

EXPLORING KNOWLEDGE SHARING AND KNOWLEDGE HIDING OF  
SKILLED EMPLOYEES IN A SMALL CHINESE MANUFACTURING FAMILY  
BUSINESS

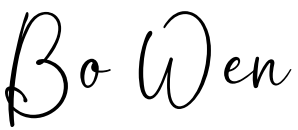
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A thesis submitted in partial fulfilment of the requirements of  
Liverpool John Moores University for the degree of Doctor of  
Philosophy

May 2022

## DECLARATION

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning. Any viewpoints expressed in this thesis represent the author's opinions rather than those of Liverpool John Moores University. The thesis has not been published or written by another person, except where due reference is made in the thesis itself.

SIGNED: 

DATE: 11/10/2022

## ACKNOWLEDGEMENTS

My PhD journey and the current thesis would not have been completed without the diligent support and long-standing encouragement from others. Foremost, I would like to express my most tremendous gratitude to my current and previous lead supervisors: Dr Scott Foster and Dr Aileen Lawless, for their incredible supervision and knowledge sharing. They were dedicated to guiding my research area and methods, which inspired my potential from research skills and theoretical concepts. They encouraged and cultivated me from a novice PhD student to an independent researcher and Doctor, especially when I felt depressed and hopeless during the pandemic. Second, I would like to give my sincere thanks to my supervisors: Dr Deborah Humphreys and Dr Khalid Abbas. Dr Deborah Humphreys provided me with abundant guidance on qualitative research philosophy and methods. Her outstanding qualitative research experiences helped me avoid repeated and unforeseen situations during my whole PhD journey. I also appreciate Dr Khalid Abbas's wholehearted dedication in terms of teaching guidance in 3is and the thought provocation of the knowledge-sharing field. I felt happy to have him in my supervisory team last year of my PhD. In all, there are no more words for me to convey my sincere gratitude to my dear four supervisors. I feel honoured to have them as my supervisors.

I am willing to express my warmest thanks to my colleagues at Liverpool Business School. They gave unconditional support to me. I am particularly grateful to Dr Jane Dowson, Dr Andrew Wilson and Miss Sophie Reeves-Morris for their limitless and kind help over four years. They shared their expertise regarding Nvivo application, research methodology and data collection and analysis methods with me. Noteworthy, I am highly appreciative of Dr Andrew Wilson for critical review and feedback on the thesis at the neared-completing time. Additionally, I am thankful for my close friends at Liverpool Business and Law School, Mr. Elhadi Eltweri and Miss Wen Li. They encouraged me to move forward when I felt burnout.

Last but not least, I would like to give my most significant acknowledgement to my mother. She provided selfless financial funding and spiritual encouragement to underpin me to complete PhD in the UK. A PhD is not only my ambition but also my mother's dream. The Chinese meaning of Bo, my first name, is Doctor. Hence, I am glad to achieve the dreams of both of us.

## ABSTRACT

When it comes to the knowledge management field, knowledge resource, particularly tacit knowledge, is a primary contributing factor to the survival of the small family business. However, a limited amount of knowledge management and family business literature has simultaneously investigated knowledge sharing and hiding behaviours. Self-determination theory (SDT) is an extensively applied theory to probe knowledge sharing behaviour through diverse individual motivations but few in knowledge hiding areas. Therefore, this study explores knowledge sharing and hiding behaviours concurrently in the small Chinese manufacturing family business based on SDT.

This thesis employs an interpretivism philosophy, and data was collected by multi-methods of document analysis and semi-structured interviews from twenty-two participants in a single case-study company. The case study was a typical case of the methodology of the single case-study selection. The success of the selected company depended on the employees' knowledge innovation, and the local government accredited it as 'provincially-excellent learning organisation' due to its training and learning programmes. The participants were selected by the owner-manager and human resource (HR) manager utilising a purposive sampling technique. Data was analysed through template analysis, and three themes arose from the key concepts in the literature, and five sub-themes were sourced from the final template: 'perceptions of tacit knowledge', 'methods of knowledge sharing and hiding', and 'reasons for sharing and hiding'.

The findings highlighted that the tacit knowledge of the skilled employees had distinctively experience-based characteristics. This knowledge was often shared through formal and informal approaches, whereas it was hidden through playing-dumb and rationalised methods. The occurrence of knowledge sharing and hiding was mainly driven by diverse corporate characteristics and individual motivations, even if some reasons for both behaviours were the same (intimate rapports) or correlated (trust and distrust; confidence and fears of being replaced by others). The key findings from the data suggested that knowledge hiding was mainly triggered by the unfair issues between the family and non-family employees.

The study makes three valuable theoretical contributions to family business and knowledge management literature. It contributes to extending understanding of the knowledge sharing



and hiding behaviours in the context of the small family business. This project helps address a gap in the knowledge management literature by investigating a new conceptualisation of the simultaneous enactment of knowledge sharing and hiding in business settings. Through analysing the findings, it has developed a framework to understand knowledge sharing and hiding simultaneously. The study extends an in-depth understanding of knowledge sharing and hiding behaviours simultaneously through exploring different types of motivations and the processes of motivational quality changes and external-regulation internalisation based on SDT. Through analysing the corporate context of the small family business and individual motivations, the findings have the opportunities to influence the decision-makers in the family businesses to become mindful of the significance of using formal and informal approaches for knowledge sharing and to consider using the long-term and short-term methods to motivate people to share knowledge or reduce the possibilities of knowledge hiding.

## PUBLICATIONS ASKING FROM THIS WORK

Wen, B. (2021) Exploring the Reason for Tacit Knowledge Sharing and Knowledge Hiding of Skilled employees at a Small Family Firm in China. *Faculty of Business and Law Research Day*, Liverpool UK, 7<sup>th</sup> December 2021.

Wen, B., Foster, S., Abbas, K. and Deborah, H. (2022) How do Small Family Firms Enhance Employees' Learning? From Knowledge Sharing and Hiding Perspective. *The University Forum for Human Resource Development Annual Conference 2022*, Sheffield UK, 8<sup>th</sup>-10<sup>th</sup> June 2022.

Wen, B. (2022) Exploring the Reason for Tacit Knowledge Sharing and Knowledge Hiding of Skilled employees at a Small Family Firm in China. NARTI (*Northern Advanced Research Training Initiative*), Liverpool, UK, 27<sup>th</sup>- 28<sup>th</sup> June 2022.

Available at:

<https://www.liverpool.ac.uk/media/livacuk/schoolofmanagement/conferencesandevents/nartiabstracts/B,WEN,-Exploring,the,Reason,for,Tacit,Knowledge,Sharing,and,Knowledge,Hiding,of,Skilled,employees,at,a,Small,Family,Firm,in,China.pdf>

Wen, B., Foster, S. and Abbas, K. (2022) Exploring Knowledge-Hiding Methods and Reasons in a Small Chinese Family Business. *23<sup>rd</sup> European Conference on Knowledge Management 2022*, Naples Italy, 1<sup>st</sup>-2<sup>nd</sup> September 2022.

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## CHAPTER 1: INTRODUCTION

### Introduction

The initial chapter provides a brief introduction to the context of the current study. It commences with a general overview of the research background and a statement of the research problems. The following section outlines the research context, including the status quo of small family businesses in China and the study rationale. The aim and objectives of the present study are then provided, followed finally by the thesis structure.

### 1.1 Background of the Study

In the current highly competitive business environment, family businesses comprise the bulk of firms in the socioeconomic landscape in nations throughout the world (Howorth et al., 2014). In 2017, in the United States of America, family businesses took up over 95% of employer firms and provided 64% of private-sector jobs (Ahluwalia et al., 2017). In the UK, family-controlled businesses created 47% of all private-sector employment and 72% of all SMEs were defined as family-controlled businesses (Cunningham, 2020). Likewise, China has a similar situation. According to the latest report on the development of Chinese family-run businesses, family businesses represent 85.4% of private-sector enterprises (Si, 2020) that have produced over 60% of GDP growth and over 80% of urban employment opportunities (Zhu, 2020). Over 80% of all family businesses are small-sized companies (Liu, 2019). Therefore, family businesses have made considerable contributions to the economies of different nations.

However, family businesses also encounter tremendous survival challenges (Hadjielias et al., 2021; Cunningham, 2020; Motoc, 2020; Ahluwalia et al., 2017). In particular, small-sized family businesses have greater difficulties in survival and development than large or medium ones (Ahluwalia et al., 2017; Cunningham et al., 2017, 2016). The majority of small family businesses cannot survive through three generations (Si, 2020; Ahluwalia et al., 2017; Letonja and Duh, 2016) because they are short of sustainable innovation abilities and abundant resources (human, finance and knowledge) secure competitiveness (Motoc, 2020; Zhou, 2019; Ahluwalia et al., 2017; Letonja and Duh, 2016). Almost 30% of small-sized businesses survive in the first five years of start-up (Mas-Verdu et al., 2015). In China, 60% of small-sized businesses had shut down within their first five years, and only 10% of them survived after

ten years (Zhou 2015). According to a report from the Chinese National Academy of Development and Strategy (2019), small Chinese businesses' average life is three years, compared to eight years in the USA and twelve years in Japan. It is therefore urgent that small family businesses seek effective methods to enhance their survival abilities and competitiveness.

## **1.2 Problem Statement**

When it comes to knowledge management literature, knowledge resources, particularly tacit knowledge, are the primary contributing factor to the survival of organisations because this type of knowledge is hard to be imitated (Nonaka and Takeuchi, 1995), associated with performing different work-related tasks by individual members (Pereira et al., 2019; Bartol and Srivastava, 2002). As a result, how to manage knowledge from individual members (knowledge management) becomes the key to the survival and progress of an organisation (Pereira and Mohiya, 2021). It is because knowledge management as a complex and challenging strategy is determined by employees' individual behaviours, such as how they obtain, store, dispose and apply knowledge in the workplace (Cabrera et al., 2006). Family businesses are not exceptional (Hadjielias et al., 2021; Zahra et al., 2007) because the hard-to-imitate characteristics of tacit knowledge (Nonaka and Takeuchi, 1995) enable small family businesses to achieve technology innovation (Cunningham et al., 2017) and continually adapt to the competitive and dynamic environment (Grant, 1996).

Small family businesses have a wealth of tacit knowledge sources (Gomez-Mejia et al., 2020; Motoc, 2020). However, most of these are possessed by skilled employees rather than businesses (Motoc, 2020; Dessi et al., 2014; Leonard-Barton and Swap, 2005). This is mostly because skilled employees have ample experience and learn from their past before coming to this enterprise (Chirico, 2008; Cho et al., 2007). The second reason is the skilled employees' work experience in their current businesses, as they have undertaken the working practices for a long time and already mastered up-to-date knowledge and solutions to the issues (Chirico, 2008). When skilled employees share their tacit knowledge with others, it is potent to expand the collective wisdom, in turn strengthening the competitive advantages of small family businesses (Hadjielias et al., 2021; Gomez-Mejia et al., 2020; Cabrera-Suarez et al., 2018; Woodfield and Husted, 2017; Sanchez-Famoso and Maseda, 2014). Hence, tacit

knowledge of skilled employees plays a vital role in the survival and development of the small family business.

Nonetheless, it has also been found that small family businesses are hard to obtain tacit knowledge from skilled employees (Cunningham, 2020; Motoc, 2020; Cunningham et al., 2016; Durst and Edvardsson, 2012). This phenomenon can be explained from micro and macro perspectives. At the macro level, small family businesses have a critical struggle to attract and maintain a skilled workforce (Cunningham, 2020, Zhou, 2019). These situations are primarily caused by the restrictive conditions imposed by their small size and family involvement in business management (Cunningham et al., 2016). As Zhou (2019) highlighted, the decision-makers in family businesses usually cannot establish effective incentive mechanisms to enhance talented people's enthusiasm and truly satisfy their psychological needs; thereby, the businesses cannot retain their talents. Therefore, transferring knowledge from individuals to companies becomes the bottleneck for small family businesses (Cunningham et al., 2016; Durst and Edvardsson, 2012).

The findings in past family business literature have revealed that this context has unique characteristics that can both promote and hinder knowledge sharing (Cunningham et al., 2016; Zahra et al., 2007). On the one hand, kinship and blood relations can help the family businesses form close interpersonal relationships and emotional bonds among the family members (Botero et al., 2021; Cunningham et al., 2017; 2016; Zahra et al., 2007). The tight-knit interpersonal relationships and emotional bonds may bring mutual dependencies and collective interests (Pearson et al., 2008; Zahra et al., 2007). These relational advantages provide social and emotional support for knowledge sharing (Hadjielias et al., 2021; Cunningham et al., 2017; 2016; Zahra et al., 2007). The characteristics of close interpersonal relationships are particularly prominent in Chinese enterprises (Gagne et al., 2019; Cunningham et al., 2016; Lin, 2013) as Chinese people's behaviours appear to be more relationship-oriented in the workplace (Zhang, 2009).

Besides, values and beliefs in terms of family continuity may influence businesses to develop a culture that promotes participation and knowledge exchange to achieve the continuity of the family and business operation (Le Breton-Miller and Miller, 2006). This culture underpins a knowledge sharing working environment inside the company (Botero et al., 2021). In the

Chinese context, family involvement forms a collective organisational culture (Zhao, 2019; Lin, 2013). The results of Chirico and Nordqvist (2010) revealed that the centralised culture facilitates protecting the inertia of knowledge resources. On the other hand, family involvement in business and management is a fertile ground for conflicts (Si, 2020; Eddleston and Kellermanns, 2007). These conflicts may produce a competitive internal environment among employees (Zahra et al., 2007) and an outsider-excluded social-relational structure (Motoc, 2020; Lin, 2013). In China, an outsider-excluded social-relational structure fleshes out personal preference and favouritism (Lin, 2013). Personal preference and favouritism from the top managers (Lin, 2013) may treat non-family and family members unequally concerning promotion, salary and trust (Zhao, 2019). Thus, it is detrimental to knowledge sharing (Cunningham 2017; 2016) and may produce knowledge hiding in small family businesses (Hadjielias et al., 2021). Hence, motivating knowledge sharing in a small family business is a complicated and convoluted process.

From the micro perspective, tacit knowledge is inherent in people's minds (Nguyen, 2021; Pereira and Mohiya, 2021; Polanyi and Sen, 2009; Davenport and Prusak, 1998; Nonaka and Takeuchi, 1995). Sharing it relies upon individual motivations (Cormican et al., 2021; Pereira and Mohiya, 2021; Rese et al., 2020; Gagne et al., 2019; Islam et al., 2018; Stenius et al., 2016; Cavaliere et al., 2015; Wang and Hou, 2015; Černe et al., 2014; Hung et al., 2011; Chen and Hung, 2010; Lin and Huang, 2010; Lin, 2007; Kankanhalli et al., 2005). Knowledge sharing as an individually autonomous behaviour is a significant process of knowledge management (Gagne et al., 2019) to facilitate employees acquiring knowledge, learning and creating new knowledge, in turn reaching the goals of knowledge and technology innovation and obtaining powerful survival abilities (Scuotto et al., 2017).

Nonetheless, companies are not the owners of individual knowledge assets, and individuals have no obligation to transfer their unique knowledge to other members (Yang et al., 2021). Accordingly, along with knowledge sharing, employees may hide their knowledge on purpose (Chatterjee et al., 2021; Hadjielias et al., 2021; Pereira and Mohiya, 2021; Xiong et al., 2021; Gagne et al., 2019; Xiao and Cooke, 2019; Connelly et al., 2012). It has been widely recognised by researchers and practitioners that knowledge hiding as autonomous behaviours has adverse impacts on employees who share knowledge, coworkers who request knowledge, and organisations (Singh, 2019). Knowledge hiding is a widespread workplace phenomenon

that damages knowledge transfer inside the company (Connelly et al., 2012) and causes tremendous financial losses to businesses (Zhao et al., 2016). Illustratively, knowledge hiding caused a loss of US\$ 47 million in American companies in 2018, and workers in the USA wasted 5.3 hours per week waiting for obtaining knowledge from their colleagues to share (Panopto, 2018 cited in Nguyen et al., 2022, p.161). The time that workers have wasted decreases the pace of innovation and development for businesses due to missing potential opportunities for exchanging information and collaboration among people inside and outside the company (Hickland et al., 2020). Despite numerous enterprises making efforts on inspiring their workers to share knowledge and voice concerns, people may prefer hiding knowledge instead of sharing (Prouska and Kapsale, 2021; Peng, 2013), as there is a prevalent tendency that knowledge is a scarce, unique and valuable resource for both individuals and organisations (Pereira and Mohiya, 2021; Shrivastava et al., 2021; Xiong et al., 2021; Singh, 2019; Polanyi and Sen, 2009; Nonaka and Takeuchi, 1995). As highlighted by Gagne et al. (2019), exploring knowledge hiding is able to enrich the understanding of knowledge sharing. Hence, it is significant to investigate knowledge sharing and hiding simultaneously for knowledge management and family business research.

In the existing literature, research on knowledge hiding is *“in its infancy stage”* (Pereira and Mohiya, 2021, p.369), especially in the family business literature (Hadjielias et al., 2021). Also, prior research typically has investigated knowledge sharing or knowledge hiding in isolation, rather than looking into both at the same time. It is because knowledge hiding as a separate research topic has just started since 2012 (Connelly et al., 2012). Besides, knowledge hiding, similar to knowledge sharing, is an individually autonomous behaviour that heavily relies on individual motivation (Halvari et al., 2021; Shrivastava et al., 2021; Xiong et al., 2021; Huo et al., 2016; Peng, 2013). Thus, it is challenging to capture knowledge hiding and sharing behaviours in the workplace (Hadjielias et al., 2021; Zhang and Jiang, 2015). However, in reality, knowledge sharing and hiding occur in tandem (Hadjielias et al., 2021; Pereira and Mohiya, 2021; Singh, 2019), as people may simultaneously hold reasons for both behaviours (Gagne et al., 2019; Cress et al., 2006; Cabrera and Cabrera, 2002). This phenomenon forms a new conceptualisation in the knowledge management field (Aleksic et al., 2021; Hadjielias et al., 2021; Pereira and Mohiya, 2021; Su, 2020; Gagne et al., 2019). Therefore, this research aims to explore simultaneous knowledge sharing and hiding with the specific consideration

of the small family business context.

### **1.3 Empirical Context**

#### **1.3.1 Small-sized Businesses in China**

The definitions of small businesses vary in different nations and contexts. The contextual focus of this study draws upon Chinese small family businesses; thus herein, it follows the definition in China. According to the Chinese report on *Methods for Classifying Large, Medium and Small Enterprises Statistically* issued by the National Bureau of Statistics (2018), the definitions of businesses in large, medium and small sizes differ from sectors and are determined by three leading indicators: the number of employees, value of fixed assets and annual revenue (see Table 1). The current study was conducted in the manufacturing sector in China. Therefore, small businesses in the manufacturing sector are enterprises where the employees are less than three hundred people, and the revenues are below twenty million yuan every year, as presented in the colour-filled section in Table 1.

The majority of family businesses in China are located in the eastern coastal area, for example, Zhejiang, Guangdong, Fujian and Jiangsu (Zhou, 2019). This is because the economy in these areas is more developed than in the central and western provinces (Zhou, 2019). Given this, Chinese family business studies have primarily been conducted in these areas (Si, 2020; Zhu, 2020; Xiao and Cooke, 2019; Liu, 2019; Wang, 2018). Therefore, Chinese family business research should also keep an eye on the central and western regions.



**Table 1: Division of Chinese Large, Medium and Small Enterprises**

Sector	Large size	Medium size	Small size
<b>Farming, forestry, animal husbandry and fishing</b>	$Y \geq 200$	$Y: 5-200$	$Y < 5$
<b>Manufacturing</b>	$X \geq 1,000$ $Y \geq 400$	$X: 300-1,000$ $Y: 20-400$	$X < 300$ $Y < 20$
<b>Construction</b>	$Y \geq 800$ $Z \geq 800$	$Y: 60-800$ $Z: 50-800$	$Y < 60$ $Z < 50$
<b>Wholesaling</b>	$X \geq 200$ $Y \geq 400$	$X: 20-200$ $Y: 50-400$	$X < 20$ $Y < 50$
<b>Retailing</b>	$X \geq 300$ $Y \geq 200$	$X: 50-300$ $Y: 5-200$	$X < 50$ $Y < 5$
<b>Transporting</b>	$X \geq 1,000$ $Y \geq 300$	$X: 300-1,000$ $Y: 30-300$	$X < 300$ $Y < 30$
<b>Storage</b>	$X \geq 200$ $Y \geq 300$	$X: 100-200$ $Y: 10-300$	$X < 100$ $Y < 10$
<b>Postal</b>	$X \geq 1,000$ $Y \geq 300$	$X: 300-1,000$ $Y: 20-300$	$X < 300$ $Y < 20$
<b>Accommodation</b>	$X \geq 300$ $Y \geq 100$	$X: 100-300$ $Y: 20-100$	$X < 100$ $Y < 20$
<b>Catering</b>	$X \geq 300$ $Y \geq 100$	$X: 100-300$ $Y: 20-100$	$X < 100$ $Y < 20$
<b>Information transmission</b>	$X \geq 2,000$ $Y \geq 1,000$	$X: 100-2,000$ $Y: 10-1,000$	$X < 100$ $Y < 10$
<b>Software and IT services</b>	$X \geq 300$ $Y \geq 100$	$X: 100-300$ $Y: 10-100$	$X < 100$ $Y < 10$
<b>Real estate development and operation</b>	$Y \geq 2,000$ $Z \geq 100$	$Y: 10-2,000$ $Z: 50-100$	$Y < 10$ $Z < 50$
<b>Property management</b>	$X \geq 1,000$ $Y \geq 50$	$X: 300-1,000$ $Y: 10-50$	$X < 300$ $Y < 10$
<b>Leasing and business services</b>	$X \geq 300$ $Z \geq 1,200$	$X: 100-300$ $Z: 80-1,200$	$X < 100$ $Z < 80$
<b>Others not listed</b>	$X \geq 300$	$X: 100-300$	$X < 100$
X: Employment (person)			
Y: Annual Revenue (Million Yuan)			
Z: Value of fixed assets (Million Yuan)			

Source: The National Bureau of Statistics (2018).

Note: Exchange rate was roughly 9.1 yuan = 1 UK pound in 2018.

### 1.3.2 Small Businesses in Henan Province

Henan is located in the middle of China, shown in Figure 1, and has the third-largest population of any Chinese province (Fan and Xiang, 2020). As the report “*Made in China 2025*” stated, China needs to accelerate the deep integration of new-generation information technology and manufacturing industry as the mainline; to promote intelligent manufacturing as the main direction; to strengthen industrial infrastructure capabilities; to foster industrial transformation and upgrade; and to realise the historical leap of manufacturing industry from big to strong (Qu, 2017). According to this guideline and the solid foundation of rich human resources, the manufacturing industry in Henan Province has made advances in intelligent manufacturing (Jiang and Li, 2021). SMEs in Henan have also enjoyed higher growth trends than in other provinces in China because of the central government’s Strategy of Rising of Central China (HENAN.GOV.CN, 2020). Family businesses have made up 80% of these SMEs (Zhu, 2020). Even during the pandemic, the number of small and micro companies in Henan increased by 2.31%, and the added value was over 2 billion yuan in total by the end of October 2020 (NEWS. HNR.CN., 2021). The majority of leading small businesses are in the manufacturing sector, committed to researching and developing (R&D) cars, foods, new materials and new energy (HENAN.GOV.CN, 2020). Zhengzhou as the capital city and largest city in Henan province has contributed the most to Henan’s GDP, with over 1200 billion yuan in 2020 (HENAN.GOV.CN, 2020). Therefore, this research focuses on small family businesses in Zhengzhou.

**Figure 1: Geographic location of the case study in China**



Source: Wang et al., (2019)

### **1.3.3 Case-study Rationales**

The case study was conducted at a small family business in Zhengzhou city. There were four criteria for case selection. The primary criterion was the 10-year survival period. In China, almost 60% of small-sized firms have shut down within the first five years, and only 10% of them could survive after ten years (Zhou 2015). The case-study business was founded in 1970 by the former owner-manager, the father of the current owner-manager, and has continually expanded to date.

Second, the chosen small business conformed with the definition of a Chinese small business given by the National Bureau of Statistics of China (2018). The case company has 110 employees with an annual turnover of more than 40 million yuan and annual revenue of around 5 million yuan. Another essential aspect of the description was that the case-study business should be a family-run business. Therefore, the case company was selected from the domain of family business.

Third, as a good example of knowledge sharing following the ‘typical principle’ proposed by Yin (2018), the selected business offers sufficient opportunities to encourage learning and sharing knowledge (Wen and Wang, 2021; Gardiner, 2015; Chen and Hsieh, 2015; Lin, 2013; McInerney, 2002). In the prior literature, encouraging learning and sharing involves establishing small group meetings, on-site seminars, and rewarding employees who actively participate in learning and teaching others (Chatterjee et al., 2021; Zhang et al., 2017; McInerney, 2002). However, small businesses are generally reluctant to invest in formal employee training (Bryan, 2006). The case company is a good role-model case for knowledge sharing because its training and development programmes are accredited by the local government and other enterprises in the same sector. As many researchers suggested (Wen and Wang, 2021; Zahra et al., 2007; Bartol and Srivastava, 2002), training and development programmes are an effectively formal mechanism for knowledge sharing throughout the companies.

Last but not least, a successful family-run business has a powerful survival ability developed from employees’ knowledge. In the Chinese manufacturing sector, patents and reputations are viewed as compelling evidence of knowledge innovation (Lin et al., 2020; Zhou, 2019),

which is associated with internal knowledge sharing activities (Motoc, 2020; Pereira and Mohiya, 2021; Cunningham et al., 2017, 2016; Cabrera et al., 2006; Nonaka and Takeuchi, 1995). This section will be elaborated on in Chapter Three.

#### **1.4 Research Aim, Research Questions and Objectives**

The aim of the current study is to explore knowledge sharing and hiding within a small Chinese family business. In order to achieve the research aim, this study has set the following general research questions:

- How do skilled employees perceive their tacit knowledge in the small Chinese family business?
- How do skilled employees share and hide tacit knowledge?
- Why do skilled employees share and hide knowledge from the motivational and corporate perspectives?
- What recommendations can be made for the owner-managers to improve knowledge sharing and hiding behaviours?

Referring to the stated research questions, four critical research objectives have been set up:

- To identify how skilled employees perceive tacit knowledge within the context of a small Chinese family business.
- To explore how skilled employees share and hide tacit knowledge.
- To analyse why skilled employees share and hide tacit knowledge as well as to provide the appropriate recommendations for motivating knowledge sharing and mitigating knowledge hiding.
- To develop a conceptual framework to visualise knowledge sharing and knowledge hiding simultaneously

#### **1.5 Thesis Structure**

The thesis is structured into six chapters, as summarised in Figure 2. Chapter One (current chapter) introduces the entire thesis: the research background, problem statement, empirical context, research aim and objectives. Chapter Two systematically reviews the literature based on three critical scopes: small family businesses, knowledge sharing and hiding and self-determination theory (SDT). Chapter Three elaborates on the research methodology and methods. The fourth chapter presents the findings from the single case-study business. The

results are managed into three themes: perceptions of tacit knowledge, ways of knowledge sharing and hiding, and reasons for sharing and hiding from the corporate and motivational perspectives. In the fifth chapter, the findings are discussed through in-depth comparison with the existing literature, following the four research objectives and three critical themes. By the end of the chapter, a conceptual framework from the findings is introduced and articulated. Finally, Chapter Six summarises the entire thesis and emphasises the theoretical and practical contributions. This chapter also acknowledges several limitations, which could be considered potential avenues for future research.

**Figure 2: Thesis Structure**



## Summary

This chapter has portrayed the general overview of the current study. It started with a description of the research background and a statement of the specific problem. It then outlined the empirical context of the status quo of small family businesses in China and Henan province, accompanied by a rationale for the chosen case study. Although the research aim four specific research questions and research objectives have set up in the systematic

literature review, it is also necessary to posit them in the introduction chapter, as they are the most central aspect of the thesis. Finally, the structure of the entire thesis was unfolded. Having clarified the critical concepts of this project, the following chapter will concentrate on exploring and explaining these concepts via a literature review.

## CHAPTER 2: LITERATURE REVIEW

### Introduction

The literature review chapter draws upon the theoretical considerations regarding employees' individual-tacit knowledge, knowledge sharing and hiding, and motivation for both behaviours in a small family business. There are three main scopes for this research: knowledge sharing and hiding, individual motivations for both behaviours based on self-determination theory (SDT), and the corporate context of the small family business. Therefore, a systematic literature review needs to achieve three purposes: (1) to enable the researcher to understand the research topic from different theoretical perspectives; (2) to enhance the general knowledge of the research topic within the context of small family businesses; and (3) to find the research gaps in the current literature.

The literature review chapter has six sections. The first will explore the theoretical lens and studies on individual-tacit knowledge. The second will describe knowledge sharing from different perspectives. The third will explain knowledge hiding from different scopes parallel to knowledge sharing. The fourth will discuss the reasons why people share or hide knowledge from motivational and corporate perspectives. SDT is adopted as the theoretical grounding in this research. The corporate context of the small family business will be explored because that is the focus of this study. The section also provides a conceptual framework for this project to investigate knowledge sharing and hiding simultaneously. The fifth section will expose the gaps in the current literature. The final section will give a summary of the literature review chapter.

### 2.1 The Criticality of Individual-Tacit Knowledge

Scholars and practitioners have researched knowledge in a wealth of fields. However, it is hard to give a universal definition of knowledge because it refers to all aspects of individual and working life in business settings (Ipe, 2003). The earliest description of knowledge can be traced back to ancient Greek times; Socrates and Plato defined knowledge as "*true belief*" with Aristotelian notions of the results of experience (Cornford, 2003, cited in Li, 2018, p.12). At that time, knowledge was understood as an objective construct that was completely real and unchanging (Cornford, 2003, cited in Li, 2018, p.12); this was opposed by the Kantian

viewpoint on knowledge (Spender, 1996). Kant contended that knowledge is constructed from individual experiences shaped by reality and delimited by people's understanding, which cannot move beyond reality (Spender, 1996). This debate left a proposition of definition and categories of knowledge, that is, static and universal truths and subjective and intuitive understanding for subsequent researchers (Ipe 2003).

James (1950 cited in Spender, 1996 p.49) developed ideas of knowledge from Greek epistemology and divided people's knowledge into "*know-what*" and "*know-how*". When 'know-how' emanates from experience, it eliminates the subjective and contextual factors of experience (James, 1950 cited in Spender, 1996 p.49). It extracts the objective principles behind 'know-how', forming 'know-what' (James, 1950 cited in Spender, 1996 p.49). Therefore, 'know-what' from the idea of Platonic truth is the result of systematic or mathematical analysis, whereas 'know-how' is the individual's perceptions and beliefs from experience (Ipe, 2003). This distinction gained researchers' attention. Polanyi's (1966 cited in Spender, 1996, p.50) definition is the most influential for the research topic of knowledge management, organisational and individual behaviour because it was the first to include the term 'tacit knowledge'. Explicit knowledge is defined as 'know-what' that can be easily codified and collected, for example, technical or academic information. (Cabrera and Cabrera, 2002). In contrast, tacit knowledge is labelled as "*we know more than we can tell*" (Polanyi, 1966, p.4 cited in Chen et al., 2018, p.480); it is subjective, difficult to transfer and constructed from people's activity and experiences (Chen et al., 2018). Tacit knowledge is hard to write down (Polanyi and Sen, 2009). Even if tacit knowledge is written, it is difficult for people to make sense of it when there is no detailed explanation or common experience as the basis (Newell, 2015). That is because tacit knowledge is embedded in people's minds (Polanyi and Sen, 2009) and is determined by their previous experiences and the individual ability to intellectualise this experience (Wathne et al., 1996). Tacit knowledge is relevant to personal experience.

Nonaka and Takeuchi developed Polanyi's viewpoint (1966) from a business management perspective (Chen et al., 2018). Nonaka and Takeuchi (1995) believed that the most valuable knowledge resource in a company is embedded in the tacit form and needs to be internally constructed by individuals. Hence, before forming organisational knowledge, tacit knowledge should be shared by individuals and then converted into explicit knowledge (Broadbent, 1998;



Nonaka and Takeuchi, 1995). Nonaka and Takeuchi (1995) posited a model to explain the process of knowledge conversion between tacit and explicit states. First, knowledge conversion commences with sharing skills and experiences from tacit to tacit through observations and imitations (Riege, 2005); this is known as socialisation. The externalisation process then transfers tacit knowledge to explicit, making it easier for others to comprehend using metaphors and analogies from books or manuals (Riege, 2005). The third process combines a broad body of individuals' explicit knowledge by analysing and re-organising information within firms (Nonaka et al., 2000). In the end, explicit knowledge may be learned by employees as tacit knowledge through a hands-on approach by applying experience or simulation models, described as the internalisation process (Nonaka, 1994). In the view of Nonaka and Takeuchi (1995), knowledge conversion starts from tacit knowledge at the individual level (Ouédraogo and Rinfret, 2019). However, Brown and Duguid (1998) disagreed with a simple view of conversion. Tacit knowledge cannot be transferred entirely into explicit form because tacit knowledge has various complex characteristics (Brown and Duguid, 1998). Furthermore, knowledge, particularly in tacit forms, has dynamic features because it constantly changes with individual experience and learning (McInerney, 2002). Therefore, tacit knowledge can be understood as the personal experience from expressions of active human actions by "*evaluation, attitude, viewpoint, commitments and emotion*" (Pathirage et al., 2007, p.116).

Although Nonaka and Takeuchi's (1995) model of knowledge conversion is not perfect, it gives a valuable angle to understand how knowledge moves from the individual to the organisation (Hansen et al., 1999; Zack, 1999). Organisational knowledge represents what employees commonly have known about an organisation (Nonaka and Takeuchi, 1995). Baumard (2001) termed organisational knowledge as collective knowledge to distinguish it from individual knowledge.

Building on the theories of Nonaka and Takeuchi, Spender (1996) developed a matrix to explain knowledge from two dimensions (explicit vs tacit, and individual knowledge vs social knowledge), as shown in Table 2. Each company will be a compound of all knowledge (Weber, 1968, cited in Spender, 1996, p.51). Initially, individual explicit knowledge, called conscious knowledge, is stored and retrieved from personal memory and records (Riege, 2005). The second kind of knowledge is individual tacit knowledge, or automatic knowledge, built on

people's theoretical and practical experience and learning (Lam, 2000; Spender, 1996). The third kind is objectified, explicit social knowledge, embodying registered patents and information stored in organisational databases (Riege, 2005). The last type is tacit social knowledge, termed collective knowledge, which refers to all knowledge embedded in social practices and culture (Bartol and Srivastava, 2002). This matrix facilitates the division of knowledge into a detailed classification, covering all knowledge in the workplace (Cabrera and Cabrera, 2002).

**Table 2: Different types of organisational knowledge**

	<b>Individual</b>	<b>Social</b>
<b>Explicit</b>	Conscious	Objectified
<b>Implicit</b>	Automatic	Collective

Sources: Spender (1996), p.52

Nelson and Winter (1982 cited in Spender, 1996 p.50) adopted Polanyi's distinction (1966) between explicit and tacit knowledge to research organisational evolutionary modes of work adaption, finding that employees' knowledge is embedded in corporate routines. Sternberg (1994 cited in Spender, 1996 p.51) discovered knowledge to be closely associated with action and process, which is practical. Associating with practical work, Davenport and Prusak (1998, p.5) defined knowledge as

*"...a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is in the minds of knowers. In organisations, it often becomes embedded not only in documents or repositories but also in organisational routines, processes, practices and norms."*

From Davenport and Prusak's view (1998), organisations can use a wide array of routines and practices to make individuals' knowledge available to the company. Knowledge is practical and contextual in nature (Endres et al., 2007), lies with work processes (Armbrosini and Bowman, 2001) and is made up of technical and professional specific skills (Lam, 2000; Nonaka, 1994). When people exchange knowledge with their co-workers, this process may

add value to current knowledge, and create innovative ideas in products, services and technology, eventually formulating competitive advantages (Hadjielias et al., 2021; Maravilhas and Martins, 2019; Woodfield and Husted, 2017). Nevertheless, it is also possible for people who possess the knowledge to lose it (Nguyen et al., 2022; Halvari et al., 2021; Pereira and Mohiya, 2021). In this vein, knowledge is the most valuable asset for both individuals and organisations (Hadjielias et al., 2021; Maravilhas and Martins, 2019; Woodfield and Husted, 2017). A differing perspective, suggested by Bonaventura (1997), is that knowledge is developed into a cultural product (Xiong et al., 2021; Lin, 2007). Both individual experience and networks among people simultaneously work together to create knowledge (McInerney, 2002). This means knowledge results from socialisation among members (Davenport and Prusak, 1998). Thus, knowledge could be deemed as a social value (Lang, 2001). Nonetheless, Nguyen (2021) claimed that organisations only hold a small part of knowledge in the business processes, whereas employees internalise the majority of knowledge. It is not easy to transform one's knowledge into organisational knowledge, despite the great efforts that organisations have put into knowledge management or sharing practices (Di Vaio et al., 2021; Prouska and Kapsale, 2021; Cho et al., 2007; Alavi and Leidner, 2001).

In the small family business context, people hold a wealth of knowledge sources (Gomez-Mejia et al., 2020; Motoc, 2020; Gagne et al., 2019; Leonard-Barton and Swap, 2005; Sirmon and Hitt, 2003). Most of these knowledge sources are in the tacit form possessed by skilled employees (Motoc, 2020; Ahluwalia et al., 2017; Dessi et al., 2014; Leonard-Barton and Swap, 2005). This is because skilled employees have accumulated knowledge from long-term experience and learning (Chirico, 2008; Cho et al., 2007). Also, employees who have been working for a long time in a business will be more likely to comprehend work-related knowledge than newcomers because they are familiar with working practices and up-to-date core knowledge and solutions to the issues (Chirico, 2008). When skilled employees share their expertise in the company, tacit knowledge could help expand collective wisdom and form competitive advantages (Hadjielias et al., 2021; Gomez-Mejia et al., 2020; Cabrera-Suarez et al., 2018; Ahluwalia et al., 2017; Woodfield and Husted, 2017; Sanchez-Famoso and Maseda, 2014). Nonetheless, a critical struggle for family businesses is how to attract and maintain a skilled workforce (Cunningham, 2020). Therefore, individual-tacit knowledge from

skilled employees matters to the survival and development of small family businesses.

As stated above, tacit knowledge is embedded in people's minds (Pereira and Mohiya, 2021; Nguyen, 2021; Polanyi and Sen, 2009; Nonaka and Takeuchi, 1995) from their experiences and learning (Chen et al., 2018). This type of knowledge starts to be transferred from the individual level (Ali et al., 2021; Su, 2021; Pereira and Mohiya, 2021; Shrivastava et al., 2021; Xiong et al., 2021). In this view, individual-tacit knowledge is the fundamental construct of a vast amount of knowledge activities and practices in the workplace (Ouédraogo and Rinfret, 2019; Chen et al., 2018). Tacit knowledge cannot be comprehended from a single perspective because of its complexity and dynamics.

Furthermore, individual-tacit knowledge held by skilled employees (Motoc, 2020; Dessi et al., 2014; Liu and Liu, 2011; Chirico, 2008; Zahra et al., 2007) matters to the survival and development of a small family business (Hadjielias et al., 2021; Gomez-Mejia et al., 2020). This is because an organisation needs skilled employees who are motivated to explore new market opportunities, new work methods and new products or technology and who would like to adopt new insights into their work (Gupta and Govindarajan, 2000). A small family business could develop its competitive advantage by gathering skilled employees' knowledge (Botero et al., 2021; Hadjielias et al., 2021; Gomez-Mejia et al., 2020; Cabrera-Suarez et al., 2018; Woodfield and Husted, 2017; Sanchez-Famoso and Maseda, 2014). Nonetheless, small family businesses do not truly own employees' knowledge due to the personal and dynamic nature of tacit knowledge (Motoc, 2020) and a lack of valid practices to manage and transfer it (Cunningham et al., 2016; Durst and Edvardsson, 2012). Therefore, it is necessary to explore how and why skilled people share and hide knowledge within the particular scope of individual-tacit knowledge.

## **2.2 Understanding of Knowledge Sharing**

As clarified in the first section, tacit knowledge is hard to obtain from people (Ouédraogo and Rinfret, 2019; Chen et al., 2018). Accordingly, theorists and practitioners have posited knowledge management strategies for companies to convert individual knowledge into corporate knowledge (Cormican et al., 2021; Hamilton and Philbin, 2020; Eze et al., 2013). A significant issue in knowledge management strategy is to ensure how knowledge residing

within individuals can be transferred to others (Islam et al., 2018; Eze et al., 2013). Therefore, knowledge sharing has been deemed one of the vital processes or methods to obtain personal knowledge in knowledge management strategy (Durst and Edvardsson, 2012; Lin, 2007, Ipe, 2003; Alavi and Leidner, 2001; Davenport and Prusak, 1998).

Knowledge sharing is critical for organisations to bridge individual and organisational levels (Hendriks, 1999). Through sharing between employees, individual members may increase skills and expertise in their job positions and reduce redundant trial-and-errors to 'reinvent the wheel' (McDermott and O'Dell, 2001). When people with diverse knowledge and experience collaborate synergistically toward common goals, knowledge sharing innovates abundant wisdom that benefits organisational knowledge and technology innovation (Nham et al., 2020). Nham et al. (2020) stated that enhancing the organisational innovation ability by collaboration among people creates far more than anyone can individually. In other words, the success of a business heavily relies on sharing among people (Motoc, 2020; Dessi et al., 2014; Liu and Liu, 2011; Chirico, 2008; Zahra et al., 2007). However, it is tough to reach a standard definition for knowledge sharing in the current literature because researchers have different aspects and elements to explain it (Cormican et al., 2021; Witherspoon et al., 2013; Ho et al., 2009). Previous studies (Ouédraogo and Rinfret, 2019; Chen et al., 2018; Gardiner, 2016; Cavaliere et al., 2015; Cavaliere et al., 2012; Cabrera and Cabrera, 2005; Bartol and Srivastava, 2002) have described knowledge sharing around three elements: objects, referring to the type of knowledge; the way of sharing, such as face to face, conference, and learning; and level of sharing, among individuals, teams, or organisations (Ahmad and Karim, 2019; Ho et al., 2009). These perceptions help distinguish how people may opt to share and hide knowledge for varied reasons (Connelly et al., 2012). This research draws on skilled employees' individual-tacit knowledge. Hence, the following section will explain knowledge sharing based on the ways and levels of sharing.

### **2.2.1 The Related Concepts of Knowledge Sharing**

#### ***Knowledge transfer and knowledge sharing***

In the knowledge management field, knowledge sharing can be defined and understood in a wide variety of ways from various perspectives, situations, needs and circumstances (Aliakbar et al., 2012). Many scholars have believed that the notions of knowledge sharing and

knowledge transfer can be used interchangeably (Li, 2018); others have disagreed with this view and asserted that knowledge sharing differs from knowledge transfer (Awate et al., 2015; Wang and Noe, 2010). From the latter point of view, knowledge transfer refers to the processes of knowledge sharing and the acquisition and application of knowledge by those who learn the knowledge (Wang and Noe, 2010). Knowledge transfer involves knowledge-related activities between different units, divisions or organisations, whereas knowledge sharing typically occurs between individuals (Awate et al., 2015). Therefore, knowledge sharing could be perceived as one of the critical mechanisms of knowledge transfer (Cabrera and Cabrera, 2005).

It has been also acknowledged that the context of knowledge sharing is broader than that of knowledge transfer (Henttonen et al., 2016; Awate et al., 2015; Dyer and Nobeoka, 2000). Boland and Tenkasi (1995) argued that the domain of sharing in knowledge sharing is far more than the transfer of abstract knowledge because knowledge is shared and developed by the socially constructed process. Moreover, knowledge sharing can improve organisational learning by fostering collaboration and exchanging ideas (Dyer and Nobeoka, 2000). It can therefore be seen that knowledge sharing is a more complicated phenomenon than knowledge transfer, involving more knowledge-based activities (Li, 2018). Knowledge transfer usually describes knowledge movements from the perspectives of the knowledge recipient (Ko et al., 2005) and the organisation (Cormican et al., 2021; Ko et al., 2005), but Ford and Staple (2008) asserted that knowledge sharing is understood from the perspectives of knowledge sharer and the individuals. Consequently, in terms of the knowledge domain that this study draws on, the researcher chose the term 'knowledge sharing'.

### ***Knowledge sharing behaviour and knowledge sharing process***

Researchers and practitioners have often explained knowledge sharing from the behavioural and process dimensions. Viewing knowledge sharing as a behaviour enables people to understand this concept from the personal and motivational perspectives (Su, 2021; Gagne et al., 2019; Stenius et al., 2017; Stenius et al., 2016; Wang and Hou, 2015; Witherspoon et al., 2013; Aliakbar et al., 2012; Liu and Liu, 2011) because motivation has been identified as a crucial determinant of general behaviour (Deci and Ryan, 2000). As Al-Hawamdeh (2003) construed, in its broadest sense, knowledge sharing is the communication of all types of knowledge, including explicit and tacit knowledge. Further, Ipe (2003) provides a concise but

straightforward definition for knowledge sharing behaviour, that is, “*the act of making knowledge available to others within the organisation*” (Ipe, 2003, p. 341). Knowledge sharing is a general approach to share knowledge between individuals, groups and organisations.

