship between individual capability and knowledge sharing reveals that individual capability has a significant relationship with knowledge-sharing intention but it does not have a significant relationship with knowledge-sharing behavior. Finally, the research found an indirect effect of knowledge-sharing intention between social capital and knowledge-sharing behavior, where knowledge sharing serves as a mediator to influence knowledge-sharing behavior. Further, the relationship between knowledge-sharing intention and actual knowledge-sharing behavior was seen to be significant. From the direct relationship between the independent variables (social

capital and individual capability) and the dependent variables (knowledge-sharing intention and knowledge-sharing behavior) in this study, it was found that six hypotheses were significantly supported at 0.01 confident intervals and one hypothesis was insignificant. A summary of the SEM results is shown in Table 6.1.

The SEM analysis has shown that social capital appears to be positively and significantly related to knowledge-sharing intention statistically. The results show that the higher the social capital within the organization, the greater is the commitment to knowledge-sharing intention. The second result of the analysis demonstrates that individual capability also has a positive significant relationship with knowledge-sharing intention statistically, which indicates that the more capability that the individual has, the more willing he or she is to share the knowledge. The third analysis has shown that social capital is an important construct that positively and significantly affects knowledge-sharing behavior statistically. The result posits that strong social capital increases the behavior to share knowledge. Finally, the analysis revealed that knowledge-sharing intention has a positive relationship with knowledge-sharing behavior. However, one analysis indicated that individual capability has an insignificant relationship with knowledge-sharing behavior.

Table 6.1 Summary Assessment of the Research Hypotheses

Hypothesis	C.R	β	Accept/ Reject
H1: Social capital has a positive relationship with knowledge-sharing intention.	**5.609**	**0.590 *** (S.E = 0.117)**	**Support**
H2: Social capital has a positive relationship with knowledge-sharing behavior.	**3.523**	**0.554*** (S.E = 0.171)**	**Support**
H3: Individual capability has a positive relationship with knowledge-sharing intention.	**4.494**	**0.362*** (S.E = 0.094)**	**Support**

Table 6.1 (Continued)

Hypothesis	C.R	β	Accept/ Reject
H4: Individual capability has a positive relationship with sharing behavior.	**-1.281**	**-0.120 (S.E = 0.108)**	**Not Support**
H5: Employees' intention to share tacit knowledge is positively related to tacit knowledge-sharing behavior.	**3.717**	**0.607*** (S.E = 0.161)**	**Support**
H6: Knowledge-sharing intention mediates the relationship between social capital and knowledge-sharing behavior.		**0.359***	**Support**
H7: Knowledge-sharing intention mediates the relationship between individual capability and knowledge-sharing behavior.		**0.219***	**Support**

Overall, this research confirms the role of social capital as a strong predictor of knowledge-sharing behavior. In this study, knowledge sharing involves knowledge-sharing intention and knowledge-sharing behavior. This research takes social capital as a second-order construct, consisting of social interaction, social trust, and shared language, which are the three dimensions of a structural, relational, and cognitive nature respectively. Social capital was studied and followed the work of Nahapiet and Ghoshal (1998) with three dimensions; namely, social interaction, social trust, and shared language. The individual capability construct was based on the concept of Cohen and Leviathan's (1990) absorptive capacity. The results of this study show that individual capability is also one of the predictors of knowledge-sharing intention.

6.3 Discussion of the Findings

The findings of this study support the importance of social capital factors (social interactions, social trust, and shared language), and individual capability in enhancing knowledge-sharing intention and knowledge-sharing behavior in the private banks in Myanmar. This section discusses the results of each hypothesis.

6.3.1 The Relationship between Social Capital and Knowledge-Sharing Intention

For the first hypothesis on the relationship between social capital and knowledge-sharing intention, the findings confirmed that there is a significant relationship between social capital and knowledge sharing, which is also in line with many previous findings (Adler & Kwon, 2002; Inkpen & Tsang, 2005). Specifically, social capital has a positive relationship with knowledge-sharing intention.

As originally expected, this study shows that there is a direct and significant relationship between social capital and knowledge-sharing intention. The findings support the argument that social capital, which is composed of social interaction, social trust, and shared language, directly influences knowledge-sharing intention (Chang & Chuang, 2011) . Therefore, the findings is consistent with previous studies from other countries (Hau et al., 2013). It is not surprising that the stronger is the social capital within the organization, such as more interaction among the organization's members, an increase in trust with each other, and having a common understanding of the organization's cognitive factors, the more employees are motivated and willing to share their knowledge. Being employees working in banks, the nature of the job requires the interaction and communication with others a great deal, and trust built using shared language.

This relationship between social capital and knowledge-sharing intention is the second strongest relationship in this study and it implies that social capital will have a great influence on the employee's knowledge-sharing intention. Additionally, in congruence with previous studies that utilized social capital as a second-order construct (Hau et al., 2013; Xing Zhang et al., 2017), the findings herein confirmed that social capital has an influence on knowledge-sharing intention.

6.3.2 The Relationship between Social Capital and Knowledge-Sharing Behavior

This study also found that social capital has a significant relationship not only with knowledge-sharing intention but also with knowledge-sharing behavior; this is an areas where the present study filled a gap in the research (Chang & Chusng, 2011; Hau et al., 2013). Consistent with previous studies (Yu et al., 2013), the results revealed that social capital has an influence on the individual's knowledge-sharing behavior.