Researchers such as Zhang and Jiang (2015), Cabrera et al. (2006) and Kelloway and Barling (2000) have discovered that knowledge sharing is a voluntary behaviour because it often takes place in unstructured situations (Davenport and Prusak, 1998) and may be stimulated during interpersonal interactions (Zhang and Jiang, 2015). Thus, knowledge sharing involves voluntary, interactive and situational behaviours. On the other side, some scholars (Rese et al., 2020; Cai and Shi, 2020; Choi et al., 2020; Jeon et al., 2011) have assumed knowledge sharing to be a stable and well-planned behaviour, for instance, taking place in lectures or seminars. These two situations cannot represent all knowledge sharing possibilities. Therefore, knowledge sharing should account for both voluntary and planned behaviours (Cormican et al., 2021; Wen and Wang, 2021).

Based on knowledge flows, knowledge sharing is demonstrated from the process dimension, emphasising knowledge movements from one party to the other (Chen et al., 2018; Cavaliere et al., 2015; Zhang and Jiang, 2015; Cavaliere et al., 2012; van den Hooff and de Ridder, 2004). Van den Hooff and de Ridder (2004, p.118) defined knowledge sharing as “*the process of mutually exchanging knowledge and jointly creating new knowledge*”. The knowledge sharing process refers to two processes: knowledge donating and collecting (Lin, 2007; van den Hooff and de Ridder, 2004). Knowledge donating is the process by which people are willing to tell what they have known to others (van den Hooff and de Ridder, 2004). In contrast, knowledge collecting describes the process by which the colleagues request and learn knowledge from those who share it (Lin, 2007).

Eze et al. (2013) elucidated that knowledge sharing firstly involves one person benefiting from their experience and practices so that others can learn the knowledge; afterwards, the receivers incorporate their understandings into the knowledge. Schauer et al. (2015) underpinned this view, describing knowledge sharing as a form of social interaction involving a two-way voluntary process. This research intends to explore the knowledge donating process—telling what people have known to others, in which the concept of knowledge sharing is inclined to the behavioural dimension. Consequently, knowledge sharing is

conceived as a behaviour in that people impart or exchange knowledge with their recipients in both voluntary and planned situations.

### **2.2.2 Knowledge Sharing Mechanisms**

The second element that facilitates the description of knowledge sharing behaviour is the way of sharing, such as face to face, conference, and learning (Ho et al., 2009). According to Chai et al. (2003), knowledge sharing mechanism is the method, procedure or process of sharing in the workplace. Research conducted by Alavi and Leidner (2001) indicated four types of knowledge sharing mechanisms: informal interaction, formal activities, personal interaction, and impersonal knowledge transfer. In detail, informal mechanisms refer to unscheduled meetings and seminars or coffee break conversations; formal mechanisms include substantial scheduled and structured training sessions and plant tours (Chai et al., 2003; Alvai and Leidner, 2001). Personal interaction involves individuals participating in sharing activities, such as apprenticeships or personnel transfers; impersonal mechanisms are typically knowledge repositories (Cho et al., 2007). This classification of knowledge sharing mechanisms was absorbed and developed by Batol and Srivastava in 2002. Four significant mechanisms for people to share their knowledge are identified as contribution to knowledge databases, formal interactions, informal interactions, and communities of practices (Bartol and Srivastava, 2002).

In the first instance, individuals donate their knowledge to collective knowledge databases (Chai et al., 2003; Bartol and Srivastava, 2002). The contribution of expertise to organisational databases refers to sharing explicit or codified knowledge (Cho et al., 2007; Riege, 2005; Bartol and Srivastava, 2002), which goes beyond the focus in this research on individual-tacit knowledge, thus, this mechanism is not considered herein. Second, formal knowledge sharing interactions within or across teams or work units often establish scheduled and patterned communication channels for employees to learn, collect or exchange knowledge (Wen and Wang, 2021; Zahra et al., 2007). This type of sharing might be compulsory or required by the organisation, so it may help other forms of communication and sharing outside these formal practices (Wen and Wang, 2021; Yi, 2009; Chai et al., 2003). In this mechanism, managers expect to assign people to small groups, get them to meet regularly, and give them collective responsibility for knowledge sharing (Yi, 2009; Ellis, 2001, cited in Riege, 2005, p.27). Formal



knowledge sharing practices help businesses build up a foundation for communicating business directives (Wen and Wang, 2021; Zahra et al., 2007).

Third, informal knowledge sharing mechanisms occur in informal, unstructured, non-routine interactions among individuals (Wen and Wang, 2021; Yi, 2009; Bartol and Srivastava, 2002). Tacit knowledge, hard to express in nature, is most appropriately shared in this way (Zahra et al., 2007). Lastly, communities of practice involve people voluntarily sharing their ideas on a topic of interest in forums (Jeon et al., 2011; Yi, 2009; Batol and Srivastava, 2002). The basis of this fashion is informal and voluntary (Jeon et al., 2011). Within an organisation, people sharing knowledge through communities of practices do not necessarily need to come from the same departments or divisions, as long as they hold a similar interest in learning (Bartol and Srivastava, 2002). This mechanism can help share both explicit and tacit knowledge (Jeon et al., 2011).

A study conducted by Cho et al. (2007) emphasised that knowledge sharing in a business can be both formal and informal, concurring with formal and informal knowledge sharing mechanisms. Formal knowledge sharing mechanisms are designed for explicit knowledge dissemination (Cho et al., 2007). In contrast, informal mechanisms tend to involve relational learning and sharing of tacit knowledge, as this fashion involves personal relationships or social network (Nonaka and Konno, 1998; Brown and Duguid, 1991). Pedersen et al. (2003) stressed that written documents are the preferred mechanism for sharing knowledge purchased from outside; however, daily face-to-face communication is desirable for sharing knowledge from individual experience. Surprisingly, Chen et al. (2018) discovered that people in Chinese software firms often share tacit knowledge through morning reflection sessions, annual company retreats, weekly meetings and tutor schemes, even though these mechanisms may not be the best means for sharing employees' experiences. It has been indicated that formal and informal knowledge sharing mechanisms are vital for organisations to maximise absorption and conversion of employees' tacit knowledge for collective use (Orlikowski, 2002). From the perspective of sharing barriers, a lack of formal and informal mechanisms is one of the organisational barriers to individual knowledge sharing (Riege, 2005). In reality, some businesses may not necessarily need formal mechanisms to perform well because many employees collaborate to exchange ideas and voluntarily teach their colleagues on informal occasions (Liu and Liu, 2011). Competitive internal working

environments mean that employees need others' knowledge to achieve personal growth and enhancement rather than being forced to acquire it by the managers (Chen et al., 2018; Liu and Liu, 2011; Riege, 2005). Nonetheless, the study of Cho et al. (2007) revealed that individuals often prefer to choose formal knowledge sharing mechanisms such as training sessions and seminars to share knowledge, while preferences for other mechanisms differ by the type of knowledge. Therefore, choices of sharing mechanisms depend on the needs of different organisations and types of expertise.

Organisations may put in place diverse mechanisms for tacit knowledge sharing (Cho et al., 2007; Riege, 2005), such as setting a time when people can exchange ideas in a cafeteria or preparing regular meetings for the same purpose (Cho et al., 2007). However, when efficiency is the aim of knowledge sharing, achieving this target through rules and routines, and configuring valuable work patterns, problem-solving and collective decision-making need more meaningful interactions amongst members, often occurring in the meeting (Grant, 1996). Even though several organisations may prefer one over the other, it is significant that all mechanisms make personal knowledge available to the company (Bartol and Srivastava, 2002). In family businesses, particularly those in traditional industries (the primary and manufacturing sectors), knowledge is rooted in well-established practices and developed through trial-and-error learning (Hirsch-Kreinsen, 2008). This context usually uses apprenticeship or on-the-job training to conduct knowledge sharing movements (Woodfield and Husted, 2017). Similarly, Lin (2013) conducted an empirical study on knowledge sharing and interpersonal relationships among 131 family firms and 256 non-family companies and discovered that the supervisors in Chinese family businesses had a high preference for centralised knowledge sharing fashion. Instead, some studies have unfolded different findings in small business and family firms (Sanchez-Famoso and Maseda, 2014; Dotsika and Patrick, 2013; Zahra et al., 2007). Due to close relationships and more informally social structures, members in small organisations often display tacit-to-tacit knowledge transfer in informal ways (Sanchez-Famoso and Maseda, 2014). Small family businesses have a similar situation due to their flexible work mode and distinctive characteristics (Dotsika and Patrick, 2013). As suggested by Zahra et al. (2007), a family business should use structured and formal knowledge sharing mechanisms when considering sharing explicit knowledge and adopt informal knowledge sharing to exchange tacit knowledge.

In contrast, informal mechanisms enable people to effectively share tacit knowledge in the workplace through personal contact and daily interactions (Zahra et al., 2007). Family member involvement may strengthen both formal and informal knowledge sharing mechanisms; however, the excessive pursuit of formal approaches by family businesses may result in sharing tacit knowledge being less fluid than it could be (Zahra et al., 2007). Hence, in summary, given the emphasis in this research on individual-tacit knowledge, except the first mechanism presented by Bartol and Srivastava (2002) is excluded (contributing knowledge to organisational databases), the other three types of mechanisms need to be considered in the investigation of individual-tacit knowledge sharing within the small family business.

### **2.2.3 Different Levels of Knowledge Sharing**

Knowledge sharing may happen at different levels: individuals, teams and organisations (Nguyen, 2021; Ahmad and Karim, 2019). The level of sharing is the third component of knowledge sharing (Ho et al., 2009). Bartol and Srivastava (2002) defined knowledge sharing at the individual level as the personal sharing of job-related information, ideas, suggestions, and expertise. Ipe (2003) believed that a company's ability to use its knowledge relies on those who share, create and apply the knowledge. Thus, knowledge sharing between people becomes the most basic form in the business settings (Ipe, 2003). From a behavioural dimension, knowledge sharing is how people give their knowledge to others (Aliakbar et al., 2012). From the process dimension, knowledge sharing refers to listening and expressing to others (Cummings, 2004). The first action offers practical knowledge to the colleagues, and the second involves people learning experience from others and creating new knowledge in the future work (Lin, 2007). To this end, knowledge sharing indicates a relationship between at least two parties: knowledge sharer and knowledge recipient/receiver (Zhang and Jiang, 2015; van den Hooff and de Ridder, 2004; Hendriks, 1999). An organisation needs to create knowledge and develop competitive advantages through interactions involving this type of relationship (Cormican et al., 2021; Lin, 2007; Nonaka, 1994). From a social interaction perspective, knowledge sharing occurs in varied interactions among people at the organisational level, residing in corporate life, such as daily routines and corporate culture (Chen et al., 2018; Lin, 2007; Cummings, 2004). People provide task information and expertise for a specific product or procedure among teams, groups of members or organisations

(Cummings, 2004). Ellis (2001, cited in Riege, 2005, p.28) claimed that managers might prefer to assign experienced employees to small groups and meet the team members regularly to provide knowledge as a collective responsibility rather than making people share knowledge personally.

Additionally, Lin (2007) posited that knowledge sharing is a social interaction culture that captures, organises, reuses, and exchanges experience-based knowledge amongst members through group activities. This culture makes that knowledge available to others in the business (Lin, 2007). Thus, knowledge sharing behaviour based upon the relationship between the sharer and recipient/receiver can be comprehended as the most common sharing level, which resides at the organisational level, for example, corporate culture and daily routines. As described by Yi (2009), knowledge sharing comprises a series of personal behaviours referring to sharing personal knowledge and experience with others in the corporate activities, ultimately contributing to corporate effectiveness. Therefore, knowledge sharing happens at individual and organisational levels.

On balance, it is hard to give knowledge sharing a standard definition from the extant literature because diverse dimensions have been researched in light of the types of knowledge, ways of sharing and levels of sharing (Cormican et al., 2021; Ahmad and Karim, 2019; Ho et al., 2009). Foremost, aiming at the main aspects of this research, sharing what people have known to others is the knowledge donating act. Thus, the concept of knowledge sharing is inclined to the behavioural dimension. Second, this study excludes the first mechanism proposed by Bartol and Srivastava (2002) (contributing knowledge to organisational databases). This is because contributing knowledge to organisational databases facilitates explicit or codified knowledge sharing, which does not accommodate the focus of this research on individual-tacit knowledge. Third, knowledge sharing depends upon the relationship between sharer and recipient/receiver (Lin, 2007; Hendriks, 1999; Nonaka, 1994) as the most basic sharing level (Ipe, 2003), which resides in corporate culture and daily routines (Chen et al., 2018; Lin, 2007). Accordingly, to comprehensively make sense of knowledge sharing at a small family business, it is crucial to look into it at both individual and organisational levels. Above all, Yi's definition of knowledge sharing accommodates this research. Knowledge sharing is *"a set of individual behaviours involving sharing one's work-related knowledge and expertise with other members within one's organisation, which can*

*contribute to the ultimate effectiveness of the organisation.” (Yi, 2009, p.68).*

## **2.3 Understanding of Knowledge Hiding**

A wealth of literature shows that potent knowledge sharing is vital to an organisation, interpersonal relationships, and employees’ work performance; yet making knowledge-sharing successful is still an elusive issue (Di Vaio et al., 2021; Prouska and Kapsale, 2021). This is because firms do not truly own the wisdom of employees (Kelloway and Barling, 2000), and it is unrealistic to expect all people to be willing to share tacit knowledge in the company (Michailova and Husted, 2003; Cabrera and Cabrera, 2002). Companies are not the owners of individual knowledge assets, and individuals have no obligation to transfer their unique knowledge to other members (Yang et al., 2021). Instead, when requested to share knowledge, employees may opt to withhold it for various reasons (Webster et al., 2008). Thus, not sharing behaviours often happen within a company (Nguyen et al., 2022; Peng, 2013; Connelly et al., 2012; Webster et al., 2008). Illustratively, knowledge hiding caused a loss of US\$ 47 million in American companies in 2018 (Panopto, 2018 cited in Nguyen et al., 2022 p.161). Connelly et al. (2012) noted that in a US survey, 76% of respondents admitted they once hid knowledge. Likewise, Peng (2013) surveyed a sample of 190 knowledge workers in China and discovered that 46% had engaged in knowledge hiding. However, not-knowledge sharing has not obtained as much attention as knowledge sharing (Zhang and Min, 2019; Evans et al., 2015). Hence, this thesis should take non-knowledge sharing into account when investigating knowledge sharing.

### **2.3.1 The Related Concepts of Non-Knowledge Sharing**

An early study on non-knowledge sharing looked at data withholding by scientists (Campbell et al., 2000) because of the knowledge-intensive nature of academia. With the arrival of the information economy, Davenport and Prusak (1998) stressed the importance of studying knowledge sharing. There has been gradually rising interest in ineffective knowledge sharing behaviours such as knowledge hoarding and knowledge sharing hostility in firms (Stenius et al., 2016; Riege, 2005; Cabrera and Cabrera, 2002). The non-knowledge-sharing phenomenon could be understood as knowledge withholding (Kang, 2016), knowledge hoarding (Evans et al., 2015) or knowledge hiding (Connelly et al., 2012). The definitions of these terms are quite ambiguous in prior research on non-knowledge sharing (Oliveria et al., 2021). Distinguishing

these three terms is helpful to understand better the non-knowledge sharing domain and its implications for knowledge sharing (Xiao and Cooke, 2019).

Knowledge withholding is the likelihood that individuals make less knowledge available to their co-workers than they could (Lin and Huang, 2010). Through systematically reviewing and comparing the extant research on knowledge hiding, hoarding and withholding, Oliveria et al. (2021) argued that knowledge withholding is categorised into intentional knowledge hiding and unintentional knowledge hoarding, as posited by Webster et al. (2008). In most cases, these two concepts could be used interchangeably to describe non-sharing or lack of sharing (Anand et al., 2020). Conversely, Connelly et al. (2012) first proposed the construct of knowledge hiding, distinguishing it from other related concepts. Knowledge hiding is *“an attempt by an individual to retain and hide the knowledge that has been requested by someone else”* (Connelly et al., 2012, p.65). Meanwhile, knowledge hoarding is an accumulation or concealment of knowledge that may or may not be shared later (Hislop, 2003) but has not been requested by another (Evans et al., 2015; Webster et al., 2008). Compared to different non-knowledge-sharing concepts in prior literature (Ford and Staples, 2008; Webster et al., 2008; Cabrera and Cabrera, 2002), Connelly et al. (2012) formally constructed and measured the concept of knowledge hiding; since then, knowledge hiding has been developed as a stand-alone research topic in the knowledge management field (Xiao and Cooke, 2019). Despite the research on knowledge hiding progressing within the last decade, Pereira and Mohiya (2021, p.369) posited that *“the literature on knowledge hiding is in its infancy stage”* through the co-word analysis to review existing literature research on knowledge hiding.

By comparing these terms, it is evident that knowledge withholding comprises knowledge hiding and hoarding. The main point falls into the differences between knowledge hoarding and hiding. First, there is a distinction over whether one is asked by others, namely knowledge recipients, during knowledge sharing behaviour (Oliveria et al., 2021; Connelly et al., 2012). Second, knowledge hoarding is unintentional withholding behaviour because people may not notice the needs of others; conversely, hiding is intentionally not-sharing knowledge (Butt et al., 2020). Third, the content of knowledge hiding usually involves know-how, whereas knowledge hoarding can refer to the accumulation of a more comprehensive array of contents such as complaints, concerns and suggestions about potential organisational

problems (Oliveria et al., 2021). Considering the critical scope of this research (individual-tacit knowledge) and the chosen knowledge sharing definition, knowledge hiding, a deliberate behaviour, tends to conform more to the core of this study. What's more, the party of the knowledge recipient/receiver is an essential element of both knowledge sharing (Zhang and Jiang, 2015; van den Hooff and de Ridder, 2004; Hendriks, 1999) and knowledge hiding (Oliveria et al., 2021; Shrivastava et al., 2021; Connelly et al., 2012; Webster et al., 2008). Therefore, this work uses knowledge hiding as a non-knowledge-sharing phenomenon.

### **2.3.2 The Concept of Knowledge Hiding**

This research employs the knowledge hiding definition of Connelly et al. (2012). Not only is it the first and most-cited definition in the knowledge management field (Oliveria et al., 2021; Pereira and Mohiya, 2021; Shrivastava et al., 2021; Xiao and Cooke, 2019; Gagne et al., 2019) but also pertains to the main scope of this study: individual-tacit knowledge (Connelly et al., 2012). According to Hwang (2012), sharing explicit knowledge is more straightforward than tacit knowledge because explicit knowledge presented in written documents is hard to hide.

The critical element in knowledge hiding is that two parties are involved, as with knowledge sharing. One is the knowledge seeker (a person who requests knowledge); the other is the knowledge hider (an individual who hides their knowledge) (Černe et al., 2014). When combined with the concepts of knowledge sharing and hiding for this research, the knowledge sharer or knowledge hider is the one who possesses the knowledge and makes decisions to share or hide it (Oliveria et al., 2021). The knowledge recipient is the knowledge seeker, the co-worker who requests or learns knowledge from others (Shrivastava et al., 2021). Thus, the prerequisites of knowledge hiding are: (1) an intentional attempt; (2) knowledge requested by another member (Xiao and Cooke, 2019).

Connelly et al. (2012) also depicted how knowledge is hidden by three mechanisms: evasive, rationalised, and playing dumb. These are also known as the knowledge hiding facets (Pereira and Mohiya, 2021; Xiao and Cooke, 2019; Gagne et al., 2019). Evasive hiding refers to providing incorrect or misleading information; rationalised hiding occurs when individuals explain not sharing; playing dumb is when individuals pretend not to know or ignore the request for knowledge (Connelly et al., 2012). Oliveria et al. (2021) systematically reviewed thirty-three articles on knowledge hiding or hoarding from 2011 to 2021. The outcomes

exposed that the categories of knowledge hiding from Connelly et al. (2012) are the most complete; more categories unfolded in ongoing studies had developed from these (Oliveria et al., 2021). Similar to knowledge sharing, knowledge hiding also occurs at varying levels in business settings: among employees (Rezwan and Takahashi, 2021), teams (Babic et al., 2019; Singh, 2019), and even between supervisors and subordinates (Butt, 2020). Consequently, the present thesis accounts for knowledge hiding at different levels.

### **2.3.3 Relationship Between Knowledge Hiding and Sharing**

In numerous previous studies, knowledge hiding or hoarding are seen as opposite behaviours to knowledge sharing (Chatterjee et al., 2021; Pereira and Mohiya, 2021; Butt, 2020; Liu et al., 2020), adversely affecting individual and organisational performance, such as a company's decision-making quality (Ghasemaghaei and Turel, 2021) and decision implementation (Li et al., 2020); corporate and team performance (Nguyen et al., 2022; Chatterjee et al., 2021; Yang et al., 2021); creativity (Mubarak et al., 2021; Peng et al., 2019); employees' turnover intention (Serenko and Bontis, 2016) and organisational citizenship behaviours (Arain et al., 2020). Knowledge hiding or hoarding is deemed one of the barriers to knowledge sharing (Webster et al., 2008; Riege, 2005) and the dilemmas of knowledge sharing (Cabrera and Cabrera, 2002). Knowledge sharing may bring risks to those who share knowledge, such as loss of power (Pereira and Mohiya, 2021). It may also backfire due to colleagues' misunderstanding or misuse (Ford and Staple, 2008). By hiding knowledge, employees can protect themselves (Oliveira et al., 2021). In some cases, employees will intentionally withhold their knowledge even with the provision of an incentive scheme to share (Webster et al., 2008; Cabrera and Cabrera, 2002). At the individual level, Černe et al. (2014) unveiled that the negative influence of knowledge hiding not only works on those who request knowledge but decreases the creativity of employees who possess knowledge. At the organisational level, knowledge hiding potentially impairs collaborations and damages interpersonal relationships (Connelly and Zweig, 2015). It also holds back the development of innovative ideas; subsequently, it will do harm to team and organisational performance (Dong et al., 2017; Lin and Huang, 2010). More recently, Pereira and Mohiya (2021) found that positive corporate context and intention help knowledge sharing. Conversely, the other three combinations of corporate context and individual intentions (positive corporate context + negative individual intentions; negative corporate context + positive individual intentions;



negative corporate context + negative individual intentions) engender knowledge hiding. While many organisations take actions to provoke people to share knowledge and voice, numerous people still choose to hide knowledge deliberately (Prouska and Kapsale, 2021). Therefore, to remove impediments of for validly sharing knowledge at work, it is necessary to investigate knowledge hiding (Connelly et al., 2012).

On the other hand, in some situations, knowledge hiding is not a harmful act, as with 'white lies' (Saxe, 1991 cited in Connelly et al., 2012 p. 65), because it can be impacted by prosocial motivation (Hilliard et al., 2022; Di Vaio et al., 2021; Xiong et al., 2021; Xiao and Cooke, 2019). For instance, rationalised hiding may improve interpersonal relationships between those who possess the knowledge and those who request knowledge (Connelly and Zweig, 2015) because the people holding knowledge do not hurt others' feelings (Huo et al., 2016). People may withhold knowledge for reasons of responsibility, or employees may refrain from pointing out others' mistakes to avoid conflict (Huo et al., 2016). Xiong et al. (2021) conducted qualitative interviews with fifteen international R&D teams on knowledge hiding and found that knowledge hiding has some benefits to the individual and teams. At the personal level, knowledge hiding can save time and help build employees' confidence and professional skills (Xiong et al., 2021). At the team level, knowledge hiding helps new team members not to rely on superiors' knowledge (Xiong et al., 2021). However, little research has looked into the positive aspects of knowledge hiding (Xiao and Cooke, 2019). As a result, Xiao and Cooke (2019) suggested this should be explored in future studies.

Knowledge sharing and hiding are not mutually opposite behaviours (Anand and Hassan, 2019; Gagne et al., 2019; Connelly et al., 2012; Ford and Staples, 2010) because the two constructs may have quite different antecedents (Gagne et al., 2019; Connelly et al., 2012). Most of the reasons for both behaviours are uncorrelated (Gagne et al., 2019). That is, knowledge sharing and hiding are considerably independent behaviours that might occur toward different individuals and the same group differently over time (Gagne et al., 2019). Even if knowledge sharing and hiding may have similar behavioural presentations, the underlying motivations and mechanisms are strikingly different (Connelly et al., 2012). Ford and Staple (2008) disclosed the full spectrum from knowledge sharing to knowledge hoarding; this includes fully sharing, discretionary sharing because of communicational channels, partial sharing or hiding due to fewer channels, disengaged sharing and active knowledge hiding.

Some examples between knowledge sharing and hoarding in the study of Ford and Staple (2008), such as partial sharing or knowledge hiding, knowledge hinting and disengaged sharing, suit the types of knowledge hiding proposed by Connelly et al. (2012): evasive hiding and rationalised hiding. This demonstrates that knowledge sharing and withholding/hiding cannot be simply comprehended from opposite stances (Ford and Staple, 2008). In the latest literature-review research by Oliveria et al. (2021) concluded that knowledge hiding is in opposition to knowledge collection behaviour, whereas knowledge hoarding is in opposition to knowledge donating behaviours (Oliveria et al., 2021). The four behaviours can be positive when individuals are committed to the organisation and adverse when people do not do so (Oliveria et al., 2021). The results of Gagne et al. (2019) implied that in Chinese samples, pressure led to more frequent sharing and hiding. The Chinese people either shared or hid at different times toward varied targets depending on whether they could do sharing (Gagne et al., 2019).

By contrast, whilst knowledge sharing and hiding are motivated differently, it is acknowledged from a social dilemma perspective that people may simultaneously have reasons for sharing or not sharing (Ford and Staples, 2008; Cress et al., 2006; Cabrera and Cabrera, 2002). In the research of Gagne et al. (2019), pressure could result in more frequent sharing and hiding simultaneously; it might be because people shared or hid knowledge at different times and toward different audiences depending on whether they could get rid of the pressure or not. Some scholars have underpinned this assertion, suggesting that knowledge hiding may also occur alongside knowledge sharing, which merits attention (Hadjielias et al., 2021; Singh, 2019). However, simultaneous knowledge sharing and hiding, the new conceptualisation in the knowledge management field, has drawn limited attention (Aleksic et al., 2021; Hadjielias et al., 2021; Pereira and Mohiya, 2021; Su, 2020; Gagne et al., 2019). As suggested by Gagne et al. (2019), future research could draw upon this research topic. Therefore, the current thesis will probe knowledge sharing and hiding concurrently to improve understanding of both behaviours.

In summary, it is likely that knowledge sharing and hiding can be autonomous, situational behaviours (Hillard et al., 2022; Anand et al., 2020; Kim et al., 2015). First, knowledge hiding can be separated from other related concepts of non-knowledge-sharing behaviour, such as knowledge withholding and hoarding (Bari et al., 2019; Connelly et al., 2012), because it is an

intentional act to withhold or conceal knowledge when other people request knowledge (Hillard et al., 2022; Xiao and Cooke, 2019; Connelly et al., 2012; Webster et al., 2008). Knowledge is often hidden by three mechanisms: evasive hiding, rationalised hiding and playing dumb (Connelly et al., 2012) from different levels in the workplace (Butt, 2020; Babic et al., 2019).

Second, scholars have distinct perceptions of knowledge hiding, either as a detrimental behaviour (Butt, 2020; Anand et al., 2020; Liu et al., 2020; Webster et al., 2008) or not a hostile act (Hillard et al., 2022; Di Vaio et al., 2021; Xiao and Cooke, 2019; Huo et al., 2016; Connelly et al., 2012). Instead, the bright side of knowledge hiding has been under-explored (Hillard et al., 2022; Di Vaio et al., 2021; Xiao and Cooke, 2019).

Furthermore, knowledge hiding and sharing are considered as either mutually opposite behaviours (Chatterjee et al., 2021; Butt, 2020; Liu et al., 2020) or different constructs (Di Vaio et al., 2021; Anand and Hassan, 2019; Gagne et al., 2019; Connelly et al., 2012; Ford and Staples, 2010), because the underlying motivations and mechanisms are strikingly different (Gagne et al., 2019; Connelly et al., 2012). Recent researchers have proposed a new conceptualisation that knowledge hiding may also occur alongside knowledge sharing, which merits attention (Hadjielias et al., 2021; Singh, 2019). People may simultaneously hold motivations to share and not to share (Cress et al., 2006; Cabrera and Cabrera, 2002). Hence, knowledge sharing and hiding need to study simultaneously. However, studying knowledge sharing and hiding concurrently is a new topic in knowledge management research (Aleksic et al., 2021; Hadjielias et al., 2021; Pereira and Mohiya, 2021; Su, 2021; Gagne et al., 2019). Despite the increasing recent interest in knowledge hiding (Chatterjee et al., 2021; Di Vaio et al., 2021; Mubarak et al., 2021; Oliveria et al., 2021; Rezwan and Takahashi, 2021; Shrivastava et al., 2021; Xiong et al., 2021; Bilginoğlu, 2019; Xiao and Cooke, 2019; Connelly et al., 2012), research on knowledge hiding is still in “*its infancy stage*” (Pereira and Mohiya, 2021, p.369). Therefore, the current paper will look into the knowledge hiding area and increase the understanding of knowledge sharing and hiding simultaneously.

## **2.4 Reasons for Knowledge Sharing and Hiding**

The extant literature has examined individual factors of knowledge sharing from the perspectives of personal abilities (Motoc, 2020; Dessi et al., 2014; Liu and Liu, 2011; Chirico,

2008; Bock et al., 2005; Bock and Kim, 2002); individual motivations (Hillard et al., 2022; Pereira and Mohiya, 2021; Nham et al., 2020; Chen et al., 2018; slam et al., 2018; Stenius et al., 2017; Cavaliere et al., 2015; Eze et al., 2013; Hung et al., 2011; Lin, 2007), knowledge as a source of power (Chen and Hsieh, 2015; Riege, 2005), the relationship of trust between knowledge sharer and knowledge recipient (Cormican et al., 2021; Wen and Wang, 2021; Khvatova and Block, 2017; Chen and Hung, 2010; Riege, 2005), levels of education (Riege, 2005), and time factors (Connelly et al., 2014; Riege, 2005). The organisational factors related to knowledge sharing include corporate culture (Wen and Wang, 2021; Gardiner, 2015; Chen and Hsieh, 2015; Lin, 2013; Bock et al., 2005; Davenport and Prusak, 1998), leadership (Nguyen et al., 2022; Cormican et al., 2021; Wen and Wang, 2021; Cunningham et al., 2017, 2016; Eze et al., 2013; King and Marks, 2008); the role of managers (Wen and Wang, 2021; Woodfield and Husted, 2017; Cunningham et al., 2016; Durst and Edvardsson, 2012), reward system (Cormican et al., 2021; Bock et al., 2005), corporate structure (Cavaliere et al., 2015; Chen and Hsieh, 2015), social networks (Lin, 2013; Wang and Noe, 2010) interpersonal trust (Cormican et al., 2021; Su, 2021) and IT systems (Chen and Hsieh, 2015; Cavaliere et al., 2015; Alvai and Leidner, 2001). However, individual-tacit knowledge is often shared and exchanged through social interactions rather than IT support. Therefore, IT factors are excluded from this project.

By the same token, research on knowledge hiding factors or antecedents has also increased. In these studies, knowledge hiding is seen as resulting from individual factors, including psychological safety (Jiang et al., 2019), job insecurity and lack of confidence (Nguyen et al., 2022; Jha and Varkkey, 2018); job characteristics (Hernaes et al., 2018); organisational factors (Chatterjee et al., 2021; Malik et al., 2019) such as the nature of the corporate climate (Anaza and Nowlin, 2017), interpersonal work conflicts (Venz and Shoshan, 2022), the quality of leader-member exchanges (Zhao et al., 2019); the quality of sharing culture (Xiong et al., 2021; Gagne et al., 2019, Connelly et al., 2012) and motivational perspectives (Hillard et al., 2022; Gagne et al., 2019; Ma et al., 2020; Wang et al., 2018).

As explained, the reasons for knowledge sharing and hiding behaviour may be individual or organisational experiences (Pereira and Mohiya, 2021). Whether people share or hide is determined by their intentions, and the corporate context will be studied in-depth in this work. With the arrival of the information economy in the 1990s, the research regarding

knowledge sharing has flourished in diverse contexts and disciplines (Ouédraogo and Rinfret, 2019; Chen et al., 2018; Witherspoon et al., 2013; Lin, 2007; Ipe, 2003; Nonaka and Takeuchi, 1995). In contrast to knowledge sharing, knowledge hiding commenced being an independent research subject in 2012. In recent years, attention to knowledge hiding has been increasing (Hillard et al., 2022; Chatterjee et al., 2021; Di Vaio et al., 2021; Mubarak et al., 2021; Oliveria et al., 2021; Rezwan and Takahashi, 2021; Shrivastava et al., 2021; Xiong et al., 2021; Bilginoğlu, 2019; Xiao and Cooke, 2019; Connelly et al., 2012). As stated by Pereira and Mohiya (2021, p.369), *“the literature on knowledge hiding is in its infancy stage”*. So far, researchers have typically investigated knowledge sharing or knowledge hiding in isolation rather than looking into both at the same time, which would form a new research topic in the knowledge management field (Aleksic et al., 2021; Hadjielias et al., 2021; Pereira and Mohiya 2021; Su 2020; Gagne et al., 2019). Above all, the current study aims at addressing this gap from the individual motivational perspective and the corporate context.

#### **2.4.1 Motivational Perspective**

##### ***2.4.1.1 Motivations to knowledge sharing and hiding***

It has been broadly acknowledged that motivation is a core determinant of the general behaviour and work-related behaviours (Deci and Ryan, 1985). Mohd et al. (2012, cited in Ergün and Avcı, 2018, p.62) defined motivation as an inherent force that affects the action direction and inspires proper behaviour. The role of motivation is to facilitate direct behaviours, set a goal, maintain the continuity of the act and relevant learning, and enhance the amount of work that an employee achieves (Rehman and Haider, 2013). Morgan (1984 cited in Ergün and Avcı, 2018 p.62) described motivation as any goal-directed behaviour. People believe that the desirable accomplishment of the goal requires them to actively display this behaviour (Ergün and Avcı, 2018). In this way, they will spend time and effort to achieve their specific aims (Ülgen, 1994, cited in Ergün and Avcı, 2018, p.62). Motivation is especially significant for knowledge-based work because it is cognitively demanding, requiring time and effort (Gagne and Deci, 2005). As individually cognitive behaviours, knowledge sharing and hiding are also triggered by varied motivations (Aleksic et al., 2021; Osterloh and Frey, 2000).

Based on the expectancy-valence theory of motivation proposed by Vroom (1964 cited in Gagne and Deci, 2005 p. 331), Porter and Lawler (1968 cited in Gagne and Deci, 2005 p. 331)

built up a model of intrinsic and extrinsic work motivation. Intrinsic motivations are characterised by interest or pleasure in the activity for its own sake (Deci and Ryan, 1985). Extrinsic motivations are for goal-driven reasons, such as rewards and reputation. (Deci and Ryan, 1985). It has been widely recognised by diverse authors within various contexts that people can be motivated either intrinsically or extrinsically (Cormican et al., 2021; Lin, 2007; Ryan and Deci, 2000; Deci and Ryan, 1985). If an individual is intrinsically motivated, they are willing to undertake the action because it is enjoyable (Stenius et al., 2016; Cavaliere et al., 2015). In contrast, a goal triggers extrinsically motivated individuals' behaviours (Gagne and Deci, 2005).

Knowledge sharing and hiding invariably highlight the significance of people's motivations in deciding whether to share or hide knowledge (Pereira and Mohiya, 2021; Connelly et al., 2012; Siemsen et al., 2007). Nonetheless, Connelly et al. (2012) asserted that motivations for knowledge sharing and hiding are likely to be distinct, which has been verified by a wealth of empirical evidence in extant studies (Aleksic et al., 2021; Cormican et al., 2021; Halvari et al., 2021; Xiong et al., 2021; Islam et al., 2018; de Almeida et al., 2016; Stenius et al., 2016; Cavaliere et al., 2015; Lin, 2007; Kankanhalli et al., 2005). Cormican et al. (2021) selected 104 employees in a high-tech service in Ireland to examine factors affecting knowledge sharing. The findings indicated that trust as intrinsic motivation is significantly connected with knowledge sharing (Cormican et al., 2021). Lin (2007) surveyed 172 people from 50 large Taiwanese organisations. The results revealed that reciprocal benefits, knowledge self-efficacy and enjoyment in helping others positively motivated people to share knowledge, whilst expected organisational rewards as an extrinsic motivation did not impact knowledge sharing behaviour (Lin, 2007). Olatokun and Nwafor (2012) obtained similar findings in Ebonyi State in Nigeria. Enjoyment in helping others and knowledge self-efficacy as intrinsic motivations had a salient influence on knowledge sharing (Olatokun and Nwafor, 2012). Still, extrinsic incentives such as expected organisational rewards and reciprocal benefits had no significant impact (Olatokun and Nwafor, 2012). This demonstrated that knowledge sharing might depend on employees' intrinsic rather than extrinsic motivations (Gagne et al., 2019; Wang and Hou, 2015; Olatokun and Nwafor, 2012; Lin, 2007). Intrinsic motivation is conducive to tacit knowledge sharing when extrinsic motivation fails (Osterloh and Frey, 2000). Furthermore, extrinsic motivations, particularly monetary rewards, have been discovered to

influence knowledge sharing positively or negatively (Aleksic et al., 2021; Islam et al., 2018; Witherspoon et al., 2013; Olatokun and Nwafor, 2012; Cavaliere et al., 2012; Lin, 2007). This is determined by employees' cost and benefit analysis when sharing knowledge (Osterloh and Frey, 2000). From a socio-economic perspective, if the perceived benefits (monetary incentives or reciprocity) equal or surpass the costs (time), then people will prefer to share knowledge; otherwise, they will stop (Ahmad and Karim, 2019). Zhang and Jiang (2015) demonstrated that the knowledge recipient's characteristics affect one's motivation for knowledge sharing.

Knowledge hiding is also the production of a series of individual intentions or motivations (Hillard et al., 2022; Pereira and Mohiya, 2021; Gagne et al., 2019; Connelly et al., 2012). First, from an economic perspective, individual behaviours stem from self-interests, and people will do their best to maximise personal utility (Halvari et al., 2021; Xiong et al., 2021). In this sense, knowledge hiding is constructed on self-interested intentions (Peng, 2013). Ulrike et al. (2005, cited in Pereira and Mohiya, 2021, p. 371) pointed out that if someone fears losing their power of knowledge, known as the perspective of knowledge ownership; this may lead to knowledge hiding (Halvari et al., 2021; Pereira and Mohiya, 2021). Kelloway and Barling (2000) and Huo et al. (2016) shed light on how people often overestimate the potential value of a controlled object and take steps to maintain control of it, particularly when they have put a large amount of effort into obtaining it. In this case, even if employees know that sharing knowledge could help earn respect from others, they may opt to hide knowledge because they feel threatened about losing control of it (Huo et al., 2016).

Second, social interactions are also relevant to knowledge hiding (Shrivastava et al., 2021; Xiong et al., 2021). When an individual experiences knowledge hidden by others, they are prone to retaliate as claimed by the norm of reciprocity, inducing distrust in their colleagues (Sitkin and Roth, 1993). This may cause people to feel reluctant to participate in social exchanges (Blau, 1964) and make them susceptible to engaging in knowledge hiding (Connelly et al., 2012). This point is supported by Černe et al. (2014) and Hernaus et al. (2018), who argued that individuals' high distrust and competitiveness could cause knowledge hiding. However, instead of some logical parallels, distrust is not merely an absence of trust (Lewicki et al., 1998). Trust is *"the willingness of a party to be vulnerable to the actions of another party"* (Mayer et al., 1995, p.712), but distrust is a *"lack of confidence in the other, a concern*

*that the other may act to harm one, and that the other does not care about one's welfare, intends to act harmfully, or is hostile"* (Grovier, 1994, p. 240). In this vein, trust and distrust are separate motivational constructs (McKnight et al., 2004).

Finally, Connelly et al. (2012) believed that knowledge hiding might not come from an intention to hurt others. For example, individuals resist pointing out their colleagues' mistakes or hide knowledge to avoid conflict in the workplace (Huo et al., 2016). Oliveira et al. (2021) concluded that researchers have typically examined the motivations of knowledge hiding from three theoretical perspectives: psychological ownership, power politics and exchange theory. Hence, motivations are essential factors resulting in people's knowledge hiding behaviours. In the latest study by Hillard et al. (2022), employees' knowledge hiding behaviours are aligned with autonomous motivations, such as a desire for better mentoring, protecting colleagues and themselves from adverse outcomes and advancing a meaningful project. In this case, the motivations for pro-social knowledge hiding do not seem to be different to those of knowledge sharing (Hillard et al., 2022).

It is also salient that motivations behind knowledge sharing and hiding are significantly different and uncorrelated, as underpinned by several past studies (Pereira and Mohiya, 2021; Gagne et al., 2019; Xiao and Cooke, 2019; Connelly et al., 2012). As posited by Gagne et al. (2019), knowledge hiding, as an intentionally withholding behaviour, could be an active and motivated sort of not sharing because it aligns explicitly with the instances where people are solicited for their knowledge by coworkers. Stenius et al. (2016) applied SDT to examine different types of motivations for knowledge sharing and found that these motivations simultaneously influenced knowledge hiding. The sense of importance was the best predictor of the quality of knowledge sharing, and it was negatively linked with knowledge hiding (Stenius et al., 2016). In contrast, external motivation was not associated with knowledge sharing but was positively concerned with knowledge hiding (Stenius et al., 2016). Conversely, some researchers believe that motivations for knowledge sharing and hiding are interrelated (Hadjielias et al., 2021; Singh, 2019; Ford and Staples, 2008; Cress et al., 2006; Cabrera and Cabrera, 2002) because people may simultaneously have motivations for sharing or not sharing (Cress et al., 2006; Cabrera and Cabrera, 2002). Ford and Staples (2008) stressed that the motivation to share knowledge is able to reflect on knowledge withholding. Unfortunately, limited state-of-the-art studies have researched knowledge sharing and hiding



simultaneously (Aleksic et al., 2021; Hadjielias et al., 2021; Pereira and Mohiya, 2021; Su, 2020; Gagne et al., 2019). Therefore, it is worth investigating motivations for knowledge sharing and hiding simultaneously.

#### ***2.4.1.2 A Brief introduction to theories on motivations for knowledge sharing and hiding***

The previous literature has used different theories to identify and examine the motivations of knowledge sharing behaviours, for example, Social Exchange Theory (SET) (Cormican et al., 2021; Rese et al., 2020; Černe et al., 2014; Hung et al., 2011; Chen and Hung, 2010; Lin and Huang, 2010; Kankanhalli et al., 2005), the Theory of Reasoned Action (TRA) (Choi et al., 2020; Henttonen et al., 2016; Olatokun and Nwafor, 2012; Ho et al., 2009; Lin, 2007; Bock and Kim, 2001), the Theory of Planned Behaviour (TPB) (Cormican et al., 2021; Islam et al., 2018; Jeon et al., 2011; Lin, 2007; Bock et al., 2005; Ajzen, 1991), and the Self-Determination Theory (SDT) (Hillard et al., 2022; Halvari et al., 2021; Hon et al., 2021; Wu et al., 2021; Gagne et al., 2019; Stenius et al. 2017; Stenius et al., 2016; Cavaliere et al., 2015). Therefore, this section needs to look at them in detail to provide a suitable theoretical foundation to study skilled employees' motivations for knowledge sharing and hiding in this research.

#### ***Social Exchange Theory (SET)***

Social Exchange Theory (SET) began with the research of Blau (1964 cited in Xiao and Cooke, 2019 p. 478). In this theory, people's actions are based on benefit maximisation and cost minimisation (Yan et al., 2016). The results of Yan et al. (2016) demonstrated that a sense of self-worth and reputation enhancement positively affect knowledge sharing. Within the social exchange, knowledge contribution is impacted by social and personal costs and benefits (Yan et al., 2016; Hung et al., 2011). The costs include loss of knowledge power and time spent (Halvari et al., 2021). In contrast, the benefits refer to rewards, knowledge self-efficacy and enjoyment in helping others (Kankanhalli et al., 2005). These factors could be perceived as intrinsic and extrinsic motivations (Deci and Ryan, 1985). For example, Kankanhalli et al. (2005) illustrated that monetary reward was an extrinsic motivation for employees' knowledge sharing because they shared knowledge in order to obtain a better life. Their research also discovered that some employees were willing to share knowledge, as they could obtain happiness and a sense of self-worth by doing so (Kankanhalli et al., 2005). Diverse ways of social exchange include a set of interactions, but these produce obligations at the same

time (Aliakbar et al., 2012). In SET, these interactions have a close connection with another person's action (Emerson, 1976 cited in Aliakbar et al., 2012, p. 212). Thomas and Gupta (2021) articulated that how people actively indulge in knowledge sharing is determined by their expectations of obtaining reciprocal sharing when they need knowledge at a later time.