This relationship demonstrated a strong relationship in this study, implying that if individuals are within the organizations and if the organizations have strong social capital factors, the employees may share their knowledge regardless of the intention, which can be usually found in the collective-culture countries or high-context culture countries. From the cultural perspective, Myanmar can be seen as a collective and high-context culture, so even if one does not have much willingness or intention to share knowledge, he or she may perform sharing behavior in order not to lose face. Similar findings have been found in other Asian countries, such as China and Taiwan regarding their high-cultural contexts (Ding, Liu, Huang, & Gu, 2017), indicating that individuals will share their knowledge since relationships play a more important role in affecting knowledge-sharing intention. Moreover, rejection someone's request is perceived as losing face (Cardon & Scott, 2003; Huang, Davison, & Gu, 2011), and employees might share knowledge with whoever asks them.

Further, some organizational cultures such as public organizations are strongly oriented by rules and norms and that can have a significant influence on knowledge-sharing behavior even though behavior is believed to be influenced by knowledge-sharing intention. Additionally, in the context of the banking industry, the organizational culture might be shaped by rules and norms that can lead directly to knowledge-sharing behavior.

6.3.3 The Relationship between Individual Capability and Knowledge-Sharing Intention

Apart from the social capital factor, this study also found the importance of individual capability in knowledge sharing. Based on the absorptive capability perspective, this study found that individuals who are perceived as both a source and a recipient of knowledge has intention to share knowledge. The findings showed that individual capability has a significant relationship with knowledge-sharing intention but the strength of the relationship is moderate. It can be seen that an individual that possesses knowledge, who has prior experience and who has the capability to share knowledge, has the intention to share his or her knowledge to some extent. The results reconfirm that individual capability has a direct association with knowledge-sharing intention, which is consistent with previous studies conducted in the U.S., the U.K., and the Netherlands. When individuals have confidence that they have the capacity to share knowledge, they also have the intention to share it (Castaneda et al., 2016).

However, this relationship was not seen to be so strong in this study since it took into consideration the barriers to knowledge-sharing factors. Regarding the individual's with absorptive capacity, it can be assumed as having individual capability may reluctant to share the knowledge because of some factors such as differences in experience and education levels and they may even fear that sharing may affect one's job security in Myanmar working environment. Riege (2005) discussed hoarding knowledge in lower- and middle-level managers and argued that those that hoard their knowledge intentionally perceived that their superiors in the organizations may not support the lower levels if the latter appear to be more knowledgeable than them. As Bandura (2001) argued, human behavior is partly self-generated and partly determined by environmental conditions, and this concept can be applied to the Myanmar environment. Individuals in Myanmar grew up in an authoritative regime for many decades and many of the organizational settings were very bureaucratic. However, many people's mindsets are still rooted in this setting. However, in the era of the current open the economic system, having a position is quite competitive. This is in line with the nature of the work environment of a developing country. Therefore, even though individuals have absorptive capacity, other sharing barrier factors may weaken their willingness and intention to share.

6.3.4 The Relationship between Individual Capability and Knowledge-Sharing Behavior

In this study, the findings revealed that there was no significant relationship between individual capability and knowledge-sharing behavior. This study showed that even though individuals have the capability to share knowledge, they will not share it unless they are willing to or intend to share. Individual capability is measured through prior knowledge and the experience of a person in assimilating and sharing and creating new knowledge. Generally speaking, the person with individual capability will be more of a knowledge source than a knowledge recipient. Even though they are in a position of being a recipient, they will not participate in sharing, which is in line with the high power distance culture in Myanmar. Hence, they will not share their capability alone without having the intention to do so. Therefore, this relationship is consistent with Ajzen (1991) theory of planned behavior. This is also congruent with the argument of (Castaneda et al., 2016), which posits that the reasons for not sharing is because employees think that they lack the ability to do so. This shows the confidence in one's ability in spite of his or her capacity.

6.3.5 The Relationship between Knowledge Sharing Intention and Knowledge-Sharing Behavior

The analysis results showed that knowledge-sharing intention and knowledge-sharing behavior had a strong relationship in this study, which is in line with previous studies (Abdillah et al., 2018; Ajzen, 1991; Reychav & Weisberg, 2010). Some of the previous studies indicated that knowledge-sharing intention has a direct positive relationship with the knowledge-sharing behavior (Abdillah et al., 2018; Al Qeisi & Al Zagheer, 2015; Reychav & Weisberg, 2010). However, some previous studies demonstrated weak relationships between knowledge-sharing intention and knowledge-sharing behavior (Chatzoglou & Vraimaki, 2009; Yang & Farn, 2009).

Many researchers have found that the intention to share knowledge is one of the critical success factors in knowledge management (Alazmi & Zairi, 2003). Therefore, the individual's intention to share knowledge is perceived as an indicator of the potential performance of knowledge management in the organizations. Therefore, this result confirms the fact that the intention to share knowledge has a

great deal of influence on actual knowledge-sharing behavior and hence this is true in the banking industry in Myanmar as well.