### ***Theory of Reasoned Action (TRA)***

The Theory of Reasoned Action (TRA) is a well-established general theory of social psychology used to study human behaviours (Fishbein and Ajzen, 1975, cited in Lin, 2007, p. 136). In TRA, individuals' behaviour can be predicted by their attitudes, beliefs and intentions (Fishbein and Ajzen, 1975, cited in Lin, 2007, p. 136). This theory has been successfully applied to forecasting knowledge sharing behaviour through individual attitudes toward knowledge sharing, subjective norms of knowledge sharing and intention to share (Choi et al., 2020; Henttonen et al., 2016; Olatokun and Nwafor, 2012; Ho et al., 2009; Lin, 2007; Bock and Kim, 2001). Lin (2007) used TPA to survey 172 employees to examine the role of extrinsic and intrinsic motivations in explaining knowledge sharing behaviours. The results presented that reciprocal benefits, knowledge self-efficacy and enjoyment in helping others significantly affected knowledge sharing but expected rewards did not predict knowledge sharing behaviours (Lin, 2007). Nevertheless, Bock and Kim (2001) demonstrated that expected rewards were necessary factors for knowledge sharing but were not positively related to attitudes toward knowledge sharing. Bock et al. (2005) revealed that anticipated reciprocal relationships impacted attitudes, and sense of self-worth and corporate climate affected subjective norms; however, anticipated extrinsic rewards negatively influenced knowledge sharing attitudes. As Xiong et al. (2021) suggested, cultivating a collaborative environment is beneficial to knowledge sharing and eradicating knowledge hiding in the workplace.

### ***Theory of Planned Behaviour (TPB)***

Developed from TRA, TPB is able to predict human behaviours from many functional aspects (Ajzen, 1991). TPB adds a new construct (perceived behavioural control) into TRA (Ajzen, 1991). Thus, human behaviours and their intentions can be predicted by using three components: attitude toward the specific behaviour, subjective norms and perceived behavioural control of this behaviour (Fishbein and Ajzen, 2010). These behavioural intentions are argued as a mixture of motivation to predict the actual behaviours (Stenius et al., 2017). TPB insists that this composite of motivation guides individuals' behavioural

intentions and behaviours “*in a logical, predictable and consistent fashion*” (Fishbein and Ajzen, 2010, p. 20). Jeon et al. (2011) discovered that both intrinsic (enjoyment in helping others and need for affiliation) and extrinsic (self-image and reciprocity) motivations are positively connected with attitudes toward knowledge sharing. Intrinsic motivations have more significant effects on knowledge sharing behaviours than extrinsic motivations (Jeon et al., 2011). Different outcomes emerged in the study of Islam et al. (2018), showing that enjoyment in helping others was highly associated with managers’ knowledge-sharing behaviour in Bangladesh’s Ready-Made Garments Industry. However, expected rewards, reciprocal benefits and knowledge self-efficacy did not significantly affect the same behaviours (Islam et al., 2018). According to Xiong et al. (2021), knowledge hiding was affected by R&D employees’ attitudes toward this behaviour (a sense of superiority, self-satisfaction, timesaving, and cost-benefit analysis), perceived social norms (according to the leadership styles and corporate cultures), and perceived behavioural control (arising from the knowledge differences between knowledge hiders and those requesting knowledge).

### ***Self-Determination Theory (SDT)***

SDT is extensively applicable to research on knowledge sharing (Halvari et al., 2021; Hon et al., 2021; Wu et al., 2021; Gagne et al., 2019; Stenius et al., 2017; Stenius et al., 2016; Cavaliere et al., 2015). However, it has not been often used to construe knowledge hiding (Hillard et al., 2022; Yang and Lee, 2021; Wang et al., 2018). Scholars, such as Peng (2013), Connelly et al. (2012) and Michailova and Husted (2003), confirmed that compared to knowledge sharing, hiding or withholding knowledge is more favoured by people on account of self-interest. In the existing literature, three theoretical perspectives, including psychological ownership, power politics, and exchange theory, have been broadly investigated to explain why people hide knowledge (Halvari et al., 2021; Xiao and Cooke, 2019). These perspectives are concerned with motivation (Halvari et al., 2021; Gagne et al., 2019; Connelly et al., 2012). Psychological ownership can satisfy an individual’s efficacy and effectiveness needs (Pierce et al., 2003). Thus, individuals who possess strong psychological ownership are more likely to conduct dysfunctional behaviours to keep their control over the target and not let others do so (Peng, 2013). Therefore, SDT could be a valuable theory for understanding knowledge sharing and hiding from a motivational perspective (Halvari et al., 2021; Yang and Lee, 2021; Gagne et al., 2019; Wang et al., 2018; Stenius et al., 2016; Cavaliere et al., 2015).

Ryan et al. (1985 cited in Gagne and Deci, 2005 p.333) were the first to adopt the concept of internalisation to analyse extrinsic motivations. It illustrates that extrinsically motivated behaviour can become autonomous, associated with Deci and Ryan's (1985) research on individual differences in casualty orientations (Haraldsen et al., 2019). This idea facilitates the formulation of SDT (Ryan and Deci, 2000; Deci and Ryan, 1985). The external social environments can significantly affect the basic psychological needs of autonomy, competence, and relatedness (Gagne and Deci, 2005) or impede or undermine them (Deci and Ryan, 2014). When these psychological needs are met, people tend to be autonomously inspired and to behave effectively (Deci et al., 2017; Deci and Ryan, 2014; Wang and Hou, 2015; Gagne and Deci, 2005). Conversely, feeling lost in one or more of these psychological needs can adversely impact one's mood and well-being (Deci and Ryan, 2011).

SDT stresses that motivation not only changes in strength, as argued by TRA and TPB, but also changes in quality (Gagne, 2009). It has been acknowledged by Deci and Ryan (2000) that the changes in motivational quality are viewed as changes in types of motivations. It points out that a specific sort of motivation enables remaining at a low level of quality if a person is endeavouring to control his or her behaviour (Wang and Hou, 2015). Within SDT, the quality of autonomous motivations is deemed to be higher than that of controlled to facilitate a particular behaviour (Halvari et al., 2021; Wang and Hou, 2015). Additionally, SDT describes motivation as a continuum varying from amotivation (no motivation at all) to intrinsic motivation (a behavioural sake of its own enjoyment) (Deci et al., 2017). Extrinsic motivations can be divided into four types: extrinsic, introjected, identified and integrated motivation, dependent on social context variables and individual differences (Deci et al., 2017). The process by which one specific motivation changes from external to intrinsic motivation is called external motivation internalisation (Deci et al., 2017; Gagne, 2009; Ryan and Deci, 2000; Deci and Ryan, 1985). The higher the degree of internalisation is, the closer the motivation to autonomous motivation is (Wang and Hou, 2015). As such, SDT develops motivation beyond the traditional categories between intrinsic and extrinsic motivation into a distinction between autonomous and controlled motivation (Ryan and Deci, 2000). This distinction is meaningful because extant knowledge sharing research primarily adopts the conventional categories of motivation (Gagne et al., 2019).

### ***Rationale for selecting SDT***

People may simultaneously have motivations for sharing and hiding (Hadjielias et al., 2021; Singh, 2019; Cress et al., 2006; Cabrera and Cabrera, 2002), and the motivation for knowledge sharing enables reflecting on knowledge withholding (Ford and Staples, 2008), the present study, therefore, used SDT as the leading theory to inform motivations for knowledge sharing and hiding simultaneously. Behind this, there are three reasons, as exhibited below.

The primary reason is that the study probes knowledge sharing and hiding by drawing upon individual-tacit knowledge, which is inherent in people's minds. Knowledge sharing is an autonomous and situational behaviour that contains a lot of discretionary possibilities (Hadjielias et al., 2021; Halvari et al., 2021; Wu et al., 2021; Gagne et al., 2019). The more tacit the knowledge is, the more discretion people will have to perform a behaviour that is meaningful for themselves but not necessarily for the business (Wang and Hou, 2015; Wang, 2004). As a result, people who possess knowledge will have the discretion to share or hide it (Yang and Lee, 2021; Gagne et al., 2019; Wang et al., 2018; Wang and Hou, 2015; Davenport and Prusak, 1998). In TRA and TPB, knowledge sharing is a stable phenomenon and is planned by people (Zhang and Jiang, 2015), which can be predicted logically and consistently (Fishbein and Ajzen, 2010) rather than relying on the specifically autonomous situation of sharing (Zhang and Jiang, 2015). Therefore, SDT is a valid theory to explore how people behave in action from autonomous motivations (Deci et al., 2017; Wang and Hou, 2015). Furthermore, SDT unravels that people's motivations for sharing or hiding vary in different types (Wang and Hou, 2015; Gagne, 2009). Thus, in this respect, TRA and TPB do not benefit in this research.

Secondly, SET, TRA and TPB adopt the traditional dichotomy between intrinsic and extrinsic motivations to investigate the motivation of knowledge sharing (Aleksic et al., 2021; Xiong et al., 2021; Cavaliere et al., 2015; Lin, 2007; Kankanhalli et al., 2005). It has been agreed by this study that intrinsic motivation is the purest type of motivation to drive people to share or hide knowledge out of the intrinsic pleasure it entails (Deci and Ryan, 2000). However, it may be unrealistic that intrinsic motivation can constantly or very often affect employees to do the workplace behaviours (Stenius et al., 2016), such as knowledge sharing and hiding in this research. Also, it is impossible that organisations could make all workplace behaviours interesting and enjoyable (Stenius et al., 2016). In addition, how to define inherent enjoyment and interest as intrinsic motivation relies on individual differences (Deci et al., 2017; Stenius

et al., 2016).

Lastly, people's behaviours are triggered by a number of motives and motivations, often simultaneously but not necessarily equally impact (Deci et al., 2017; Chemolli and Gagne, 2014; Vansteenkiste et al., 2009). Acknowledge by Gagne and Deci (2005) that six forms of motivations based on SDT are reflected in different reasons and situations for human behaviours, and these reasons provide the approach for assessing the types of motivations. Thus, SDT with a multidimensional view could better accommodate probing different reasons for tacit knowledge sharing and hiding than the traditional dichotomy of intrinsic and extrinsic motivation.

#### ***2.4.1.3. Knowledge sharing and hiding under SDT***

SDT states that individuals' behaviours may be motivated by externally induced incentives, labelled as controlled motivation, and internally evoked incentives, known as autonomous motivation (Cockrell and Stone, 2010). People feel autonomously motivated when they consider self-determination in selecting their targets out of self-interests, curiosity, care or abiding values (Peng, 2013; Ryan and Deci, 2000). The autonomous drivers include self-interests, enjoyment, and selfless care for others (Wang and Hou, 2015). On the other side, controlled motivation includes incentives based on individuals' explicit core-self needs and benefits (Wang and Hou, 2015; Ryan and Deci, 1985). People are conscious of being controlled to perform specific behaviours whilst they feel the pressure or necessity of performing these to accomplish desirable goals (Deci et al., 2017). The controlled motivations are reward systems, formal or informal appraisals from others, and status within a team or an organisation (Wang and Hou, 2015). At the aggregate level, the more autonomous types of motivation can generate better behavioural and well-being outcomes than the less autonomous forms (Hon et al., 2021).

Additionally, autonomous and controlled motivations may interact to influence people to perform a specific behaviour (Wang and Hou, 2015; Gagne, 2009; Gagne and Deci, 2005). In other words, one type of motivation can strengthen or weaken another kind of motivation according to the degree to which people's fundamental psychological needs are fulfilled (Wang and Hou, 2015; Gagne, 2009). The psychological needs contain autonomy (to be self-regulating in performing a behaviour), competence (to be effective in what one does), and

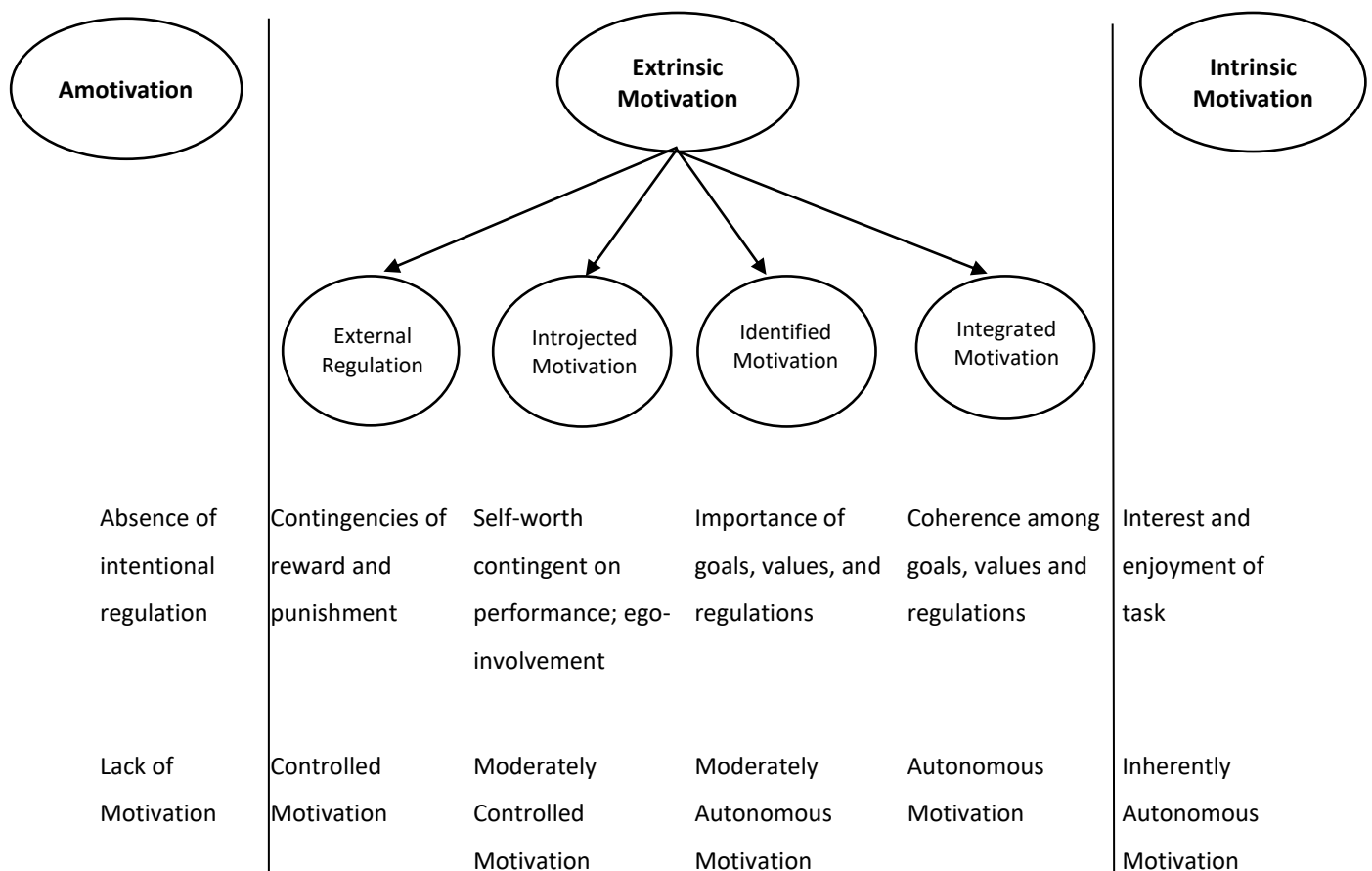
relatedness (to feel connected and in sympathy with others) (Ryan and Deci, 2000; Ryan et al., 1985). Explicitly, perceived autonomy is aligned with one's desire to self-regulate or self-organise their actions, which varies with their values, beliefs and lifestyles (Haas, 2019). Perceived competency lies with one's ability to be exerted (Wang and Hou, 2015). Perceived relatedness involves people's sense of belonging and meaningfulness to others (Haas, 2019). In this study, these needs are perceived as the focal motivations for knowledge sharing and hiding.

SDT posits amotivation, intrinsic motivation, and various extrinsic motivations based on the degree of autonomy (Gagne and Deci, 2005). Within SDT, the quality of a motivation is determined by how well it meets the three basic psychological needs (autonomy, competency and relatedness) (Wang and Hou, 2015). Thus, the quality of motivation increases in the continuum from amotivation to intrinsic motivation in Figure 3. More specifically, amotivation is a lack of motivation to engage in an activity (Gagne and Deci, 2005). Intrinsic motivation, the most autonomous motivation, involves people doing an activity from an inborn desire for autonomy, competency and relatedness (Deci and Ryan, 2000). Gagne (2009) stated that people with intrinsic motivations may be susceptible to talking about their job and sharing their knowledge passionately, even when not requested to do so. This motivation is found to cause less knowledge hiding (Gagne et al., 2019). Prior research has studied intrinsic motivation to share knowledge from altruism (Olatokun and Nwafor, 2012). In line with SDT, research has associated two constructs of altruism with intrinsic motivation: organisational benefits (e.g., organisational commitment) (e.g., Hsu et al., 2007) and personal fulfilment (e.g., enjoyment in helping others) (e.g., Olatokun and Nwafor, 2012; Lin, 2007).

At its core, SDT sets forth that extrinsic motivation is divided into different sorts of motivation: external regulation, introjected regulation, identified regulation and integrated regulation (Gagne and Deci, 2005). External regulation involves people undertaking activities to obtain a social (e.g. approval) or material (e.g. bonus) reward or to avoid social (e.g. criticism) or material (e.g. job loss) punishment (Halvari et al., 2021; Wang and Hou, 2015). When employees are subject to external regulation, they feel that others directly control their behaviours, often through contingent rewards and threats (Deci et al., 2017). It has been confirmed that external regulations have a powerful influence on motivating a particular behaviour; however, it is often accompanied by damage in an enduring decrease in

autonomous motivation and well-being (Deci et al., 2017). This type of motivation is less positively concerned with knowledge sharing than intrinsic motivation (Andreeva and Sergeeva, 2016). Instead, when people have little interest in an activity, external regulation does increase knowledge sharing (Gagne et al., 2019). Job insecurity and lack of rewards for knowledge sharing may increase the probability of knowledge hiding (Nguyen et al., 2022; Halvari et al., 2021; Wen and Ma, 2021; Haraldsen et al., 2019). Interestingly, when knowledge sharing is rewarded, it would be risky for externally motivated individuals to share something useless or unimportant with others; thus, they can maintain their knowledge strength (Cress et al., 2006). Stenius et al. (2016) discovered that external regulation for sharing was significantly associated with knowledge hiding. In the research of Gagne et al. (2019), external regulation among Chinese people was positively aligned with knowledge sharing, possibly due to the organisational culture or corporate context in China, where not sharing behaviours could lead to being punished.

**Figure 3: Motivations in Self-determination theory**





Source: Gagne and Deci (2005, p.336)

Introjected regulation represents that people indulge in an activity for ego-involvement (Gagne and Deci, 2005). This form of motivation may be relevant to knowledge sharing when it enhances individual ego or public image (e.g. showing off and gaining status), giving rise to irregular or not-evident sharing (Gagne, 2009). Gagne et al. (2019) put forward an assumption that whether to share or hide knowledge may depend on preserving or boosting one's ego. Wang and Hou (2015) stated that personal reputations and relationships with others intimately connect with introjected motivation, even when people do not truly realise the value of the behaviour. However, the relationship between ego-involvement and knowledge sharing/hiding is unknown (Gagne et al., 2019).

Identified regulation means that people identify with the value of a behaviour for their own self-selected goals (Gagne and Deci, 2005). With this form of motivation, people feel more autonomous because the behaviour is more consistent with their own goals and identities (Gagne et al., 2019). Likewise, integrated regulation is the fullest type of autonomous extrinsic motivation, in which *"people have a full sense that behaviour is an integral part of who they are, that it emanates from their sense of self and is thus self-determined"* (Gagne and Deci, 2005, p.335). When there are conflicts, identified motivation, such as identifying with one's job or family, is critical for employees to bring different identifications into coherence within the company (Deci et al., 2017). When they achieve this, individuals can wholeheartedly participate in specific actions without inner barriers or conflicts (Deci et al., 2017). Gagne et al. (2019) viewed both identified and integrated regulation as autonomous extrinsic forms of motivation because people join in an activity from personal meaning and perceived importance. Gagne (2009) deemed knowledge sharing associated with these forms of motivation. If a person believes it is vital to share knowledge to reach organisational goals, he or she tends to do so (Gagne et al., 2019).

Notably, identified/integrated motivation is not intrinsic motivation. A person with identified/integrated motivation acts a behaviour not out of their interests but through being influenced by the perceived importance of their self-selected goals (Gagne and Deci, 2005). However, identified/integrated motivation is closely linked with intrinsic motivation; hence both have been recognised as autonomous motivation (Ryan and Deci 2002; 2000; 1985) and

have been seen as facilitating knowledge sharing in previous literature (Gagne et al., 2019). Stenius et al. (2016) discovered that identified motivation is the perception of a sense of personal importance for the goals of the activity. It is the best predictor of tacit knowledge sharing and is negatively associated with knowledge withholding (Stenius et al., 2016). As a result, if the sense of importance is missing, identified motivation may cause knowledge withholding (Stenius et al., 2016). Still, most past research has not accounted for the distinction between intrinsic and identified motivation (Gagne et al., 2019). Gagne and Deci (2005) suggested that motivation needs to be studied as an important motivation connected to work. Hence, the current study will respond to this assertion by investigating the construct of identified motivation within SDT.

In contrast, external regulation and introjected motivation are forms of controlled motivation (Deci and Ryan, 2000). People participate in an activity out of pressure or the importance of undertaking the actions (Gagne and Deci, 2005). In the study by Stenius et al. (2016), external knowledge sharing motivation could give rise to knowledge withholding, whereas introjected motivation was equally as crucial as intrinsic motivation, indicating that self-worth-related considerations were likely to drive knowledge sharing in the work situation. Gagne (2009) posited that when employees feel competent, autonomous and related to their colleagues, they are likely to share knowledge. This argument highlighted that these psychological needs have a close connection with a sense of trust, relationship with others, and self-efficacy (Cormican et al., 2021; Khvatova and Block, 2017; Olatokun and Nwafor, 2012; Lin, 2007). On the other hand, time pressure and competitiveness have been proven to hinder intrinsic motivation for knowledge sharing (Ahmad and Karim, 2019; Riege, 2005) because tacit knowledge is people's core value due to outstanding effort and a long period of training (Nguyen et al., 2022), and sharing it also takes time and effort (Shrivastava et al., 2021). When employees are stipulated to work overtime or may obtain pay cuts, it will stir up intense negative moods, such as anxiety, panic, and distress (Nguyen et al., 2022). Hence, people are more prone to hiding knowledge (Chatterjee et al., 2021; Wen and Ma, 2021). In the latest research by Hillard et al. (2022), knowledge hiding is triggered by employees' autonomous motivations rather than less desirable motivations, which put forth a different perspective from the majority of literature (Gagne et al., 2019; Stenius et al., 2016; Connelly et al., 2012).

Gagne et al. (2019) combined all forms of motivations based on SDT to investigate knowledge

sharing and hiding simultaneously. The results presented that autonomous motivation played the primary role in knowledge sharing. Knowledge hiding occurred when the Australian sample had a low level of autonomous motivations and a high level of external regulation; it also happened when the Chinese sample had a high level of external regulation (Gagne et al., 2019). In the research of Gagne et al. (2019), pressure could lead to more frequent sharing and hiding simultaneously; it might be because people shared or hid knowledge at different times and toward different audiences depending on whether they could get rid of the pressure or not. This is the first study to compare antecedents of knowledge sharing and hiding, which can serve as interventions to either enhance knowledge sharing behaviours or discourage different forms of knowledge hiding, proving that varied motivations trigger knowledge sharing and hiding. However, few studies have applied SDT to the new research area of simultaneous knowledge sharing and hiding (Gagne et al., 2019; Stenius et al., 2016). It is noticeable that the researched behaviours by Stenius et al. (2016) were knowledge sharing and withholding. Under the definitions of knowledge hiding and withholding, they are different concepts (Oliveria et al., 2021; Connelly et al., 2012), even though these terms have been used interchangeably in a vast amount of research (Anand et al., 2020). As suggested by Gagne et al. (2019), future research could draw upon the research topic of simultaneous knowledge sharing and hiding. Therefore, it needs more evidence of simultaneous knowledge sharing and hiding based on SDT.

#### **2.4.2 Corporate Context and Knowledge Sharing and Hiding**

Knowledge sharing and hiding behaviours reside in organisational life; thus, corporate context is an indispensable factor in this project (Chatterjee et al., 2021; Cormican et al., 2021; Butt, 2020; Anaza and Nowlin, 2017). Ipe (2003) put forward that the culture of the work environment impacts all factors in a company. Corporate culture involves a set of basic assumptions about how to determine what is real and how employees of a group behave, how they determine what is critical information, and when they have enough of it to determine whether to act and what to do (Schein, 1985). Culture reflects the values, norms and practices in a company where values are manifested in norms that, in turn, develop specific practices (De Long and Fahey, 2000). If corporate culture assumes a value that knowledge is vital, it is likely to establish a context of social interactions for sharing (De Long and Fahey, 2000). Also, culture determines the norms concerning the exchange of knowledge

between people (Jarvenpaa and Staples, 2001). Meanwhile, culture influences members' perceptions of a specific behaviour (Gold et al., 2001). Chatterjee et al. (2019) discovered that people proactively share knowledge with the existence of an instrumental knowledge sharing climate, making their businesses perform better in producing innovative ideas. Consequently, corporate culture is viewed as an enabler of knowledge sharing (Chatterjee et al., 2021; Witherspoon et al., 2013; Lin, 2007; Bock et al., 2005).

However, some researchers also recognise culture as a significant barrier to knowledge creation, sharing and application (De Long and Fahey, 2000). For instance, Tikakul and Thomson (2017) distributed a questionnaire to 311 employees from 20 Thai SMEs and unveiled that the most significant cultural barrier to knowledge sharing is the extra workload. Bhagat et al. (2002) suggested that individualist corporate culture is likely to help explicit knowledge sharing whilst collective culture is better at assisting tacit knowledge sharing. Xiong et al. (2021) unfolded that R&D team members from individualistic cultures are more likely to hide knowledge than those from collectivistic cultures, such as China. It is because R&D team members in collective cultures deemed knowledge hiding as undesirable behaviour toward their team members (Xiong et al., 2021). The individualistic and collective cultures are often perceived as the distinction between Western and Chinese cultures (Zhao et al., 2016). Zhang et al. (2017) discovered that employees working in the Chinese culture characterised as collectivists have a high commitment to the firm, so they may not perform a specific behaviour that will damage organisational benefits, for instance, hiding their knowledge. In the meantime, the collective culture possibly causes knowledge hiding from those outside the group because Chinese people are prone to share knowledge in light of their interpersonal relationships (Davison et al., 2018) and 'face-saving' (Huang et al., 2011; Leung and Chan, 2003). Yan et al. (2016) found that face concerns negatively affect knowledge sharing in the online health community. In order to keep their face (known as individual respect, pride and dignity as the outcome of social achievements), Chinese people may choose evasive hiding instead of direct refusal to request from their colleagues (Young, 2014; Huang et al., 2011; Leung and Chan, 2003).

Corporate culture is not a homogenous construct in the workplace (McDermott and O'Dell, 2001). It comprises multiple sub-cultures characterised by distinctive values, norms, and practices, often leading to employees perceiving knowledge differently from other staff in the

same enterprise (Pentland, 1995). Thus, employees may make significant efforts to share knowledge (Ipe, 2003). Within reference to SDT, collectivism and face-saving subcultural traits can be perceived to help fulfil the competency and relatedness of psychological needs, as people are willing to establish good relationships with other people to be better involved in corporate life (Huang et al., 2011). Furthermore, knowledge hiding for saving face protects one's competent self-image in front of others (Leung and Chan, 2003). Hence, cultural characteristics are accounted for in the present study.

Interpersonal relationships are another organisational factor that is impacted by corporate culture, which positively relates to knowledge sharing and hiding (Lin, 2013; Chen and Hung, 2010; Ipe, 2003). A positive interpersonal relationship is built on the norms of reciprocity and expectation of trust, honesty and mutual help (Buller and Burgoon, 1996). Chen and Hung (2010) suggested that interpersonal trust is significantly linked with knowledge sharing in professional virtual communities. Lee and Choi (2003) discovered that a shortage of trust among people is the primary barrier to knowledge sharing activities. If there is no trust, there is neither potent communication nor harmonious sharing with others (Yang, 2004). In parallel, Zhao et al. (2019) employed the group engagement model to examine the leader-member relationship and knowledge hiding. The outcome disclosed that the leader-member relationship might affect how much employees hide knowledge from colleagues (Zhao et al., 2019). Interpersonal relationship orientation is an outstanding characteristic embedded in Chinese culture (Chow and Ng, 2004). As such, corporate culture profoundly influences interpersonal trust and relationships. Furthermore, from a motivation perspective, strong trust increases employee goodwill and positively influences mutual understanding and sharing (Choi et al., 2008), which is closely associated with the psychological need for relatedness in SDT (Gagne and Deci, 2005; Ryan and Deci, 2000). Trust is an essential prerequisite for knowledge sharing (Cormican et al., 2021). Accordingly, corporate culture is viewed as one of the main factors influencing individuals' motivation to share (Lin, 2007; De Long and Fahey, 2000; Davenport and Prusak, 1998) and hide (Zhao et al., 2019; Davison et al., 2018; Huang et al., 2011; Leung and Chan, 2003).

In addition, leadership and support from managers are the critical enablers of organisational learning and knowledge sharing (Cormican et al., 2021; Yao et al., 2020; Fullwood and Rowley, 2017; de Almeida et al., 2016; Cavaliere et al., 2015; Buch et al., 2015; Eze et al., 2013).

Managers' support for employees' goals enables knowledge sharing at work (Buck et al., 2015). When managers attempt to control employees, it would negatively impacts such behaviour (Kim et al., 2015). Cormican et al. (2021) illustrated that empowering and participatory leadership were the two main drivers in promoting knowledge sharing in a high-tech service company in Ireland. King and Marks (2008) and Uday et al. (2006) stressed that supportive managers can help create a desirable work environment where people want to engage in sharing activities and actively use others' knowledge. Employees are supposed to behave in a certain way if they think that people who are important and related to themselves hope to encourage and appreciate such behaviour (Cabrera et al., 2006). However, abusive supervision (Anand et al., 2020; Khalid et al., 2018) and passive leadership (Mubarak et al., 2021) are significant enablers of knowledge hiding behaviours. Evidence from Chinese firms has presented that the managerial styles of Chinese leaders are characterised by personal preference and favouritism (Farh and Cheng, 2000; Redding, 1990). These features are influenced by the interpersonal relationship-oriented corporate culture (Cheng et al., 2002). Thus, employees' knowledge sharing and hiding come with a manager's responsibility to create a team and work environment that facilitates unmasking knowledge and thereby enhances workplace performance (Sukumaran and Lanke, 2020)

To sum up, these organisational factors can also encourage employees' knowledge sharing and hiding in the context of a small company. The existing literature has paid much attention to the impact of corporate context on knowledge sharing and hiding in different types of firms, such as large companies and SMEs. However, small-size family businesses are still under-representative in research (Hadjielias et al., 2021; Cunningham et al., 2017; Huo et al., 2016). Accordingly, the corporate context of a small family business cannot be ignored in explaining knowledge sharing and hiding.

#### ***2.4.2.1. Small-sized context***

The most overt characteristic of small businesses is their limited resources (Zhang, 2009), which has a salient influence on knowledge sharing (Jack et al., 2008). Because of an absence of resources, small firms manage knowledge or undertake knowledge sharing in more tacit forms, such as know-how and experienced wisdom (Durst and Edvardsson, 2012). Small businesses have been discovered to provide a conducive environment for creating knowledge

due to the small size, often single-site location, and more intimate rapport among members, facilitating high-efficient communication flows and knowledge sharing (Riege, 2005). As presented by Dotsika and Patrick (2013), smaller businesses are more informally structured and operate with more socially-based relationships than larger companies. Furthermore, Eze et al. (2013) found that the awareness of leaders and their managerial style are of significance to knowledge sharing behaviour in SMEs. Wu and Parkvithee (2017) stressed that because the owner's attitude influences a variety of business practices and significant decisions, the distribution of information and tasks is more efficient and accessible than in large companies built on small firms' flatter and less bureaucratic structure.

On the flip side, the organisation's small size makes knowledge sharing happen in a poor way (Riege, 2005). For instance, small businesses fall short in long-term strategies. The leaders less appreciate the value of employees' tacit knowledge; therefore, small businesses do not invest money and time into knowledge management and sharing practices or formal employee training (Bryan, 2006; Levy et al., 2003). It can make the tacit knowledge challenging to disseminate in the small family business (Poulton et al., 2010). Hence, the small size is a non-negligible characteristic of this project.

#### ***2.4.2.2 Family business context and knowledge sharing and hiding***

Compared to other types of enterprises, the distinctive characteristic of family businesses is that the company is governed by members of the same family or a small group of families (Zahra et al., 2007). According to Tsang (2018), family businesses are often divided into two types: traditional and professional, dependent on the extent to "*hiring full-time, non-family employees, particularly with the delegation of managerial authority*" (Stewart and Hitt, 2012, p.59). Traditional family businesses typically hire most family members in their top management team, and the scales of this type of business are small or medium in size (Tsang, 2018). Organisational management processes, such as decision-making authority, promotion and operational rules, are highly centralised within the owning family and may not be uniformly applied to all the employees (Tsang, 2018). By contrast, professional family businesses usually, but not always, involve non-family employees in the top management team; however, this type of family business is still effectively controlled and actively run by the owning family (Tsang, 2018). Consequently, it is evident that family involvement plays a

pivotal role in the corporate context of the small family business.

### ***Advantageous context and knowledge sharing***

Research conducted by Botero et al. (2021), Cunningham et al. (2017; 2016), Lin (2013) and Zahra et al. (2007) has demonstrated that family businesses hold some peculiar advantages for knowledge sharing due to the role of family involvement. The primary characteristic influenced by family involvement is the leading role of the owner-managers or top managers in the family and their leadership, which affects the formation and development of corporate culture and the notion of knowledge sharing (Mallen et al., 2015). Founders play an essential role in corporate culture (Vallejo, 2011). The culture within the family business embodies the beliefs and aspirations of the founders (Denison et al., 2004). It can be inherited, developed and changed by the leaders of the next generation (Botero et al., 2021; Cunningham et al., 2017, 2016; Lin, 2013; Zahra et al., 2007), but the corporate culture will still reflect the values, beliefs and goals of the dominant family (Botero et al., 2021). The values of the family highlight commitment, loyalty, working harmony and stability of members in the workplace (Vallejo, 2011). These values are available for creating a form of collective culture and paternalistic leadership styles in the workplace (Botero et al., 2021). Chirico and Nordqvist (2010) revealed that a centralised culture facilitates protecting the inertia of knowledge resources. Zhou (2019) posited that the leaders in Chinese family businesses are actually 'patriarchs', and they often have a higher reputation and prestige; thus, most employees follow the 'patriarchs'. When leaders support setting up favourable environments where individuals hold open attitudes to taking risks and indulging in conversation, it will enhance the notion of altruism and transfer of knowledge (Cunningham et al., 2017, 2016; Lin, 2013; Zahra et al., 2007).

The influence of family involvement is beneficial to creating an intimate form of relationship among members (Botero et al., 2021; Zhou, 2019; Sanchez-Famoso and Maseda, 2014), which is mainly associated with tacit-to-tacit knowledge transfer (Cunningham et al., 2016). It is characterised by the kinship between family members and its impact on relationships throughout the enterprise (Botero et al., 2021; Zhou, 2019; Cunningham et al., 2017; 2016; Zahra et al., 2007). These relational advantages help conform the personal interests of the family members to their business interests; therefore, they enhance their mutual dependencies (Zhou, 2019). The mutual dependencies among members in a family bring



about a potent form of familial social capital to maintain the reciprocal social norms, thus directly influencing the notion of knowledge sharing (Pearson et al., 2008) and formulation of reciprocal learning (Zahra et al., 2007). Lin (2013) depicted that family businesses are less likely to use incentivised systems for knowledge sharing. Instead, they prefer to rely on social networks for reciprocity or multi-beneficial profits for the entire company (Lin, 2013). When facing hardship, the family members will work together to help the company tide over difficulties (Zhou, 2019). Meanwhile, it enhances internal trust to support transferring knowledge from one individual to another (Cormican et al., 2021), particularly among family members (Karra et al., 2006). In the early stages of business development, altruism effectively aligns knowledge and objectives between owners and other employees (Zahra et al., 2004). It raises strong emotional bonds between family and non-family members across the company, influencing the way they behave, including knowledge sharing behaviour (Motoc, 2020). Close interpersonal relationships are particularly prominent in Chinese enterprises (Gagne et al., 2019; Cunningham et al., 2016; Lin, 2013). Chinese people's behaviours appear to be more relationship-oriented (Zhang, 2009). Chinese people value responsibility and obligation when interacting with their family members, whereas they stress reciprocity when interacting with familiar people (Lin, 2013). For instance, people share knowledge to help others out of trouble because they expect to obtain the same help in the future (Li, 2018). Accordingly, intimate interpersonal relationships within small businesses are helpful for knowledge sharing among members.

### ***Disadvantageous context and knowledge hiding***

On the flip side, some problematic aspects regarding the corporate context caused by family involvement may generate knowledge hiding. At the outset, family involvement is fertile ground for conflicts, such as rivalries, jealousy and exclusion of non-family members (Si, 2020; Zahra et al., 2007). These conflicts may cause issues of inappropriate treatment of family members (Chrisman et al., 2010) and a strong asymmetry of power (Michailova and Husted; 2003). It fractures interpersonal relationships, thereby invoking non-family members' sense of exclusion (Motoc, 2020) and impeding relational-based knowledge sharing culture (Chirico and Salvato, 2008). Inappropriate treatment of family members and strong asymmetry of power in Chinese family businesses flesh out personal preference and favouritism (Lin, 2013). Personal preference lies in family relationships and paternalistic leadership (Zhou, 2019; Farh

and Cheng, 2000; Redding, 1990), whilst favouritism emerges from differential management (Hu et al., 2004). Personal preference and favouritism from top managers (Lin, 2013) can induce businesses to prioritise the knowledge of family members and negate the knowledge of non-family members so as to maintain family harmony (Sonfield and Lussier, 2009). Thus, an outsider-excluding network structure may arise from Personal preference and top managers' favouritism because non-family members may not be valued in the workplace (Lin, 2013). As stated by Zhou (2019), owner-managers in Chinese family businesses find it challenging to treat non-family and family members equally concerning promotion, salary and trust. As a result, non-family employees feel excluded and distrusted, and then, knowledge hiding occurs in this context (Hadjielias et al., 2021). The conflicts among members also build a competitive environment that does not underpin knowledge sharing (Sonfield and Lussier, 2009). In order to avoid conflicts, members may withhold their knowledge (Zahra et al., 2007). To this end, the conflicts among employees impacted by family involvement are detrimental to knowledge sharing and potentially engender knowledge hiding.

The notion of knowledge sharing and the formation of corporate culture rely on the owner or family members in management (Schulze et al., 2003). Knowledge sharing, especially individual-level sharing, heavily depends on a complex set of motivations (Foss et al., 2010). Sparrow (2001) hinted that owner-managers might intentionally or unintentionally withhold knowledge by deliberately avoiding providing training and development opportunities for others, such as employees or non-family members, especially for knowledge relevant to their expertise. When these situations occur, internal knowledge-sharing activities will not actively happen (Woodfield and Husted, 2017). The perception of not-sharing exerts an adverse effect on other employees across the enterprises (Cunningham, 2020). Gradually, employees come to believe that knowledge sharing is undesired workplace behaviour (Botero et al., 2021). Hence, knowledge hiding would become more regular (Gagne et al., 2019; Stenius et al., 2016). Another exceptional instance concerning knowledge hiding is that people endeavour to pursue excellent interpersonal relationships with their colleagues (Huang et al., 2011). A situation where people share or talk about mistakes/difficulties with others in a public place may cause conflicts, so it will be avoided as much as possible to maintain harmony (Pheng and Leong, 2000). Therefore, knowledge hiding happens to protect one's feelings (Huo et al., 2016; Connelly et al., 2012).

Taken together, the distinctive context of small family businesses arising from the influences of family involvement can both promote and inhibit knowledge sharing (Cunningham et al., 2017, 2016; Zahra et al., 2007) and may result in knowledge hiding (Hadjielias et al., 2021). Therefore, the corporate context is an inextricable part of the present study.

## **2.5. Conceptual Framework**

### **2.5.1 A model of the role of individual intentions and organisational support in either knowledge transfer or hiding**

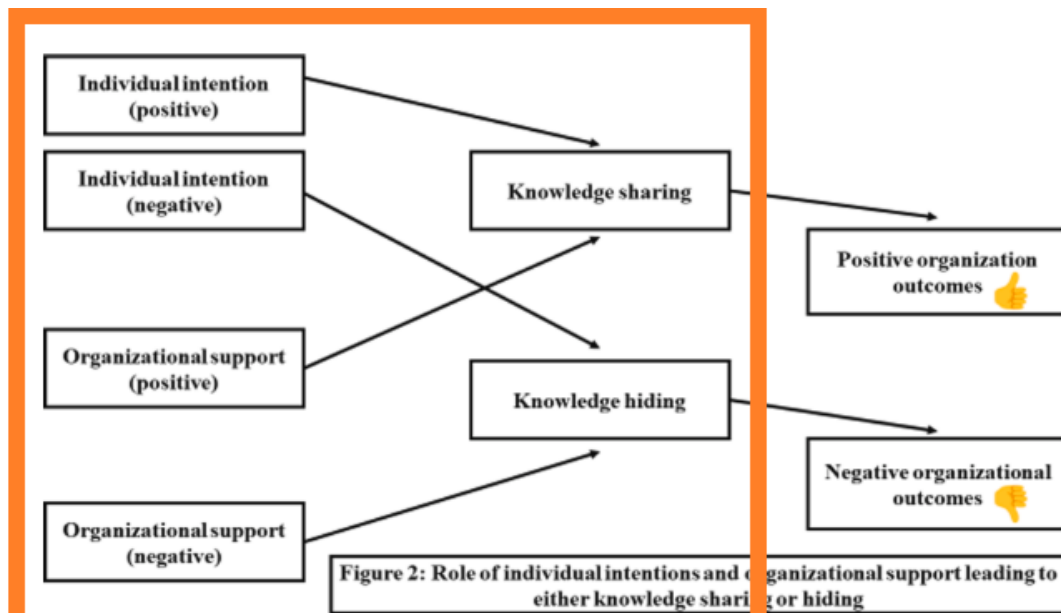
Pereira and Mohiya (2021) posit a model to portray the role of individual intentions and organisational support in either knowledge transfer or hiding by the qualitative methods, exhibited in Figure 4. It identifies why employees either share or hide knowledge and how and to what extent the organisation extends its support towards minimising hiding and encouraging sharing of knowledge. This model chooses organisational justice and Vroom's expectancy motivation theory as theoretical lenses. From the corporate perspective, a positive environment and openness in an organisation can facilitate collaborative work arrangements between employees, decreasing knowledge hiding and encouraging knowledge sharing. In light of the organisational justice perspective, moral obligation in employees towards their company and coworkers, for example, fairness, mutual trust and altruism, could be developed through trust over time (Yang and Lee, 2021). Furthermore, from the individual perspective, people sharing knowledge enabled obtaining rewards and recognition that were of value to them, whereas they might hide knowledge because of psychological ownership (Halvari et al., 2021; Pierce et al., 2003).

Reflecting on the overarching researched topic (why employees share or hide knowledge from individual and corporate perspectives), this model, combining personal motivations and corporate context, provides this research with some inspiration. Notably, it believes that different motivations drive knowledge sharing and hiding. However, this model is established on organisational justice and Vroom's expectancy motivation theory. The standpoint of this model is opposite relationships between knowledge sharing and hiding, rather than correlated relationships. Meanwhile, Pereira and Mohiya (2021) highlighted future researchers may need to consider applying this model to different contexts where knowledge sharing and hiding are necessary to be understood; and this model can be extended and built

on more relevant theoretical lenses and using more qualitative research methods (e.g. interviews and focus groups).

Above all, herein, individual intentions based on organisational justice and Vroom's expectancy motivation theory in this model may be substituted by motivations within SDT to explore knowledge sharing and hiding in this study. On the other side, the corporate context of the small family businesses influenced by family involvement (Botero et al., 2021) is added in this research, because it is significant for the small family business context to construe knowledge sharing and hiding. Within SDT, different types of motivations that affect people to behave in a certain behaviour are influenced by the externally social context and individual differences (Deci et al., 2017; Stenius et al., 2016). In this vein, this model contributes valuable inspiration to this study. Furthermore, a semi-structured interview and document analysis may be considered using data collection. Finally, this model is established on the opposite standpoint of the relationship between knowledge sharing and hiding. Hence, there is a need to develop a framework to understand knowledge sharing and hiding in tandem (Hadjielias et al., 2021; Singh, 2019).

**Figure 4: Model about the role of individual intentions and organisational support leading to either knowledge transfer or hiding**



Source: Pereira and Mohiya (2021, p. 373)

### 2.5.2 Conceptual Framework in This Study

To develop a conceptual awareness of relevant research themes, a conceptual framework for this study has been constructed to inform the interview design in the data collection stage. The model of Pereira and Mohiya (2021) and SDT inspire this study to focus on four concepts: knowledge sharing, knowledge hiding, organisational context and motivational drivers based on SDT.

The first concept is knowledge sharing. Zahra et al. (2007) and Wen and Wang (2021) were the key authors to inform the knowledge sharing of this study, as the outcomes from these studies demonstrate that family businesses and Chinese manufacturing companies often adopt formal and informal mechanisms for employees to share knowledge. It highlighted the significance of formal and informal knowledge sharing practices in the context of family businesses and the Chinese manufacturing sector, which fall into the focus of this study.

The second concept is knowledge hiding. Knowledge hiding in this research has been mainly affected by the papers of Connelly et al. (2012) and Pereira and Mohiya (2021). Connelly et al. (2012) were the first to distinguish knowledge hiding from other aspects and develop it as a separate topic in the knowledge management field. The definition of knowledge hiding proposed by Connelly et al. (2012) is also the most cited in the corresponding field. However, Pereira and Mohiya (2021) revealed that knowledge sharing and hiding were caused by employees' intentions and (positive and negative) organisational support. They also suggested that future researchers consider applying their outcomes to different contexts and through more relevant theoretical lenses and qualitative research methods (e.g. interviews and focus groups). Hence, the study of Pereira and Mohiya (2021) provided inspiration for this project.

The third concept refers to different motivations for knowledge sharing and hiding behaviours based on SDT. Through reviewing the literature, only Stenius et al. (2016) and Gagne et al. (2019) applied SDT to probing knowledge sharing and hiding at the same time. In this circumstance, even if both studies employed quantitative approaches, the consequences facilitated the researcher's understanding of different motivations for knowledge sharing and hiding in depth.

The final concept involves corporate factors of the small family business in both behaviours. The studies conducted by Cunningham et al. (2017), Motoc (2020) and Hadjialias et al. (2021) have presented the advantages of small family businesses helping employees to share knowledge, whereas Hadjialias et al. (2021) provided the first evidence of the disadvantages in this context leading to knowledge hiding among people. The outcomes from these studies provided a fundamental understanding of how organisational factors influence employees to share and hide knowledge in the small family business context. Notably, Lin (2013) explained knowledge sharing in the family business from Chinese cultural dimensions. It has deepened the researcher's comprehension of the knowledge sharing phenomenon within Chinese culture.

As concluded above, the conceptual framework has summarised four concepts in Table 3.

**Table 3: Conceptual Framework**

<b>Concept/Theme 1: Knowledge Sharing</b>		
<b>References</b>	<b>Research methods</b>	<b>Findings</b>
1) Zahra et al. (2007)	Mail survey with 209 family companies	Formal and informal knowledge sharing practices are positively associated with the strength of family firms' technological capabilities. Furthermore, the number of generations involved in management strengthens the relationship between both formal and informal knowledge sharing mechanisms and family firms' technological capabilities, while the percentage of top managers who are family members strengthens the informal knowledge sharing–technological capabilities relationship.
2) Wen and Wang (2021)	Online questionnaire with 530 respondents	Level of knowledge structure, self-efficacy, leadership support and KS culture all have a significant positive effect on both formal KS and informal KS while trust only positively affects formal KS and information technology support positively affects informal KS. Both formal KS and informal KS positively contribute to the task performance of manufacturing companies.
<b>Concept/Theme 2: Knowledge hiding</b>		
<b>References</b>	<b>Research methods</b>	<b>Findings</b>
3) Connelly et al. (2012)	Mixed methods: A daily short survey with 35 respondents based on event-based experience-sampling methodology and 11 interviews	This research has established that knowledge hiding exists, which distinguishes knowledge hiding from related concepts (knowledge hoarding and knowledge sharing). The outcomes found that knowledge hiding is comprised of three related factors: evasive hiding, rationalized hiding, and playing dumb. Each of these hiding behaviours is predicted by distrust, yet each also has a different set of interpersonal and organizational predictors
4) Pereira and Mohiya (2021)	Document analysis of 242 first hand employees' comments	Good intentions were important reasons for sharing knowledge. Employees who hid knowledge derived from knowledge power, impacting on overall knowledge sharing culture. Positive organisational support led to knowledge sharing, whereas negative organisational support led to knowledge hiding.
<b>Concept/Theme 3: Motivations for knowledge sharing and hiding based on SDT</b>		

References	Research methods	Findings
5) Stenius et al. (2016)	Online survey with 200 respondents	Autonomous type of extrinsic motivation (identified motivation) was the strongest predictor of knowledge sharing (in work meetings) and its quality, whereas the other motivation types (Intrinsic, introjected, and external) had no independent contribution to variance in knowledge sharing. Knowledge withholding was negatively associated with identified and positively with external knowledge sharing motivation.
6) Gagne et al. (2019)	A panel of survey with 394 employees	Cognitive job demands and job autonomy were positively related to knowledge sharing frequency and usefulness via autonomous motivation to share knowledge. Task interdependence was positively related to the three forms of knowledge hiding (evasive and rationalized hiding, and playing dumb) via external regulation to share knowledge
<b>Concept/Theme 4: Corporate context factors and knowledge sharing and hiding</b>		
References	Research methods	Findings
7) Lin (2013)	Questionnaire with 131 family firms and 256 non-family firms	Although the supervisors of family firms have a lower preference for incentive reward systems for knowledge sharing, they demonstrate a higher preference for centralized knowledge-sharing networks and differential patterns.
8) Cunningham et al (2017)	Survey with 110 respondents	This research investigated leadership in small family firms to acknowledge diversity in leadership approach and found the implications of this diversity for perceptions of knowledge sharing. Two distinct leadership approaches are uncovered, both of which relate positively to the leader's perception of knowledge sharing. The influence of family is seen to be associated with a guidance-based leadership approach, made up of supportive and instructional behaviours, whereas a leadership approach based on participative behaviour bares no meaningful relationship with family influence. Thus, a choice in leadership approach is presented, contrasting organization-focused participation against family-influenced guidance.
9) Motoc (2020)	9 semi-structured interviews from 6 small companies	There is a large amount of tacit knowledge, while the explicit one is less important across family businesses. The most prominent procedure for the transfer of knowledge is social interaction. This is linked to the culture family companies have, is clearly expressed that the working atmosphere allows ideas and knowledge interaction to occur unconstitutionally. However, this kind of familial feeling invoked may also be present in non-familial companies of the same size. The difference comes from the family members who are unable to separate themselves from the professional role, impacting the knowledge transfer and the places and time this takes form.
10) Hadjielias et al. (2021)	51 interviews	Members of farming business families act as stewards and behave in ways that facilitate the sharing or hiding of business knowledge. Business families act in secrecy and exhibit behaviours that can hide business knowledge in the presence of actors who are distrusted, since they carry a risk of knowledge appropriation. Conversely, they share knowledge with individuals they trust to fill resource gaps through behaving in an open manner

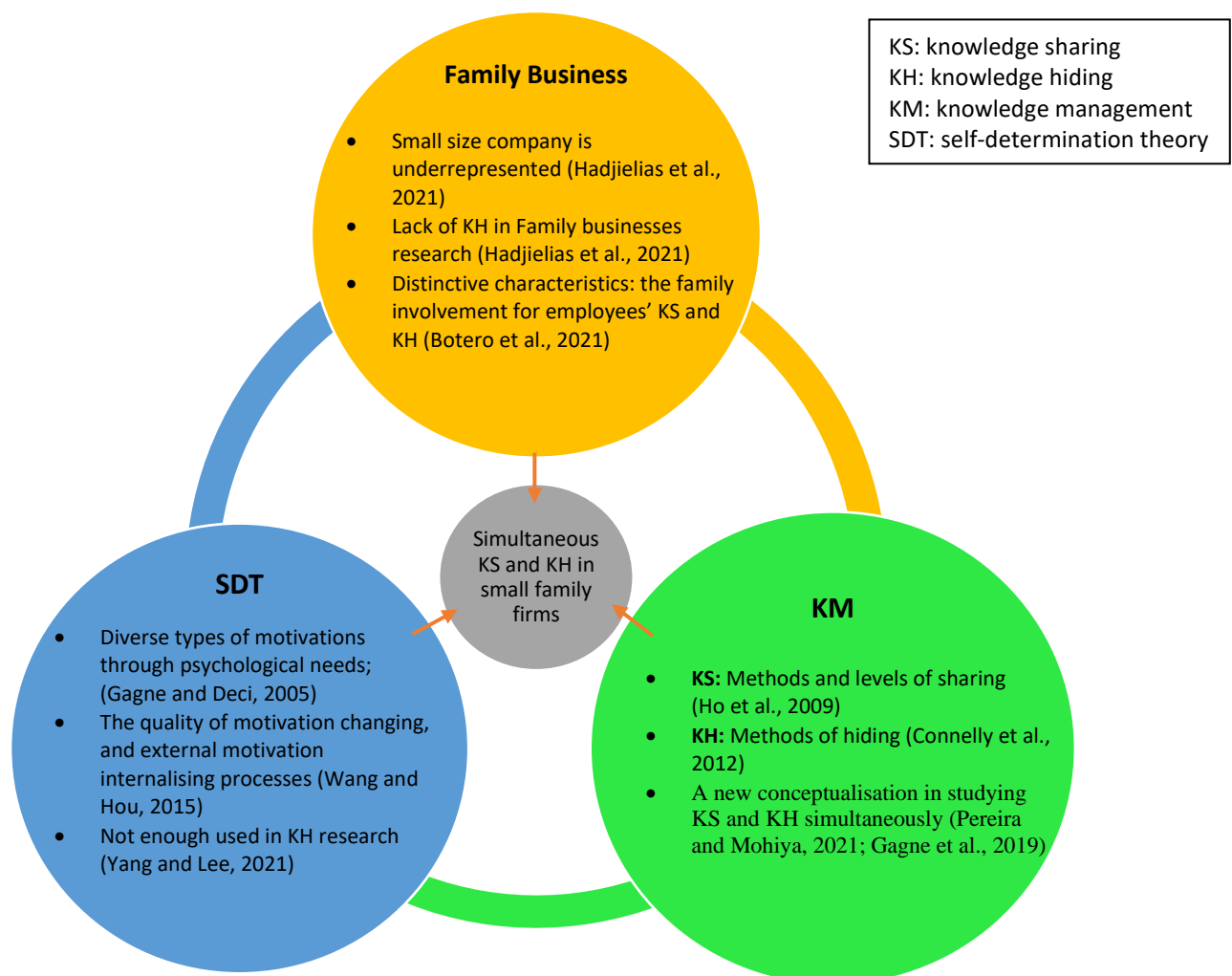
Source: Researcher's construct

## 2.6 Research Gap

The literature review of this research aims at three scopes: knowledge management

(knowledge sharing and knowledge hiding), individual motivations within SDT and the corporate context of the small family business. It has been found that research on employees' tacit knowledge sharing is mature (Ouédraogo and Rinfret, 2019; Chen et al., 2018; Islam et al., 2018; Gardiner, 2016; Cavaliere et al., 2015; Zhang and Jiang, 2015; Cavaliere et al., 2012; Eze et al., 2013; Aliakbar et al., 2012; Liu and Liu, 2011; Chirico, 2008; Cho et al., 2007; Zahra et al., 2007; Cabrera and Cabrera, 2005; Riege, 2005; Ipe, 2003; Bartol and Srivastava, 2002). Following knowledge sharing, since Connelly et al. (2012) firstly proposed the definition of knowledge hiding, the latter has drawn researchers' attention in the past decade (Oliveria et al., 2021; Pereira and Mohiya, 2021; Shrivastava et al., 2021; Xiao and Cooke, 2019; Gagne et al., 2019; Connelly et al., 2012). However, traversing the literature, some gaps have emerged among the three major research scopes, as presented in Figure 5. These gaps are summarised as follows.

**Figure 5: Gaps in the literature.**





Source: Researcher's summary

In the first place, in the literature on family businesses, some research on knowledge sharing has looked at large or medium-sized companies (Botero et al., 2021; Pittino et al., 2018; Woodfield and Husted, 2017; Lin, 2013; Zahra et al., 2007) whereas small family businesses remain underrepresented (Hadjielias et al., 2021; Motoc, 2020; Arzubiaga et al., 2019; Cunningham et al., 2017, 2016). This situation has emerged because knowledge sharing and learning in small businesses are often informal and contextualised in daily practical applications (Fullwood and Rowley, 2021). Knowledge sharing and learning are not apparent in organisational life; as a result, it is hard to capture these processes in small businesses (Short, 2019).

What's more, the existing studies on knowledge sharing within family businesses have two main streams. One explores knowledge sharing between family members (Hadjielias et al., 2021; Botero et al., 2021; Motoc, 2020; Woodfield and Husted, 2017; Cunningham et al., 2017, 2016; Lin, 2013; Zahra et al., 2007) and how these sharing activities impact the succession (Cabrera-Suarez et al., 2018) or the development capabilities of the business (Fang et al., 2018). The other has focused on how knowledge sharing impacts organisational processes and performance (Arzubiaga et al., 2019; Pittino et al., 2018; Zahra et al., 2007). Investigations of the antecedents of knowledge sharing within the family business have typically drawn on the perspective of family involvement and its positive and negative influences on knowledge sharing (Hadjielias et al., 2021; Botero et al., 2021; Woodfield and Husted, 2017; Cunningham et al., 2017, 2016; Lin, 2013). Noteworthy, Hadjielias et al. (2021) provided the first empirical evidence on knowledge hiding in the context of small family businesses. This subject remains a largely unexplored topic with the family business backdrop. As analysed by Pereria and Mohiya (2021), the research topic regarding knowledge hiding is in its infancy stage. There needs to be more empirical evidence on knowledge hiding in small family businesses to respond to the call for understanding knowledge hiding in diverse contexts (Pereria and Mohiya, 2021).

Second, there is a theoretical and empirical gap in a new conceptualisation in knowledge management literature: explanations of simultaneous knowledge sharing and hiding behaviour (Hadjielias et al., 2021; Pereira and Mohiya, 2021; Gagne et al., 2019). Few

theoretical models have been developed for this new research topic (Aleksic et al., 2021; Pereira and Mohiya, 2021). Prior literature has investigated either knowledge sharing or hiding separately (Cormican et al., 2021; Hon et al., 2021; Stenius et al., 2017; Cavaliere et al., 2015; Olatokun and Nwafor, 2012; Connelly et al., 2012). It is because knowledge hiding as a separate research topic has just started in 2012 (Connelly et al., 2012). Even though knowledge hiding has attracted increasing attention from researchers and practitioners in the recent years (Oliveria et al., 2021; Pereira and Mohiya, 2021; Shrivastava et al., 2021; Xiao and Cooke, 2019; Xiong et al., 2021), this research subject is still in its infancy stage (Pereira and Mohiya, 2021), especially in the family business literature (Hadjielias et al., 2021). Besides, knowledge hiding, similar to knowledge sharing, is an individually autonomous behaviour, heavily relying on individual motivations (Halvari et al., 2021; Shrivastava et al., 2021; Xiong et al., 2021; Huo et al., 2016; Peng, 2013). Thus, it is hard to capture knowledge hiding behaviours, especially for tacit knowledge (Singh, 2019) in the workplace (Hadjielias et al., 2021). Herein, researching the new conceptualisation of the co-existence of knowledge sharing and hiding becomes the primary purpose of the present paper. It is also critical to develop a theoretical model to explain simultaneous knowledge sharing and hiding behaviours.

Third, a theoretical and empirical gap has also been found in applying SDT to research on knowledge hiding (Yang and Lee, 2021; Wang et al., 2018) and its co-existence with knowledge sharing (Gagne et al., 2019; Stenius et al., 2016). SDT is an extensively-applied theory to analyse individual motivations in knowledge sharing (Halvari et al., 2021; Hon et al., 2021; Wu et al., 2021; Gagne et al., 2019; Stenius et al., 2017; Stenius et al., 2016; Cavaliere et al., 2015) but few have used it to exploring hiding (Hillard et al., 2022; Yang and Lee, 2021; Wang et al., 2018). For example, Rezwan and Takahashi (2021) reviewed 88 studies concerning the psychological reasons behind knowledge hiding between 2009 and February of 2021 within different contexts and unraveled that only two research conducted by Gagne et al. (2019) and Stenius et al. (2016) applied SDT to simultaneous knowledge sharing and hiding behaviours.

Furthermore, much of the literature is based on the distinction between intrinsic and extrinsic motivation (Cavaliere et al., 2015; Olatokun and Nwafor, 2012). Note that the core of SDT is the classification of people's motivation into diverse forms to explain behaviours through the

extent to which the three basic psychological needs are satisfied (Wang and Hou, 2015; Gagne and Deci, 2005). Multiple motivations in SDT could be more helpful in understanding the simultaneous knowledge sharing and hiding behaviours than the traditional dichotomy between intrinsic and extrinsic motivations. This is because intrinsic motivation cannot possibly affect employees to do the workplace behaviours constantly or very often (Stenius et al., 2016), how to define inherent enjoyment and interest as intrinsic motivation differentiates from people (Stenius et al., 2016); human behaviours are triggered by a number of motives motivations often simultaneously, but not necessarily impact in equality (Deci et al., 2017; Chemolli and Gagne, 2014; Vansteenkiste et al., 2009). Acknowledge by Gagne and Deci (2005) that six forms of motivations within SDT are reflected in different reasons for people's behaviours, and these reasons provide the approach for assessing the types of motivations, SDT thus, with a multidimensional view could better accommodate probe different reasons for tacit knowledge sharing and hiding than the traditional dichotomy between intrinsic and extrinsic motivation. Hence, SDT could effectively respond to the calls of Gagne et al. (2019) and Pereira and Mohiya (2021) that it entails using primary interview/focus group data and a more theoretical lens, such as SDT, in the research of simultaneous knowledge sharing and hiding.

The above gaps inspired the researcher to set the central questions and objectives of this study. First, it investigates the new conceptualisation of simultaneous knowledge sharing and hiding by focusing on the small family business context. Second, SDT is used as the guiding theory to combine with the corporate context of small family businesses to address the gaps. Therefore, the main research question in the present study is why skilled employees share and hide their knowledge. In order to achieve the research aim, this study has set the following general research questions:

- How do skilled employees perceive their tacit knowledge in the small Chinese family business?
- How do skilled employees share and hide tacit knowledge?
- Why do skilled employees share and hide knowledge from the motivational and corporate perspectives?
- What recommendations can be made for the owner-managers to improve knowledge sharing and hiding behaviours?

For better addressing this question, the research objectives are fourfold:

- To identify how skilled employees perceive tacit knowledge within the Chinese small family business context.
- To explore how skilled employees share and hide tacit knowledge.
- To analyse why skilled employees share and hide tacit knowledge and provide the appropriate recommendations for motivating knowledge sharing and mitigating knowledge hiding.
- To develop a conceptual framework to visualise knowledge sharing and knowledge hiding simultaneously.

## Summary

This chapter has presented the literature review around the small family businesses, individual-tacit knowledge, knowledge sharing and knowledge hiding, motivational perspective and corporate context, and the gaps in the literature. The purpose of the literature review was to look critically at the literature on knowledge sharing and hiding and the reasons for triggering both behaviours from motivational and corporate perspectives at small family businesses to identify gaps. The first section reviewed the literature relevant to individual-tacit knowledge. The second was an in-depth review of different understandings of knowledge sharing: the definitions, mechanisms and levels of sharing. The third aimed to comprehend knowledge hiding compared to relevant concepts: knowledge withholding, and knowledge hoarding, and through a thorough discussion of the relationship between knowledge sharing and knowledge hiding. The fourth section made a systematic explanation of reasons for knowledge sharing and knowledge hiding from the motivation perspective and the corporate context of the small family business. Additionally, it also provided a conceptual framework to conclude the core concepts on knowledge sharing, hiding, motivational and corporate factors on both behaviours from previous literature. The final section summarised the gaps in contemporary literature on knowledge sharing and hiding within small family businesses.

## CHAPTER 3: RESEARCH METHODOLOGY

### Introduction

This chapter aims to discuss the methodology applied in the study and articulate the rationale behind the selection. Overall, the entire research process includes three stages: research paradigm identification and research design, data collection and data analysis. This chapter is divided into six main sections to elaborate on these three stages. It commences by discussing the philosophical position, including the ontological and epistemological assumptions, deductive and inductive approaches, and quantitative and qualitative approaches relevant to this research. The second part presents a detailed research design and rationale for selecting a case study. Thirdly, it illuminates data collection in this study. Section four discusses the data analysis, and section five discusses the validity and reliability of the research, which are associated with the trustworthiness of this study. Finally, there is a summary of this chapter.

### 3.1 Research Philosophy

Saunders et al. (2009) defined research philosophy as being the researchers' belief about knowledge development that affects how research is conducted. Accordingly, research philosophy evidences the worldview within which research is situated and guides that every step in the research process should be appropriate to or should fit with the purpose and focus of the research (Quinlan et al., 2019). Bryman and Bell (2015) presented that research philosophy could be understood as a research paradigm. Denzin and Lincoln (2011, p.91) defined a research paradigm as "*a basic set of beliefs that guide action*". Saunders et al. (2009) posited that there is no research philosophy better than another, as each is better at doing different things. In other words, whether one philosophical assumption is more applicable than others depends on how well researchers reflect on their research and answer their research questions. Consequently, to have comprehensive knowledge of philosophy is the commence to appropriately design the research to address research questions and to avoid ambiguity and confusion (Easterby-Smith et al., 2021).

#### 3.1.1 Philosophical Assumptions: Ontology and Epistemology

As Easterby-Smith et al. (2021) set forth, most of the central philosophy debates concern matters of ontology and epistemology. Ontology is about the nature of reality and existence; and epistemology refers to the theory of knowledge and facilitates researchers to understand

the best way of enquiring into the nature of the world (Creswell, 2013). Thus, it is pivotal to be mindful that nature and social science generally extract from different ontological and epistemological assumptions when selecting suitable methodologies for conducting research (Quinlan et al., 2019).

#### **3.1.1.1 Ontology**

Ontology is the starting point for the majority of debates among philosophers (Easterby-Smith et al., 2021). Ontology relates to the nature of reality, to the study of being and to human beings' ways of being in the world (Quinlan et al., 2019). In general, ontology mainly deals with the issues of whether social realities are independently existent from participants in society or established from and interrelated to their perceptions and actions (Denzin and Lincoln, 2011). At this point, ontology consists of objectivism and subjectivism. The objectivist position considers that social phenomena independently exist and are not affected by participants (Bryman, 2012). In objectivist positions, scientists further explain it by realism and internal realism (Easterby-Smith et al., 2021). Realism emphasises that the world is concrete and external, and that science can be developed only whereby direct observations of the phenomena (Easterby-Smith et al., 2012). Internal realism believes that there is a single reality, but researchers are never possible to access reality directly (Easterby-Smith et al., 2021). The phenomena can only be investigated by indirect evidence of fundamental physical processes (Putnam, 1987). In this position, researchers are absolute and independent of observation (Easterby-Smith et al., 2012). A helpful example of management studies by Easterby-Smith et al. (2021) explained this position. In objectivist positions, management functions are almost the same in different organisations, even though managers perform within various management structures (Saunders et al., 2009).

On the other hand, subjectivism/constructivism believes that social phenomena are continuously constructed by social actors in the phenomena (Lune and Berg, 2017). Based on this position, subjectivism has been divided into two types: relativism and nominalism. Relativism suggests that scientific laws are created by people (Easterby-Smith et al., 2021). People hold different views, and their ability to accept the truth from others may rely on their status and previous experience, thus, the truth of a particular idea and theory is reached whereby discussions and agreements among the main social actors (Easterby-Smith et al.,

2012). As a result, in relativist positions, there is no single reality that can somehow be discovered but there are many perspectives on the issues (Collins, 1983). The nominalism positions further argue there is no truth, and how to establish different versions of truth depends on people's language and discourse (Cunliffe, 2001).

In summary, regardless of which positions are, the main characteristics of ontology are the number of truths and the participatory role of researchers or observers (Denzin and Lincoln, 2011). According to the above discussion, four ontological positions are summarised in Table 4.

**Table 4 Four different ontological positions**

	<b>Realism</b>	<b>Internal Realism</b>	<b>Relativism</b>	<b>Nominalism</b>
Truth	Single truth	Truth exists, but is obscure	Many truths	No truth
Facts	Facts exist and can be revealed	Facts are concrete, but cannot be accessed directly	Facts depend on viewpoint of observer	Facts are all human creations

Source: Easterby-Smith et al., (2021, p. 75)

### **3.1.1.2 Epistemology**

Saunders et al. (2016) explained that ontology refers to what we may know, and epistemology refers to how we know what we know. Epistemology is the study of the nature of knowledge and ways of enquiring into the physical and social world (Easterby-Smith et al., 2021). It has shaped the foundation for a sustained debate among social scientists as to how social science research should be undertaken (Easterby-Smith et al., 2012). There are two prominent research positions: positivism and interpretivism, distinguished by whether the role of human factors is taken into account in the construction of social knowledge (Blumberg et al., 2014). As these two epistemological positions have been widely used in the mainstream mythological literature, the choice of which to apply to a study has several implications (see Table 5)

**Table 5: Contrasting implications of positivism and interpretivism**

	<b>Positivism</b>	<b>Interpretivism</b>
The observer	Must be independent	Is part of what is being observed
Human interests	Should be irrelevant	Are the main drivers of science
Explanation	Must demonstrate causality	Aim to increase general understanding of the situation
Research processes through	Hypothesis and deductions	Gathering rich data from which ideas are deducted
Units of analysis	Need to be defined so that they can be measured	Should incorporate stakeholder perspectives
Concepts	Should be reduced to the simplest terms	May include the complexity of the 'whole' situation
Generalisation through	Statistical probability	Theoretical distributions
Sampling	Large numbers selected randomly	Small numbers of cases chosen for specific reasons

Source: Easterby-Smith et al., (2021, p. 83)

The two main epistemological paradigms within the field of management study are explained in the following sections below in more detail. A justification for the decision made on which research philosophy suits this research will be discussed.

### ***Positivism***

The core of positivism is that the social world exists outside and that its properties can be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition (Easterby-Smith et al., 2021). Positivism believes that knowledge exists independent of human factors (Easterby-Smith et al., 2012). Moreover, it is through an empirical study that a positivism paradigm seeks to develop a theory with assumptions being investigated concerning the correlation between at least two variables from previous literature and or research studies (Remenyi et al., 1998). In so doing, researchers often determine to start with existing theories when designing data collection and analysis research, particularly via developing hypotheses to test (Punch, 2014). The positivist tendency aims to identify the root causes of social phenomena and to search for facts without corresponding subjective statements made by people (Mangan et al., 2004). Furthermore, according to Saunders et al., (2009), researchers conducting positivist studies seek to apply generalised findings to a wider population. The consequences from positivist



research are similar to those from physical and natural research in that results can be made into generalisations that are 'law-like' (Creswell, 2003). In the end, positivism also assumes that social phenomena could be developed into a model and similarly applied by researchers (Bryman, 2012). However, the numeric data cannot provide an understanding of experience, beliefs and meanings. Thus, researchers have stressed the significance of qualitative data, which falls into the interpretivist paradigm.

### ***Interpretivism***

Interpretivism has been developed by philosophers as a result of the limited achievement of applying positivist principles to social science (Quinlan et al., 2019). These limitations of positivism arise from a viewpoint that reality is not objective and external but is socially constructed and is provided meaning by human beings in their daily interactions with others, known as social constructivism (Easterby-Smith et al., 2021).

Interpretivism is aligned with social constructivism (Savin-Baden and Major, 2013), which holds that social reality is constructed based on interpretation and interactions (Quinlan et al., 2019). This position aims to the methods that people understand the world, particularly through sharing their experiences with others via the medium of language (Easterby-Smith et al., 2021). Interpretivism claims that learning about a social phenomenon should involve exploring interactions between social knowledge and humans (Silverman, 2015) and the observer is contended as being a part of the reality being observed (Bryman and Bell, 2007). Researchers in interpretivism studies are curious about all varieties of experiences and events and seek to address 'how', 'why' and 'what' questions, thus, interpretivism allows to investigate the social phenomenon from diverse groups and admits different influences from people and their interpretations of knowledge (Ritchie et al., 2013). As such, interpretivism research often uses non-statistical data gathered through interviews and observation rather than causality of measurements (Bryman, 2012). Rather than a reductionist quality, interpretivism research examines a holistic and complex situation in the real world (Remenyi et al., 1998). Hence, as Easterby-Smith et al. (2021) highlighted, interpretivism philosophy is significant for people to make sense of the world and investigate the phenomena within the business and management discipline.

### ***Comparing strengths and weaknesses of the positivism and interpretivism paradigm***

The two main epistemological paradigms have different implications for how a study should be conducted (Creswell, 2003). Comparing the strengths and weaknesses between positivism and interpretivism enables the researcher to select a suitable methodology and methods in the following research process.

Positivism paradigms perceive the truth that is concrete and external and separate from the observer (Easterby-Smith et al., 2012). In this case, the main strength of this paradigm can provide an objective explanation of the world or situations. Moreover, researchers often determine to start with existing theories when designing data collection and analysis research, particularly via developing hypotheses to test (Punch, 2014). It helps positivism studies have a clear focus at the outset (Saunders et al., 2009). In addition, it is economical and fast to collect a large amount of data from large samples (Saunders et al., 2009). As the data from positivist studies are statistics from a large sample (Creswell, 2003), the results can cover a wide range of situations and be applied to a wider context (Easterby-Smith et al., 2012). Conversely, positivist researchers use quantitative methods to gather data, which is considered as being rather inflexible and artificial (Easterby-Smith et al., 2021). The numeric data helps examine correlations among variables but is not effective in the understanding phenomena in depth (Saunders et al., 2007). Positivism focuses on testing hypotheses from previous literature (Saunders et al., 2009), as such, it is not very helpful in generating theory (Easterby-Smith et al., 2021).

The strengths and weaknesses of the interpretivism paradigm are complementary to those of positivism above. Accordingly, interpretivism is conducive to looking at the change process over time and understanding people's meanings and phenomena (Easterby-Smith et al., 2021), especially understanding how and why questions (Saunders et al., 2007). Through interpretation from people, interpretivism can emerge new ideas and contribute to the evaluation of new theories (Easterby-Smith et al., 2012). However, the acquisition of data would take up a great deal of time and resources, and the corresponding analytical process may be complex and difficult, depending on the intimate and tacit knowledge of researchers (Easterby-Smith et al., 2021). The nature of subjectivism in interpretivism studies may cause low credibility problems (Saunders et al., 2007). The above strengths and weaknesses of positivism and interpretivism are concluded in Table 6.

**Table 6 Strengths and weaknesses of positivism and interpretivism**

	<b>Positivism</b>	<b>Interpretivism</b>
Strengths	Economical collection of a large amount of data. Clear theoretical focus for the research at the outset. Greater opportunity for researchers to retain control of the research process.  Easily comparable data	Facilitates understanding of how and why.  Enables a researcher to be alive to changes that occur during the research process. Good at understanding social processes.
Weaknesses	Inflexible - direction often cannot be changed once data collection has started. Weak at understanding the social process. Often does not discover the meaning people attach to social phenomena	Data collection can be time-consuming. Data analysis is difficult. Researcher has to live with the uncertainty. Patterns may not emerge.  Generally perceived as less credible by non-researchers.

Source: Saunders et al., (2007, p.74)

### ***3.1.1.3 Justification of philosophical assumption for this research***

The research philosophy of this study is interpretivism. The first reason is based on consideration between ontological and epistemological assumptions. As discussed, ontology relates to the nature of reality, to the study of being and to human beings' ways of being in the world (Quinlan et al., 2019). Ontology mainly deals with the issues of whether social realities are independently existent from participants in society or established from and interrelated to their perceptions and actions (Denzin and Lincoln, 2011). According to the scopes of ontological positions, it aims to investigate the 'truth' and prove its existence in the real world. However, this research seeks to understand how and why knowledge employees share or hide tacit knowledge. The main purpose is to shape theory created by sharing experiences and interactions among social actors (Easterby-Smith et al., 2012). Therefore, the ontological assumptions do not suit this research.

The second consideration is established on the distinction between positivism and interpretivism. As discussed in Section 2.4.1.1., tacit knowledge is embedded in people's minds, and both knowledge sharing and hiding are the product of social interaction and multiple sources of motivation (Cormican et al., 2021; Halvari et al., 2021; Xiong et al., 2021; Islam et al., 2018; de Almeida et al., 2016; Stenius et al., 2016; Cavaliere et al., 2015; Lin, 2007; Kankanhalli et al., 2005). Therefore, learning why people share and hide knowledge depends

on their perceptions and interpretations of these behaviours, consistent with the characteristics of the interpretive paradigm (Easterby-Smith et al., 2021). Especially, this research seeks to explore 'how' and 'why' skilled employee share and hide knowledge, which interpretivism contributes to addressing 'how' and 'why' questions (Ritchie et al., 2013). Corresponding to the data type, interpretative data can better achieve the questions of 'how' and 'why' rather than numeric or statistical data from positivist research.

In addition, interpretivism allows an investigation of the social phenomenon from small sample sizes with diverse characteristics and admits different influences from people and their interpretations of knowledge (Easterby-Smith et al., 2015; Ritchie et al., 2013). The research context focuses on small family businesses. According to the definition of the small family business in China (see Section 1.3, p. 68), participants in the small-scale business would not possibly involve a large number of people. In this case, the acquisition of data from large samples within the positivism paradigm may not be feasible and suitable.

Finally, instead of a reductionist quality, interpretivism research examines a complex situation in the real world (Remenyi et al., 1998). With regard to the past literature, in the small family business, knowledge sharing and learning are not apparent in organisational life (Short, 2019). Likewise, knowledge hiding refers to silent and non-expression behaviours (Singh, 2019; Connelly et al., 2012). As a result, knowledge sharing and hiding are complex and hard-to-capture behaviours in the small family business context. Interpretation from employees in this context can help investigate these complicated situations. Therefore, this research adopts the interpretivism paradigm.

### **3.1.2 Research Approaches**

#### ***3.1.2.1 Deduction and induction***

On the foundation of interpretivism, a specific approach is of great importance to address the research questions. Bryman and Bell (2015) stated that before choosing research approaches, there is a need to decide whether the research should be guided by theory or conducted via a set of procedures to establish a theory as the final purpose. Based on the relationship between theory and research, two research approaches are deductive and inductive; both contribute to generating new knowledge (Hyde, 2000).

Deductive research aims to test an established theory to see whether it can be applied and validated in a specific context (Hyde, 2000). Researchers usually commence with a foundation from prior studies in a specific domain, then deduce questions or hypotheses, and finally verify whether the theory is accurate (Saunders et al., 2016). Sequentially, data analysis patterns and regularities are developed into tentative hypotheses or questions that researchers intend to study (Patton, 2014). Finally, the researcher acquires and generates conclusions and theories established on tentative hypotheses or questions (Creswell, 2013). In contrast to the deductive approach, the inductive approach aims to develop or generate a general theory (Bryman and Bell, 2015). In inductive research, researchers infer the implications of their findings for the theory that created the whole investigation (Bryman and Bell, 2015). The theory stock feeds back from the findings (Whittington, 1989). Saunders et al. (2009) stated that the inductive approach is more applicable for studies with small sample sizes. In inductive research, researchers start with several observations in their plan to investigate (Hyde, 2000) and often link data and theory through qualitative research methods (Bryman and Bell, 2015).

In the current knowledge management literature, there is a new conceptualisation of investigating knowledge sharing and hiding simultaneously (Hadjielias et al., 2021; Pereira and Mohiya, 2021; Gagne et al., 2019). Also, in the literature on family businesses, some studies on knowledge sharing have looked at large or medium-sized companies (Botero et al., 2021; Pittino et al., 2018; Woodfield and Husted, 2017; Lin, 2013; Zahra et al., 2007) whereas small family businesses remain underrepresented (Hadjielias et al., 2021; Motoc, 2020; Arzubiaga et al., 2019; Cunningham et al., 2017, 2016). Thus, it is hard for this research to use existing models or theories to establish a hypothesis in the small business context. Likewise, there is a need to develop a conceptual framework for researching this new area. It is necessary, therefore, to develop a deep understanding of simultaneous knowledge sharing and hiding in the small family business through rich data collection. In this respect, the inductive approach suits this study.

#### ***3.1.2.2 Quantitative and qualitative research methods***

Quantitative research is a process of collecting numerical data (Easterby-Smith et al., 2015). It depends on numbers as evidence to test a theory, which lies with a deductive research

approach (Lune and Berg, 2017). On the other side, qualitative research focuses on the meanings, concepts and descriptions of things rather than the numbers (Myers, 2019). Qualitative research often addresses what, how and why questions (Yin, 2018). The main reason for choosing qualitative methods for this study is that the research question seeks to understand the meaning of a social phenomenon (Strauss and Corbin, 1998).

The qualitative approach is employed in this research because it can better address the research questions: exploring how and why skilled employees share and hide their tacit knowledge in a small family-run business. Data from skilled employees' perceptions, experiences and stories are more appropriate than numbers in the present study. Fieldwork is required to interact with skilled employees in person to capture their perceptions on how and why they share and hide knowledge with others. Consequently, the study needs high-quality and rich interpretations to address the research questions, which conform to the requirements of interpretivism paradigms.

Considering the main research questions—how and why skilled employees share and hide knowledge in the small family business context, this study's philosophical positions entail social actors' perceptions and produce an interpretive, inductive and qualitative research approach.

### **3.2 Research Strategy**

Saunders et al. (2016) described that a research strategy is a set of procedures to answer the research questions and achieve the research objectives. There are five main strategies for qualitative research in social science: historical research, action research, ethnography, grounded theory and the case study (Myers, 2019). Therefore, it is significant to comprehend the rationale behind the research strategy, and the research strategy should be consistent with the interpretivism philosophy in this study.

This section will elaborate on two aspects of how to design this research. The first is about how to select research strategies by comparing different qualitative research strategies; the second sets forth the rationale behind choosing a case study for this research.

### 3.2.1 Selection of Research Strategies

This section provides a comprehensive explanation of each strategy and the reasons for selecting the case study methodology.

Historical research is a method to study past events that happened a certain amount of time ago in a particular research backdrop (Saunders et al., 2009). Therefore, this strategy investigates past events and provides theoretical explanations for these events (Lune and Berg, 2017). Gorman et al. (2005) stated that historical research is often applied through the organisation case study because it is through probing trivial events at a company, putting them back together, and recovering a whole event that people can re-build the corporate past (Pickard, 2013). However, this strategy does not befit this study, which aims to probe the contemporary phenomenon of tacit knowledge sharing or hiding from knowledge employees, even though their interpretations may refer to organisational history. Also, these interpretations are new data collected from fieldwork interviews.

Action research involves researching social actors' actions in a social phenomenon and reflecting on their changes in action so that the organisation can benefit from them (Myers, 2019). Embracing the concept of change is an outstanding trait in this research strategy (Babüroglu and Ravn, 1992). Action research is suitable for investigating social phenomena where people hope to improve and develop internal practice (Pickard, 2013). This study conducts a current investigation of skilled employees' tacit knowledge sharing and hiding in the small family business context. It does not involve the 'change' process. Accordingly, an action research strategy has not been selected.

Ethnography is a strategy to describe an outsider's deep and comprehensive views and an insider in a social setting (Silverman, 2015). This research strategy requires researchers to conduct fieldwork and be involved in the contextual daily operation and life (Pickard, 2013). In ethnography, the focus is on describing social phenomena, such as observation, understanding, and description of a different way of life from the standpoint of the participants (Myers, 2019). This study investigates skilled employees' tacit knowledge sharing and hiding behaviours. Tacit knowledge sharing and hiding could happen at any time during their working life. The researcher cannot possibly spend much time observing employees' sharing or hiding practices through fieldwork. Hence, this strategy is not desirable for the

current project.

Grounded theory is a widely-used strategy to build new theories in a research field and discipline (Matavire and Brown, 2013). This strategy uses various data collection methods, for instance, observation and interviews, to generate theory (Goulding et al., 1999). Notably, the distinction between grounded theory and other qualitative strategies is the lack of any stabilised theory at the beginning of research (Strauss and Corbin, 1998). This enables us to avoid theory coming from the accumulation of a range of concepts in previous literature or one's thoughts on social phenomena (Strauss and Corbin, 1998). In particular, in grounded theory, there may not be large theoretical foundations to support data collection and analysis (Myers, 2019). However, the theories and models for investigating tacit knowledge sharing or hiding, such as the SDT, are extensive in the current literature. Although few theoretical models have been used to study the co-occurrence of knowledge sharing and hiding behaviours in the knowledge management literature and the family business settings, the vast majority of theoretical foundations in various backdrops have underpinned the presented research. As a result, the grounded theory strategy is not an ideal choice.

A case study is a widely recognised research strategy in the organisational studies and social sciences field to intensively probe a specific context and social phenomenon (Saunders et al., 2016). Myers (2019) construed that a case study is beneficial for researching where the boundaries between social phenomena and backdrops are not clear. This study examines the phenomenon of people's simultaneous tacit knowledge sharing and hiding in a small family business. The context is situated in the small family business. As such, the boundaries of this study are considerably ambiguous.

Furthermore, the case study strategy aims to address 'how' and 'why' questions and deeply analyse complex phenomena within a particular social context by a variety of evidence—documents, artefacts, interviews, observations and so on (Yin, 2018). The case study strategy helps people investigate social phenomena from multiple perspectives of the complexity and uniqueness. In the literature review, tacit knowledge resides in people's minds (Pereira and Mohiya, 2021; Nguyen, 2021; Polanyi and Sen, 2009; Nonaka and Takeuchi, 1995) and whether to share or hide it relies on a variety of individual motivations (Cormican et al., 2021; Halvari et al., 2021; Xiong et al., 2021; Islam et al., 2018; de Almeida et al., 2016; Stenius et



al., 2016; Cavaliere et al., 2015; Lin, 2007; Kankanhalli et al., 2005). Within SDT, the individual motivations contain six categories, and each motivation may vary in strength and quality depending on the extent to which people's psychological needs are fulfilled (Wang and Hou, 2015; Gagne, 2009; Ryan and Deci, 2000; Ryan et al., 1985). Meanwhile, the motivations for sharing and hiding are influenced by the diverse corporate characteristics of the small family business (Botero et al., 2021; Cunningham et al., 2017, 2016; Lin, 2013; Zahra et al., 2007). Knowledge sharing and hiding is, therefore, a complex phenomenon. Finally, this study also expects to understand the reasons for people's knowledge sharing and hiding behaviours at different levels in the small family business: managers and employees; family members and non-family employees. Therefore, taken together, the case study is an ideal strategy for addressing the research questions and achieving the objectives of this study.

Easterby-Smith et al. (2015) suggested that the research topic determines the selection of the research strategy. As critically discussed, of the various qualitative research strategies above, the case study is most likely to address the main research questions. The following section will justify choosing a detailed case study strategy for this study.

### **3.2.2 The Case Study Strategy**

#### ***3.2.2.1 Rationale for selection of the single case study***

It is essential that researchers know the standpoint of the case within the research on the foundation of the research subject, aim and objectives before choosing the particular case study strategy (Thomas, 2016). Yin (2018) classified three purposes of a case study: explanatory, exploratory and descriptive. The explanatory case study illustrates why or how something is regarding a phenomenon; the exploratory case study provides broader topics such as the conclusion or outcome of particular interventions; the descriptive case study describes how things are in a specific case or a group of cases (Yin, 2009). The researcher anticipates exploring some feasible recommendations to encourage employees to share knowledge and improve the knowledge hiding phenomenon in the context of the small family business. Therefore, this study could be viewed as an exploratory case study. Moreover, this research aims to comprehend and explain how and why individual-tacit knowledge is shared and hidden, which aligns with the purpose of the explanatory case study. Consequently, in light of an analysis of the purposes of the case study strategy, this research employs a mixture

of exploratory and explanatory case study strategies.

A case study can involve single or multiple cases (Flyvbjerg, 2006). No argument illustrates which one is undoubtedly better than the other, as long as the case study can address the research question (Yin, 2014). According to Yin's (2018) five principles of a single case study strategy, a critical case study tests a current theory when a single case fulfils all the assumptions of this theory. A rare or unique case study is used to obtain new information to unfold an unexplored field (Yin, 2018).

A typical case facilitates examining typical conditions or common circumstances to apply the findings in a specific topic to a similar context (Yin, 2018). A novel case serves phenomena emerging from the researcher's interest, and a long-term case study is adopted when the researchers need to examine a case over different periods (Yin, 2018).

The systematic literature review showed that the backdrop of the small family business is underrepresented in the literature on family businesses and knowledge sharing (Hadjielias et al., 2021; Motoc, 2020; Arzubaga et al., 2019; Cunningham et al., 2017, 2016). Furthermore, this research explores a new conceptualisation in knowledge management literature—simultaneous knowledge sharing and hiding behaviour (Hadjielias et al., 2021; Pereira and Mohiya, 2021; Gagne et al., 2019). Therefore, the purpose of the present study is to understand simultaneous knowledge sharing and hiding behaviour in depth by the specific focus on a small family business rather than comparison among cases. A single typical case where people can actively share tacit knowledge sharing via varied methods will meet the needs of this research. As demonstrated in the sub-section below, it is necessary to select a proper case-study site for data collection and analysis.

#### ***3.2.2.2 Criteria for case selection***

There are four criteria for case selection. The primary criterion is the over ten-year survival period. This is because almost 60% of small-sized firms shut down within the first five years, and only 10% of them could survive after ten years in China (Zhou, 2015). The case company was founded in 1970 by the father of the current owner-manager and has continually expanded to date.

Second, the chosen company meets the definition of a Chinese small business. According to

the description given by the National Bureau of Statistics of China (2018), those enterprises in manufacturing with fewer than three hundred employees and earning below twenty million yuan in annual revenue are in the small business group. The case-study company has 110 employees with an annual revenue of around five million. Moreover, it is also essential for the case study to be a family-run business. Therefore, the case company is selected from the domain of family businesses.