Flores, Antonsen, and Ekstedt (2014) also found the national culture to be a moderator and suggested that national culture has an impact on knowledge-sharing behavior and decision-making. From Flores et al. (2014) study, it was found that there is a strong relationship between culture value and knowledge-sharing behavior in the collective culture in Turkey. Since the Myanmar culture is a collective one, like other Asian countries, the reasons for knowledge-sharing intention are influenced by the national culture. Hassan et al. (2015) argued the culture as the moderating role in knowledge-sharing behavior. From the perspective of Hofstede's cultural dimension, many researchers have worked on knowledge-sharing behavior by using the individualism and power distance dimensions. After studying many countries' samples, it can be confirmed that the intention behavior relationship is also applicable in collective-culture countries such as Myanmar as well.

6.2.6 Indirect Effect of Knowledge-Sharing Behavior

Moreover, the study has found that knowledge-sharing intention plays a mediating role in actual knowledge-sharing behavior. Furthermore, the findings indicate that individual capability and knowledge-sharing intention promote knowledge-sharing behavior. Without intention, it would be very difficult for capability alone to exhibit the actual behavior of sharing knowledge.

Additionally, national cultural factors such as individualism vs. collectivism might also have an impact on individual knowledge-sharing behavior as well as organizational culture. Many researches have been conducted on knowledge sharing in different national cultures (Razmerita et al., 2016). Therefore, different national cultures might explain the variation in knowledge-sharing behavior. Even though individual capability was not seen to have a direct impact on knowledge-sharing behavior, it has an indirect influence through knowledge-sharing intention.

6.4 Recommendations and Implications of the Study

From this research, there are some useful implications for knowledge management practitioners and human resource managers in organizations, as well as academicians. The theoretical contributions will be discussed initially, followed by implications for practitioners.

Regarding the theoretical contributions, this research pointed out some interesting issues. First, this study advances the earlier work of Hau et al. (2013) by integrating knowledge-sharing behavior into the social capital-knowledge-sharing intention model, thereby expanding the view of social capital and its subsequent impact on both intention and behavior. By this means, this study also highlights knowledge-sharing intention as a mediating mechanism between social capital and knowledge-sharing behavior, i.e., a process that few studies have addressed.

Second, while prior scholars have focused on the independent effect of social capital dimensions on knowledge sharing, this research modeled social capital as a second-order construct and detected how social capital, which is made up of the three dimensions provided by Hau et al. (2013), as a whole, affects the knowledge-sharing process. This study shows that while an understanding of the independent effects of each dimension on knowledge sharing is essential, the treatment of the social capital concept as a whole may provide another important spotlight.

According to the literature, there are individual factors that have an influence on knowledge-sharing intention and behavior. However, individual capability has not been discussed along with the organizational factors in previous studies. Moreover, many studies focused on the influence of individual capability on knowledge sharing as a whole but not separately as knowledge-sharing intention and knowledge-sharing behavior.

This study also provides some managerial implications that could be useful for organizations. First, in terms of the occurrence of knowledge sharing within an organization, organizations may need to build stronger social capital among their members, which could ultimately lead to more knowledge sharing, which in turn could promote sustainable development and a competitive advantage. It is vital that practitioners, especially human resource managers, understand and develop social

capital to enhance their knowledge-sharing behavior. Since social capital is a key factor in knowledge sharing among employees in organizations, firms should try to strengthen their social capital by providing sufficient time, space, and situations for having an advantageous position for social interactions, and promote trusting relationships among colleagues and greater understanding among members. An understanding of the value of social capital and thereby directing effort towards its development could be the key to having a competitive advantage.

Moreover, the vital role of social capital for knowledge sharing might also tend to suggest that it would be beneficial for organizations when they can crystalize an atmosphere that could provide an opportunity for the sharing of knowledge among employees. Nonaka and Takeuchi (1995) discussed the concept of "Ba," which can be referred to as space. Ba can be thought of as shared space for emerging relationships. The space can be physical, such as meeting rooms at an office; dispersed space or virtual space, such as email or teleconferencing; or mental space, such as shared experiences, ideas or ideals or any combination of them. Therefore, organizations should provide opportunity for sharing in the work environment, such as providing big office meeting rooms, mini meeting rooms, meeting points, coffee corners, and even social media platforms for inter-organizational members.

Thirdly, the study also suggests that practitioners, especially human resource-related officers, should concentrate on recruiting personnel with capability from previous experience and that have the ability to absorb, assimilate, and replicate new knowledge. In order to motivate and increase the intention to share, organizations need to find out the potential capability of employees; individuals might have different backgrounds and experiences. For managers, they should find out the capabilities of their employees and use the appropriate tools to encourage them share their knowledge.

6.5 Limitations of the Study

Even though the results of this study provide compelling contributions to the knowledge sharing in Myanmar, there are a few limitations, as with all other research that need to be taken into consideration when generalizing the findings.

First, this study was conducted using cross-sectional data due to time and cost constraints. Since cross-sectional surveys cover a given time frame, it generally limits the justification of the causal inferences compared to a longitudinal study.

Secondly, from the perspective of the methodology used in this research, convenience sampling was used due to the difficulty during the data-collection process. Although probability sampling would have been the ideal, it is almost impossible to obtain random sampling in banks in Myanmar as the study area was only in the Yangon area and did not represent the total population of all the branches throughout Myanmar. Thus, it would be appropriate to be cautious in drawing conclusion regarding this study.

Thirdly, the study used self-reporting data gathered via questionnaires. The measurements used in this study were mostly subjective measures and it is usually difficult to obtain objective measures of knowledge-sharing behaviors. Most of the self-reporting measures depended upon the respondent's answer regarding his or her perceptual measures rather than on direct observation. Therefore, this fact might have made the study prone to social desirability bias.

Fourth, the knowledge-sharing intention and knowledge-sharing behavior investigated in this research were from only one country and one industry; however, they can vary across national cultures and organizational cultures and this may have limited the applicability of the findings to other countries or regions.

Moreover, some of the questionnaire items were deleted in order to improve the reliability and validity of their underlying theoretical contributions during the instrument purification process, which can lead to weakening of the justification of the construct.

The above-mentioned limitations of the present study could be perceived as a gap in the literature, which could provide a basis for future work in knowledge-sharing research. The next section highlights some suggestions for such research.

6.6 Suggestions for Further Study

First of all, the variables in this research, such as social capital, individual capability, knowledge-sharing intention, and knowledge-sharing behavior, change over time. Therefore, a longitudinal approach could be used to test the research model. A longitudinal exploration of the relationships might be helpful for identifying the precursors and other enabling factors for social capital.

Further development and testing of this research framework are necessary as well. Since in this study, after modification of the framework, social capital was treated as a second-order construct for SEM, however, little research has been conducted that approach for measuring the social capital. Moreover, the effectiveness of knowledge-sharing behavior may not only lie in social capital factors of the organizations but also in the organizational culture. Nevertheless, future research should investigate the research model using objective measures for knowledge-sharing behaviors to make the finding of the study more robust.

The study was conducted with middle-level managers that are working in the banking industry in Myanmar. In fact, the middle-level managers' knowledge-sharing behavior might be different from the senior level or entry levels in the organizations, and therefore future study can focus on different levels within the organization and explore the differences among the levels.

In addition, the model proposed in this study should be tested in other contexts in order to establish the generalizability of the research findings. This study examined only one industry, the banking sector in Myanmar. Tacit knowledge sharing can be more diverse than that presented in this study, depending on the nature of the work and so on. In addition, there are many multinational corporations entering the Myanmar market recently and those are expected to bring their knowledge and organizational culture along with their investment. Therefore, the results from these findings might be different from those of local organizations since most multinational corporations are from developed countries with different organizational cultures. Social capital and knowledge sharing can vary depending on the organizational culture. Hence, multi-industry research, and/or cross comparison studies with local

and multinationals, should be conducted to enable greater generalization of the findings.

Furthermore, the study was conducted on the banking industry in only one country, Myanmar; hence, it is difficult to generalize the findings to other cultural contexts. Future research should also be applied to national cultural values (Hofstede, 1997) different from those of Myanmar.

6.7 Chapter Summary

This chapter presents a summary of the research paper, including the objectives of the study and the means that were used to obtain the objectives, a literature review, the research methodology used, a summary of the findings, the limitations, and recommendations and suggestions for future research. By adopting knowledge management literature and social capital theory, the research was conducted to propose a model of knowledge-sharing behavior in private banks in Myanmar and to test the relationships of social capital, individual capability, knowledge-sharing intention, and knowledge-sharing behavior. Applying quantitative research methodology and testing the hypotheses showed that three out of the six hypotheses were significant: social capital had a positive relationship with knowledge-sharing intention, social capital had a positive relationship with knowledge-sharing behavior, individual capability had a positive relationship with knowledge-sharing intention, employees' intention to share knowledge was positively related to knowledge-sharing behavior, and knowledge-sharing intention mediated the relationship between individual capability and knowledge-sharing behavior.

The study results contribute to knowledge management practitioners and human resource managers. Having social capital in the organization enhances knowledge sharing so that firms should try to strengthen their social capital by providing sufficient time and space for more social interaction and increase trust and more language shared among members. Moreover, human resource practitioners should concentrate on recruiting personnel with capability from previous experience and that have the ability to absorb, assimilate, and replicate new knowledge. However, there are some limitations regarding the data, the methodology, and the context of the study which lead to the suggestion for future research.

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APPENDICES

APPENDIX A

LETTER OF APPROVAL

No. 0526.02/ 255

Graduate School of Public Administration
National Institute of Development
Administration (NIDA),
Bangkapi, Bangkok 10240

June 13, 2018

Topic: Request for dissertation study support from your company

Dear Sir/Madam,

Ms. Nang Sarm Siri, our Ph.D. candidate in Doctor of Philosophy Program in Development Administration (International Program), Graduate School of Public Administration, National Institute of Development Administration (NIDA) is now pursuing dissertation study with topic: "Factors Affecting on Knowledge Sharing Behavior:". This dissertation study is carried out under the supervision of Associate Professor Tippawan Lorsuwannarat.

The dissertation will be beneficial to academic and professional areas because it will help us understand the role social capital perspective that can lead to improve the employees' performance in Myanmar Context. Furthermore, the study can positively contribute to the building of social capital in organizations through a knowledge sharing process between employees in organizations when operating in developing countries. It is expected that it will help multinational organizations for effective human resource management and gain competitive advantage by contributing the importance of organizational social capital factors that have influence on employees' knowledge sharing in developing countries.

The Graduate School of Public Administration hopes to be granted your great support in information provision or otherwise for this dissertation study and the school would like to thank you in this occasion. If you need more information, please contact Ms. Nang Sarm Siri.