Third, following the typical principle of Yin (2018), a ‘good practice’ business of researching knowledge sharing should offer sufficient opportunities to encourage learning and sharing knowledge (Wen and Wang, 2021; Gardiner, 2015; Chen and Hsieh, 2015; Lin, 2013; McInerney, 2002). In the prior literature, encouraging learning and sharing can establish small group meetings and on-site seminars and reward employees who actively participate in learning and teaching others (Chatterjee et al., 2021; Zhang et al., 2017; McInerney, 2002). However, small businesses are generally reluctant to invest in formal employee training (Bryan, 2006). Thus, the chosen case-study company needs to value workplace learning and sharing.

The final significant criterion is that a successful family-run business has a powerful survival ability developed from employees’ knowledge. Patents and reputations are viewed as compelling evidence in manufacturing sectors in China (Lin et al., 2020, Zhou, 2019).

To conclude, through these four criteria, the selected case-study company is a typical case, conforming to Yin’s (2018) standards for a single case study.

### ***3.2.2.3 Negotiating access to the case study company***

There were three stages in negotiating access to the case study company. The first was to contact a local agency in charge of Quality Mark Certification for companies in the manufacturing sector. The help of this agency made it easier for the researcher to screen small businesses that met the selection. After the researcher explained the selection requirements to the staff, fifteen companies met the selection criteria. Then, the staff provided the names of the candidate companies because the agency signed confidential contracts with these companies. In the second stage, the researcher found the email addresses of the owner-managers of the fifteen candidate companies on the official websites.

Then, the researcher emailed them to provide an introduction of the researcher and the research purpose. By the end, only two of them expressed an interest in participation. Subsequently, the researcher continued keeping in touch with them, as either of the owner-managers of the candidate businesses might change their minds to drop out of the research any time before the final confirmation. Finally, after the researcher frequently negotiated with the owner-managers of the two candidate small businesses, one of them thought that the long-time discussion on the details of the study was time-consuming; as a result, he decided to quit. Hence, the other candidate company became the case-study company.

The chosen case-study company met all the above four criteria, presented in Section 3.2.2.2 (p. 80-81). The most meaningful reason was that the owner-manager was interested in the topics of knowledge sharing and hiding. When taking the MBA courses, the owner-manager studied the employees' learning and training, closely associated with the knowledge sharing area. The owner-manager actively served as the gatekeeper for the researcher to gain access, review document and collect data.

#### **3.2.2.4 Case study context**

Henan is located in the middle of China and has the third-largest population of any Chinese province (Fan and Xiang, 2020), as presented in Appendix I. The population advantage provides a rich labour force for Henan province. Second, as the report "*Made in China 2025*" stated, China needs to accelerate the deep integration of new-generation information technology and manufacturing industry as the mainline; to promote intelligent manufacturing as the main direction; to strengthen industrial infrastructure capabilities; to foster industrial transformation and upgrade; and to realise the historical leap of manufacturing industry from big to strong (Qu, 2017). The majority of leading small businesses are in the manufacturing sector, committed to researching and developing (R&D) cars, foods, new materials and new energy, and the companies in traditional manufacturing industries in Henan province, such as iron and steel, chemical industry, nonferrous metals also more and more focus on investment in R&D (HENAN.GOV.CN, 2020). According to this guideline and the solid foundation of rich human resources, the manufacturing industry is the pillar sector in Henan Province (Jiang and Li, 2021).

Even though the small family businesses have several survival environments as demonstrated in Chapter 1, SMEs in Henan have also enjoyed higher growth trends than in other provinces in China because of the central government's Strategy of Rising of Central China (HENAN.GOV.CN, 2020). Family businesses have made up 80% of these SMEs (Zhu, 2020). Even during the pandemic, the number of small and micro companies in Henan increased by 2.31%, and the added value was over 2 billion yuan in total by the end of October 2020 (NEWS.HNR.CN., 2021). The more important thing is the leading small and family businesses of Henan are mainly situated in the manufacturing sector (HENAN.GOV.CN, 2020). Zhengzhou as the capital city and largest city in Henan province has contributed the most to Henan's GDP, with over 1200 billion yuan in 2020 (HENAN.GOV.CN, 2020). Therefore, based on these conditions, the case study company aims at the R&D manufacturing sector in Zhengzhou city, Henan province.

### ***Introduction to the selected case study***

The chosen business is an independent R&D company in the manufacturing sector. It mainly engages in researching, developing, producing, and selling various molecular sieve raw powders and activated powders, broadly applied to air separation equipment, petrochemicals, coal chemicals, natural gas purification, etc. In 1970s, the first owner-manager, the father of the current owner-manager, established a small factory. In 1995, after the founder passed away, the current owner-manager took over and re-built the business from a small factory into a small independent R&D business. Nowadays, the case-study family business has expanded its business from China to overseas.

Its business development cultivates numerous skilled technicians, engineers, and experts engaged in ISO9001, ISO14001 and OHSAS18001 systems through long-term working practices. Most of skilled employees have worked at the company for a decade or more. Therefore, the survival and success of the researched company depend on skilled employees and their knowledge.

In addition, the current owner-manager is responsible for business development and managerial decisions. Family members often take on important positions to make decisions in business development and management. Both the founder and the current owner-manager value employees' knowledge. Once the company was set up, the founder developed

a corporate culture that welcomed employees to share and exchange knowledge. The current owner-manager inherited and has maintained this kind of corporate culture. The local government and other enterprises accredited its employees' training and learning programmes. The chosen small business has obtained the title of 'provincially-excellent learning organisation'. According to corporate document analysis, the case company provides a variety of training and meetings for employees' learning and knowledge sharing. It also has a bonus scheme to reward skilled employees' mentoring practices and physical prizes for all employees who help the business address hidden safety dangers and improve work performance through offering suggestions.

Within reference to the fourth criterion, patents and reputations are viewed as compelling evidence in the Chinese manufacturing sectors (Lin et al., 2020). The selected business has been accredited with the titles of 'provincial enterprise technology centre' and 'provincial innovation pilot enterprise' due to various patents and intellectual properties. Table 7 exhibits a list of the patents and intellectual properties of the case-study business: seventeen utility model patents, three national patents, two technological innovations, four technological reputations, and three qualifications through knowledge and technology innovations. The owner-manager agreed to disclose the names of patents and reputations but not the reference numbers.

The patents and reputations of the case-study business are the key criterion to be chosen in this study. The wide range of patents and reputations show the core knowledge and technology of the selected company, which emerges from skilled employees with excellent expertise and experience.

**Table 7: Patents and reputations of the case company**

Names of patents	Items of patents
<b>17 utility model patents:</b>	Vacuum tape filter; Slurry filter; Moisture-proof lid; Flash dryer; Shear agitator; Rotary kiln body; Energy-saving rotary sealer; Universal ballast; Hot water washing slurry system with belt filter; Energy-saving backwater decompressor; Screw feeding device; High water lifter; Spiral metering and mixing feeding device; vibration device with movable dust cover; feeding device with side suction dust cover; Dust-collecting fine material automatic recovery and storage device; and A screening device with an air distributor.
<b>Three national patents</b>	Producing methods of 13X molecular sieve with high adsorption property
	Multi-purpose solid-liquid separator
	Producing methods of 3A-G activation powder with insulating glass adhesive strip
<b>Two technological innovations</b>	Developed G2000 hollow glass molecular sieve
	High-quality activation powder expands the service life of the rubber strip
<b>Four technological reputations</b>	13X molecular sieve production device and process research won the second prize of discipline technology progress in Zhengzhou in 2011
	selected as an "innovative pilot enterprise" in by the province-level government in 2011
	selected as "provincial enterprise technology centre" by province-level government in 2012
	selected as a high-tech enterprise by the Provincial Department of Science and Technology in 2012
<b>Three qualifications</b>	ISO9001:2000 (International quality management system); ISO14001:2004 (International environment management system); and OHSAS18001:2001 (International occupational health and safety system)

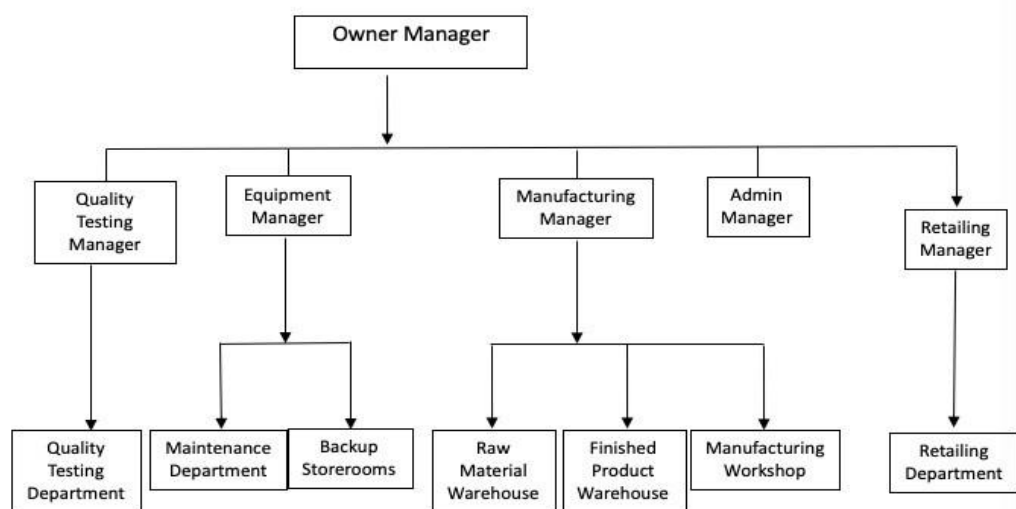
Source: Quality, Environment, Occupational Health and Safety Management System Manual of the case company, 2018

#### **3.2.2.4 The selection of the participants**

In qualitative studies, researchers should continue sampling during the research process until opportunities are maximised, or patterns in the data continuously emerge (Bryman and Bell, 2015). In this study, given the research question, the participants had to be skilled people. Within the case company, skilled people are those who adept at management practices and

operational and technological skills through long-term work, as stated by Chirico (2008) and Cho et al. (2007). Considering this point, at the beginning of the research design, the researcher intended to interview twenty-six employees. They were likely to be the owner-manager, administration/HR manager, manufacturing manager, retailing manager, equipment manager, quality testing manager and twenty employees in different departments, as shown in Figure 6. Of the above, the owner-manager takes on a central position in making decisions. The managers from core departments understand the core organisational knowledge and often give their expertise to the less-experienced employees in training schemes and activities; the skilled ordinary employees regarded as 'role models' have opportunities to share knowledge in public because they have made contributions to the company. The owner-manager identified eleven participants at the manager level before data collection. The HR manager selected the other ten participants at the employee level during the interview process until information saturation had been achieved.

**Figure 6: The internal structure of the case company**



Sources: Quality, Environment, Occupational Health and Safety Management System Manual of the case company, 2018 and translated into English

Purposive sampling is a widely used method to screen sampling in qualitative research (Bryman and Bell, 2015). This method is helpful in deliberately selecting particular people, groups and activities to provide information that is relevant to the research questions and goals (Palys, 2008). Bryman and Bell (2015) posited three types of purposive sampling: theoretical, generic and snowball sampling. Theoretical sampling is a sequential sampling that gradually evolves to benefit the research questions (Teddlie and Yu, 2007) until theoretical



saturation (Charmaz, 2006). This method stands out from other sampling processes that emphasise the selection of cases and samples in the quest for theoretical understanding (Strauss and Corbin, 1998). Generic sampling is conducted purposively but is not necessarily associated with the generation of theory and theoretical categories (Hood, 2007). This method can be employed sequentially or fixedly, or a combination of both (Bryman and Bell, 2015). Snowball sampling is used when the researcher selects a small group of people to collect data at the outset, and then the sampled participants recommend other participants who know in response to the research questions (Coleman, 1958). However, Noy (2008) argued that this method is a technique for probability sampling, which is not helpful in developing an in-depth understanding of a theory.

The present study explores why skilled employees share and hide tacit knowledge; therefore, all participants should be skilled employees in the case company. As presented previously, the case company is an R&D manufacturing family business. Hence, those involved in the manufacturing processes, equipment and quality testing processes, and management practices are viewed as skilled employees. Their perceptions concerning tacit knowledge sharing and hiding practices are critical. Furthermore, the sample contains people from different levels, departments, and groups (family members and non-family employees; senior and young employees), which could provide rich perceptions and stories. Hence, the participants in this study from theoretical samples.

#### ***3.2.2.5 The criteria for participant selection***

Maxwell (2012) suggested that researchers should avoid homogeneous sampling. In this study, the participants were selected from three hierarchies: owner-manager, managers and employees, to guarantee rich and diverse qualitative research data. Also, the participants included two groups: family members and non-family employees. Some were often assigned as the trainers or mentors to guide newcomers or apprentices/subordinates. Some were selected by the owner-manager and department managers as 'role models' at the year-end conference. Thus, all participants had rich experience in undertaking knowledge sharing practices.

Furthermore, the participants in this study have to work at the company for over three years. An employee is eligible to become a mentor after working in this business for three years.

Also, the employees who have worked at this business for over three years can better understand corporate culture and get more involved in knowledge sharing activities than those who work in a short term. Skilled employees working for a long time are more likely to comprehend the application of knowledge because they familiarise the working practices, up-to-date expertise and solutions to the issues (Chirico, 2008). Those working at the company for over three years may provide richer and deeper interpretations of how and why tacit knowledge is shared or hid than those working there for a shorter time. Therefore, the tenure of three years became a significant criterion in this research.

#### ***3.2.2.6 The process of participant selection***

After the criteria were set, the participants were selected through two steps. Primarily, the researcher contacted the owner-manager to articulate the requirements for potential participants. The owner-manager agreed with these criteria. As the gatekeeper, the owner-manager identified eleven skilled employees at the manager level, since the owner-manager often works with the managers rather than the ordinary employees. These people included the department managers and group leaders in the producing workshop. Next, as the owner-manager was in the middle of attending innovation conferences during the interview process in December 2019, the owner-manager assigned the HR manager as the gatekeeper to support the researcher in identifying the participants at the employee level and the ongoing data collection stage. It was because the HR manager often undertook a variety of human resource management (HRM) practices in the daily routines. Interviewing skilled employees should have continued until information saturation. In the end, the total number of interviewees was twenty-two.

All the participants have been used pseudonyms, for example, owner meaning the owner-manager; Mg meaning the manager; and Em meaning the employee. The numbers 1-10 stand for the ordinal number of each manager and employee. The demographic profile of the participants is listed in Table 8.

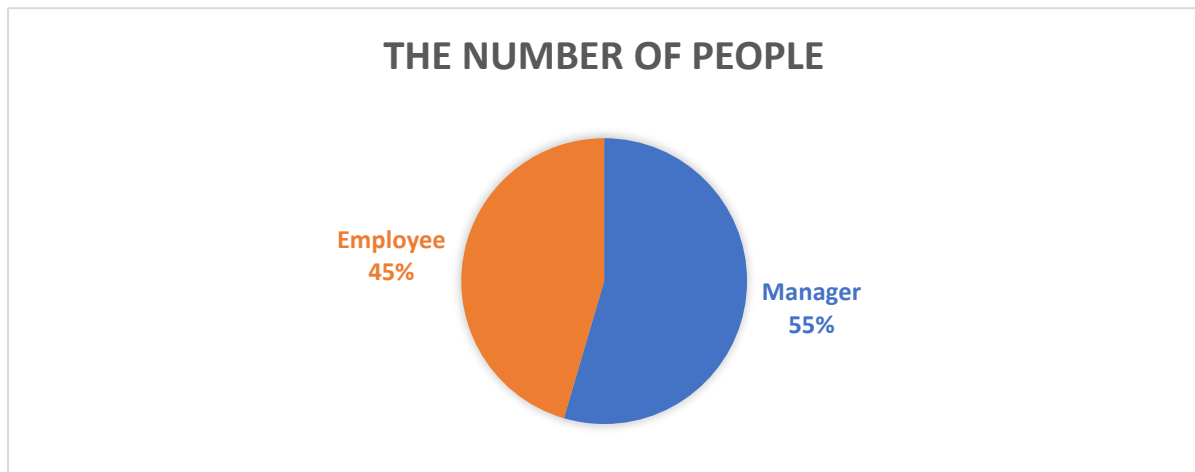
**Table 8: Summary of the demographic profile of the participants**

No.	Age	Departments	Tenure (year)	Positions	Group (Family or Non-Family)	Coding
1	29	administration	4.5	HR	Non-F	Em1
2	45	manufacturing	12	group leader	Non-F	Mg1
3	38	supply and sales	3	international business specialist	Non-F	Em2
4	57	Equipment/tech	27	manager	Non-F	Mg2
5	48	administration	23	owner	F	Owner-manager
6	33	supply and sales	9	group leader	Non-F	Mg3
7	31	administration	6	cashier	F	Em3
8	26	manufacturing	3	worker	Non-F	Em4
9	28	manufacturing	4	worker	Non-F	Em5
10	28	supply and sales	4	sales	Non-F	Em6
11	32	supply and sales	5	sales	Non-F	Em7
12	33	quality testing	11	quality tester	Non-F	Em8
13	43	quality testing	15	manager	Non-F	Mg4
14	65	administration	38	accounting manager	F	Mg5
15	53	quality testing	20	manager	Non-F	Mg6
16	48	manufacturing	19	manager	F	Mg7
17	48	manufacturing	9	group leader	F	Mg8
18	57	administration	20	manager of the quality management system	F	Mg9
19	65	Equipment/tech	22	senior engineer	F	Mg10
20	52	supply and sales	8	manager	F	Mg11
21	25	supply and sales	5	sales	F	Em9
22	34	quality testing	11	worker	Non-F	Em10

Source: Author's construct

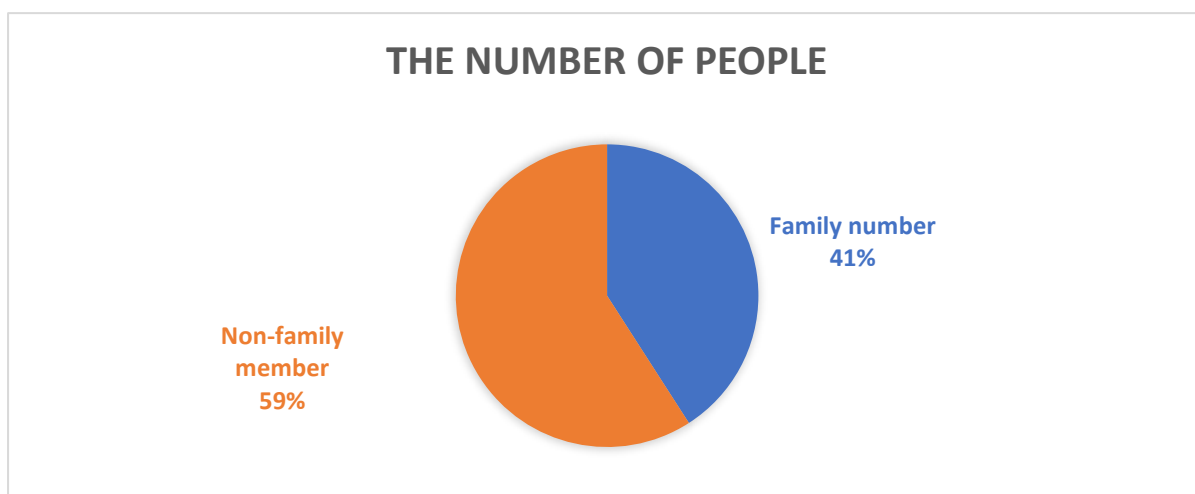
Through the illustration of Table 8, it is evident that there were twelve participants at the manager level and ten at the employee level, as depicted in Figure 7.

**Figure 7: The comparison of participants between the manager group and employee group**



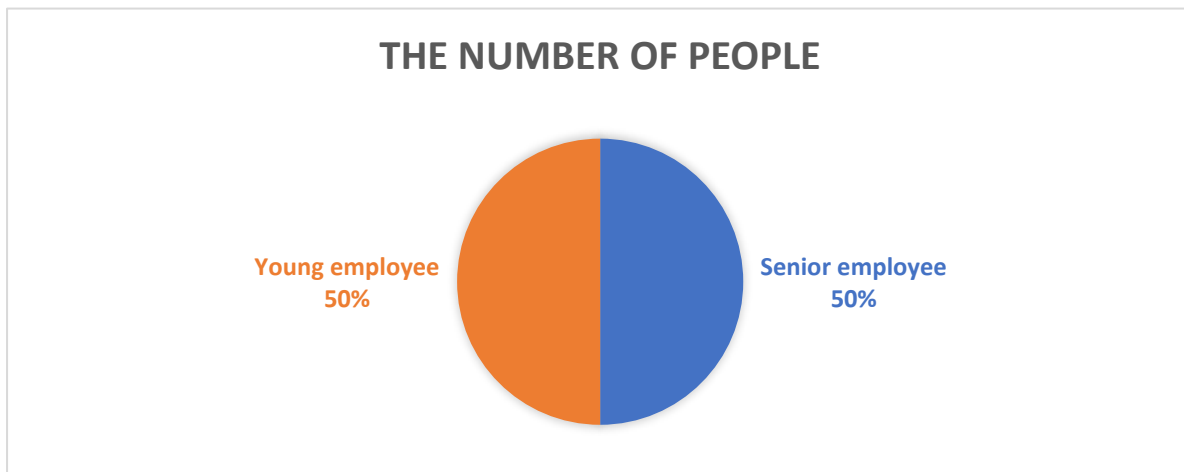
Thirteen employees were non-family members, whereas nine came from the company's family (see Figure 8).

**Figure 8: The comparison of participants between the family-member group and non-family employee group**



Eleven interviewees were over forty years old, making up 50% of all participants. They were selected as the senior-employee group. The other eleven were the young-employee group in this study, as depicted in Figure 9. The 40 years were selected as the criterion for these two groups because the oldest participant was 65 years old, and the youngest was 25 years old. 40 was middle age across all the participants.

**Figure 9: The comparison of participants between age groups**



The three pie charts reflect the participants in different groups have diverse demographic characteristics, which influences their perceptions and beliefs in knowledge sharing and hiding. The finding chapter will explain how these demographic characteristics of the participants are related to knowledge sharing and hiding.

Twenty-two participants may be a small sample of the population. Still, the quality of qualitative research is influenced by the richness and diversity of information rather than the sample size (Maxwell, 2012). To achieve this goal, the researcher kept in touch with the gatekeepers (the owner-manager and HR manager), discussing the research aim and objectives, the requirements for participant and interview questions and the research procedures for many times. This ensured that the owner-manager and HR manager could deliberately select suitable participants for this study.

### **3.3 Data Collection**

In a qualitative study, various methods can collect rich data (Patton, 2014); this is one of the essential primary advantages of case studies (Yin, 2014). Qualitative methods include six approaches: documentation, archival records, interviews, direct observation, participant observations and physical artefacts (Silverman, 2015). These methods can be summarised into three categories: text analysis, observations and interviews (Myers, 2019). Adopting the case study strategy allows researchers to combine multiple data collection methods on a particular topic (Yin, 2018).

As Easterby-Smith et al. (2012) stated, data collection methods should be selected to answer

the research questions. Therefore, the current section is split into three parts to describe the data collection. The first section provides the rationale for selecting document analysis and semi-structured interview methods. The second describes the process of gaining access and collecting data. The last part presents the time horizon of data collection.

### **3.3.1 Rationale for Data Collection Methods: Document Analysis and Semi-structured Interviews**

Qualitative research focuses on gaining an in-depth understanding of the real world through people's perceptions and interpretations (Easterby-Smith et al., 2015). Hence, qualitative researchers and practitioners often attempt to address research questions using multiple data sources (Yin, 2018). In this study, document analysis and semi-structured interviews are considered the most suitable data collection approaches to respond to the research questions, as shown below.

The foremost approach is document analysis. Documentation can be valuable evidence in qualitative research to discover the history of an essential event in a business setting (Bowen, 2009). Altheide and Schneider (2012) pointed out that document analysis is helpful for researchers to understand the culture, as a large number of cultural features are unfolded by documents. In this study, the researcher could use this approach to explore any collective activities regarding knowledge sharing and capture any corporate cultural characteristics influencing knowledge sharing and hiding, such as the role of owner-manager, reward system, and so on. Through analysing corporate documents, the researcher obtained initial findings concerning potential corporate reasons for employees' knowledge sharing and hiding, confirming the evidence in subsequent interviews. Therefore, document analysis has been selected as a valuable data collection method and the outcomes from document analysis guided interview question design.

Observation is a method that collects data by observing people, events or phenomena (Myers, 2019). Thomas (2016) asserted that observation describes settings, behaviours and events. However, the research questions of this study mainly seek to analyse tacit knowledge sharing and hiding and the reasons for both behaviours from participants' interpretations rather than describing the phenomenon. Also, one of the research questions explains how tacit knowledge is shared and hidden. Although observation is a valid approach for describing

phenomena through observing events, participants' behaviours and context, interview approaches can also achieve the target of description of phenomena, particularly for past events (Maxwell, 2012). Furthermore, it is hard to observe knowledge hiding behaviour objectively and accurately due to its less significant characteristics (Xiao and Cooke, 2019; Cerne et al., 2014). Finally, on account of the hard-to-capture traits of tacit knowledge (Newell, 2015; Polanyi and Sen, 2009), when the participants communicate with each other on the informal occasions, it is difficult for the researcher to capture and distinguish whether these communication practices are knowledge sharing or simple interactions at work. From the practical side, motivations of employees are hard to observe, but can be known by employees' interpretations. In addition, the owner-manager disagreed with observing events of tacit knowledge sharing because there was a risk of secret knowledge leakage. When employees share workplace knowledge, this will be secret internal knowledge, which is confidential to outsiders. To this end, observation is not an appropriate method to data collection. In contrast, the interview method can respond to the descriptive questions.

Interviews are widely applied in qualitative research to yield rich and deep subjective understanding, meaning or sense-making from people or groups (Myers, 2019). The interview method can also be adopted as part of multi-method research where different perceptions are generated from multiple methods (Thomas, 2016), especially for case studies (Easterby-Smith et al., 2015). This study aims to understand how and why knowledge employees share or hide tacit knowledge. People cannot be forced to share tacit knowledge, and this only occurs when individuals are willing to share or motivated to share by outside organisational interventions (Anand et al., 2020; Kim et al., 2015; Lin, 2007). Therefore, the interview is the most suitable approach to obtain employees' perceptions and interpretations of the reasons for their tacit knowledge sharing and hiding in the case company.

Interviews can be conducted with a range of individuals and groups (Wahyuni, 2012). The individual interview method takes place in a one-to-one situation, whereas group interviews are conducted among a group of people to discuss the given topic, for example, in a focus group (Gawlik, 2018). However, focus groups are not ideal for attaining productive data. Some interview questions may refer to employees' insights into a workplace issue, for example, unfair treatment. As a result, the participants may not openly express their authentic perceptions when facing their colleagues. Also, Chinese culture encourages people to keep

harmonious relationships and save face (Huang et al., 2011). Therefore, people tend to state good things to maintain a harmonious workplace relationship (Lin, 2013). Finally, due to the intense working schedule in the case company, it was almost impossible to gather several participants from different departments to attend focus group interviews at a time. Thus, a focus group would not have suited gaining the authentic voice of participants.

Forms of interviews are often distinguished according to the level of structure in line with the research questions: structured, semi-structured or unstructured (Gudkova, 2018). Structured interviews set up the questions in a formalised structure so that all interviewees will be asked in the same sequence (Easterby-Smith, 2021). Semi-structured interviews have a list of questions; however, during interviews, the interviewer may deviate from the settled schedule and follow up on interesting issues from the interviewees' responses (Silverman, 2015). Unstructured interviews include a few pre-existing questions leaving space for the interviewer to follow rich interpretations from interviewees (Bryman and Bell, 2015). The selection of the structure of an interview depends on its purpose (Myers, 2019). Essentially, structured interviews attempt to eliminate the bias of the role of the interviewer (Gudkova, 2018). Thus, structured interviews are usually used to quantify data for analysis, while less-structured interviews, such as semi-structured or unstructured interviews, inspire participants to openly express their ideas surrounding the topic and follow the main logic of interviews (Silverman, 2015). Hence semi-structured or unstructured interviews are usually used in qualitative research (Silverman, 2015). The most significant difference between semi-structured and unstructured interviews is whether there is a list of questions to guide the interviews (Bryman and Bell, 2015). Even though unstructured interviews may allow interviewees to convey their opinions on a topic and generate richer and deeper data, semi-structured interviews offer a sufficient degree of latitude. This assures that the interviews do not drift away from the topic of discussion (Saunders et al., 2009). Taken all, semi-structured interviews with follow-up questions where necessary (Creswell, 2013) were chosen for data collection in this study.

### **3.3.2 Data Collection Process**

The whole data collection process was divided into three stages: ethical approval, gaining access, and data collection.



### ***Stage one: Ethical approval***

Ethical approval is necessary for social studies, especially qualitative studies, because people involved may be asked for personal ideas about their working lives (Lune and Berg, 2017). Therefore, in order to ensure that the research was ethically sound and accurate, with serious consideration, the researcher submitted the ethical application form to LJMU's Research Ethics Committee on 26 June 2019. The ethical application was granted with reference number 19LBS020 on 19 August 2019. Afterwards, the researcher followed this commitment in all the research processes.

### ***Stage two: Gaining access to the case-study company and participants and obtaining consent***

After acquiring ethical approval (Ref: 19LBS020 Date: 19/08/2019), the research officially started with gaining access to the case-study company to obtain consent for the study. As introduced in the process of the case-study firm selection, two candidate companies responded to the request from the researcher after they received a detailed introduction to this research with the original English and Chinese copies of the gatekeeper information sheet and consent form. In the end, one of them decided to pull out, and the other insisted on taking part in this research. At this stage, a gatekeeper plays a significant role in supporting the researcher in selecting and informing participants and conducting data collection (Jacobson et al., 2012). As Bryman and Bell (2015) demonstrated, obtaining consent from the case-study company and participants is a primary step. Before conducting the interviews, the owner-manager acted as the gatekeeper to contact the researcher and provide the corporate documents to support the researcher's analysis. In December 2019, due to the owner-manager's busy schedule, the HR manager in the case-study company took over the gatekeeper role.

The next stage was to gain access to participants. All the participants involved in this study completely voluntarily. The processes of participant selection were described in Section 3.2.2.6. Eventually, twenty-two employees were screened as potential participants. The researcher then approached the potential participants in-person to introduce the details of this research, which gave them sufficient time to consider whether to participate in the interview process. They all agreed to participate in the interviews and signed the consent form before each interview. The participants could leave the investigation at any time during

the whole research process. Also, their audio recordings and contents were confidentially and anonymously protected by the researcher. After analysis, discussions and presentations, the names of the case company and participants will not be disclosed in any publications or conferences.

***Stage three: Processes of data collection: document analysis and semi-structured interviews***

This study employs document analysis and semi-structured interviews for data collection. In the document analysis process, the researcher explored any internal activities about knowledge, knowledge sharing, and the corporate context associated with knowledge sharing practices, such as the role of owner-manager and rewards. The owner-manager, as the gatekeeper, sent the electronic copies of the corporate documents to the researcher. These documents covered internal regulations and HRM, learning and training programmes of 2018, the owner-manager's annual summary reports for 2018, the performance management report of 2018, and so on. This process took place in September and October 2019.

The semi-structured interviews were conducted in three steps. The preliminary step was the formation of interview questions. The initial interview questions were revised based on the conceptual framework (see Table 3) and the results of document analysis, as the initial interview questions were written in an academic style and hard to understand for non-academics. After the researcher discussed with the lead supervisor to check the interview questions, the final version was confirmed, as shown in Appendix II. Each question was open-ended, which allowed the interviewees to provide vivid examples and interpretations. The interview questions were initially developed in English and then translated into Chinese. The Chinese copy of the interview questions was checked and verified by a professional translator.

The second step was a pilot interview. A pilot interview offers an opportunity to examine the whole research instrument and resolve any emerging problems during the interviews (Roberts-Holmes, 2005). It develops relevant questions, possibly even providing some conceptual clarifications for the research design (King et al., 2018). Therefore, the researcher selected two participants involved for pilot interviews. They were the first and second participants in this study. They both finished the face-to-face interviews. However, the pilot interviewees found some of the questions confusing in Chinese, for instance, the self-efficacy. Some urgent things also happened during the one-hour interviews, for example, a phone call

from their colleagues to ask for help and nervous feelings and shyness among the interviews. Therefore, the researcher amended the Chinese words without changing the meaning. Also, a fifteen-minute break was set in the middle of the one-hour interview so that interviewees could deal with their personal things or have a good rest. The final interview questions and a new interview procedure were used from the third interview.

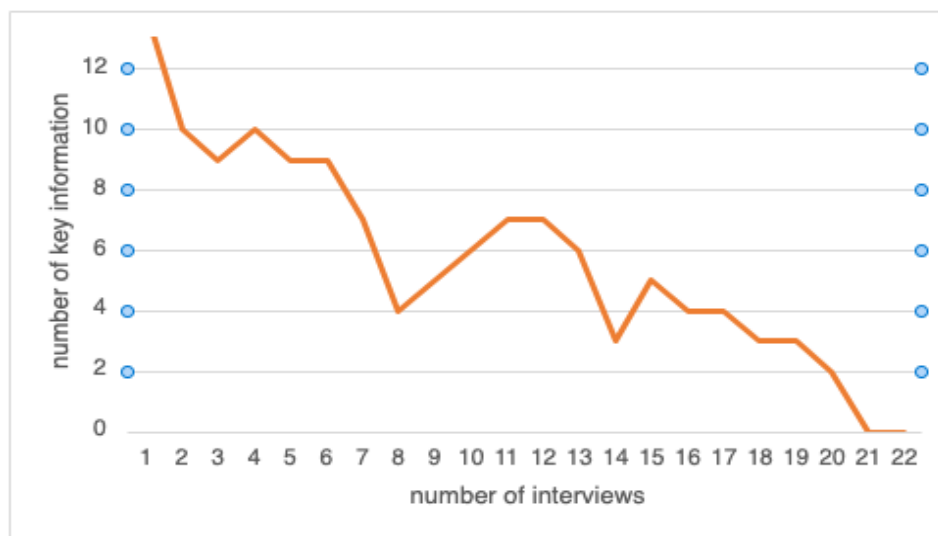
The final step was the semi-structured interview process. This process was divided into two steps because of the outbreak of COVID-19 in China in January 2020. In December 2019, the researcher was allowed to conduct face-to-face interviews only for three days because the end of the year was the busiest period at the case company. In order to ensure the quality of all the interviews, three or four were conducted each day. Thus, the first-round fieldwork involved ten people in December 2019. The researcher intended to complete the remaining interviews in February 2020 after the Spring Festival (the most important Chinese festival). Unfortunately, due to a large outbreak of COVID-19 in January 2020, China implemented a complete lockdown. Hence, the remaining twelve interviews were conducted by telephone.

During both the face-to-face and telephone interviews, an audio technique was applied to record all participants' interpretations throughout the whole process. All participants knew and agreed to be recorded before the interviews. Throughout the interviews, the researcher used the field notes technique to take down the key information, which provided the initial ideas for data coding (see Appendix III).

The interviews stopped when theoretical saturation was achieved (Charmaz, 2006). In this research, information saturation was considered to be reached when no new critical information or concepts emerged from interviewees' interpretations in response to the interview questions. The critical information could be understood as 'priori codes' developed from the literature review (Miles and Huberman, 1994). Thirteen items of critical information were developed from the literature review: tacit knowledge or experience, knowledge sharing (mechanisms and practices), knowledge hiding along with sharing, motivations related to relatedness (e.g. interpersonal relationship, trust or distrust), motivations related to competency (e.g. confidence, rewards), motivations to autonomy (e.g. time pressure), enjoyment in helping others, motivations for hiding, corporate culture, reward system, helpful corporate context, detrimental corporate context and suggestions. Figure 10 shows a

generally decreasing trend in saturation of priori codes. When interviewing Participant 8-12, the critical information slightly increased because the first seven interviewees were the managers. From the eighth participant, the interviews were conducted in the employee group. As such, Participant 8-11 could provide new information from the employees' perspective. It is evident that no new information came from the last two interviewees. The thirteen pieces of critical information were used as initial templates in the later data analysis stage.

**Figure 10: Information saturation in twenty-two interviewees**



Source: Researcher's construct

### ***The time horizon***

The time horizon for a study is categorised as cross-sectional or longitudinal (Saunders et al., 2016; Bryman and Bell, 2015). Cross-sectional studies investigate a social phenomenon in a social setting at a particular period, whereas longitudinal studies study changes in a social phenomenon over a period of time (Sekaran, 2003). The selected time horizon type depends on the research questions (Easterby-Smith et al., 2012). This study explores the contemporary situation where employees share and hide their tacit knowledge in a small-sized family business. Therefore, it is a cross-sectional study.

The whole period of data collection lasted four months. The researcher did not collect data every day because the process relied on participants' schedules. For instance, in December 2019, the researcher can only work in the case-study business for three days. Three or four

people could be interviewed each day. In February, the researcher sometimes conducted interviews with more than three people a day, but sometimes only one person was available for the interview. Furthermore, as a few questions used in the pilot interviews had been modified, the first two interviewees missed some new interview questions. The researcher, therefore, needed to collect second-round data from those two. The duration of the whole process is presented in Table 9 as follows:

**Table 9: The whole duration of data collection**

Phase	Details	Period
1	Document analysis	28 September —22 October 2019
2	Semi-structured interviews	1 <sup>st</sup> round: face-to-face interviews: 23-25 December 2019
		Telephone interviews: 12-22 February 2020
		2 <sup>nd</sup> round: 10 and 24 March 2020

Source: Researcher's construct.

In summary, this research used document analysis and semi-structured interviews to collect data in a single case-study business. To achieve information saturation, twenty-two people were interviewed. The whole data collection process included ethical approval, gaining access and data collection stages. The data collection took place in two methods: document analysis and semi-structured interview. During the process of the interviews, the first two participants were selected for pilot interviews in order to make some adjustments to the interview questions and interview process, which led to second-round interviews on 10 and 24 March 2020 to ensure the integrity and accuracy of data. It is notable that the nature of the semi-structured interviews changed from the initial face-to-face interview into a combination of face-to-face and telephone interviews because of the sudden outbreak of COVID-19 in China. However, the results of those two interview approaches had no evident differences in data collection.

### 3.4 Data Analysis

#### 3.4.1 Template Analysis

Template analysis is a form of thematic analysis approach to organising and interpreting qualitative data within diverse research settings and topics, especially in business and management areas (Lockett et al., 2012). Within business and management research, template analysis can be applied to multiple types of businesses: large multinational

organisations, health services, educational institutions, SMEs, the voluntary sector and so on (Brooks et al., 2015). This method accommodates the business setting of this study, a small family business. Template analysis can analyse any textual data, such as interview transcripts, observational field notes and pre-existing corporate documents and organise them in a hierarchical structure (King et al., 2013). All data from the document analysis and semi-structured interviews were in textual form; thus, template analysis enables interrogate and structure the qualitative data properly (Thompson et al., 2010).

Furthermore, the pivotal component of this method is the clear template to aid with the classification and comparison of the interpretations from different groups' perspectives (Easterby-Smith et al., 2021). By coding in a thematic way, a structure or template is developed to guide the analytical process (King, 2012). For example, this study probes tacit knowledge sharing and hiding and the reasons for both behaviours from different groups' perspectives (e.g. managers and employees; family members and non-family employees). As a result, template analysis could achieve the purpose of comparison.

Additionally, compared to content analysis which construes the data strictly following the pre-existing structure, and grounded analysis which builds theory from comparing different data fragments with one another, template analysis is a flexible tool to generate theory from the analysis of data themselves and pre-existing structure built upon the literature review (Easterby-Smith et al., 2021). This method allows researchers to develop a priori codes or a priori themes from the literature review, which provided the initial templates for the research (Brooks et al., 2015). In this thesis, three initial themes were structured from the literature review: description of tacit knowledge, methods of knowledge sharing and hiding, and reasons behind both behaviours. However, the sub-themes and key concepts in each theme were generated from relatively open coding procedures and ended in applying an explicit template to direct the presentation of findings. Last but not least, template analysis has a straightforward step instrument for researchers to analyse qualitative data (King, 2012). The researcher could apply these steps flexibly to the analysis process. Hence, this study used the template analysis method.

### **3.4.2 Template Analysis Process**

King (2012) put forward a six-step instrumental framework for conducting template analysis:

becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, defining themes, and writing up. The process may often cycle back and forth between these steps because template analysis is highly iterative (King and Brooks, 2016). In the present study, the data analysis process contained corporate document analysis and interview data analysis.

### **Phase one: Corporate document analysis**

The corporate document analysis occurred between 28 September and 22 October 2019. The researcher analysed nine corporate documents: internal regulations, Employees Training and Development programmes of 2018, the Owner-manager's Annual Summary Report for 2018, the Performance Management report of 2018, the Quality, Environment, Occupational Health and Safety Management System Manual of the case company for 2018, several Annual Summaries for 2018 of the top managers and core employees, Reports on the Patents and Intellectual Properties, Reports on new projects for 2018-2019, and the Next Five-Year Business Plan (See Appendix IV).

As individual perceptions of knowledge sharing and hiding involve employees' intrinsic feelings, skilled employees might express their ideas on both behaviours through their annual reports or summaries. Furthermore, knowledge movements reside in the organisational life (Chen et al., 2018; Lin, 2007; Cummings, 2004), and the corporate context of small family businesses affects whether people share or hide knowledge (Chatterjee et al., 2021; Cormican et al., 2021; Butt, 2020; Xiao and Cooke, 2019; Cunningham et al., 2017, 2016; Lin, 2013; Zahra et al., 2007). Therefore, at this stage, document analysis was undertaken around the knowledge domain, knowledge sharing, helpful corporate context or practical actions to knowledge sharing, potentially adverse factors leading to knowledge hiding, and underlying motivational drivers of sharing and hiding behaviours.

### **Phase Two: Interview data analysis**

There were six steps in the analysis process for interview data.

#### ***Step one: Become familiar with the data***

The preliminary step is to familiarise oneself with the data. Converting records into text is valuable to reflect on the data (King, 2012). Notably, in a small study, it is necessary to read

the complete data set several times before proceeding (King and Brooks, 2016). This study contained twenty-two transcripts and was so deemed a small study. The researcher listened to the audio records three times and transcribed all recordings into Chinese transcripts before analysis. It was handy for the researcher to become familiar with the data through Chinese transcripts, as shown in Appendix V. Maguire and Delahunt (2017) have suggested that it is helpful at this stage to make notes and jot down early impressions. The researcher took down the ideas in English because this was advantageous for applying them to the further analysis steps.

***Step two: Generate initial codes.***

The second step is to organise data systematically. Forming the coding depends on the research questions (Maguire and Delahunt, 2017). Reflecting on the research questions from the literature review may generate a priori codes and themes, which can be provisional guidelines for the inception of the research (King et al., 2018). Priori themes enable developing the initial themes, although these themes would be changed in the following analysis process (Brook et al., 2015). A priori codes develop a set of categories to create the initial coding (Madill et al., 2000). Thirteen priori codes were derived from the literature review in this study, as discussed in Section 3.3.2. However, when the researcher analysed the first transcript, more codes emerged; for example, confidence, trust or distrust, fears of being replaced by others, family members or non-family members, time factors etc.

The researcher also adopted a constant comparative method to open coding to ensure that codes did not express the same meanings and guarantee the richness and diversity of the data (Olson et al., 2016). After coding all transcripts, the researcher launched sixty-two codes. All codes were associated with the research questions and connected with all relevant quotations, as depicted in Appendix VI. Using a constant comparative method facilitated reducing, merging, and modifying the number of codes (King, 2012). By continuous comparison among codes, twenty-one initial codes were generated, and the whole coding process was achieved via Nvivo, as presented in Appendix VII.

***Step three: Search for themes.***

A theme is a pattern that captures something significant or interesting about the data and research question (Braun and Clarke, 2006). After generating initial codes, researchers should



organise them into themes and think about how the themes are related to each other (King and Brooks, 2016). The twenty-one initial codes described in Step two were merged into three priori themes: (1) tacit knowledge; (2) tacit knowledge sharing and hiding; (3) reasons for sharing and hiding. The three initial themes were used to shape the initial template. Analysis showed that these three priori themes were very distinct from each other. Therefore, the codes were readily classified into these three themes according to the definitions presented in Table 10.

**Table 10: Initial template: defining thematic categories**

Main themes	Defining the scope of the theme
<b>1. Tacit knowledge/knowledge</b>	This theme refers to broader descriptions of knowledge, tacit knowledge.
<b>2. Tacit knowledge sharing and hiding</b>	This theme refers to the wider descriptions of knowledge sharing and hiding. Sub-themes should cover different activities, mechanisms, and levels of both behaviours.
<b>3. Reasons for sharing and hiding</b>	This theme discusses the various reasons for sharing and hiding from the motivation and corporate context perspectives; and reasons for both.

Source: Researcher's construct

According to the scope of the initial template, twenty-one initial codes were classified into three themes, and the template was developed, as shown in Table 11.