Thank you for your kind cooperation.

Yours sincerely,

Tippawan

Associate Professor Tippawan Lorsuwannarat, Ph.D.
Director
Ph.D. Program in Development Administration (International)
Graduate School of Public Administration
National Institute of Development Administration

APPENDIX B

QUESTIONNAIRE (ENGLISH VERSION)

Dear Respondent,

The researcher would like to request for your kind cooperation in responding to the following research questionnaire. This research is a part of the dissertation for the Degree of Doctor of Philosophy (Development Administration), School of Public Administration, National Institute of Development Administration (NIDA).

The questionnaire will take about 15 minutes of your time. Please follow all the instructions on each part and **answer all the questions** from your own actual experiences and opinions.

The data from this questionnaire will be kept confidential and used for academic purpose only. Please be assured that you will not be identified in any discussion of the findings. The data collected from the survey will be applied for my doctorate dissertation and subsequent publications.

Thank you for your kind cooperation and for devoting your valuable time to completing this questionnaire.

Researcher's Name and Contact Information:
Nang Sarm Siri
email: nssiri@gmail.com

Section A

Demographic Profile of Respondents

Direction: Please complete the following information about yourself by marking the checkmark a (√) in the blank.

Gender ☐ Male ☐ Female ☐ Others

Age ☐ 20-29 years ☐ 30-39 years

☐ 40-49 years ☐ 50-59 years

☐ 60-up years

What is your highest level of educational attainment?

☐ High school ☐ Bachelors

☐ Master ☐ Ph.D.

☐ Others

How long have you been working with your current organization?

☐ less than 1 year ☐ 1-3 years

☐ 3-5 years ☐ 5- 10 years

☐ More than 10 years

What level your current position in your current organization?

☐Top level Management

☐Middle level Management

☐Others (please specify)_____

How long have you been working in this industry?

☐ less than 1 year ☐ 5- 10 years

☐ 1 – 3 years ☐ More than 10 years

☐ 3 – 5 years

Have you been worked in other countries?

☐ Yes ☐ No

If "Yes", where did you work before?

☐ Asian Countries ☐ Western Countries/ Non-Asian countries

☐ Both

Section B

This section is concerned with the respondent's perception on social capital and knowledge sharing behavior within organizations. Please answer the following statements by circling in appropriate number (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree).

No.		**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
		1	**2**	**3**	**4**	**5**
	Social Interaction					
1.	I maintain close social relationships with members in the organization.	1	2	3	4	5
2.	I spend a lot of time interacting with some members in the organization.	1	2	3	4	5
3.	I have frequent communication with some members in the organization.	1	2	3	4	5
4.	I know some members in the organization on a personal level.	1	2	3	4	5
5.	I usually interact and communicate with members from different department in the organization.	1	2	3	4	5

No.	Social Trust	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	I believe that members in the organization will not take advantage of others even when the opportunity arises.	1	2	3	4	5
2.	I believe that members in the organization will always keep the promises they make to one another.	1	2	3	4	5
3.	I feel members in the organization are truthful in sharing ideas, feelings and hopes.	1	2	3	4	5
4.	In my organization, most people, even those who are not close friends, trust and respect each other as a coworker.	1	2	3	4	5
5.	If I have difficulties at work, I can freely talk to the organization members and I know that they would respond constructively and caringly.	1	2	3	4	5
7.	Overall, I feel that I can trust my colleagues from the organization completely.	1	2	3	4	5

No.	Shared Language	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	Members in my organization use common terms or jargons when sharing information.	1	2	3	4	5
2.	Members in my organization communicate in an understandable manner to share information.	1	2	3	4	5
3.	My colleagues have the same technical background in relation to the field of our work as I do.	1	2	3	4	5

No.	Individual Capacity	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	I easily identify what new knowledge is most valuable to me.	1	2	3	4	5
2.	It is important for me to learn the knowledge related to my work.	1	2	3	4	5
3.	I have competence to absorb to learn the new knowledge.	1	2	3	4	5
4.	I had the required general knowledge on the job I am currently working.	1	2	3	4	5
5.	I had substantial working experience in related areas.	1	2	3	4	5
6.	I acquired some level of expertise in related areas.	1	2	3	4	5

No.	Knowledge Sharing Intention	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	I intend to share my experience or know-how from work with other organizational members in the future.	1	2	3	4	5
2.	I will provide my know-where or know-whom at the request of other organizational members.	1	2	3	4	5
3.	I will share know-how from work with my co-workers.	1	2	3	4	5

No.	Knowledge Sharing Behavior	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	My colleagues in my organization share know-how from work experience with each other.	1	2	3	4	5
2.	I share the information I have with colleagues when they ask me to.	1	2	3	4	5
3.	I share expertise from education or training with my co-workers.	1	2	3	4	5
4.	In my organization, new content and knowledge are shared or posted frequently among members.	1	2	3	4	5
5.	My co-workers are discussing their views and providing responses during meeting and social media in the organization	1	2	3	4	5

Thank you for completing the survey. The result of this survey will be depicted in a summary report. If you would like a copy of this report, please provide us with the following information:

Name	Email

APPENDIX C

QUESTIONNAIRE (MYANMAR VERSION)

အပိုင်း (က)