**Table 11: Developed template**

Main themes	Defining the scope of the theme
<b>1. Tacit knowledge/knowledge</b>	This theme refers to broader descriptions of knowledge, tacit knowledge.
	<b>Covering code:</b> tacit knowledge or experience, knowledge
<b>2. Tacit knowledge sharing and hiding</b>	This theme refers to the wider descriptions of knowledge sharing and hiding. Sub-themes should cover different activities, mechanisms, and levels of both behaviours.
	<b>Covering codes:</b> formal sharing; informal sharing, sharing as a duty; knowledge hiding
<b>3. Reasons for sharing and hiding</b>	This theme discusses the various reasons for sharing and hiding from the motivation and corporate context perspectives; and reasons for both.
	<b>Covering codes:</b>
	Motivational reasons: trust, the attitudes of others, confidence, distrust, no confidence, the learning ability of the learner, the time factor, fears of being replaced by others Corporate reasons: good relationship; rewards, recognition, the owner-manager, family members, collective culture, unfair issues.

Source: Researcher's construct

#### ***Step four: Review themes in the template***

During this step, the researcher should make iterative modification and development to the themes from Step three, so that the themes and sub-themes can be coherent and distinguished from each other (Braun and Clarke, 2006). King et al. (2018) stated that the modifying processes can be via merging and re-defining themes, deleting redundant themes, and adding new themes. Maguire and Delahunt (2017, p.3358) put forward six suggestions for this process:

*“Do the themes make sense? Does the data support the themes? Am I trying to fit too much into a theme? If themes overlap, are they separate themes? Are there themes within themes (subthemes)? Are there other themes within the data?”*

After considering the above questions, the template was modified and developed in Table 12. The sub-themes and clusters of data in each theme were merged, re-named and modified. For instance, the attitudes influenced by others and the learning ability of learners both focused on those who learned and received knowledge from the participants. As such, these two groups of data could be merged into one. In this way, the template included three themes and eight sub-themes by the end of this step. The changes emerging to the themes and sub-themes were associated with all the data.

#### ***Step five: Define themes***

This stage involves defining what each theme talks about (King et al., 2018). For example: *“what is the theme saying? If there are sub-themes, how do they interact and relate to the main theme? How do the themes relate to each other?”* (Maguire and Delahunt, 2017, p. 3361). In this investigation, the focus was on how and why tacit knowledge is shared and hidden.

Notably, there were some changes in the sub-themes. In Theme two, the researcher believed that both formal and informal sharing were aimed at knowledge sharing behaviours; thus, these two sub-themes should be merged into one. In Theme three, the researcher found that the reasons for knowledge sharing and hiding were explained separately from the corporate context and individual motivations. Therefore, reasons for knowledge sharing and hiding were labelled as the headings of two sub-themes, merged from the previous four sub-themes in Theme Three in Table 12 (the helpful corporate context and individual motivations for sharing, and the detrimental corporate context and personal motivations for hiding).

Furthermore, rewards could be deemed as both corporate context and individual motivations. In the literature review, rewards were the extrinsic motivations for knowledge sharing and hiding. However, through repeated reading of the transcripts, rewards tended to be a corporate trait in the small family business. Rewards were therefore moved from personal motivation reasons to corporate contextual reasons. By the end, the final template was created as Table 13; each theme and sub-theme differed from the other.

**Table 12: Themes in the developed template**

Main themes
<b>1. Tacit knowledge/knowledge</b>
<b>2. Tacit knowledge sharing and hiding</b>
<ul style="list-style-type: none"> <li>2.1 formal sharing</li> <li>2.2 informal sharing</li> <li>2.3 knowledge hiding</li> </ul>
<b>3. Reasons for sharing and hiding</b>
<ul style="list-style-type: none"> <li>3.1 Helpful corporate reasons leading to tacit knowledge sharing: <ul style="list-style-type: none"> <li>3.1.1 the role of the owner-manager</li> <li>3.1.2 culture</li> <li>3.1.3 interpersonal relationships</li> </ul> </li> <li>3.2 Helpful individually motivational reasons leading to tacit knowledge sharing: <ul style="list-style-type: none"> <li>3.2.1 trust</li> <li>3.2.2 confidence</li> <li>3.2.3 rewards</li> </ul> </li> <li>3.3 Detrimental corporate reasons leading to tacit knowledge hiding: <ul style="list-style-type: none"> <li>3.3.1 family managers</li> <li>3.3.2 no rewards to non-family employees</li> <li>3.3.3 good relationship—lost face</li> </ul> </li> <li>3.4 Detrimental individually motivational reasons leading to tacit knowledge hiding: <ul style="list-style-type: none"> <li>3.4.1 distrust</li> <li>3.4.2 lack of confidence</li> <li>3.4.3 time factor</li> </ul> </li> <li>3.5 Suggestions</li> </ul>

Source: Researcher's construct.

### ***Step six: Write-up***

The final stage is to write the data in light of the sequence of themes and sub-themes into the finding chapter, as listed in Table 13. The findings are presented in Chapter Four.

**Table 13: Final *template***

Main themes
<b>1. Tacit knowledge/knowledge</b>
<b>2. Tacit knowledge sharing and hiding practices</b>
2.1 Knowledge sharing practices
2.2 Knowledge hiding practices
<b>3. Reasons for knowledge sharing and hiding</b>
3.1 Reasons for knowledge sharing
3.1.1 Helpful corporate context:
The role of the owner-manager
Advantageous corporate culture
Close interpersonal relationships
A reward system
3.1.2 Individual motivations for sharing:
Sense of trust
Confidence
3.2 Reasons for knowledge hiding
3.2.1 Detrimental corporate context:
Issues of managing family members
Low salaries and no bonuses to non-family employees
Close interpersonal relationships
3.2.2 Individual motivation for hiding
Sense of distrust
Fears of being replaced by others
'996' working schedules
3.3 Suggestions

Source: Researcher's construct

### 3.5 Quality of the Research

Checking the quality of the research is also essential to both quantitative and qualitative research (Seale, 1999). This procedure often considers whether quality criteria suit the study (Silverman, 2005). Validity and reliability are deemed the significant criteria for quantitative and qualitative research (Guba and Lincoln, 2005). However, these two constructs are differently applied to each research approach (Chenail, 2010). In quantitative research, to achieve the aim of generalisability, validity is used to explain what researchers measure (Bryman, 2012), and reliability is "*a characteristic of measurement concerned with accuracy, precision and consistency*" (Blumberg et al., 2004, p.495). Mason (1996) argued that reliability, validity and generalisability are varied standards to measure the quality and rigour of the study, which must be built upon particular methodology and disciplinary conventions.

In contrast, it is hard to achieve generalisability in qualitative studies because of small sample sizes (Morrow, 2005). As Thomas (2016) stated, the quality of a case study is not determined by the sample size, validity or reliability; instead, it relies on the study's conception, construction and conduct. Therefore, qualitative scholars have proposed alternative criteria, such as trustworthiness, to evaluate the quality of qualitative research (Guba and Lincoln, 1994; Lincoln and Guba, 1985).

Symon and Cassell (2012) suggested that trustworthiness involves the elements researchers believe are the most relevant to the research. Qualitative researchers should cautiously indicate to the readers or other scholars what the research aims are and how the study can be judged (Bryman and Bell, 2015). Guba and Lincoln (1994) stressed four criteria for trustworthiness, credibility, transferability, dependability and confirmability. Credibility emphasises plentiful consideration of social reality, which stipulates confirmation from people studied in the social world (Bryman and Bell, 2015). Lincoln and Guba (1985) suggested that the triangulation technique achieves credibility. Transferability requires researchers to produce rich accounts of the details of contextual significance (Geertz, 2008), understood as a thick description (Lincoln and Guba, 1985). For dependability, the researcher should use a complete auditing approach to record all stages of the research process, for instance, problem formulation, participant selection, fieldwork notes, interview transcripts, data analysis decisions and procedures (Bryman and Bell, 2015). In this process, peer assessment could enhance the dependability of qualitative research. The final standard is confirmability. It is suggested that the researcher should not involve overtly personal values or theoretical inclinations in the process of research (Bryman and Bell, 2015). Confirmability demands the objectivity of researchers and auditors (Lincoln and Guba, 1985).

Creswell (2013) proposed eight key strategies to consider the rigorousness and trustworthiness of qualitative research: (1) triangulation and multiple sources of data; (2) member checking; (3) thick description; (4) clarifying of researcher bias; (5) negative case analysis; (6) prolonged engagement (7) peer debriefing and (8) external audit. It is important for qualitative researchers to apply at least two of these eight strategies to check research quality (Myers, 2019; Yin, 2014). Therefore, this study employed four strategies to guarantee rigorousness and trustworthiness: triangulation, thick description, member checking and clarifying researcher bias.

### **3.5.1 Trustworthiness by Triangulation**

Triangulation is a broadly accepted way to check the quality of qualitative research (Myers, 2019). There are four main types of triangulations: multiple data sources, methods, investigators and theories (Bryman and Bell, 2015). This study used three triangulation strategies to evaluate the trustworthiness of the research.

Data triangulation involves gathering from multiple sources as corroborating evidence (Lincoln and Guba, 1985). The data in this study were sourced from three perspectives (the owner-manager, the managers and the employee) and two groups (family and non-family members). This may provide the chance to compare and generate the findings from the perspectives of the manager and employee, family members and non-family employees, and employees from different age groups. Furthermore, method triangulation involves using more than one approach to investigate a single issue. There were two research methods to gather the data for this study: document analysis and semi-structured interviews. Therefore, triangulation was the pivotal strategy to ensure trustworthiness.

### **3.5.2 Trustworthiness by Thick Description**

The thick description refers to using sufficient details on the context of the phenomena being studied to check whether the conclusion may apply more widely (Lincoln and Guba, 1985). It helps to provide an accurate description and interpretation to explain the phenomena clearly and thoroughly (Geertz, 2008). This study described the case in-depth (see Chapter Four) and used direct quotations as evidence to construe tacit knowledge sharing and its reasons in the small family business. The conclusions might be used in other small family businesses in China or similar contexts.

### **3.5.3 Trustworthiness by Member Checking**

Member checking is an essential technique to assure the trustworthiness of qualitative research (Lincoln and Guba, 1985). This approach enables the participants to check and confirm the researchers' accuracy of understanding and analysis, developing the conclusions (Easterby-Smith, 2012). During the interviews, after the participants answered the questions, the researcher repeated their answers or expressed the meanings of their answers so as to check whether the researcher's understanding of their expression was right. After reviewing

the transcripts verbatim three times, the researcher sent transcripts to the interviewees to double-check whether the word expression was accurate. When the participants confirmed this, the transcripts were returned to the researcher. Some participants made notes on the transcriptions that they disagreed with and explained their opinions. The researcher corrected the transcripts in light of their comments. This step helped this study obtain confirmation to enhance the trustworthiness of interpretations from the participants (Stake, 1995). Finally, the researcher invited a professional translator to audit and confirm that all transcripts were accurately translated from Chinese to English.

### **3.5.4 Trustworthiness by Clarifying Researcher Bias**

Researchers' biases refer to the subjectivity of researchers, such as researchers' values and expectations, that may influence research conduct and the generation of conclusions (Maxwell, 2012). There are two critical biases: the selection of data that befits researchers' existing theory goal and the selection of data that stands for researchers' perspectives (Mile and Huberman, 1994).

The current study had the potential bias that the conclusions might be much influenced by the researcher's knowledge from previous literature. For instance, prior literature demonstrated that interpersonal relationships among employees in a small company are beneficial factors for sharing tacit knowledge (Lin, 2013; Chen and Hung, 2010; Ipe, 2003). The researcher had this idea in mind. During the interviews, most of the interviewees insisted on this point of view. In contrast, only a couple of people asserted that good interpersonal relationships made it difficult to openly share knowledge. They worried whether it would damage their friendships with the audiences when they picked out a colleague's mistakes in public. When analysing, the researcher had considered ignoring this argument because it was controversial. However, an exceptional example was maintained and presented in the finding chapter after in-depth discussion with the supervisors. Therefore, regular meetings with the supervisors during the process of data collection and analysis to discuss the issues of interview techniques and coding could facilitate the researcher to minimise biases and ensure trustworthiness

## Summary

**Table 14: Summary of research methodology and methods**

Concept	Adopted Position	Observations
Philosophy	Interpretivism	To understand personal narrative and meaning
Approach	Induction	For theory-building (simultaneous knowledge sharing and hiding behaviours) in the under-representative context (small family business)
Methodological Choice	Qualitative, multi-methods	Collecting abundant and in-depth data
Strategy	A single-exploratory and explanatory Case study	One small family business selected: R&D manufacturing industry
Time Horizon	Cross-sectional	To comprehend the knowledge sharing and hiding phenomenon in-depth, rather than the changes in both behaviours. Company constraints
Techniques	Document analysis and semi-structure interview	Twenty-two participants, including the owner-manager, managers and ordinary employees
Analysis	Template	Interview transcribed and analysed. Elements of trustworthiness to support quality

Source: Researcher's construct

This chapter clarified the research methodology and methods for the present study, as summarised in Table 14 above. The research philosophy was interpretivism, which guided the research strategies, data collection and analysis so that all the processes could fit together. This study aimed to provide empirical evidence of how and why employees share and hide tacit knowledge in a small family business in China. The qualitative research approach in a single case-study strategy was employed to understand the new conceptualisation of simultaneous knowledge sharing and hiding behaviours. Twenty-two participants were purposively screened from three hierarchies and two groups. The data were collected via document analysis and semi-structured interviews. Template analysis was adopted to analyse the data from document analysis and interviews. The present study undertook careful consideration of ethics and trustworthiness throughout the study processes.



## CHAPTER 4: FINDINGS OF THE CASE STUDY

### Introduction

This chapter employs one case study firm to represent a small family business to investigate why skilled employees share and hide tacit knowledge. The findings emerged from two methods: corporate document analysis and semi-structured interviews. Hence, the first section reveals the findings from the corporate document analysis.

This chapter is constructed as follows. It commences with the results of document analysis. The second section firstly unveils the consequences of theme one: how skilled employees perceive tacit knowledge. Theme two mainly demonstrates how employees shared and hid tacit knowledge. Theme Three construes why these workers shared and hid knowledge from individual motivation and corporate context. The final paragraph is a concise summary of all the findings.

### 4.1. Results of Document Analysis

The results from document analysis found that tacit knowledge was a competitive advantage embodied by the patents and intellectual properties of the case-study company, as depicted in Table 15. The researched business offered various activities for employees' knowledge sharing and communication. The documents also showed that this small family business had a knowledge sharing culture. There were no explicit and direct rewards for knowledge sharing, but the employees who worked as trainers or mentors could obtain some bonuses. The performance management report and employees' salaries indicated that every manager had a bonus in their monthly wage structure. Most of the ordinary employees could not obtain the bonus. Finally, the funding and resource support from the local government enabled knowledge sharing within the studied small business. It was because the case-study company made huge contributions to the locals. However, such support was not common among small-sized businesses in Henan province. The potentially helpful and detrimental contexts of the small family business were integrated into Table 16.

**Table 15: Description of tacit knowledge and knowledge sharing**

<b>Theme One: Description of KS</b>
<b>1. What is tacit knowledge in this company?</b>
The tacit knowledge derives from the internal and external sources
The tacit knowledge as the competitive advantages, intellectual property, experiences of failure and success, expertise and skills of manufacturing, researching, developing, retailing and services from academic seminars, professional meetings, customers and external suppliers etc.
<b>2. What action do the company take for knowledge sharing</b>
By internal digital information platforms (such as WeChat and emails), technological seminars, informal and formal meetings, coaching and mentoring, training, operating skill competitions and activities, internal information board and daily communication etc.

Source: the researcher's analysis

**Table 16: Potentially helpful and detrimental corporate context**

<b>Potentially helpful corporate context for knowledge sharing</b>
Support from the owner-manager
Knowledge-sharing culture
Funding and resources support from government and other parties
Reward system
<b>Potentially detrimental context for knowledge hiding</b>
no explicit rewards relevant to knowledge sharing
The limited number of employees rewarded

Source: the researcher's analysis

#### **4.2. Findings from interviews**

The second section is divided and integrated into themes based on perceptions of tacit knowledge, knowledge sharing and hiding practices, the corporate context of the small family business and individual motivations. There were three main themes with five sub-themes emerged from this study, as exhibited in Table 17.

**Table 17: Three themes and six sub-themes**

Themes	Sub-theme
1. Perceptions of tacit knowledge	
2. Tacit knowledge sharing and hiding practices:	
	2.1 Knowledge sharing practices
	2.2 Knowledge hiding practices
3. Reasons for knowledge sharing and hiding:	
	3.1 Reasons for knowledge sharing: Helpful corporate context Individual motivations for sharing
	3.2 Reasons for knowledge hiding: Detrimental corporate context Individual motivations for hiding
	3.3 Suggestions for motivating knowledge sharing or mitigating knowledge hiding

Source: Researcher's construct

The three themes and five sub-themes are described and explained in-depth with rich data from participants.

#### 4.2.1 Theme One: The Perceptions of Tacit Knowledge

The first objective of this research was to comprehend how skilled employees in this company perceived their tacit knowledge and its characteristics. It provided a comprehension of how and why tacit knowledge is shared and hidden by skilled employees in the context. Perceptions of tacit knowledge were discussed from the perspectives of the owner-manager, managers and employees.

In the owner-manager's mind, skilled employees' tacit knowledge is the most valuable strategic resource for the survival and development of a small company over thirty years in the manufacturing industry:

*My staff treats the company as their home. They contribute their expertise, experience, and skills to update our machines, innovate our technology and products, develop patents and obtain various awards.*

*Accordingly, we have created the employees' knowledge into a piece of powerful organisational knowledge.*

From the above data, the definition of tacit knowledge is not clear. However, it can be seen that tacit knowledge includes employees' expertise, experience and skills in machines and production technology and has benefited the company's survival, innovation, and development. Also, many employees have donated their knowledge to the company for decades.

*Surviving in the highly competitive market for over 30 years is a miracle for our company. What the company has achieved today is the result of the concerted efforts of all my staff. Most of them have dedicated themselves to the company for decades. Some employees have worked here with my father since the company was founded.*

As a result, the case-study business amasses powerful knowledge. In the owner-manager's mind, "tacit knowledge should be developed from an individual asset to a common asset".

Most family members underpin the ideas of the collectivisation of skilled employees' tacit knowledge. Mg10 (Manager 10), who was a senior engineer but not a family member, posited:

*Knowledge shouldn't just belong to themselves but a kind of common asset of the enterprise. We need to consider this from the standpoint of the company. When exchanging ideas with others, in fact, you can also learn from others. It is a win-win rather than a unilateral output. Thus, people should not have a narrow perception that knowledge sharing is a loss.*

However, a different idea on tacit knowledge emerged from the non-family employees' views. Most non-family employees deemed tacit knowledge as their power of knowledge because it brought them a sort of uniqueness and non-substitutability of their positions in the case company, as stated by Em6:

*My tacit knowledge makes me unique in the company. I cannot say that the enterprise cannot run without me. However, I use special communication techniques to become the best sales in the retail department. If others fully grasp my techniques, I will lose my power.*

It is hard to give a precise definition of tacit knowledge in the company. However, tacit knowledge can be described as working expertise, skills, techniques and experience. The data gathered from the non-family experienced employees shows that tacit knowledge needs a long-term accumulation. The data from both the managers and employees illuminate this

viewpoint:

*I have been engaged in researching and developing in functions of machines for over forty years. (Mg2)*

*I've accumulated these techniques from my previous working experience and practices for many years. (Em6)*

Aside from uniqueness, non-substitutability and long-term accumulation, the Manager 2, the manager of the equipment department, argued that tacit knowledge has variability and complexity:

*The skills of fixing and using machines have been changed with the updates in technology and machines. Therefore, tacit knowledge needs to be acquired through continuous learning by doing.*

Another manager underlined how failure or false experience is a valuable tacit knowledge:

*Knowledge regarding failure or false, such as the breaches of operational regulation caused by personal behaviours, and the negative results caused by personal mistakes, has referential significance to the employees and the company. Sharing false experiences and examples, like a mirror, can give the experience and lessons to other employees. As a result, they can prevent making the same mistakes from these failures and false experiences. As such, the failure and experience could be transferred into positive knowledge.*

The skilled employees have also highlighted this perception of tacit knowledge's characteristics. Em7, an ordinary staff member, gave her story:

*Whilst visiting and communicating with clients, basic verbal skills (tricks) that my leaders trained would not be enough because the clients may propose various cunning requirements, such as reducing price or changes in the volume of products in the order. Consequently, addressing the issues and persuading clients requires rich personal successful and failing experiences. This is hard to be known by my colleagues who do not have these practical experiences.*

From the above evidence, it can be suggested that skilled employees' tacit knowledge seems to be a kind of experience-based knowledge. This is because it is related to the working practices and job positions, stipulated learning by doing and is accumulated through long-standing complex working experience and adapting to changeable outside environments. Tacit knowledge makes skilled employees hard to be substituted by others because others may not have the relevant working experience. The characteristics of tacit knowledge in this context can be summarised in Table 18.

**Table 18: Summary of skilled employees' tacit knowledge characteristics**

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**Characteristics of skilled employees' tacit knowledge in the context**

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- Relevant to working practices/tasks.
  - Uniqueness and non-substitutability
  - Time-consuming acquisition from experience.
  - Complexity and variability
  - Hard to be known by others.
  - Success and failure experience
- 

Source: Researcher's construct

In summary, the majority of the family members perceived that employees' tacit knowledge should be a common corporate asset. In contrast, the non-family employees considered that their tacit knowledge belonged to them. However, both the family and non-family people agreed that tacit knowledge was valuable to individual growth and organisational development. Notably, the owner-manager in the researched small family business acknowledged the criticality of the employees' tacit knowledge as a significant resource. Regardless of whether it is an individual or corporate asset, the value of tacit knowledge was manifested by its nature of experience. Experience-based knowledge requires long-term learning and accumulated through complex working experience and adapting to the changeable outside environment. In this sense, experience-based knowledge is largely individual-related and job-related and is hard to be known by other people. Hence, it is necessary to elaborate on Theme Two on how tacit knowledge is shared and hidden.

#### **4.2.2 Theme Two: Tacit Knowledge Sharing and Hiding Practices**

The second objective on tacit knowledge sharing and hiding is composed of two sub-themes. The first sub-theme illuminates that the employees usually shared tacit knowledge in formal and informal fashions. The second sub-theme presents that playing-dumb and rationalised approaches are the main methods for employees' knowledge hiding.

#### 4.2.2.1 Sub-theme One: Tacit Knowledge Sharing Practices

The first sub-theme in Theme Two is how skilled employees share their tacit knowledge in the company. Skilled employees' tacit knowledge is usually transmitted through two mechanisms at two distinct levels: formal knowledge sharing and informal practices.

##### *Formal knowledge sharing*

The interview data revealed that the case-study business often organised formal activities for skilled employees to share tacit knowledge, for example, training sessions, group activities and meetings. The owner-manager stipulated these formal knowledge sharing practices to update producing technology and quality management systems in the internal routines. Therefore, the owner-manager assigned the senior managers or skilled employees as “*Shifu*” (meaning the trainers or mentors) to impart their expertise, skills, and experience to other employees in the formal organisational activities. The owner-manager expressed:

*In order to maintain our company's leading position in the manufacturing industry, we must pass the examinations on Quality Management from the outside every year. Therefore, we often select senior engineers and excellent employees to attend external training. Then, when they are back in the company, we will organise the experience-sharing meeting and technical training for the senior engineers to share what they have learned outside. This method can maximise the value of advanced knowledge within a limited budget.*

Mg9, who was mainly in charge of the quality management system, added:

*The training sessions are organised and coordinated by the owner-manager... Thus, my tasks in sharing knowledge could be completed.*

Likewise, the participants at the employee level agreed with and advocated for the owner-manager's actions on formal knowledge sharing. Em7, who was a role model at the workshop, said:

*The owner-manager cares about the workers' voices and regularly organises some sharing activities. Besides, she can share her expertise about the “dos and don'ts” during activities.*

From different perspectives, it can be discovered that the owner-manager determined the formal sharing practices. The owner-manager valued the skilled employees' tacit knowledge and knowledge sharing. Therefore, the owner-manager required the skilled employees to share tacit knowledge in various formal sharing activities, integrated into Table 19.

**Table 19: Formal knowledge sharing practices**

Formal knowledge sharing practices
<ul style="list-style-type: none"> <li>• <b>Training:</b> <ul style="list-style-type: none"> <li>➤ pre-job training</li> <li>➤ on-the-job training: <ul style="list-style-type: none"> <li>➤ Communist party members' education and training</li> </ul> </li> </ul> </li> <li>• <b>Group sharing activities</b></li> <li>• <b>Meetings</b></li> </ul>

Source: Researcher's construct

- **Training:** the corporate documentation and interview data displayed that training sessions were vital for knowledge sharing for skilled employees. The company had an HR staff member responsible for making scheduled and non-scheduled training plans and following executive steps for knowledge sharing.

- **Pre-job training:** when newcomers started to work in the case company, the HR staff member organised pre-job training to share the internal regulations to help the newcomers adapt to corporate life, as conveyed:

*During the new employees' training, I often train them about the general firm rules and regulations, such as the work attendance checking system, basic code of behaviours, daily duty management system, and meeting requirements. I also share the basic HRM rules, including becoming a regular employee after the three-month probation period. These casual and formal rules are tightly bound up with employees' jobs.*

After the new employees' training from HR, the newcomers were sent to the departments of their job positions. The department managers introduced the newcomers to their specific job duties and shared their working experiences to make them acquainted with their colleagues and working life, as Em3 stated:

*After the new staff are sent to our departments, I'll bring them to visit different departments and introduce them to other colleagues. In the meantime, I usually share my perceptions of the manufacturing industry and my previous experience of success and failure. When I started this job, it took me plenty of hours to prepare the topics and contents for sharing. I hope the new employees can learn a lot from my sharing.*

- **On-the-job training:** This consisted of mentoring and professional job training for the



workers at the manufacturing workshop. Mentoring was viewed as the most potent approach for sharing knowledge on the production line. The department managers were assigned as “Shifu” (trainers or mentors in Chinese) by the owner-manager to the new employees. Then the mentor gave hand-by-hand guidance to their apprentices by onsite knowledge sharing. Mg1, a group leader at the workshop, described how:

*I give them the onsite guidance on the functional skills/expertise and machine instruction in front of them. Unfortunately, the functional skills are fragmented, and it's hardly possible to write down all the details of operational procedures.*

An intriguing finding showed that the Q&A sessions in the formal job training provided a chance for trainers to share tacit knowledge. Mg9 commented:

*During these training sessions, there were Q&As for the interactions between employees and me so that I was able to precisely answer employees' queries and discuss different ideas with them. Therefore, my job is knowledge sharing.*

➤ **Communist Party member education and training:** a distinctively Chinese knowledge sharing practice was found at the case company. The case-study company had a Communist Party group to exchange ideas through learning about the leading Communist Party spirits and perceptions. Em5 stated:

*We usually learn about the latest speech of President Xi and the essential spirits of the Communist Party. Then, based on the latest publications, we'll share our ideas and communicate with the party members for mutual growth.*

• **Group activities:** Through interviewees' statements, it could be seen that aside from the formal training, the case-study business might host some group activities, such as skills competitions and requests for suggestions, to encourage all employees to convey their perceptions. There were prizes for the employees who shared knowledge and contributed feasible suggestions in these activities; this emerged in many participants' responses. Here is a typical viewpoint from Mg1:

*In 2019, our company requested us to express reasonable suggestions. So we proposed substantial-good suggestions to the top managers. We all believed that these suggestions could reduce the risks and solve the problems of non-standardised operations and unnoticed situations for our firm.*

- **Regular Meetings:** These were arranged by the administration department. Regular meetings were frequently held at the case company to actively provide a platform for skilled employees to share their experiences and suggestions. There were daily meetings among all employees at the workshop, weekly meetings among department managers, safe production meetings on the 26<sup>th</sup> of every month, and the year-end conference throughout the company before Chinese New Year. The regular meetings helped collect suggestions from skilled employees to solve corporate problems. Stimulatingly, the meetings allowed ordinary qualified employees to engage in the decision-making process.

In line with the corporate document analysis, the case company had an HR staff member organising formal knowledge sharing practices. Also, the admin department was responsible for hosting group activities and regular meetings. These collaborative practices were supported and determined by the owner-manager. Through multiple formal activities within the organisation, the skilled employees obtained sufficient chances to share knowledge and express themselves in the workplace.

#### *Informal knowledge sharing*

Apart from the formal knowledge sharing activities, skilled employees usually shared their tacit knowledge on informal occasions embedded when socialising at work. The first instance for people to informally share knowledge is the casual communication or help behaviours in the office, as Mg5 narrated:

*The young people are better at using the computer than us, the old people. So, when I have difficulty using a computer, I'll ask them for help. They can teach me how to use it.*

Another consensus example of informal situations for knowledge sharing takes place during the group dinner. The following story from Mg11 expressed this situation:

*The younger know less about the Chinese table manners where there is a group dinner. For instance, the seat opposite the main door is for the person who has the highest position level, or who is the most important to this occasion, as the VIP client or owner-manager. The person who has the highest position level is the first person to start the dishes and so on. I tell them how they should perform on this occasion.*

Mg6 illuminates that informal knowledge sharing might also occur when pointing out colleagues' mistakes and giving solutions to their problems.

*When I find my apprentices make mistakes or ask me for help, I will tell them why they are wrong and give them onsite guidance.*

As informal interactions among employees happened during interpersonal communication anytime in the workplace, most of this sort of sharing appeared to be at the individual level. Therefore, the skilled employees described the informal knowledge-sharing practices as the social interactions at work, as summarised in Table 20.

**Table 20: Informal knowledge sharing practices**

Informal knowledge sharing practices
<ul style="list-style-type: none"> <li>• Communication in the office</li> <li>• Group dinner</li> <li>• Helping behaviours</li> <li>• Pointing out the problems/mistakes and giving solutions</li> </ul>

Source: Researcher's construct

It is clear that the informal knowledge sharing practices were unstructured and unplanned methods of sharing and took place spontaneously. This was an essential aspect of organisational life, because *"it is impossible that no conversation and sharing takes place among us. Without sharing, the manufacturing tasks cannot be achieved punctually and safely"* (Mg2).

To sum up, the above information on Sub-theme One shows that knowledge sharing practices actively occurred in formal and informal interactions, as shown in Table 21. Formal knowledge sharing may involve well-planned methods for skilled employees to share knowledge, such as various pieces of training, group sharing activities and meetings. The owner-manager or department managers demanded these formal knowledge sharing practices, which took place at the organisational level. Instead, some formal knowledge sharing activities, such as one-to-one mentoring or apprenticeship, occurred between the mentor and apprentice. In these cases, formal knowledge sharing was individual-level sharing.

**Table 21: Tacit knowledge sharing practices**

Tacit knowledge sharing practices
Formal knowledge sharing practices
Informal knowledge sharing practices

Source: Researcher's construct

In contrast, the informal knowledge sharing practices spontaneously took place during communication among employees in the office, during the group dinner or helping others. Some of the informal knowledge sharing activities were unstructured and unplanned practices that happened at any time at work and were embedded in employees' social lives. Hence, skilled employees' tacit knowledge sharing practices were not only organisational practices but individual practices. However, through analysis of the corpus, no evidence was presented that the skilled employees shared tacit knowledge through the community of practices. That is, individuals from different divisions voluntarily share knowledge concerning a particular topic out of interest in forums. It is because they did not have the extra time to organise this form of knowledge sharing practice. This time pressure will be explained in the section of '996' working schedule (see P.142-143).

#### *4.2.2.2 Sub-theme Two: Knowledge Hiding Practices*

Along with sharing knowledge, there is the understanding that skilled employees, as the owners of their tacit knowledge, might not use varied excuses to refuse to share or hide partial knowledge. The first story from Em6 illustrated that telling others no time may be a valuable approach to hiding knowledge.

*Answering some questions would take me lots of time and effort. So, I would tell others that I don't have time. Also, after I helped them for the first time, they would repeatedly come to me to ask for help because they would get used to counting on me. Therefore, for this kind of person, I'll tell them that I don't know, in case they will bother me repeatedly.*

Em1 could pretend not to know the experiences or information the colleagues requested, as sharing something inappropriate in the workplace may adversely influence her career.

*The newcomers may want to know what the managers like or dislike. However, if I tell them too much based on my experience, the newcomers may believe that my subjective perceptions are not right after a couple of months. Even worse, they may distribute what I said to other colleagues. Thus, it will definitely damage my career and public reputation in the workplace. Therefore, I'll hide my experience from the newcomers to protect myself.*

Another instance of knowledge hiding could be sharing knowledge as little as they could, as Em2 commented:

*Only sharing what the managers asked or sharing knowledge as little*

as I can

Mg11 expressed that he would like to keep silent where there are disagreements or conflicts as keeping arguing could not solve problems but may damage the work relationships with their colleagues.

*When arguing different perceptions with others, I will choose to hide knowledge because some colleagues who strongly insist on their own opinions will not modestly receive your help. The continuous argument cannot reach an agreement or solve problems but can ruin interpersonal relations. Under this situation, I stop sharing knowledge.*

Through the above stories and perceptions, skilled people could use varied reasons to reject sharing or share limited knowledge, such as telling others no time, pretending not to know, sharing little knowledge, or stopping sharing, depicted in Table 22.

**Table 22: Knowledge hiding practices**

Knowledge hiding practices	
•	Telling others no time to share
•	Pretending not to know
•	Sharing as little as possible/ the basic things/ unimportant things
•	Stop sharing when arguing happens or picking out others' mistakes

Source: Researcher's construct

In summary, the senior managers and skilled employees could either share or hide their knowledge when facing sharing practices. Knowledge hiding behaviour took place simultaneously with sharing because skilled employees possessing knowledge had the freedom to decide whether to share or hide and how much they were prepared to share. When they opt for hiding knowledge, skilled employees might use various excuses to avoid responding to other colleagues' requests, such as telling others they had no time, pretending not to know, sharing as little as possible and stopping sharing when arguing. Analysis of the cases of knowledge hiding showed that it happened when other people requested knowledge from skilled employees on informal knowledge sharing occasions, that is, one-to-one sharing or one person to a small group of people who needed the knowledge. In this vein, knowledge hiding tended to be individual-level behaviour, unlike knowledge sharing practices which could be individual-level or organisational-level behaviours. However, due to the

simultaneous knowledge sharing and hiding, reasons for knowledge sharing and hiding are of equal significance in this study, as demonstrated in Theme Three.

#### 4.2.3. Theme Three: The Reasons for Knowledge Sharing and Hiding

Theme Three, concerning the reasons for knowledge sharing and hiding, comprised three sub-themes. The first sub-theme presents the reasons for knowledge sharing practices; the second illuminates the reasons for hiding; the third sub-theme elaborates the suggestions that employees conveyed this business should consider.

##### 4.2.3.1 Sub-theme One: Reasons for Knowledge Sharing

The reasons for sharing were analysed from the perspectives of the corporate context and individual motivation, as summarised in Table 23.

**Table 23: Reasons for knowledge sharing**

Reasons for knowledge sharing	
The helpful corporate context:	<ul style="list-style-type: none"> <li>• The role of owner-manager:</li> <li>• Advantageous corporate culture</li> <li>• Close interpersonal relationships</li> <li>• A reward system</li> </ul>
The individual motivations to share	<ul style="list-style-type: none"> <li>• Sense of trust</li> <li>• Confidence</li> </ul>

Source: Researcher's construct

##### *Helpful corporate context*

From the data, it was evident that the corporate context of the small family business affected skilled employees' tacit knowledge sharing. This can be found in the supportive role of the owner-manager in knowledge sharing practices, the collective corporate culture, the tight-knit interpersonal relationships, and reward systems, as integrated into Table 24.

**Table 24: Helpful corporate context**

<b>The helpful corporate context</b>	
<ul style="list-style-type: none"> <li>• The role of owner-manager:</li> </ul>	<ul style="list-style-type: none"> <li>➤ Building multiple platforms</li> <li>➤ various off-the-job team building activities</li> <li>➤ A role model for employees</li> </ul>
<ul style="list-style-type: none"> <li>• Advantageous corporate culture</li> </ul>	<ul style="list-style-type: none"> <li>➤ 'Big Family' notion in collective culture</li> </ul>
<ul style="list-style-type: none"> <li>• Close interpersonal relationships</li> </ul>	<ul style="list-style-type: none"> <li>➤ Knowledge sharing culture</li> </ul>
<ul style="list-style-type: none"> <li>• A reward system</li> </ul>	<ul style="list-style-type: none"> <li>➤ Bonuses for senior managers and critical skilled employees</li> <li>➤ Physical prizes for knowledge sharing practices</li> <li>➤ Verbal recognition</li> </ul>

Source: Researcher's construct

- **The role of the owner-manager:** The various knowledge sharing practices (formal and informal) mentioned in Theme Two were supported by the owner-manager, as Mg9 explained:

*That is because the workers are busy with their tasks. Therefore, when they attend training, it will result in the pending of their work and the delay of working hours so that they would not spontaneously attend training. However, with the help of the owner-manager, most of them take part in my training.*

➤ **Building multiple platforms:** the owner-manager built multiple formal platforms for skilled employees' knowledge sharing and various off-the-job team-building activities for informal communications. The owner-manager's actions for formal knowledge sharing provided a platform for all employees to share and express their voices. Hence, the formal knowledge sharing practices are not analysed.

➤ **Off-the-job activities:** The owner-manager organised various off-the-job activities for team building. The owner-manager provided the first example, in which the employees could share knowledge during the group travelling.

*I support organising the group travelling every year because it gives a chance for our members to know each other and enhance communication during travelling.*

Furthermore, most participants mentioned that group dinner is a casual occasion to know and communicate with other colleagues because they may not have sufficient opportunity to meet people in other departments. The data from Em4 demonstrated this point.

*We have the year-end dinner in a good hotel before the Spring Festival holiday. It is a good chance for us to express ourselves with other departments because we do not have enough time to speak with them daily.*

Likewise, it has been uncovered that singing Karaoke is a popular activity for the employees in the company. During this activity, employees may share knowledge, as Em1 conveyed:

*We have some chances to sing KALAOK at KTV. It provides more exciting communication channels than the boring regular meetings or training in daily life.*

In construing these data, the off-the-job activities included group travelling, group dinner, and Karaoke. In addition, it assisted the company in enhancing employees' cohesion and mutual understanding because some employees did not have the chance to communicate with the employees in other departments in their busy routines. Therefore, the case-study company had a harmonious rapport, motivating skilled employees to share knowledge. The coming illustrative comments described these off-the-job team building activities.

➤ **A good role model:** the owner-manager kept an open and sincere attitude towards employees' criticism. This was an exceptional quality of the owner-manager. Mg2 provided an appreciative comment toward the owner-manager in the following statements:

*Our owner-manager modestly receives various criticism and queries from us, as long as these criticisms are pertinent and beneficial for the company's development. The relationship between the owner-manager and us seems to be friends. When she earnestly requests my advice, I would like to say all of what I know without any reservation.*

The employees admired how the owner-manager could carefully learn their ideas and modestly accept their criticism. It helped make the relationships between the owner-manager and employees more like a friendship than a leader-member relationship. The friendship between the owner-manager and skilled employees contributed to knowledge sharing in the company. The owner-manager's modest listening and acceptance of employees' criticism



helped build up a good role model for all employees in the business. Over time, the employees' perceptions of freely expressing themselves and behaviours in knowledge sharing were gradually profoundly influenced by the owner-manager's performance.

- **Advantageous corporate culture:** The corporate culture had a strong 'big family' notion because of the nature of the business. The owner-manager treated each employee as her 'family member'. This developed a strong bond of interpersonal relationships among all the employees to make communications and interactions easily. As a result, skilled employees were likely to contribute their knowledge to the company. It can be unveiled from the data of Mg8:

*The time we spend working in my company may be more than that we stay at home. Apart from our family, my colleagues could be the most intimate people in my life.*

The above statement also demonstrates a collective culture. The 'big family' notion made all employees generate a collective consciousness with a sense of identification. As a result, the employees were likely to view themselves as part of the company, as most participants conveyed: *"the company and they are both glory and loss"*. The majority of experienced employees viewed knowledge sharing as something glorious because they thought that their knowledge could be used for collaborative development.

The collective corporate culture is often embodied in organisational group activities. A typical instance is that the year-end dinner occurs every year in the company. This dinner is the most important activity because it is a reunion for all employees to celebrate the Chinese year new. It seems to be a big dinner for the 'big family', as Em4 described:

*We have the year-end dinner in a good hotel before the Spring Festival holiday. It is the most important day for all of us because Spring Festival is a Chinese traditional festival. We chatted freely during the meal and gave our best wishes. Celebrating the Chinese New Year with my colleagues seems like a big reunion with my family. That's why we all love the year-end dinner.*

Finally, the presented company had a knowledge sharing culture. Since the case company was founded, the first owner-manager had developed a culture that welcomed all the employees to express themselves. The current owner-manager inherited and continuously developed this kind of corporate culture. The data of Mg1 could illuminate this argument.

*The first owner-manager, the father of the current owner-manager, encouraged us to propose different opinions. At that time, he could give us a bonus for putting forward innovative ideas. The current owner-manager employs her father's strategies and advocates the 'big family' value in our company. She often says, "we are the family members." I agree with this value. As a member of this 'big family', I would like to contribute my knowledge to other family members in order to make the family better.*

Notably, the case company advocated the 'big family' notion to its employees, which facilitated the development of their sense of identification and enhanced the interpersonal relationships among members. As such, skilled employees were happy to share tacit knowledge with co-workers.

- **Close interpersonal relationships:** According to the participants' data above, the off-the-job activities and collective knowledge sharing corporate culture developed close interpersonal relationships among employees. These tight-knit interpersonal relationships were the foundation for skilled employees to share knowledge because they increased their sense of trust toward the people who received knowledge from them. As Mg1 stated:

*Even if I have different viewpoints from others, I would like to solve the disagreements through sharing and discussion instead of hiding knowledge and no conversation. Then, after discussing, we are still close friends as usual.*

- **A reward system:** the case company employed diverse rewards for employees' outstanding performance, including knowledge sharing behaviours. The system in the case company included monetary rewards (bonuses and paid external training for experienced employees' exceptional work performance) and non-monetary rewards (physical prizes and verbal recognitions for knowledge sharing).

➤ **Monetary rewards:** These were primarily distributed to senior managers and core skilled employees. The bonus was a component of the senior managers' wage, as described by the owner-manager:

*For the senior managers, there is a flexible bonus. How much they can earn depends on how well they cultivate their subordinates by contributing knowledge.*

The bonus was used to encourage senior managers to manage their teams and pass on what they know to their subordinates, because knowledge sharing practices, such as mentoring,

were among their work performances. Leading a team and mentoring subordinates take much extra effort and time. Therefore, the extent of their bonuses depended on how well senior managers mentored their associates. Hence, the bonus is a compelling economic incentive for the managers to teach their subordinates and share practices.

*Mentoring novices and giving formal training are their job duties. This process would cost them extra effort. Hence, it is necessary to reward their mentoring behaviours. (Owner-manager)*

Second, the year-end bonuses were not granted to all the employees but only to a small number of knowledgeable employees with significant contributions or outstanding performance. They were appraised as 'role models' by the owner-manager and senior managers (including family members and non-family managers). It seemed to be a kind of acknowledgement regarding their performance and knowledge. Therefore, the bonuses inspired skilled employees' participation in sharing activities.

*Skilled employees whose contributions are outstanding can obtain the year-end bonus. It brings a sense of being acknowledged to them. When the company needs them to share knowledge on formal occasions, they are more likely to participate in sharing activities because they expect bonuses and acknowledgement from the company. (Owner-manager)*

Third, the paid external training increased the skilled employees' knowledge and knowledge sharing behaviours in formal practices. When skilled employees returned to the company, the owner-manager required them to share what they had learned from the outside training with other employees through well-planned training or meetings. Even if skilled employees did not have the discretion to share the explicit knowledge shown on the written documents, they could opt to give away limited experience or hide tacit knowledge that they perceived as most valuable. On the other side, external learning could enhance skilled employees' job commitment and sense of self-worth, increasing their knowledge sharing motivation. As such, skilled employees were more likely to dedicate themselves to the company and share knowledge, as the owner-manager mentioned:

*We reward core skilled employees to attend the paid external training. Then, when they return, we share what they have learned in internal training. Meanwhile, we offer them certain subsidies. These approaches to rewarding skilled employees are pretty effective for knowledge sharing.*

➤ **Physical prizes for knowledge sharing:** these were offered to the junior employees

who participated in and won the award for sharing activities at the case company. Em1 gave a story about delivering the prizes for knowledge sharing.

*In 2019, we carried out an activity to allow the junior employees to give feedback on what they observed and put forward how they believed to solve these issues. Almost everyone was active in expressing their ideas. In the end, we selected the first, second and third awards for them. The awards included the pressure cookers, electric kettles etc. The effect of awards on suggestion sharing was quite good.*

As presented by Em3 for the same activity, the physical prizes promoted all the employees' participation in sharing activities because it brought a sense of being acknowledged and self-worth from others.