ဖြေကြားသူ၏ နောက်ခံ အချက်အလက်များ

ညွှန်ကြားချက် ။ ။သင့်အကြောင်းနှင့် ပတ်သက်သော အချက်အလက်များကို (√) ဖြင့်မှတ်၍ ကွက်လပ်တွင် ဖြည့်ပေးပါ။

ကျား/မ ☐ ကျား ☐ မ ☐ အခြား

အသက် ☐ ၂၀ -၂၉ နှစ် ☐ ၃၀ - ၃၉ နှစ်

☐ ၄၀ - ၄၉ နှစ် ☐ ၅၀ - ၅၉ နှစ်

☐ ၆၀ နှစ် နှင့် အထက်

သင်၏ အမြင့်ဆုံး ပညာအရည်အချင်း

☐ အထက်တန်း ☐ တက္ကသိုလ်တစ်ခုခုမှ ဘွဲ့

☐ မဟာတန်း ☐ ပါရဂူ

☐ အခြား

ယခုလက်ရှိ အဖွဲ့ အစည်းတွင် လုပ်ကိုင်နေသည်မှာ မည်မျှကြာပြီလဲ

_____နှစ်

လက်ရှိအဖွဲ့ အစည်းတွင် သင်၏ရာထူးအဆင့်

☐ထိပ်တန်းစီမံခန့် ခွဲမှုအဆင့်

☐အလယ်အလတ်စီမံခန့် ခွဲမှုအဆင့်

☐အခြား (ရာထူးအတိအကျဖြေပေးပါ)_____

ယခုလုပ်ငန်းကဏ္ဍတွင် လုပ်ကိုင်နေသည်မှာ မည်မျှကြာပါပြီလဲ

☐ တစ်နှစ်အောက် ☐ ၁နှစ် - ၃ နှစ်

☐ ၃နှစ် - ၅ နှစ် ☐၅ နှစ် - ၁၀ နှစ်

☐ ၁၀ နှစ် အထက်

အခြားနိုင်ငံများတွင် လုပ်ကိုင်ဖူးပါသလား

☐ လုပ်ဖူးပါသည် ☐ မလုပ်ဖူးပါ

လုပ်ကိုင်ဖူးလျှင် မည်သည့်နိုင်ငံတွင် လုပ်ဖူးပါသလဲ

□ အာရှနိုင်ငံများ □ အနောက်နိုင်ငံများ/ အာရှမဟုတ်သောနိုင်ငံများ

□ နှစ်ခုစလုံး

အပိုင်း (ခ)

ဤအပိုင်းသည် ဖြေဆိုသူ လုပ်ကိုင်နေသည့် အဖွဲ့ အစည်းအတွင်းနှင့် အသိအမြင်ဗဟုသုတ ဖလှယ်ပေးမှုမှုများအပေါ် ထင်မြင်ချက်နှင့် သက်ဆိုင်ပါသည်။ စာကြောင်းတစ်ခုစီနှင့် အသက်ဆိုင်ဆုံးနံပါတ်ကို ဝိုင်းပေးပါ။

1 = လုံးဝသဘောမတူပါ

2 = သဘောမတူပါ

3 = သဘောတူသည်လည်းမဟုတ် မတူသည်လည်းမဟုတ်

4 = သဘောတူပါသည်

5 = လုံးဝ သဘောတူပါသည်

	လူမှုရေးဆိုင်ရာ ကူးလူး ဆက်ဆံမှု (Social Interaction)					
1.	ကျွန်ုပ်သည် အဖွဲ့ အစည်းအတွင်း ရှိအခြားသူများနှင့် ဆက်ဆံရာတွင် နီးကပ်သော လူမှုဆက်ဆံရေး ရှိပါသည်။	1	2	3	4	5
2.	ကျွန်ုပ်သည် အဖွဲ့ အစည်း အတွင်းရှိ အခြားသူများနှင့် အချိန်ပမာဏ များစွာသုံး၍ ကူးလူး ဆက်ဆံမှု ပြုလုပ်ပါသည်။	1	2	3	4	5
3.	ကျွန်ုပ်သည် အဖွဲ့ အစည်းအတွင်း ရှိအခြားသူများနှင့် မကြာခဏ ပြောဆို ဆက်ဆံမှုရှိပါသည်။	1	2	3	4	5
4.	ကျွန်ုပ်သည် အဖွဲ့ အစည်းအတွင်း အချို့ သူများ နှင့် ပုဂ္ဂိုလ်ရေး ရင်းနှီး ပါသည်။	1	2	3	4	5
5.	ကျွန်ုပ်သည် အဖွဲ့ အစည်းအတွင်းရှိ အခြားဌာန များမှဝန်ထမ်းများနှင့် မကြာခဏဆိုသလိုကူးလူး ဆက်ဆံ ဆက်သွယ်မှုများ ရှိပါသည်။	1	2	3	4	5

1 = လုံးဝသဘောမတူပါ

2 = သဘောမတူပါ

3 = သဘောတူသည်လည်းမဟုတ် မတူသည်လည်းမဟုတ်

4 = သဘောတူပါသည်

5 = လုံးဝ သဘောတူပါသည်

	လူမှုရေးဆိုင်ရာ ယုံကြည်မှု (Social Trust)					
1.	အဖွဲ့အစည်းအတွင်း ရှိသူများသည် တစ်ဦးနှင့်တစ်ဦး ကိုယ်ကျိုးစီးပွား အတွက် အကျိုးအမြတ်မထုတ်ဟု ကျွန်ုပ် ယုံကြည်ပါသည်။	1	2	3	4	5
2.	အဖွဲ့အစည်း အတွင်းရှိ သူများသည် တစ်ယောက်နှင့်တစ်ယောက် ကတိပေးပြီးလျှင် ကတိကဝတ် စောင့်ထိန်းမည်ဟု ကျွန်ုပ် ယုံကြည် ပါသည်။	1	2	3	4	5
3.	အဖွဲ့အစည်းအတွင်း ရှိသူများသည် အမြင်ချင်း ဖလှယ်ခြင်း ခံစားချက် များနှင့် မျှော်လင့်ချက်များ ထုတ်ဖော်ရာတွင် လိမ်ညာမှုမရှိဘဲ အမှန် အတိုင်း ထုတ်ဖော်ကြသည်ဟု ခံစားရပါသည်။	1	2	3	4	5
4.	ကျွန်ုပ်၏ အဖွဲ့အစည်း တွင်အလွန်ခင်မင်ရင်းနှီး သူများမဟုတ်သည့်တိုင်အောင် အများစုမှာ လုပ်ဖော်ကိုင်ဖက်အဖြစ် ယုံကြည်မှု၊ လေးစားမှု ရှိပါ သည်။	1	2	3	4	5
5.	အကယ်၍ ကျွန်ုပ်သည် လုပ်ငန်းခွင်အတွင်း အခက်အခဲရှိလာပါက အချင်း ချင်း ပွင့်လင်းစွာ ပြောဆိုနိုင်ပြီး ၎င်းတို့ သည် အပြုသဘောဖြင့် ဂရုတစိုက် ပြန်လည်တုန့် ပြန်မည် ဖြစ်သည်။	1	2	3	4	5
6.	ခြုံငုံပြောရလျှင် အဖွဲ့ အစည်းအတွင်းရှိ လုပ်ဖော်ကိုင်ဖက်များကို လုံးဝ ယုံကြည်နိုင်သည် ဟု ခံစားရပါသည်။	1	2	3	4	5

	အချင်းချင်း ဆက်ဆံရာတွင်နားလည် နိုင်သော ဘာသာစကား အသုံးပြုမှု (Shared Language)					
1.	အဖွဲ့အစည်း အတွင်းရှိသူများသည် သတင်းအချက်အလက်များ မျှဝေရာတွင် မိမိလုပ်ငန်းနယ်ပယ်တွင် အသုံးများသော စကားအခေါ်အဝေါ် များကို သုံးပါသည်။(ဥပမာ ဘဏ်လုပ်ငန်းဆိုင်ရာအသုံးအနှုန်းများ Credit line, NPL etc)	1	2	3	4	5
2.	အဖွဲ့အစည်း အတွင်းရှိသူများသည် သတင်းအချက်အလက်များ မျှဝေရာတွင် နားလည်မှုရှိစွာ လုပ်ဆောင်ကြပါသည်၊	1	2	3	4	5
3.	ကျွန်ုပ်၏လုပ်ဖော်ကိုင်ဖက်များသည် ကျွန်ုပ်နှင့် လုပ်ငန်းဆိုင်ရာ နည်း စနစ် ကျွမ်းကျင်မှု အခြေခံချင်း တူညီပါသည်။	1	2	3	4	5

	အသိအမြင်ဗဟုသုတ ဖလှယ်ဝေမျှခြင်းဆိုင်ရာအပြုအမူများ (Knowledge Sharing Behavior)					
1.	အဖွဲ့ အစည်းအတွင်း လုပ်ဖော်ကိုင်ဖက် များသည် မိမိတို့ ၏ တတ်ကျွမ်းသော လုပ်ငန်းပိုင်း အတွေ့ အကြုံများ ကိုအချင်းချင်း မျှဝေကြပါသည်။	1	2	3	4	5
2.	လုပ်ဖော်ကိုင်ဖက်များ မေးမြန်းလာလျှင် ကျွန်ုပ်သည် သတင်းအချက်အလက်များကို ဖြန့် ဝေပါသည်။	1	2	3	4	5
3.	ကျွန်ုပ်သည် သင်တန်းများမှရရှိသော ပညာရပ်များကို လုပ်ဖော်ကိုင်ဖက်များအား မျှဝေပါသည်။	1	2	3	4	5
4.	အဖွဲ့ အစည်းတွင် ပညာရပ်ဗဟုသုတ အသစ်များကို အချင်းချင်းမျှဝေခြင်း၊ စာတမ်းများကို ဘုတ်တွင် ကပ်ထားပေးခြင်း မကြာခဏ ထားရှိပါသည်။	1	2	3	4	5
5.	အဖွဲ့ အစည်းအတွင်း လုပ်ဖော်ကိုင်ဖက်များသည် ၄င်းတို့ ၏ ထင်မြင်ချက်၊ တုန့် ပြန်ချက်များကို အစည်းဝေးများ၊ လူမှုကွန်ယက်များတွင် ဆွေးနွေးတင်ပြကြပါသည်။	1	2	3	4	5