*These prizes did not mean what I could get but a kind of affirmation and appreciation of my knowledge. I had a sense of being acknowledged. I enjoyed sharing what I knew with the company.*

➤ **Verbal recognition:** it was a non-monetary and non-physical reward for employees' knowledge sharing. Skilled employees were often rewarded with verbal appreciation on formal occasions, including meetings and training, as shown in the statement of Em8:

*At the year-end dinner, I was selected as the 'role model' by the owner-manager. When the owner-manager stated my contribution and performance on the stage, I felt respected. I had a sense of pride and fulfilment. It inspired me to make more effort in my future work.*

Likewise, giving verbal appreciation also took place on informal occasions, as Mg9 said:

*After answering other workers' questions, they always say 'thank you, teacher'. Simple words convey their deep appreciation. It brings me a sense of self-fulfilment and confidence.*

Through the data from both the managers and employees, providing verbal appreciation is a facilitator for skilled employees to share knowledge. The main reason is that being recognised by others could bring a large amount of self-fulfilment, confidence, and pride, enhancing skilled employees' motivation for sharing. Their effort and knowledge can be respected by the owner-manager and peers.

The participants' statements indicated that no matter which reward method the case-study company utilised, it could bring a deep sense of being acknowledged and confidence to the employees, which inspires their motivation to share. Therefore, the evidence unfolds that the corporate context of the studied company not only enables its formal and informal knowledge

sharing practices but motivates the skilled employees' personal motivation to share: a sense of trust toward their colleagues and confidence. These individual motivations for knowledge sharing are discussed in the next section.

### *The motivations for knowledge sharing*

As mentioned above, the individual motivations for knowledge sharing are manifested in the skilled employees' sense of trust toward others and confidence in their knowledge.

#### **Sense of trust**

In the interviews, almost all the participants expressed an intense sense of trust in their audiences. The owner-manager's position made her trust each member because this business heavily relied on all employees' knowledge. In terms of sharing knowledge, the owner-manager generously contributed expertise to those who were in need:

*I must trust all the employees. My business depends on them, and they depend on me simultaneously. Even though they may do something wrong, I believe they don't mean to do that. I cannot have a difference in trust with my employees. If so, there will be inequity among employees. I will give what I know to them as equals. That is because sharing knowledge will definitely facilitate the employees' development and my business.*

Likewise, good interpersonal relationships among the employees could foster skilled employees' sense of trust in their audiences. The sense of trust made them believe knowledge sharing was necessary for their co-workers. Accordingly, skilled people felt happy to tell others what they knew to others. Notably, the sense of trust played a more significant role in sharing on formal occasions than informal circumstances. This finding is explained below.

#### **➤ From the angle of formal knowledge sharing**

Formal knowledge sharing typically occurs during compulsory activity in which the owner-manager requires skilled employees to share knowledge and ordinary employees to attend. The sharing aims to facilitate the team members to achieve the common goal. However, if skilled employees do not communicate well, there will be problematic results for their careers, such as salary reductions or being fired. Thus, in the formal knowledge sharing activities, skilled employees do not have sufficient discretion to hide knowledge but attempt to do well in their sharing job, as Em6 stated:

*When handing over the work to the other colleague, I must thoroughly explain the experience about how and whom I contacted the partner in detail. If so, the further work of my peer will go well. In contrast, if not, he will come to me to consult again and again so that it will waste my time. Even worse, I may be blamed and take full responsibility for the loss. Accordingly, I must share all of what I know in the formal sharing.*

➤ **From the angle of informal knowledge sharing**

Compared to sharing knowledge on formal occasions, informal practices were significantly different. Skilled employees communicated with others and answered the questions at their ease. The sharing circumstances were not what they had to do but what they wanted to do. Knowledge sharing practices depended on whether to share and with whom to share. The sharing tended to be autonomous. It can be discovered from the data of the managers and experienced employees who usually did sharing practices:

*When sharing with my apprentices, I do not make a difference in trusting them. Because mentoring them is my job. I will patiently teach them until they fully understand. We work together, have lunch together, and communicate like friends in daily life. Therefore, there is no reason to distrust them. So, when they ask me for help, I'm pleased to tell them how to do it (Mg8).*

*It depends on with whom I will share. If the audience is my colleague whose relationship is intimate with me, I'll enjoy sharing my experience as much as I can when they ask for help. However, on the other hand, if sharing with the one I rarely communicate with in daily life, I may not share too much or hide some part of the vital knowledge because I don't have the duty to help those I don't trust too much (Em5).*

From the above statements of the participants, it is overt that skilled employees' motivations for knowledge sharing are concerned with the extent to which they trust the audiences during the informal knowledge sharing activities. When sharing with those they trust, the skilled employees feel it is enjoyable to share. Conversely, when communicating with those they do not much rely on, skilled employees may not have adequate motivation to share their tacit knowledge. Thus, knowledge hiding would occur. A sense of distrust will be discussed in detail (see P.141-142).

**Confidence**

The sense of confidence is the second individual motivation for skilled employees' knowledge sharing practices. Concerning the influence of the reward systems for knowledge sharing,

skilled employees' confidence was sourced from recognition and praise from other people because their knowledge and effort obtained sufficient respect and attention. Mg9 articulated this viewpoint:

*When the employees called me 'teacher' after training or when the owner-manager appreciated me after the company passed the exterior inspections, the company recognised my knowledge. Therefore, I think they need me, which increases my confidence. Therefore, I want to share my knowledge with my colleagues and company without any doubt.*

Surprisingly, the senior employees over forty years old had different opinions from the young employees regarding how confidence influenced the knowledge sharing practices.

➤ **From the perspective of the skilled senior employees**

Those over forty years old and who had worked in the company for decades had strong confidence in their knowledge. Seven of the eleven managers conveyed that the value of knowledge was to pass it on to the young rather than hide it. The skilled senior employees did not fear being replaced by others. Conversely, the senior skilled employees expected the young people could grasp their knowledge and take over their jobs through sharing. This situation reflected different individual value systems of knowledge between the senior and young employees. The statement from Mg2 presented below is a typical insight of the older employees into the value of knowledge:

*I hope the young could take my experience as much as they can. The exact value of knowledge is to make more and more young people learn it and benefit from it. If no one can inherit my knowledge before I retire, my knowledge will be of no value.*

From the finding from the skilled employees, it was evident that skilled employees' confidence could motivate them to share knowledge in formal and informal activities.

➤ **From the perspective of the young knowledge employees:** 55% of those whose ages below forty stated that their confidence could provoke them to share knowledge. Nevertheless, it would only happen under the premise that the young skilled employees would not lose the authority of their knowledge and would not be replaced by other colleagues, as Em6 stated:

*I share my personal experience with my team member. I am seen as the expert in selling techniques in my team. When my team member asks*

*me how to handle intractable clients, I can actively tell them how to do it because my experience is richer than others, and my communication style has my attributes. I know that no one can replace me. When the performance is measured following the team unit rather than individuals, helping the team members is equal to helping me.*

By contrast, from the same person above (Em6), when sharing knowledge, the young could be under psychological pressure out of losing knowledge ownership simultaneously. The young skilled employees might not fully share their tacit knowledge with others because they risked being replaced. Understandably, the young employees might be willing to donate their experience to the team members only when they felt safe or when they shared knowledge within the team for a common goal.

*If one from the other team asks me for help, I may not tell them too much. This is because they may become a significant threat if they take away my verbal techniques (Em6).*

In summary, for skilled employees in the company, their knowledge sharing practices were influenced by the corporate context and their motivations. The owner-manager's support for knowledge sharing had laid the sound foundations for the skilled employees' knowledge sharing because her efforts in knowledge sharing practices created sufficient chances for the employees to convey themselves. The insights and behaviours of the owner-manager in accepting different voices affected all the staff in the workplace. This situation might have influenced the employees to follow the owner-manager's values on knowledge sharing. As such, skilled employees could behave as the owner-manager did.

The company also had a corporate culture that benefited knowledge sharing. This type of corporate culture created close interpersonal relationships among employees. The collective and knowledge sharing culture could affect skilled workers' workplace behaviours in this context for a long time. Gradually, skilled employees formed a sense of identity towards the company. Meanwhile, this business adopted diverse rewards for employees, stimulating the skilled employees' knowledge sharing behaviours. Physical prizes and verbal recognition for knowledge sharing behaviours brought about a sense of self-worth and confidence for skilled employees. Therefore, the above helpful corporate context facilitated skilled employees' knowledge sharing practices and increased their motivation for knowledge sharing, for example, through a sense of trust towards colleagues and confidence.



From the individual standpoint, a sense of trust toward those who requested knowledge and confidence in knowledge effectively motivated skilled employees' knowledge sharing practices. First, the close interpersonal relationships in the workplace set up the employees' sense of trust. Notably, skilled employees' sense of trust had more evident influences on informal knowledge sharing than formal practices, as formal knowledge sharing typically involved compulsory activities required by the leaders. In contrast, informal sharing took place on autonomous occasions that relied on employees themselves. However, on informal knowledge sharing occasions where skilled employees might automatically share rather than being demanded by their leaders to do so, a sense of trust could inspire them to share knowledge with those they trusted.

Second, recognition from others could increase the employees' confidence in their knowledge; thereby, they gained much impetus to work well in sharing. In this business, the confidence of the skilled senior employees who had worked there for decades influenced them to pass on their knowledge to the young employees, as they anticipated that the young would learn their knowledge and take over their job before retiring. In contrast, the young skilled employees' confidence might make them do sharing, but there was a premise: keeping the authority of the knowledge or not being under threat of being replaced by others. In most cases, the young skilled employees shared knowledge within the team for a common interest.

#### *4.2.3.2 Sub-theme Two: Reasons for Knowledge Hiding*

As with the reasons for knowledge sharing in Sub-theme One, the reasons for knowledge hiding were also probed from the corporate context and individual motivation perspectives. The issue of knowledge hiding reflected unfairness between the family members and non-family employees. The reasons for hiding are integrated into Table 25.

**Table 25: Reasons for knowledge hiding**

<b>Reasons for knowledge hiding</b>	
The detrimental corporate context:	<ul style="list-style-type: none"> <li>• Issues of managing family members</li> <li>• low salaries and no bonuses for the non-family employees</li> <li>• Close interpersonal relationships</li> </ul>
The individual reasons for hiding	<ul style="list-style-type: none"> <li>• Sense of distrust</li> <li>• fears of being replaced by others</li> <li>• The “996” working schedules</li> </ul>

Source: Researcher’s construct

### *The detrimental corporate context*

Some corporate characteristics of the case company, such as the issues of managing the family members, low salaries, and no bonuses for the non-family employees, may have undermined their motivation to share or caused knowledge hiding. However, surprisingly, the close interpersonal relationships among employees could also result in knowledge hiding, as presented in Table 26.

**Table 26: Detrimental corporate context**

<b>The detrimental corporate context</b>	
<ul style="list-style-type: none"> <li>• Issues of managing the family members</li> <li>• Low salaries and no bonuses for the non-family employees</li> <li>• Close interpersonal relationships</li> </ul>	<ul style="list-style-type: none"> <li>➤ Favouritism toward family members</li> <li>➤ Infighting among relative managers</li> </ul>

Source: Researcher’s construct

- **Issues of managing the family members:** Eight out of thirteen non-family skilled employees stated that the most overt reason for knowledge hiding stemmed from the owner-manager’s indulgent management of family members, mainly manifested in favouritism toward family members and infighting among managers who were the owner-manager’s relatives. The main reason was the vast number of senior relatives of the owner-manager

working in the company, such as her aunts and uncles. Thus, numerous issues emerged, along with the large amount of authority the owner-manager granted to the family members.

➤ **Favouritism toward family members**

The owning family had a strong 'big family' notion, so the owner-manager provided many job positions to her relatives, especially those older than her. When handing over the company to the current owner-manager, the founder required her to treat the family members well. Therefore, the owner-manager's favouritism towards family members emerged in the business.

*As a fine Chinese tradition, respect for seniority is quite important in our family. When the company was founded, my father employed his siblings to work here. When he handed over the company to me, he asked me to treat them well. Therefore, I have to agree with their strategies in most cases, although some are not necessarily helpful, especially regarding rewards on knowledge sharing behaviours (Owner-manager)*

The owner-manager also expressed a dilemma in managing the family members, including offering privileges and adopting their inappropriate managerial strategies.

*I confess that I have given them many privileges at work in the company. It may cause non-family employees' dissatisfaction. This is not good for my business. Now, I am taking action to lessen their authority, but it takes time.*

Mg2, who was a non-family employee, added:

*Apart from the fact that the owner-manager's relatives can come to work later or leave earlier than us without deducting wages, the more outrageous thing is that some top managers required us to use their names when we applied and registered the patents. In fact, the family managers did not make any effort. They also attempted to persuade us that all the technological or knowledge creation results should belong to the firm. The unfairness, as a hidden rule, made us uncomfortable, but no one proposed against this.*

Another relative manager's viewpoint was typical in response to the non-family employees' perceptions of unfairness:

*The knowledge should not be secret. Sharing knowledge, as a basic behaviour, is what people should do rather than what is rewarded (Mg5).*

It was certified that unfairness was common for non-family employees in the case-study company. This also reflected how the 'big family' notion profoundly influenced the owner-manager to treat family and non-family members differently. The owner-manager felt awkward because the favouritism did not help her business. Furthermore, the perceptions of the family managers were influenced by the collective corporate culture where personal knowledge must belong to the organisation. In some cases, the privileges that the owner-manager offered to the family members might be used irrationally. This resulted in non-family employees' dissatisfaction and motivation for knowledge hiding. In this way, the collective corporate culture with the family notion would cause knowledge hiding in the case-study small business.

#### ➤ **Infighting among the family managers**

The other issue was that the case-study company had infighting among the family managers for their interests. This gave non-family employees motivation for knowledge hiding. Em8 told his story:

*The owner-manager expects all the members to work together to make knowledge sharing better throughout the company. But honestly, it is hard to achieve. Especially for the family managers, they pursue their interests, so infighting and disagreement exist among them. As a result, I do not want to share knowledge with them at all because I do not want my knowledge to be a tool for them to fight for their benefit. Therefore, when they request me to share knowledge, I will pretend not to know.*

- **Low salaries and no bonuses for non-family employees:** skilled senior managers were given a bonus in their monthly wages. However, only a couple of the non-family employees had the opportunity to attain the bonus. Even though some participants at the employee level had obtained the yearly bonus once or twice, all of them admitted that their salaries stayed at a low level and there were no bonuses in their monthly wages. As Em1, a non-family employee stated:

*Compared to our province's average level of salary, our wages are below the average level. Besides, there is no bonus on our monthly wage. It doesn't inspire me to share knowledge with others because knowledge sharing tasks are beyond my job duties. If sharing too much, it will take much time, and also it may make me lose the competitiveness and even lose my job.*

Compared to the high wages of family members, it was unfair that non-family employees

were distributed low salaries. As a consequence, non-family skilled employees had negative perceptions of the company and even lost confidence in themselves. On one side, they were likely to lose motivation for knowledge sharing. On the other side, skilled employees from outside of the owning family worried about losing the power of knowledge if they shared too much knowledge with other coworkers. Because of this, the non-family employees would hide their wisdom.

The owner-manager had noticed that the low salaries and no bonuses brought about knowledge hiding among the non-family employees, and worried that employees would focus on the monetary reward rather than the quality of knowledge sharing. Thus, the outcomes of setting up the compensation would not be valid.

*Most ordinary employees view the money as the benchmark of their work, including knowledge sharing on the job. Thus, in my view, a bonus will not always play a positive role in motivating employees' knowledge sharing as some people will count on a bonus too much. As long as there is a bonus, they will share anything regardless of the value and quality of the knowledge. Therefore, from the company's perspective, the cost of HRM will be largely increased but with no satisfactory results.*

In addition to this, the non-family skilled employees hid knowledge in the case-study company because the family managers cared about short-term economic interests. However, the knowledge sharing working on business development took a long time. Further, the top managers from the owning family took skilled employees' knowledge sharing for granted, not as something worthy of being rewarded. Therefore, the family managers refuted giving monetary rewards to non-family employees. The following statement represented the family managers' perceptions of financial rewards and knowledge sharing:

*For ordinary employees, paying their wages on time and no default are their rewards. As a member of our business, contributing knowledge is what they should do (Mg7).*

The family managers' perceptions of knowledge and rewards had the potential risk of influencing skilled employees to hide knowledge.

- **Close interpersonal relationships:** it has been shown that close interpersonal relationships among employees and a sense of trust toward colleagues are generally-recognised facilitators for knowledge sharing. However, two participants indicated that they might hide their knowledge in a situation where they found that other people whose

relationships were intimate to them were making mistakes in public. That was because correcting other people's mistakes in a public place might hurt others' faces. As explained by Em8:

*A good relationship makes me incapable of being brave to criticise others, because numerous people care about their faces in front of others. So, when I see that my peers work in the wrong way in front of others, I cannot correct their mistakes openly, because if I directly point out their mistakes, they'll feel embarrassed, and I would also feel embarrassed.*

Pointing out colleagues' mistake openly might potentially destroy the good friendship among employees at work. Thus, to maintain relational harmony, skilled employees might choose to hide their knowledge on purpose.

*I struggled to put forward my suggestion to those I have a good friendship with. It may cause a situation in which good intentions do evil. The recipients may think, "It is none of your business. Who do you think you are!" After all, it is not my business. I do not want to be a "fault-picker." If sharing my opinion may hurt the friendship between us, it would be unworthy to take the risk of sharing knowledge. (Mg11).*

### ***The individual motivations for knowledge hiding***

There were three main reasons that skilled employees admitted had made them hide knowledge: a sense of distrust, fears of being replaced by others and lack of time for doing sharing. Among them, fears of being replaced by others and time pressure were mainly reported by the non-family skilled employees. All are listed in Table 27 and are explained below.

**Table 27: Individual reasons for knowledge hiding**

<b>Individual reasons for knowledge hiding</b>	
• sense of distrust	➤ sense of trust being damaged by others
	➤ poor learning abilities of audiences
• Fears of being replaced by others	
• The "996" working schedules	

Source: Researcher's construct

- **Sense of distrust:** some skilled employees revealed that negative perceptions or

words from other colleagues might break their sense of trust towards newcomers who were outsiders from fixed social relations in the team. As a result, in subsequent social life, skilled employees distrusted the newcomers, leading them to hide tacit knowledge. We can find this in Em2's story:

*At the outset, I did not know much about L, a newcomer in our department. One colleague told me something negative about him, which brought me a bad impression of him. When the manager assigned me as his mentor, I was reluctant to speak to him due to distrust. Therefore, I only introduced the most basic and superficial things to slight over him as my superior required.*

The participants said that the poor learning abilities of their audiences adversely affected their sense of trust; accordingly, they wanted to hide knowledge for this kind of audience, as Mg8 narrated:

*Three years ago, I had a fellow with poor learning ability. It was a struggling process when I shared it with him. Not only was he a slow learner, but he often interrupted my sharing and asked some irrelevant questions. The time cost was much higher than expected. Honestly, this caused a sense of distrust and annoying feeling to him. Since then, I chose to skip him.*

- **Fears of being replaced by others:** Fear of being substituted by others was discovered among the young skilled employees, as discussed under the young employees' confidence for knowledge sharing. The following perception from Em2 demonstrates why they had this fear:

*I spent much time learning the export laws and operating procedures in different countries. Then, when another colleague wanted to know, I would generally talk about it, not in detail. This was how I kept my knowledge ownership.*

The company's internal competition mechanisms might be another significant reason for making the young, skilled employees feel threatened by others about losing knowledge ownership through sharing. Hence, they preferred hiding their knowledge rather than sharing it.

*Our company encourages internal competition for the same job position. Each member is a competitor to me. I would not tell them the core knowledge that I know. It has a risk to my career development (Em7).*

- **The "996" working schedule:** all the participants at the manager and employee levels admitted that the "996" working schedule made it stressful to share knowledge because it

added a large amount of mental and physical burden. The term “996” means to work six days per week and from 9 a.m. to 9 p.m. each day:

*Due to the tight time when training, I could give a general explanation about the expertise. Second, as the employees did not have enough time, they may not attend the training or be asked to return to their job position by a call from their managers. It could interrupt my passion for the training sessions. It also caused the audiences to learn little (Mg9).*

*The 996 working schedule made me tired every day. I didn't enjoy the statutory holidays and only had one day off per week. It was hard for me to enjoy knowledge sharing. I prefer hiding knowledge to have a good rest (Em2).*

Varied sharing practices were conducted outside employees' working hours. Their personal time had been occupied by the knowledge sharing practices or training sessions. Therefore, they were not in the mood to share knowledge, as Em5 stated:

*In most cases, we sacrifice our private time to do sharing, so we usually work overtime. Due to sharing activities, our working hours have been extended very often, or even we cannot have a good rest on weekends. So I definitely have the reluctance to do sharing.*

To conclude, the detrimental corporate context and individual motivation reasons for hiding may cause either an increase in employees' motivation for knowledge hiding or an impediment in their motivation for sharing. Knowledge hiding mostly took place among the non-family skilled employees because of the unfair situations between the family members and them. On the corporate side, the owner-manager had the dilemma of managing her relatives within the company because of the strong family notion in her family. The owner-manager exposed evident favouritism to her family members in the company. The privileges and infighting of the family managers, and the low salaries and no extra bonuses for the non-family skilled staff, led non-family employees to hide knowledge. Still, no employee could go against this phenomenon. The only thing they could do was hide knowledge from their company.

Behind this situation, the first reason was the owner-manager's worry that if employees were only pursuing the monetary incentives, and then, employees might ignore the quality of the knowledge they shared. Some family managers did not respect the value of skilled employees' knowledge sharing. Second, the close interpersonal relationships among employees might cause skilled employees to struggle in some cases because pointing out the mistakes of an



intimate friend in public was likely to make that friend lose face. In doing so, the friendship between the skilled employees and their colleagues would potentially be damaged. To keep a harmonious interpersonal relationship, skilled employees preferred hiding knowledge in this case.

On the individual side, a sense of distrust, fears of being replaced by others and time pressure was the main reasons skilled employees hid knowledge. The non-family employee group mostly mentioned fears of being replaced and time pressure. In detail, the skilled employees' sense of trust toward their audiences could be damaged by other colleagues' negative perceptions and the poor learning abilities of the audiences. This instance might add a heavy burden to the skilled employees to share knowledge from psychology and work practices.

Furthermore, fears of being replaced by others influenced the non-family qualified employees' knowledge hiding. The young skilled employees did not have rich experience. Thus, there was a risk of being replaced by others. Finally, skilled employees had a busy "996" working schedule in their routines. Working overtime led to an imbalance between work and life. Sharing usually caused an extension in working hours and occupation of weekends. Equally, skilled employees could not explain the knowledge in detail during training because of tight time. This was not helpful for the audience's learning. Under these situations, knowledge hiding naturally took place in the workplace. In contrast, all the family members stated that nothing made them hide knowledge in the workplace because they worked together and shared better to achieve the common goals of the family and business.

The owner-manager of the case company noticed the problems of skilled employees' knowledge hiding caused by unfair issues between the family members and non-family employees. Therefore, the owner-manager considered some practical actions to solve the problems of knowledge hiding. However, these just stalled at the conception stage. Hence, the participants proposed suggestions that might be valuable for the owner-manager's consideration, as shown in Sub-theme Three.

#### **4.2.3.3 Sub-theme Three: Suggestions for Motivating Knowledge Sharing or Reducing Hiding**

The final research question was asked the participants to provide suggestions for this business to improve knowledge sharing and reduce hiding. Noticeably, skilled employees from the

family and non-family groups responded differently. All the family members deemed that nothing needed to be improved in terms of motivating employees to share knowledge and reducing the happening of knowledge hiding because family members believed that this business had provided sufficient chances and benefits for sharing. On the contrary, the non-family employees highly recommended that the owner-manager should carefully consider improving fairness and equality, such as lessening the family members' authority, adding some bonuses into the non-family skilled employees' wage structure, and adjusting the "996" working schedule, as presented in Table 28.

**Table 28: Suggestions for motivating knowledge sharing or mitigating knowledge hiding**

<b>Suggestions for motivating knowledge sharing or mitigating knowledge hiding</b>	
·	Lessening privileges for the family members
	Adding a bonus to the non-family employees' wage structure
	Improving "996" timetable

Source: Researcher's construct

The first suggestion made by the non-family skilled employees was aimed to resolve the privileges for the family members because this issue disrespected the non-family employees' knowledge and results of knowledge sharing, as Mg2 proposed:

*It is urgent to reduce the power of the family managers, especially during registering patents. The result and honour should belong to those who invent the patents rather than the family managers. Therefore, the owner-manager should stop using the family managers' names as the inventors.*

Similarly, Em2 put forward the necessity of managing the family members to work following the '996' timetables.

*One day, I saw that one family manager left the office at 4 p.m. We usually worked overtime without a bonus; however, our company deducted our wages when we were late to work or asked for one day off. All my colleagues were dissatisfied with this situation. Therefore, our owner-manager should manage them the same as us.*

The second significant feedback on how to improve knowledge sharing and hiding behaviours drew upon the standpoint of the non-family people. Reflecting on the non-family members' issues most—low compensation and intensive working hours; thus, Em4 highlighted adding a

bonus to their monthly wage structure and improving the intensive '996' timetable.

*There is a necessity to improve our welfare, such as paid holidays, bonuses and salary. Our wages increase by 100 yuan per year. It is too little for us. Nevertheless, the working hours last too long. Also, we work based on the "996" working schedule. Therefore, I cannot enjoy two-day weekends. Hence, I recommend if our company could consider adjusting to our working schedule and giving more bonus to compensate our work overtime.*

As mentioned above, the privileges of the family members, the lack of bonuses and the "996" timetable were the prominent reasons for the non-family skilled employees to hide knowledge in the researched company. Therefore, all the suggestions they proposed revolved around fairness between the family and non-family members.

### 4.3 Summary of the Findings

In conclusion, this small family business was founded by the current owner-manager's father in 1970 and restructured by the current owner-manager. The business development and decisions in HRM, employees' development and knowledge sharing practices relied on the owner-manager. Due to the nature of the family-owned company, numerous relatives of the owner-manager worked in this business. The family members often hold essential positions in the decision-making process regarding business development, HRM and employees' development.

This research aims to investigate how and why skilled employees share and hide tacit knowledge simultaneously, by analysing individual motivations and the corporate context of the small family business. A wide range of findings was discovered and interpreted according to three themes:

**Theme One has presented employees' perception of tacit knowledge.** The tacit knowledge of skilled employees had distinctively experience-based characteristics because it originated from employees' long-term learning and accumulation from their working experience. The family members believed that the skilled employees' tacit knowledge should belong to the company. In contrast, the non-family skilled employees asserted that their knowledge was their own private asset. Nevertheless, all participants acknowledged the criticality of the employees' tacit knowledge as a significant resource in personal employee growth and

organisational development.

**Theme Two has illuminated knowledge sharing and hiding practices in this business. This theme was classified into two sub-themes: knowledge sharing and knowledge hiding.**

Foremost, skilled employees actively shared their tacit knowledge through two approaches: the formal and informal fashion. Formal knowledge sharing was a well-planned planned method stipulated by the owner-manager for skilled employees to share knowledge. There were also a variety of informal knowledge sharing activities, the unstructured and unplanned practices that happened at any time, which was embedded in employees' social life. Both knowledge sharing approaches took place at the individual and organisational levels. However, no evidence was presented that skilled employees shared tacit knowledge through the communities of practices because they did not have extra time to organise this form of knowledge sharing practice.

**The second sub-theme described knowledge hiding practices in the case-study company.**

Along with knowledge sharing, skilled employees could hide their knowledge on purpose. When choosing to hide knowledge, skilled people might use various excuses not to respond to other colleagues. For example, telling others they had no time, pretending not to know, sharing as little as possible or unimportant things, and stopping sharing when arguing were the usual ways they hid knowledge. Knowledge hiding happened when other people requested knowledge from skilled employees. In this way, knowledge hiding tended to be an individual-level behaviour, unlike knowledge sharing practices which could be individual-level and organisational-level behaviours.

**Theme Three has explained the reasons for knowledge sharing and hiding practices.**

Knowledge sharing and hiding behaviours were triggered by different reasons. However, some explanations overlapped, such as the collective culture and closed interpersonal relationships among the employees in the workplace. Meanwhile, both knowledge sharing and hiding behaviours were influenced by the corporate context and individual motivations. It was also discovered that the corporate context largely influenced skilled employees' motivation for knowledge sharing and hiding. There were three sub-themes to explain this theme in depth.

**In the first sub-theme, the reasons for knowledge sharing** included the support from the owner-manager, the collective corporate culture, close interpersonal relationships and various rewards. The corporate context not only assisted knowledge sharing practices but increased the skilled employees' sharing motivations in terms of a sense of trust toward their audiences and confidence in their knowledge. A sense of trust toward audiences and confidence were the primary motivations for knowledge sharing. Nevertheless, dependent on different types of knowledge sharing approaches (formal and informal sharing) and different groups of the participants (the skilled senior employees and young employees) in the case company, the sense of trust toward the colleagues and confidence influenced the qualified employees to share knowledge in varied ways.

**The second sub-theme was about the reasons for knowledge hiding.** It primarily reflected on unfair issues between the family and non-family members in the case company. The corporate context included the problems of managing the family members, lack of bonuses for the non-family employees and close rapport. These corporate features profoundly influenced the skilled employees' motivations, particularly the non-family qualified employees' motivations for knowledge hiding, for instance, distrusting the company and other colleagues, fears of being replaced by others and time pressure. These reasons might also undermine the individual motivations for knowledge sharing simultaneously.

**The third sub-theme was the participants' suggestions to improve the company's knowledge sharing and hiding behaviours.** As the reasons for knowledge hiding were typically manifested in unfairness towards the non-family employees, the suggestions aimed at encouraging "fairness" in the researched company, for example, lessening the privileges of the family members, adding bonuses and adjusting the "996" work schedule for the non-family employees.

## CHAPTER 5: DISCUSSION OF FINDINGS

### Introduction

This study aims at investigating how and why skilled employees share and hide tacit knowledge simultaneously within the context of a small family business. This chapter discusses the findings presented in Chapter Four by comparing them with the relevant theories in the literature review and examines whether the findings accomplish the four research objectives. In doing so, the discussion may provide comprehension of the contribution of this research within the broader context discussed thoroughly in the next chapter.

This chapter begins with exploring and discussing the insights on the criticality of individual-tacit knowledge at the case-study company. The second part discusses tacit knowledge sharing and hiding practices. The third section deals with why skilled employees share and hide their tacit knowledge from the corporate context and individual motivations based on SDT. Three sub-sections discuss the reasons for knowledge sharing and hiding in depth. The fourth part thoroughly construes simultaneous knowledge sharing and hiding by combining all the reasons. Sequentially, based on the research findings, the fifth section presents and discusses an integrative conceptual framework that includes the varied reasons for knowledge sharing and hiding in the current study. The final paragraph summarises this chapter.

### 5.1 Insights into the Criticality of Individual-Tacit Knowledge

**Research objective 1:** *To identify how skilled employees perceive tacit knowledge within the Chinese small family business context.*

In the case-study company, tacit knowledge involved technicians' techniques for creating patents and fixing machines, workers' skills in using machines, chemistry testing and producing goods, skilled employees' experience in solving problems, and experiences of success and failure. These can be viewed as experience-based knowledge in the studied small family business, because skilled employees had formed and accumulated this knowledge through hard work and learning from previous working experience for many years and even decades. This perception shows some parallels with the viewpoint of Nonaka (1994),

Davenport and Prusak (1998), Lam (2000) and Ambrosini and Bowman (2001). Tacit knowledge is the product of work practices and experiences associated with daily work and job positions, acquired through learning by doing and accumulated by long-term complex working experience and changeable outside environments. Noticeably, previous experiences of success and failure allowed employees to avoid making the same mistakes in the workplace. McDermott and O'Dell (2001) highlighted employees could reduce redundant trials and errors to "reinvent the wheel" by learning and sharing relevant expertise and skills.

Due to the long-standing and challenging accumulation of previous experience, the non-family skilled employees in the case-study company asserted that their tacit knowledge belonged to themselves. For the non-family employees, their tacit knowledge made them unique and irreplaceable. Thus, they perceived tacit knowledge as their asset. As Halvari et al. (2021), Pereira and Mohiya (2021) and Connelly et al. (2012) have claimed, people believe they control psychological ownership of their knowledge; as a result, it is not easy for them to give away their knowledge to others.

Nevertheless, the participants at the manager level, especially the family members, did not hold a similar view to the illustration above. They thought that the employees' knowledge should be a common asset because "*sharing knowledge was beneficial for all the employees eventually*" (Mg10). The senior managers who had worked at the case company for a long time were deeply affected by the collective corporate culture where they were members of the group or organisation (Young, 2014), so the family skilled employees should contribute knowledge to the organisation. For example, Mg 10, one of the senior managers, said:

*Knowledge should not just belong to the employees themselves, but a kind of common asset of the enterprise.*

From different standpoints of the participants, it can be seen that tacit knowledge is a valuable asset for individual growth and organisational development (Hadjielias et al., 2021; Maravilhas and Martins, 2019; Woodfield and Husted, 2017). As the owner-manager discoursed, this business could not succeed without the tacit knowledge of its employees. The patents, external awards and intellectual properties of the case-study company were invented and developed through the knowledge contributions of skilled employees. Therefore, skilled employees' tacit knowledge could be the most crucial strategic resource for the survival and development of this small company. The above finding is consistent with the

existing literature (Hadjielias et al., 2021; Gomez-Mejia et al., 2020; Cabrera-Suarez et al., 2018; Woodfield and Husted, 2017; Sanchez-Famoso and Maseda, 2014). When skilled employees work together to solve problems, the individual-tacit knowledge can be managed and integrated into the collective pool, eventually forming the competitive advantages of the family business.

However, from analysing the perceptions of the participants, individual-tacit knowledge had practical, unique, time-consuming, complex, variable and hard-to-be-known features. Accordingly, it was challenging for the learners who received knowledge to fully understand the tacit knowledge from skilled employees. As a participant said, *“it is hard to be known by my colleagues who do not have these practical experiences”* (Em7). This statement shows the importance of relevant personal working experience (Wathne et al., 1996), as it is hard for audiences to understand tacit knowledge when they do not have similar experiences as the basis (Newell, 2015). Therefore, transferring tacit knowledge from the individual level to the organisational level is challenging for companies (Di Vaio et al., 2021; Nguyen; 2021; Prouska and Kapsale, 2021; Cho et al., 2007; Alavi and Leidner, 2001).

Within the literature, most tacit knowledge is possessed by a small group of people, mainly skilled employees (Motoc, 2020; Dessi et al., 2014; Leonard-Barton and Swap, 2005). In exploring the corporate document analysis and the owner-manager’s remarks, most of the skilled employees had worked in the researched small family business for over ten years. Hence, skilled employees held abundant practical skills and expertise in their positions. The owner-manager mentioned that *“skilled employees had grown up with the development of our company. That is why I invest much money to send the old technicians to study outside every year”*. Chirico (2008) agreed with this viewpoint that skilled employees have accumulated knowledge from long-term experience and learning. Conversely, due to limited financial support, the leaders of a small business will not provide sufficient money for employees’ learning and development (Eze et al., 2013; Levy et al., 2003). A lack of resources is one of the unique characteristics of small businesses, different from large companies; this makes tacit knowledge sharing challenging in this context (Poulton et al., 2010). The majority of employees in the small business cannot obtain external learning opportunities. Under this circumstance, to make individual-tacit knowledge available to all employees, the case-study business used a variety of approaches for skilled employees to transfer tacit knowledge to



others, as presented in Theme Two. In the meantime, the survival and development of the case-study business heavily relied on skilled employees' individual-tacit knowledge.

To sum up, the tacit knowledge of skilled employees was experience-based. However, the perceptions of skilled people with different perspectives (the family and non-family groups) were distinguished from each other. The family-employee group claimed that tacit knowledge of employees should belong to the collective; instead, the non-family group insisted that their tacit knowledge was a personal asset. To this end, Research objective One on understanding tacit knowledge has been achieved.

## **5.2 Knowledge Sharing and Hiding Practices**

**Research Objective 2:** *To explore how skilled employees share and hide tacit knowledge in a small family business.*

Theme Two aims to achieve Research Objective 2 through two sub-sections. The first sub-section (Theme 2a) investigates knowledge sharing behaviours in the case-study company; the second (Theme 2b) concerns knowledge hiding behaviours in the same context.

### **5.2.1 Understanding of knowledge sharing**

**Sub-Theme One (Theme 2a):** *to explore how skilled employees share tacit knowledge in a small family business.*

The results on knowledge sharing behaviours had similarities with the previous literature, in that knowledge sharing cannot be described and explained from a single perspective but only from multiple angles: the types of knowledge, the way of sharing, and the level of sharing (Ahmad and Karim, 2019; Ho et al., 2009). It provides a proper mindset to analyse knowledge sharing behaviours; in doing so, the current study construes and discusses the findings in this area via the way of sharing and the level of sharing (Ahmad and Karim, 2019; Ho et al., 2009).

#### **5.2.1.1 Knowledge sharing mechanisms**

Skilled professionals in the case-study business mostly shared tacit knowledge through formal and informal approaches. The studied business primarily organised the formal approaches for skilled employees to share knowledge, including diverse training sessions (e.g. pre-job training, on-the-job training, and communist party members' education and training), rich

group activities and regular meetings. One distinctive formal knowledge sharing practice has been found in this study, but in the previous literature: Communist Party member education and training. The case company had a communist party group to exchange ideas by learning about the leading party spirits and perceptions. These formal knowledge sharing practices were planned behaviours required by the owner-manager or department managers and organised by the HR or administration staff. This finding implies that knowledge sharing greatly depends on the owner-managers' decisions, because the owner-managers have the predominant role in decision-making, business development and management in small family businesses (Cunningham et al., 2016; Zahra et al., 2007). The owner-manager in the case-study business valued updating producing technology and quality management systems. After that, the owner-manager assigned the senior managers or core engineers as the trainers or mentors to impart expertise, skills, and experience in formal activities. In all, the results from the interviews were also discovered in the corporate documents. As scholars such as Rese et al. (2020), Cai and Shi (2020), Choi et al. (2020) and Jeon et al. (2011) have pointed out, knowledge sharing involves stable and well-planned behaviours such as lectures or seminars.

The second fashion for skilled people to share tacit knowledge was informal practices, such as communication among employees, helping other people, pointing out their colleagues' mistakes and sharing the solutions, and some group dinners. These knowledge sharing approaches were unplanned practices that occurred when other colleagues asked for help or requested knowledge. Then, skilled employees spontaneously responded to colleagues' requests. This finding is associated with the prior statement that informal approaches are the appropriate methods for tacit knowledge sharing (Zahra et al., 2007). This is because tacit knowledge is hard to express in nature, and sharing it often happens in unstructured daily routines among individuals (Wen and Wang, 2021; Yi, 2009; Bartol and Srivastava, 2002).

The findings that the studied small family business primarily applied formal approaches to tacit knowledge sharing, comply with the literature. Woodfield and Husted (2017) underlined that knowledge in family businesses, particularly those in primary industries and manufacturing, is deeply grounded in well-established practices and developed through trial-and-error learning, such as an apprenticeship or on-the-job training. Lin (2013) similarly found that supervisors in Chinese family businesses preferred centralised knowledge sharing

methods over other types of approaches. However, Zahra et al. (2007) disagreed with the above illustrations, discovering that when employees need to exchange explicit knowledge, family businesses will use formal mechanisms, whereas for tacit knowledge, this context will prefer an informal fashion involving personal contact and daily interactions due to a friendly kinship. Accordingly, the findings contribute to understanding the significance of formal knowledge sharing approaches in small family businesses. As Zahra et al. (2007) suggested, formal knowledge sharing practices should be applied to help knowledge sharing in family businesses; however, in the meantime, family businesses need to notice that formal approaches may cause tacit knowledge sharing to be less flexible than it could be.

As discussed above, the case-study business had a wise approach to helping skilled employees share tacit knowledge via a combination of formal and informal mechanisms. Formal knowledge sharing approaches are practical ways of sharing one's experience and tacit knowledge, even if this method may hold back long-term efforts to effectively influence tacit knowledge sharing (Chen et al., 2018). On the other hand, a dearth of formal and informal approaches is detrimental to knowledge sharing across the company (Riege, 2005). Hence, there is a consensus that small family businesses should consider using a variety of methods for facilitating employees' knowledge sharing at work.

#### ***5.2.1.2 Levels of knowledge sharing***

Another element that helped this research to understand knowledge sharing in the studied small family business was the levels of sharing. The findings presented that the formal and informal knowledge sharing practices took place at the individual and organisational levels. At the individual level, formal knowledge sharing practices, such as one-to-one mentoring or apprenticeship, often occurred between two people, one skilled employee and one newcomer or subordinate. The majority of informal knowledge sharing also happened at the individual level because this type of knowledge sharing typically took place when a colleague asked for help or requested knowledge from experienced employees. Through these examples, it can be seen that individual-level knowledge sharing involves two people: the experienced person and the novice. This is in line with the process dimension of knowledge sharing, which refers to expression by the experienced people and listening and learning by the less-experienced individuals (Lin, 2007; Cummings, 2004). These person-to-person interactions make up the knowledge sharing among groups, teams and organisations; thus,

individual-level sharing is the most basic level of workplace knowledge sharing practices (Ipe, 2003).

At the organisational level, formal knowledge sharing practices, such as training and meetings, were demanded by the leaders and organised by HR from top to bottom (Ellis, 2001, cited in Riege, 2005, p.28). Under these circumstances, skilled employees as the trainers must prepare well for what they will share, and the ordinary employees as the learners must participate in the sessions. It is because sharing and learning became their job responsibilities, rather than extra roles. Furthermore, this outcome reflects the collective corporate culture. On one side, people working in a collective culture should conform to the collective rules and cannot perform a specific behaviour to damage organisational benefits (Zhang et al., 2017; Lin, 2013). On the other side, the paternalistic leadership styles in the family business could play a role in employees' behaviours (Botero et al., 2021). Hence, skilled employees automatically complied with the arrangement of the leaders to share and learn knowledge influenced by the collective culture. The collective culture aspect will be discussed in-depth in Section 5.3.

In brief, the findings exposed how the case-study small family business adopted various formal and informal approaches for knowledge sharing behaviours. Furthermore, these approaches took place at the individual and organisational levels. It could help small family businesses to realise the importance of using formal and informal knowledge sharing mechanisms (Zahra et al., 2007).

### **5.2.2 Understanding of Knowledge Hiding**

***Sub-theme Two (Theme 2b): to explore how skilled employees hide tacit knowledge in a small family business.***

In exploring the findings on knowledge hiding at the case company, accompanied by knowledge sharing, skilled employees might hide knowledge for varied reasons using various excuses to reject sharing or share limited knowledge. For example, when sharing took lots of effort and time, skilled workers told their colleagues they did not have time. On the other hand, when facing those who often had a dependency at work or hardly listened to others' perceptions, skilled employees might opt to pretend not to know, share little things, or stop

sharing to avoid conflict. It is evident that skilled employees hid tacit knowledge on purpose when they perceived various troubles caused by sharing, including work overload, being counted on by their colleagues, or involvement in a conflict. This consequence indicates that skilled employees decided to hide knowledge depending on their intention. This outcome follows the definition of knowledge hiding in Connelly et al. (2012): knowledge hiding is the intentional behaviour of hiding knowledge when colleagues request knowledge from employees.

Moreover, the above knowledge hiding behaviours typically took place on informal occasions in this business, such as when coworkers asked for help from skilled employees or sought the solutions and opinions. In these informal situations, knowledge hiding is related to individual interactions involving two people, those who ask for the knowledge and those who possess the knowledge (Černe et al., 2014). As with informal knowledge sharing, knowledge hiding behaviours in the studied business often occurred at the individual level. This finding also reflects the two premises of knowledge hiding: (1) an intentional attempt; (2) knowledge requested by another member (Xiao and Cooke, 2019).

Furthermore, different approaches that skilled employees often used, as mentioned above, fit into the classification of Connelly et al. (2012): evasive hiding, rationalised hiding and playing dumb. Precisely, telling others that they had no time or making other excuses to refuse to share tended to be rationalised hiding because skilled employees gave explanations for not sharing. On the other hand, pretending not to know to keep from being extensively relied on others, sharing little knowledge or unimportant things and stopping sharing from avoiding conflict appeared to be playing dumb, as skilled employees pretended not to have the expertise or ignore others' requests.

One worthwhile phenomenon was found in this company. The skilled workers primarily used the method of playing dumb to hide their tacit knowledge; there was no evident evasive hiding. As construed by Connelly et al. (2012), evasive hiding takes place when people deliberately give misleading information to those who need and request their knowledge. The fact that skilled employees usually played dumb rather than evasively hiding knowledge may have resulted from the collective corporate culture. Zhang et al. (2017) discovered that Chinese employees working in a collective culture may not perform a particular behaviour

that damages the organisation. Evasive knowledge hiding would have been detrimental to the collective interests of this small family business because delivering false knowledge to mislead other people would “*make my colleagues get into the trouble at work*” (Em6). Therefore, those who delivered false knowledge to mislead others had to be held accountable for the entire loss; this outcome was written in the corporate regulations of the investigated business. The other reason was that the collective culture facilitates skilled employees to develop a sense of responsibility. Skilled employees did not use evasive hiding because of their sense of responsibility and obligation (Lin, 2013). The case-study small family business viewed deliberate sharing of false expertise as irresponsible behaviour.

Moreover, influenced by the collective culture, skilled employees played dumb for knowledge hiding primarily to protect their interpersonal relationships with those who requested the knowledge (Yan et al., 2016; Huang et al., 2011; Leung and Chan, 2003). When skilled people realised that knowledge sharing might hurt their interpersonal relationships with colleagues, they might play dumb to avoid awkward situations caused by the direct rejection of requests from colleagues. Hence, playing dumb became the principal method for skilled employees to hide knowledge.