ဖြေကြားမှု အတွက် ကျေးဇူး အထူးတင်ပါသည်။

1 = လုံးဝသဘောမတူပါ

2 = သဘောမတူပါ

3 = သဘောတူသည်လည်းမဟုတ် မတူသည်လည်းမဟုတ်

4 = သဘောတူပါသည်

5 = လုံးဝ သဘောတူပါသည်

	အသိအမြင်ဗဟုသုတ ဖလှယ်ဝေမျှနိုင်သောစွမ်းရည် (Absorptive and sharing capability)					
1.	ကျွန်ုပ်အတွက် မည်သည့်အသိပညာ ဗဟုသုတ အသစ်သည် တန်ဖိုး အရှိဆုံး ဖြစ်ကြောင်းကို ကောင်းစွာသတ်မှတ်နိုင်ပါသည်။	1	2	3	4	5
2.	ကျွန်ုပ်၏လုပ်ငန်းနှင့် ပတ်သက်သော အသိပညာ ဗဟုသုတများကို လေ့လာမှတ်သား ရန် အရေးကြီးပါသည်။	1	2	3	4	5
3.	အသိပညာဗဟုသုတ အသစ်များကို လေ့လာ မှတ်သားနိုင်ရန် ကျွန်ုပ် တတ်နိုင်စွမ်း ပါသည်။	1	2	3	4	5
4.	ယခုလက်ရှိ လုပ်ကိုင်နေသော လုပ်ငန်းနှင့် ပတ်သက်၍ လုံလောက်သော အထွေထွေ အသိပညာ ဗဟုသုတများ ကျွန်ုပ်တွင် ရှိပါသည်။	1	2	3	4	5
5.	ယခုလုပ်ငန်းနှင့် ဆက်နွယ်သော အရေးကြီးသော လုပ်ငန်း အတွေ့ အကြုံများ ကျွန်ုပ်တွင် ရှိပါသည်။	1	2	3	4	5
6.	ကျွန်ုပ်၏ လုပ်ငန်းနှင့် သက်ဆိုင်ရာနယ်ပယ်တွင် သင့်တင့်လျောက်ပတ်သော ကျွမ်းကျင်မှုကို ရရှိခဲ့ပါသည်။	1	2	3	4	5

	အသိအမြင်ဗဟုသုတ ဖလှယ်ဝေမျှခြင်းဆိုင်ရာရည်ရွယ်ချက်များ (Knowledge Sharing Intention)					
1.	အဖွဲ့အစည်း အတွင်းရှိသူများသည် သတင်းအချက်အလက်များ မျှဝေရာတွင် မိမိလုပ်ငန်းနယ်ပယ်တွင် အသုံးများသော စကားအခေါ်အဝေါ် များကို သုံးပါသည်။(ဥပမာ ဘဏ်လုပ်ငန်းဆိုင်ရာအသုံးအနှုန်းများ Credit line, NPL etc)	1	2	3	4	5
2.	အဖွဲ့အစည်း အတွင်းရှိသူများသည် သတင်းအချက်အလက်များ မျှဝေရာတွင် နားလည်မှုရှိစွာ လုပ်ဆောင်ကြပါသည်၊	1	2	3	4	5
3.	ကျွန်ုပ်၏လုပ်ဖော်ကိုင်ဖက်များသည် ကျွန်ုပ်နှင့် လုပ်ငန်းဆိုင်ရာ နည်း စနစ် ကျွမ်းကျင်မှု အခြေခံချင်း တူညီပါသည်။	1	2	3	4	5

	အသိအမြင်ဗဟုသုတ ဖလှယ်ဝေမျှခြင်းဆိုင်ရာအပြုအမူများ (Knowledge Sharing Behavior)					
1.	အဖွဲ့ အစည်းအတွင်း လုပ်ဖော်ကိုင်ဖက် များသည် မိမိတို့ ၏ တတ်ကျွမ်းသော လုပ်ငန်းပိုင်း အတွေ့ အကြုံများကိုအချင်းချင်း မျှဝေကြပါသည်။	1	2	3	4	5
2.	လုပ်ဖော်ကိုင်ဖက်များ မေးမြန်းလာလျှင် ကျွန်ုပ်သည် သတင်းအချက်အလက်များကို ဖြန့် ဝေပါသည်။	1	2	3	4	5
3.	ကျွန်ုပ်သည် သင်တန်းများမှရရှိသော ပညာရပ်များကို လုပ်ဖော်ကိုင်ဖက်များအား မျှဝေပါသည်။	1	2	3	4	5
4.	အဖွဲ့ အစည်းတွင် ပညာရပ်ဗဟုသုတ အသစ်များကို အချင်းချင်းမျှဝေခြင်း၊ စာတမ်းများကို ဘုတ်တွင် ကပ်ထားပေးခြင်း မကြာခဏ ထားရှိပါသည်။	1	2	3	4	5
5.	အဖွဲ့ အစည်းအတွင်း လုပ်ဖော်ကိုင်ဖက်များသည် ၄င်းတို့ ၏ ထင်မြင်ချက်၊ တုန့် ပြန်ချက်များကို အစည်းဝေးများ၊ လူမှုကွန်ယက်များတွင် ဆွေးနွေးတင်ပြကြပါသည်။	1	2	3	4	5

ဖြေကြားမှု အတွက် ကျေးဇူး အထူးတင်ပါသည်။

BIOGRAPHY

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