### ***Simultaneous knowledge hiding and sharing behaviours***

The findings that knowledge hiding can be harmful to knowledge sharing are congruent with previous literature (Chatterjee et al., 2021; Butt, 2020; Liu et al., 2020). In this vein, knowledge hiding is a barrier to knowledge sharing (Webster et al., 2008; Riege, 2005). In the case-study business, pretending not to have the expertise requested by others and sharing as little knowledge as possible was a sign of self-protection by skilled employees from underlying threats. It is because skilled employees had spent decades learning about these experiences (Huo et al., 2016; Peng, 2013). Once colleagues knew their knowledge, skilled people would lose knowledge ownership (Halvari et al., 2021; Pierce et al., 2003). Thus, in order to protect themselves, the skilled employees chose to hide knowledge. Therefore, in this case, knowledge hiding for self-protection could impede skilled employees from exchanging knowledge with others.

A contrasting insight into knowledge hiding is that due to prosocial motivation, it may not be hostile to knowledge sharing (Di Vaio et al., 2021; Xiong et al., 2021; Xiao and Cooke, 2019).

The findings revealed that skilled employees quit sharing knowledge to stop conflicts when there was debate, as *“the continuous argument cannot reach an agreement or solve problems but can ruin interpersonal relations. Under this situation, I stop sharing knowledge”* (Mg11). A similar example showed that skilled employees could hide knowledge when picking out other colleagues’ mistakes in public. Sharing knowledge on such occasions might render the colleagues to lose face, eventually destroying the friendships between skilled employees and those who made the mistakes. The above illustrations are parallel to the findings of Pheng and Leong (2000). It is not polite to share and talk about other people’s mistakes or hardships in a public place; as a result, hiding knowledge is a wise way to keep harmony. This finding is also in line with Chinese corporate culture—pursuing collective harmony and saving face (Huang et al., 2011). To keep a harmonious relationship, Chinese people tend to state good things or keep silent instead of directly refusing others’ requests (Young, 2014; Huang et al., 2011; Leung and Chan, 2003). Accordingly, it was evident that skilled employees hid knowledge to protect their interpersonal relationships in the collective interest rather than personal interests. Knowledge hiding in these situations has positive influences (Xiao and Cooke, 2019; Huang et al., 2011).

The second instance of non-harmful hiding in the current study involved employees telling colleagues they had no time to avoid heavy dependency. On one side, skilled employees might hope to save time due to the tight work schedules. On the other side, the mentors reduced the frequency of sharing or hid knowledge in some cases because they expected the apprentices to develop independent learning abilities (Xiong et al., 2021). This type of knowledge hiding did not hinder knowledge sharing but for the employees’ self-growth. Hence, knowledge hiding for this sake should be a positive behaviour for the learners.

Another exceptional example of knowledge hiding was informal knowledge sharing approaches (training sessions). The senior managers, who often acted as the trainers, stated that they might hide a specific amount of knowledge during the training on account of the limited training hours. Within the fixed time, the trainers could not explain the knowledge in detail to every employee. In this case, hiding knowledge did not emerge from the voluntary will of skilled employees but the time factor. This finding deals with the influence of time pressure on knowledge hiding, which has been mentioned in the literature (Ahmad and Karim, 2019; Riege, 2005). However, little research has indicated that knowledge hiding caused by

the time factor is not necessarily a hostile behaviour or barrier to knowledge sharing. This result could enhance understanding of the positive and negative sides of knowledge hiding in the knowledge management literature, as highlighted by Hilliard et al. (2022) and Xiao and Cooke (2019).

As concluded above, skilled employees actively shared tacit knowledge with their colleagues through formal and informal approaches. In the meantime, they could choose playing-dumb and rationalised methods to hide knowledge for varied reasons. This consequence confirms that knowledge sharing and hiding coincided at the small family business. Moreover, it responds to the calls for investigating the new conceptualisation of simultaneous knowledge sharing and hiding (Aleksic et al., 2021; Hadjielias et al., 2021; Pereira and Mohiya, 2021; Su, 2020; Gagne et al., 2019). Through analysing the findings, it can be shown the simultaneous knowledge sharing and hiding of skilled employees, as summarised in Table 29.

**Table 29: Summary of the simultaneous knowledge sharing and hiding**

Knowledge Hiding Behaviours in the Findings	Knowledge Hiding Methods Based in the Literature	Purpose for Hiding	Occasions of Happening	Relationship with Sharing
<b>Telling others no time</b>	Rationalised hiding	Saving time; Helping the subordinates' self-development	Formal and Informal	Not harmful
		Self-protection		Harmful
<b>Pretending not to know the relevant knowledge</b>	Playing dumb	self-protection	Informal	Harmful
<b>Sharing limited knowledge</b>	Playing dumb	self-protection	Informal and formal	Harmful
<b>Stop sharing</b>	Playing dumb	Protecting collective interests (corporate harmony and interpersonal relationship)	Informal	Not harmful

Sources: the researcher's summary

These two behaviours cannot be simply understood from the angles of two opposite concepts or entirely separate constructs (Connelly et al., 2012; Ford and Staples, 2010; Ford and Staple, 2008), because skilled employees as knowledge sharers played an essential role in both behaviours (Chen et al., 2018). When facing sharing, individuals had the freedom to decide to



hide knowledge and how much they were prepared to share. As a large number of scholars such as Hadjielias et al. (2021), Pereira and Mohiya (2021), Gagne et al. (2019) and Connelly et al. (2012) have suggested, knowledge sharing and hiding may have similar behavioural expressions, yet the potential reasons and antecedents are strikingly different (Connelly et al., 2012). As a result, the second research objective regarding how skilled employees shared and hid knowledge in the small family business has been fulfilled. The next section will further discuss the simultaneous knowledge sharing and hiding through investigating the reasons for these two behaviours.

### 5.3 Reasons for Tacit Knowledge Sharing and Hiding

**Research Objective 3:** *To analyse why skilled employees share and hide tacit knowledge and provide the appropriate recommendations for motivating knowledge sharing and mitigating knowledge hiding.*

In exploring Theme Three, the current study unfolded skilled employees shared and hid knowledge emerging from their motivations, and both of these behaviours were affected by the corporate context of the small family business. Hence, the explanations for knowledge sharing and hiding draw upon the corporate context and individual motivations.

Three sub-themes are discussed in depth to achieve Research Objective 3: 1) to explore why skilled employees share tacit knowledge; 2) to explore why they hide tacit knowledge; 3) to accommodate recommendations. Each sub-section will be specifically explained below.

#### 5.3.1 Reasons for Knowledge Sharing

**Sub-theme One (Theme 3a):** *To analyse why skilled employees share tacit knowledge in a small family business.*

The findings on reasons for knowledge sharing in the case-study small family business are similar to the results of the past studies. These studies have found that the reasons why skilled employees shared knowledge were related to the context of small family businesses (Chatterjee et al., 2021; Cormican et al., 2021; Butt, 2020) and depended on individual motivation to share (Pereira and Mohiya, 2021; Nham et al., 2020; Gagne et al. 2019; Chen et al., 2018; Slam et al., 2018; Stenius et al., 2017; Cavaliere et al., 2015). Accordingly, the

following paragraphs discuss reasons for tacit knowledge sharing based on the corporate context of the small family business and individual motivations to share in SDT.

#### ***5.3.1.1. Corporate context and knowledge sharing***

The case-study small family business had an instrumental corporate context to motivate skilled employees' knowledge sharing behaviours, for example, the support from the owner-manager, cultural strengths, close interpersonal relationships and a reward system. These outcomes match a consensus in the past studies that corporate context is an essential reason for knowledge sharing behaviours in small family businesses because of their distinctive feature—family involvement (Botero et al., 2021; Cunningham et al., 2017, 2016; Lin, 2013; Zahra et al., 2007). The corporate context of the studied company embodies the influences of family involvement.

#### **The role of the owner-manager**

The owner-manager played the predominant role in the management and development of business at the case company, including managing knowledge sharing practices. Prior literature shows this as one of the distinctive characteristics of small family businesses. According to Mallen et al. (2015), knowledge sharing relies on the owner-manager or family members in the family business management. At the case company, the owner-manager valued the employees' knowledge; thus, there were multiple platforms for formal and informal knowledge sharing in this business.

The owner-manager organised a variety of off-the-job activities: group trips, group dinners and karaoke. Singing karaoke is a common and popular group activity in various Chinese organisations but does not commonly occur in Western companies. On the one hand, these off-the-job activities could release the pressure on the employees under the '996' working schedule; on the other, it helped the small family business enhance the employees' cohesion and mutual understanding. Some employees working in the busy routines did not have the chance to communicate with those in other departments. Doing so facilitated knowledge sharing behaviours and enhanced employees' motivation to share (Cunningham et al., 2017, 2016). However, the findings of the various off-the-job activities that the owner-manager organised differ from parts of the literature. Due to small companies' limited resources, owner-managers invest less financial support and time in sharing practices (Levy et al., 2003).

Therefore, multiple off-the-job activities provide potent evidence to owner-managers concerning the importance of investment in small businesses' knowledge sharing activities.

The study also presented that the owner-manager held an open and sincere attitude towards employees' criticism. The employees admired that the owner-manager could carefully consider their suggestions and modestly accept their criticism. It established intimate relationships between the owner-manager and the employees, more like friendships than leader-member relationships. As King and Marks (2008) and Uday et al. (2006) have advised, supportive managers could help create a desirable work environment where people want to be engaged in sharing activities and actively use others' knowledge. The owner-manager was an excellent role model for the employees' behaviours, imperceptibly influencing the employees' awareness and knowledge sharing behaviours. Corporate members are inclined to act some behaviours according to what their leaders expect and appreciate them to do (Cabrera et al., 2006). In Chinese family businesses, the leaders play a 'patriarchs' role; thus, most people will listen to the leaders and follow their behaviours (Zhou, 2019). As presented in the findings, the owner-manager freely told what she knew to the employees and modestly listened to different voices from the employees. Thereby, the employees followed the owner-manager's behaviours and spontaneously gave away their knowledge to those in need.

### **Collective culture with the notion of family**

The second aspect of corporate context found in the case-study company was the collective corporate culture, determined by the founder and the current owner-manager. This result has a commonality with the literature. Influenced by family involvement, owner-managers or top managers in the family play the central role in family businesses (Mallen et al., 2015). The culture of family businesses is determined by the beliefs and aspirations of founders (Denson et al., 2004), inherited and developed by the leaders from the next generation (Botero et al., 2021; Cunningham et al., 2017, 2016; Lin, 2013; Zahra et al., 2007), but it still reflects the values, beliefs and goals of the dominant family (Botero et al., 2021). When the case company was founded, the first owner-manager developed a culture that welcomed employees to express their knowledge. He also rewarded those who had innovative ideas with a bonus. The current owner-manager inherited and continuously developed this kind of corporate to continuously motivate the employees to share knowledge.

The collective culture stood for the beliefs of the owner-manager and the owning family within the small family business. All the family members conveyed that *“knowledge should not be secret”*. Most of the employees viewed knowledge sharing as a glorious thing because they felt honoured that their knowledge could be available for collaborative development. Under this belief, the employees believed knowledge sharing was their obligation. Sharing knowledge became a spontaneous workplace behaviour. Some behaviours breaching knowledge sharing beliefs, such as knowledge hiding, were viewed as improper actions. As a consequence, most employees voluntarily followed the collective norms and beliefs. This finding accords with the research of Xiong et al. (2021). R&D team members from collective cultures, such as China, deemed knowledge hiding undesirable for their team members (Xiong et al., 2021). However, recognising that the collective corporate culture provoked skilled employees to share knowledge differs from Chirico and Nordqvist (2010), who argued that a centralised culture protects the inertia of knowledge resources in the family businesses.

Moreover, a corporate culture is not a homogenous construct (McDermott and O’Dell, 2001). It comprises multiple sub-cultures characterised by distinctive values and norms that enable the employees to have different perceptions of knowledge and knowledge movements from other members in the same enterprise (Pentland, 1995). For example, there were two salient sub-cultures within the investigated business—the family notion and the knowledge sharing culture. Firstly, the family of the owner-manager had a strong ‘big family’ notion, embodying the nature of a family business. The owner-manager was affected by this notion and perceived each employee as a member of her family. Gradually, the family notion became rooted in the collective corporate culture of the researched small family business. A common and significant expression of *“We are family”* was found in most participants’ data; skilled employees who had worked in this form of collective culture for a long time perceived the organisation as their second family. Naturally, these employees had a high commitment and loyalty to the organisation, and they were happy to contribute tacit knowledge to the company. This outcome reflects an essential characteristic of Chinese culture in the existing literature (Young, 2014; Lin, 2013; Huang et al., 2011). However, the small number of employees from the non-family group did not share this view; they perceived knowledge as their personal assets. Whether they chose to share it was irrespective of the family notion but related to their motivations, such as money or confidence.

Second, the case-study small family business had a knowledge sharing culture incorporated into its collective culture. As demonstrated above, the sub-cultures depended upon the founder and the current owner-manager, who held important positions in the owning family. The founder, the father of the current owner-manager, valued and respected the employees' suggestions. Accordingly, the founder developed a knowledge sharing culture. The current owner-manager inherited and continuously developed this kind of corporate culture. Many senior members have worked here from the start of their careers until now. The knowledge sharing culture became a necessary enabler for the knowledge sharing of skilled employees, especially the senior managers.

The influence of the collective corporate culture on knowledge sharing can be understood based on SDT by explaining the satisfaction of skilled employees' psychological needs. Skilled employees in the studied firm had high commitment and loyalty, identified as altruism, an autonomous motivation for knowledge sharing (Hsu et al., 2007). This is because collectivism and face-saving subcultural traits can help fulfil the competency and relatedness of psychological needs (Huang et al., 2011). These findings contribute to using SDT to understand the influence of the corporate culture on knowledge sharing behaviours.

### **Interpersonal relationships**

The consensus perception of the third helpful corporate characteristic was the close interpersonal relationships in the company. Due to the support of the owner-manager and the collective culture, it is not surprising that the case company had a strong bond of interpersonal relationships among the employees, which made their interactions smooth. On one side, there was a strong kinship and family bond between the family members built on the blood. The mutual dependencies among family members helped them actively share knowledge with each other (Cormican et al., 2021; Karra et al., 2006). On the other side, with the help of the family notion in the collective culture and various group activities, the non-family employees formed a 'big family' concept and a solid emotional bond with the company. Even if there was an argument, skilled employees would not be truly angry with each other. This situation strengthened mutual trust between family members and non-family employees, providing a valuable foundation for non-family employees' tacit knowledge sharing (Motoc, 2020; Lin, 2007). Relational-oriented behaviour falls into the basic norm of the unique Chinese culture (Gagne et al., 2019; Cunningham et al., 2016; Zhang, 2009).

Chinese people focus on responsibility and obligation to their family members but stress reciprocity with familiar people (Lin, 2013). The close interpersonal relationships among family members and between family and non-family employees embodied both sets of qualities.

### **The reward system**

There were a variety of rewards in this case-study business, such as bonuses and paid external training for employees' outstanding work performance, non-monetary rewards, and physical prizes and verbal recognitions for knowledge sharing. This outcome does not conform to the statement of Zhou (2019) that family businesses are less likely to use incentivised systems for knowledge sharing. It was because the founder of this small family business had valued employees' knowledge, and the current owner-manager had inherited the 'big family' value from her father.

The findings concerned with rewarding and knowledge sharing behaviours in the current study also differ from parts of the literature. Within past research, rewards either positively or negatively affect people's knowledge sharing (Aleksic et al., 2021; Islam et al., 2018; Witherspoon et al., 2013; Olatokun and Nwafor, 2012), which is determined by how people perceive the cost-benefit relationship of such behaviour (Osterloh and Frey, 2000). When believing that the benefits (monetary incentives or reciprocity) equal or surpass the costs (time), people will share knowledge; otherwise, they will not do so (Ahmad and Karim, 2019). However, the current study only discovered a positive effect of rewards on knowledge sharing behaviours. From analysing corporate documents and data from interviews, only a small group of employees could obtain the bonus. The amount of bonus they could get relied on how well they supervised their subordinates through sharing knowledge. Most of the ordinary employees did not have monetary rewards. Under these circumstances, employees wanted to acquire the bonus through working hard and earnestly sharing knowledge. The result also surfaced that whichever reward (monetary incentives or verbal recognition) skilled employees acquired, they felt acknowledged by others. Therefore, the rewards enabled fostering skilled employees to share knowledge.

Within SDT, rewards are external motivations, one of the controlled motivations to knowledge sharing behaviours. It is associated with individuals' expectation of rewards when

people are required to join formal knowledge sharing or ask for help on informal occasions (Gagne et al., 2019; Wang and Hou, 2015). All the participants presented that the various rewards motivated them to share tacit knowledge, as the rewards were perceived as a form of acknowledgement of their knowledge and effort in their sharing jobs. This finding indicates that the rewards were external motivations, one of the controlled motivations, for skilled employees' knowledge sharing behaviours.

The rewards as external motivations were also found to positively affect skilled employees' sense of being acknowledged for sharing knowledge. The potential reasons may be related to satisfying individual basic psychological needs through the rewards and collective culture with the 'big family' notion. First, in line with SDT, when the needs for relatedness and competence towards a behaviour are satisfied, people will be inclined to internalise its value and regulation, thereby performing this behaviour (Wang and Hou, 2015). In this sense, skilled employees felt respected and acknowledged in terms of their knowledge and knowledge sharing when receiving a reward. During this process, external rewards gradually foster skilled employees' internal motivations to share, such as a sense of confidence and trust (Gagne and Deci, 2005). Second, in the collective culture with the 'big family' notion, rewards increase employees' commitment to the case organisation as an autonomous motivation for knowledge sharing. This consequence echoes the research of Gagne et al. (2019), external regulation among Chinese people was positively aligned with knowledge sharing, possibly due to the corporate culture or corporate context in China, where not sharing behaviours could lead to being punished. Third, rewards influencing skilled employees' confidence also reflect the interactions between autonomous and controlled motivation in SDT. This interactive process depends on how well one motivation can fulfil people's fundamental psychological needs—autonomy, competence, and relatedness (Wang and Hou, 2015; Gagne, 2009; Gagne and Deci, 2005). In this scenario, when skilled employees obtained rewards (external motivations), they felt respected and acknowledged by the organisation. In other words, skilled employees' psychological competency needs were fulfilled. Therefore, SDT contributes to explaining in depth why rewards facilitated skilled employees' knowledge sharing in this small family business.

Overall, the case-study company had great corporate strengths to motivate skilled employees' knowledge sharing behaviours. The owner-manager inherited and developed an

advantageous corporate culture for knowledge sharing, which strengthened the interpersonal relationships among the employees. In the meantime, the owner-manager provided skilled employees with various rewards. The corporate context facilitated establishing a helpful working environment for tacit knowledge sharing. It also inspired individual motivations for knowledge sharing behaviours, such as a sense of trust and confidence.

#### ***5.3.1.2. Individual motivations and tacit knowledge sharing***

In exploring the findings, this study illustrated that the corporate context of the business enhanced skilled employees' sense of trust toward their audiences and confidence in their knowledge. These were identified as individual motivations for knowledge sharing behaviours in past studies based on SDT (Cormican et al., 2021; Khvatova and Block, 2017; Olatokun and Nwafor, 2012; Lin, 2007). It is because the sense of trust and confidence are closely associated with the psychological needs of relatedness and competency in SDT (Gagne and Deci, 2005; Ryan and Deci, 2000). The next paragraphs will discuss precisely these two individual motivations for knowledge sharing.

##### **Sense of trust**

Preliminarily, the findings concerning the sense of trust as an acknowledged individual motivation for knowledge sharing in the case-study small family business have a commonality with the existing literature (Cormican et al., 2021; Khvatova and Block, 2017; Olatokun and Nwafor, 2012; Lin, 2007). As Gagne and Deci (2005) elucidated, a sense of trust can help enhance goodwill, mutual understanding and exchange among employees. It satisfies the psychological needs of relatedness in light of SDT. However, the current study discovered that a sense of trust played more of a role in informal knowledge sharing activities than formal ones. Taking a closer look, when sharing tacit knowledge on formal occasions, skilled employees were required to share by the leaders; thereby, they did not have much discretion over doing so. In these situations, knowledge sharing behaviours aimed to achieve the collective targets. If skilled people did not execute sharing tasks well, their careers would face problems, such as the deduction of bonuses. To this end, skilled people shared tacit knowledge because of pressure or worries about the potential problematic outcomes. In SDT, controlled motivations derive from reward systems and status within a team or an



organisation (Wang and Hou, 2015). That said, the sense of trust toward the colleagues tends to be a form of external motivation (fears of being punished), a controlled motivation for knowledge sharing (Gagne and Deci, 2005).

Another instance of the sense of trust as a personal motivation for knowledge sharing behaviours occurred in informal situations where sharing was what employees wanted to do rather than what they had to do. As a result, skilled workers had more autonomy to decide whether and with whom to share. Trust made skilled employees believe that their knowledge and knowledge sharing were significant to the colleagues. By sharing with those they trusted, skilled people could obtain enjoyment; thus, they felt happy to tell what they knew to others. Linking with SDT, the sense of trust in informal knowledge sharing practices is an autonomous motivation (identified motivation or intrinsic motivation). It is because skilled people act on knowledge sharing behaviours out of their self-value (Gagne and Deci, 2005) or out of their enjoyment and interest in the activity itself (Ryan and Deci, 1985). Herein, to a general extent, a sense of trust is known as an autonomous motivation in the current study.

Investigating close interpersonal relationships in the former section presented a sense of trust derived from this reason. When sharing occurred between family members or with familiar people, like friends, skilled workers were more likely to wholeheartedly devote themselves to sharing processes or fully give what they knew. In this case, people shared knowledge out of self-value (Deci et al., 2017; Gagne and Deci, 2005) or out of their enjoyment and interest in the activity itself (Ryan and Deci, 1985). As such, based on SDT, a sense of trust of skilled employees towards the family members or familiar people was an autonomous motivation for knowledge sharing.

Conversely, when sharing knowledge with those with whom they had simple work-related relations, skilled people could not enjoy sharing and did not like to provide all their knowledge. In this instance, the trust did not arise from self-fulfilment but from status in the team or the studied company. In line with SDT, the motivation for fulfilling the public-image needs in a relationship is an introjected motivation (Wang and Hou, 2015). Exceptionally, the owner-manager asserted that her sense of trust toward all employees was equal. The non-family employees stated that the owner-manager treated the family members better than the non-family employees. This finding indicates that treating each employee the same was

the expectation of the owner-manager. However, there were several dilemmas for the owner-manager to accomplish this. As the owner-manager highlighted, considering how to solve the issue of unfairness between the family members and non-family employees is significant to enhancing trust in the studied business.

### **Confidence**

Skilled people recognised confidence in knowledge and knowledge sharing as the second individual motivation for sharing behaviour because it derived from the satisfaction of competent psychological needs regarding SDT (Wang and Hou, 2015; Gagne, 2009; Gagne and Deci, 2005). However, skilled people in different groups (senior employees and young employees) did not hold similar views on how their confidence influenced knowledge sharing behaviours. First, the old skilled employees who had worked at this business for decades believed that the exact value of knowledge was to pass it on to the young rather than hide it. Consequently, the old skilled employees had strong confidence in their knowledge instead of fears of being replaced by others. In this instance, skilled employees in the old group shared tacit knowledge due to how they perceived the importance of their knowledge and self-worth to others rather than out of self-interest (Gagne and Deci, 2005). Linking with SDT, confidence is an identified/integrated motivation for knowledge sharing rather than an intrinsic motivation (Gagne et al., 2019; Stenius et al., 2016; Gagne and Deci, 2005).

The perceptions of the young group were different. The young employees acknowledged that their confidence inspired them to share knowledge, but there was a premise that they would not lose ownership of the knowledge or be replaced by other colleagues. As a consequence, the young employees shared knowledge through consideration of their public reputation. More surprisingly, a finding also surfaced that the confidence of skilled employees was concerned with face gain. For example, when the senior managers conducted training, if they could not address the subordinates' problems, they would lose face. Thus, the old managers kept learning to promote themselves. There was the same situation in the young group. With reference to SDT, facing concern helps fulfil the competency and relatedness of psychological needs (Huang et al., 2011). People are willing to establish a good personal reputation and relationships with others, connecting with introjected motivation (Wang and Hou, 2015). Accordingly, the above examples demonstrate that confidence is an introjected motivation when skilled employees share knowledge to build good public reputations (Gagne and Deci,

2005).

Through analysis, based on SDT, it can be found that a sense of trust and confidence of skilled employees could be viewed as either autonomous or controlled behaviours for knowledge sharing. These motivations change in quality (Gagne, 2009) because changes in motivational quality are perceived as changes in types of motivations (Deci and Ryan, 2000). A sense of trust and confidence for knowledge sharing behaviours might vary from amotivation to intrinsic motivation, depending on how skilled employees perceived these motivations, such as their public image, the importance of knowledge and knowledge sharing, or well-being. Hence, formal or informal settings and groups of people with diverse characteristics (family or non-family members; older or younger people) are the external social environments that influence the strength or quality of employees' motivations.

Second, the findings showed that a sense of trust and confidence could change from controlled motivations to autonomous motivations in different external knowledge sharing situations. In SDT, this is known as extrinsic motivation internalisation (Gagne, 2009; Ryan and Deci, 2000; Deci and Ryan, 1985b). As soon as the old skilled employees shared knowledge on formal occasions for public-image purposes, their confidence was the introjected motivation. However, when the old employees absorbed the corporate beliefs and family notion, their confidence became the identified motivation during both formal and informal knowledge sharing activities. The old managers identified this corporate knowledge and considered knowledge sharing as valuable behaviour to the other colleagues and the company. Thus, skilled employees from the old group changed their confidence from an introjected motivation into an identified motivation; in SDT, this is the process of external motivation internalisation (Wang and Hou, 2015). Complying with the insights of Gagne and Deci (2005) and Deci et al. (2017), the social context and individual differences can significantly affect the basic psychological needs for autonomy, competence and relatedness. Herein, formal or informal knowledge sharing and groups of people with diverse characteristics (family or non-family members; older or younger people) would influence the quality of employees' motivations or internalising processes of external motivation (Gagne and Deci, 2005). Nevertheless, most past research has not accounted for how the quality of the motivations and internalising processes of external motivation affect knowledge sharing based on SDT (Gagne et al., 2019; Stenius et al., 2017, 2016). Therefore, the current study contributes to

offering evidence in these areas by explicitly investigating a small family business's sense of trust and confidence.

Furthermore, a sense of trust toward those in fundamental work relations in informal knowledge sharing activities and the confidence of the young employees explained the introjected motivation in-depth within SDT. On these occasions, skilled employees shared tacit knowledge for public-image purposes. As Gagne et al. (2019) stressed, the relation between introjected motivation and knowledge sharing is unknown. Hence, the finding that a sense of trust informal knowledge sharing activities, and the confidence of the young employees as an introjected motivation, motivated the occurrence of knowledge sharing, provides compelling evidence of the relationship between introjected motivations and knowledge sharing.

To briefly conclude on Sub-theme One (Theme 3a), the case-study small family business had plenty of corporate strengths to provoke skilled employees' knowledge sharing behaviours, such as the support of the owner-manager, the collective corporate culture, the tight-knit interpersonal relationships and the reward system. This advantageous characteristic helped skilled employees share knowledge and strengthened their motivations for sharing—the sense of trust toward others and the confidence in their knowledge and knowledge sharing. Based on SDT, a sense of trust and confidence of skilled employees could be viewed as either autonomous or controlled behaviours for knowledge sharing, depending on different knowledge sharing practices (formal or informal activities) and groups of people (family or non-family members; older or younger). Therefore, this section completes the objective of Sub-theme One (Theme 3a) concerning why skilled employees shared tacit knowledge.

### **5.3.2 Reasons for Knowledge Hiding**

***Sub-theme Two (Theme 3b):*** *To analyse why the skilled employees hide tacit knowledge in a small family business.*

As with the reasons for knowledge sharing, skilled employees hid knowledge as a result of the detrimental corporate context and their motivations for knowledge hiding. The detrimental corporate context affected skilled employees' motivations for knowledge sharing and caused their willingness to hide knowledge. The following sections will give a detailed explanation of

the reasons for knowledge hiding from both sides.

#### ***5.3.2.1 Detrimental corporate context and knowledge hiding***

Within the studied company, the detrimental corporate context leading to knowledge hiding prominently exposed the unfair issues caused by the dominant role of family involvement, such as issues in managing the family members, low salaries for the non-family employees and close interpersonal relationships. Zhou (2019) stated that owner-managers in Chinese family businesses find it challenging to treat non-family and family members equally concerning promotions, salaries, and trust. The issues in managing the family members and low salary for the non-family employees causing knowledge hiding mainly demonstrated the conflicts between the family and non-family employees. In contrast, knowledge hiding due to intimate interpersonal relationships was common to both the family members and non-family employees.

#### **Issues of managing family members**

In exploring the corporate reasons for knowledge hiding, a common finding in past literature was discovered—the role of family involvement (Motoc, 2020; Zhou, 2019; Cunningham et al., 2017, 2016; Zahra et al., 2007). Due to the nature of family businesses, the owner-manager employed many of family members and offered them high-level job positions, for example, department managers or managerial positions. Notably, many senior relatives of the owner-manager were working in this business. Thus, the owner-manager had to grant them a large amount of authority and privilege. Thanks to this, the non-family knowledge employees hid knowledge due to issues of the owner-manager indulgently managing family members: favouritism towards family members and infighting among the relative managers.

Favouritism towards family members in the current study meant that the owner-manager provided her relatives with more flexible working hours and better compensation than the no bonuses and the '996' working schedule of the non-family people. The owner-manager even permitted the family managers to use their names when applying for patents and intellectual properties, although they had not worked on the innovations in question. These situations brought about the non-family employees' dissatisfaction. However, no one could oppose this publicly; the non-family employees wanted to keep their jobs. Instead, they chose to hide knowledge. Related to the literature, favouritism towards family members embodied a strong

asymmetry of power in a family business (Chrisman et al., 2010; Michailova and Husted, 2003).

Giving more authority to the family members and the strong asymmetry of power caused conflicts among family members and between the family and non-family members (Chrisman et al., 2010; Michailova and Husted, 2003). Within the studied firm, infighting and conflicts over their interests existing family members. This situation led to knowledge hiding among both groups: family and non-family. Family members, when facing competitiveness amongst themselves, might opt to hide knowledge for self-protection. The non-family employees hid knowledge when experiencing infighting among family employees. The non-family employees did not want to be involved in the situation and did not want their tacit knowledge to be taken advantage of by the family members. Such issues can fracture the interpersonal relationships among people; relational-based knowledge sharing culture may then be hindered (Motoc, 2020), and a network structure that excludes outsiders may be established (Lin, 2013). Gradually, the non-family members became dissatisfied and felt reluctant to share knowledge.

According to SDT, the non-family members' motivations for sharing were negatively influenced by the above issues of managing the family members, because at those moments, the non-family members' sense of trust, namely psychological needs of relatedness, was weakened (Gagne and Deci, 2005; Ryan and Deci, 2000). As elucidated by Deci and Ryan (2011), feeling lost in one or more of these psychological needs can affect one's mood and well-being. To this end, the non-family members' motivation for knowledge sharing was undermined by management issues among the family members; thereby, knowledge hiding occurred.

### **Low salaries and no bonus for the non-family employees**

Influenced by family involvement, the non-family employees had low salaries, and only a few could attain a bonus. Even though some non-family employees obtained the yearly bonus once or twice, they all admitted their salaries stayed low and had no bonuses in their monthly wage. In line with previous literature, no bonuses or low salaries for ordinary employees is a general phenomenon within small family businesses (Lin, 2013) due to restricted finance resources (Levy et al., 2003). Job insecurity and lack of rewards for knowledge sharing may

increase the possibility of knowledge hiding (Nguyen et al., 2022; Halvari et al., 2021; Wen and Ma, 2021; Haraldsen et al., 2019).

Due to a lack of monetary incentives, the non-family employees lost their motives for knowledge sharing in this business. The non-family skilled employees feared being replaced by others if they shared too much knowledge with co-workers. Within SDT, external regulations have a powerful influence on motivating a particular behaviour (Deci et al., 2017). However, in this case, a shortage of external regulations negatively affected the non-family employees' motivations for knowledge sharing. It caused the non-family employees to be willing to hide knowledge because their basic psychological needs of relatedness and competency could not be satisfied (Wang and Hou, 2015). This outcome contributes to understanding the interactions among different types of motivations in SDT.

The results also discovered that the owner-manager had a dilemma over the issues of the effects of family involvement on knowledge hiding. The prominent reason was the importance of the family notion in the collective culture. The managerial notions and modes of the owner-manager were rooted in her strong notion of 'big family' and collective culture. When taking over the business from last generation, the owner-manager wholly followed her father's managerial notions of giving better treatment to the family members than the non-family employees. Also, in traditional Chinese culture, the family has a rigid hierarchy among generations in which the junior members have to respect the senior members (Lin, 2013; Huang et al., 2011). Influenced by the traditional culture, sometimes the owner-manager had to respect the perceptions of the senior relatives, despite inappropriate perceptions. This situation elicits the second reason—the false thoughts of the family members on knowledge sharing and rewards. The family members perceived knowledge sharing as a fundamental responsibility and obligation rather than something worthy of being rewarded. Also, the family managers cared about short-term economic interests, whereas knowledge sharing was a long-term strategy. When managers endeavour to control employees, it will deteriorate people's behaviour (Kim et al., 2015). Therefore, these false managerial perceptions might give rise to knowledge hiding by the non-family employees.

Furthermore, the family notion and Chinese tradition affected the owner-manager's decisions. As Lin (2013) highlighted, personal preference and favouritism from the top

managers may make firms prioritise the knowledge of family members to maintain family harmony. Third, the owner-manager worried that rewards could not positively motivate non-family employees' knowledge sharing. This hesitation reflects the consensus perception on rewards and knowledge sharing in existing publications. According to Cress et al. (2006), individuals may share something useless or unimportant with others when knowledge sharing is rewarded. Therefore, rewards do not effectively help knowledge sharing but increase the HRM cost.

### **Close interpersonal relationships**

Another striking finding on the corporate context for knowledge hiding, differing from most insights in past literature, involves close interpersonal relationships. In the case-study business, skilled employees might hide knowledge when they saw colleagues with tight-knit friendships making mistakes in public. It was because correcting other people's mistakes in public might hurt others' faces, potentially destroying their good workplace friendships. This consequence is closely associated with face-saving (Yan et al., 2016) and the purpose of avoiding conflicts (Huang et al., 2011; Sonfield and Lussier, 2009; Zahra et al., 2007), which echoes the discussion on the bright sides of knowledge hiding.

Furthermore, from the SDT perspective, skilled people hiding knowledge to save other people's faces to protect their competent self-image in front of others (Leung and Chan, 2003) is identified as an introjected regulation (Wang and Hou, 2015; Gagne and Deci, 2005). At this point, it can be understood that a close interpersonal relationship could affect the employees' introjected motivation for knowledge hiding. This consequence increases understanding of people's motivation to hide knowledge based on SDT.

In brief, the corporate context of the current study exposes the role of family involvement in knowledge hiding, which implies the issues of unfairness between the family and non-family people in the investigated small family business. The detrimental corporate context gives rise to knowledge hiding by weakening the non-family employees' motivation for knowledge sharing or generating motivations for knowledge hiding. The following segment will provide an exquisite explanation.



### ***5.3.2.2 Individual motivations for knowledge hiding***

The current study has unveiled that the unfair issues caused by the family involvement, such as low salaries and no bonuses for the non-family workers in the first line, and the '996' working schedule, were the principal reasons influencing the motivation of skilled employees for knowledge hiding (Nguyen et al., 2022; Halvari et al., 2021; Wen and Ma, 2021; Xiong et al., 2021; Peng, 2013). Other motivations of skilled people for knowledge hiding included a sense of distrust toward their colleagues, fears of being replaced by others and time pressure. Each point will now be explained in light of SDT.

#### **Sense of distrust**

Resonant results of the past literature on the sense of distrust generating knowledge hiding were found in the research at hand (Hernaus et al., 2018; Černe et al., 2014). As discussed in 5.3.1, affected by the collective culture and the owner-manager's support, in most cases, skilled employees acknowledged that they trusted their colleagues and would like to share tacit knowledge with their co-workers. Nonetheless, a small group of people admitted that they did not often believe their colleagues as soon as they heard some negative perceptions toward newcomers from others or found that some learners had poor learning abilities. In these cases, skilled people might decide to hide their knowledge. These findings echo the relational characteristics of the family business—the outsider-excluding relations (Motoc, 2020; Davison et al., 2018; Lin, 2013). A newcomer was an outsider to the social relations in the office. If the other colleague in the team held negative thoughts about the newcomer and told something bad to the mentor, it would more or less adversely affect the mentor's sense of trust toward the newcomer, as the mentor and colleagues had been in the same social environment for longer than the newcomer (Lin, 2013). As a result, the mentor trust the team members more than the newcomer to some extent. Thus, the newcomer was excluded from the social environment (Motoc, 2020), and knowledge hiding would happen.

In the second instance, when the learner had poor learning abilities, skilled employees might distrust them, hiding knowledge. The possible reasons for this were the time factor (Halvari et al., 2021; Xiong et al., 2021; Ahmad and Karim, 2019; Riege, 2005) and the people who received knowledge (Zhang and Jiang, 2015). Employees, especially the non-family employees, followed the '996' working schedule (working hours from 9 a.m. to 9 p.m. on six

days per week). Most sharing tasks took place beyond their job duties. In an intensive working life, if the audiences learned at a languid pace during knowledge sharing activities, it would extend the working hours of the skilled employees. Timesaving for skilled employees themselves increased their sense of distrust toward the learners. In SDT, distrust lies with the psychological need for relatedness because when skilled people distrust the learners, they may not feel connected with them (Wang and Hou, 2015; Gagne, 2009). Hence, distrust was the significant motivation for knowledge hiding in the studied company.

In a comparison between the findings and literature on the sense of distrust, it is apparent that distrust and trust are two separate constructs but mutually correlated (McKnight et al., 2004; Mayer et al., 1995). Trust in this study refers to how much skilled employees were willing to contribute their knowledge. This process might risk them losing their ownership of the knowledge, but skilled employees were still willing to give their knowledge to the less experienced people (Huo et al., 2016, Peng, 2013). Conversely, in this case, a sense of distrust involved skilled members losing confidence in the learners and becoming concerned over whether the learners could bring harmful influences on them, such as wasting their time (Grovier, 1994). A sense of trust is the employees' motivation for knowledge sharing, and distrust is a separate motivation for knowledge hiding. This finding contributes to verifying that knowledge sharing and hiding are not opposite but synergetic behaviours.

### **Fears of being replaced by others**

In the results on skilled employees' confidence for knowledge sharing, the young employees feared being replaced by their colleagues if they shared their knowledge with them too much. Theoretically, it is related to the psychological need for competency, as the young skilled workers worried about losing their core competency and competitiveness (Ahmad and Karim, 2019; Wang and Hou, 2015). Connecting to the study by Peng (2013), to meet their needs of competency, people with high awareness of psychological ownership of knowledge are prone to conduct dysfunctional behaviours, such as knowledge hiding, to defend their knowledge against being controlled and mastered by other people. To this end, fearing being replaced by others was a motivation for the skilled employees to hide knowledge.

The above illustration was found in the young employee group rather than among the old employees, as presented in employees' confidence. It was because the young employees did

not have rich knowledge in the specific job, even though their experience or knowledge might be temporarily more up-to-date than other colleagues'. Once the knowledge was given out, it might threaten their job security. Besides, this situation also stems from the internal competitive environment. When working in an intensive internal competitive context, the young non-family employees felt threatened if they lost their core competitiveness through sharing. Unlike the young family members who did not worry about unemployment and the skilled senior employees who had core competitiveness, the young non-family members were the most vulnerable group to losing competitiveness. As such, the young non-family group was more likely to hide knowledge (Hernaus et al., 2018; Černe et al., 2014). In this sense, fears of being replaced or losing the ownership of knowledge was a significant motivation for the young non-family members to hide knowledge.

In addition to that, the young hid knowledge to avoid these threats, which helped them keep their public impression. It was because the co-workers could not obtain the core knowledge they had. Therefore, the public status would not be lost. Within SDT, according to Deci et al. (2017), when people attain external regulation, they may often experience contingent rewards and threats. Equally, when individuals act in a specific behaviour to enhance their public image, this is known as introjected motivation (Gagne, 2009). Accordingly, fears of being replaced or losing the ownership of knowledge in the current study tend to be relevant to introjected motivation based on SDT.

### **Time pressure from the '996' working schedules**

In the current study, the concept of '996' working hours has been mentioned. This means the employees work six days per week, and the working hours are from 9 a.m. to 9 p.m. each day. The '996' working timetable refers to the time pressure, which many prior studies have found to cause knowledge hiding (Shrivastava et al., 2021; Xiong et al., 2021; Ahmad and Karim, 2019; Stenius et al., 2016). In this business, compared to the flexible working hours of the family members, the non-family employees had to follow the corporate regulations rigidly. It implies the influences of the collective culture. As Zhang et al. (2017) claimed, employees working in the collective culture may not perform a specific behaviour that would damage the organisation. In this case, breaching the '996' working schedule was unacceptable in the collective culture. However, working following this timetable increased their enormous burdens mentally and physically, reducing their passion for taking part in sharing. It turns out

that hiding knowledge was the best choice for the non-family employees here.

Linking with SDT, the rigid '996' working schedule was concerned with the non-family members' psychological autonomy needs. Working by this timetable, the non-family members could not balance work and life; thus, they did not have sufficient autonomy in their working practices. In other words, the non-family members' autonomy-related needs for working and knowledge sharing could not be satisfied, and they believed that knowledge hiding was crucial to them (Wang and Hou, 2015; Gagne, 2009). As Deci and Ryan (2011) construed, feeling lost in one or more of these psychological needs can affect mood and well-being. This viewpoint has been concurred by Nguyen et al. (2022). Required to do overtime by the company, people will hold intense negative moods, such as anxiety, panic, and distress (Nguyen et al., 2022). According to Haas (2019), perceived autonomy is concerned with one's desire to self-regulate or self-organise their actions, which varies with their values, beliefs and lifestyles. In this scenario, the '996' working hours as imbalance lifestyles made the non-family members feel anxious and burnout, leading them to believe that hiding knowledge was significant for them at work instead of sharing. That said, time pressure was the autonomous motivation for knowledge hiding in the current study.

The significant findings revealed that nothing impeded the family members from hiding knowledge in the workplace; however, they shared knowledge and worked together to achieve the common goals of family and business. This result is underpinned by Zhou (2019): the personal interests of the family members are closely relevant to the business interests; therefore, they will fully mobilise their enthusiasm in the business operation and development. When the firm faces hardship, the family members will work together to help the company tide over difficulties (Zhou, 2019). Hence, the family members in the study preferred giving their knowledge to achieve their family's shared goals.

To conclude sub-theme two (Theme 3b), the reasons for knowledge hiding in the current study reflected the unfair issues between the family and non-family groups. The non-family employees were more likely to hide knowledge at work because of the unfair corporate context, including issues of managing the family employees, low wages and no bonuses for the non-family members, and close interpersonal relationships. Furthermore, the unfair corporate context adversely influenced the non-family employees' motivations for

knowledge sharing or brought about their motivations for knowledge hiding, such as their sense of trust toward learners, fears of being replaced and time pressure. In this case study, distrust, fears of being replaced and psychological pressure out of intensive time tend to be the autonomous motivations for knowledge hiding. It is because these motivations are sourced from self-interest needs. Wang and Hou (2015) proposed that autonomous motivations involve self-interests, enjoyment, and selfless care for others. At the same time, fears of being replaced may also be perceived as introjected motivation for knowledge hiding because it is a matter that knowledge hiding the young employees to avoid threats could help them keep the public impression. That was because the co-workers could not obtain the core knowledge they had. According to Gagne (2009), when individuals act in a specific behaviour to enhance public images, this behavioural motivation is known as introjected motivation (Gagne, 2009). Hence, this section contributes to the objective of Sub-theme Two (Theme 3b), dis-covering why the skilled employees hid tacit knowledge.

### **5.3.3 Recommendations for Motivating Knowledge Sharing and Reducing Hiding**

***Sub-theme Three (Theme 3c): To provide appropriate recommendations for motivating tacit knowledge sharing and reducing hiding in the case company***

Combining the reasons for knowledge sharing and hiding, the family members and non-family skilled employees had different insights. The family members were satisfied with the current corporate context, including culture, the strategies of the owner-manager on knowledge sharing, the reward system and the interpersonal relationships among people, because the company provided substantial chances and benefits for their sharing. In contrast, the non-family employees stated that this business should lessen the unfairness between the family and non-family groups, for instance, by reducing the privileges of the family members, adding bonuses, and adjusting the '996' working schedule. These results illuminate that family involvement in knowledge sharing and HRM was the central reason for the unfair issues between the family and non-family employees, resulting in knowledge hiding behaviours among skilled employees.

The remedies posited by the non-family employees echoed the findings of the previous literature (Motoc, 2020; Cunningham et al., 2017, 2016; Lin, 2013; Zahra et al., 2007). Small family businesses should appropriately manage family members (Lin, 2013; Zahra et al., 2007)

and wisely exert the positive effects of family involvement on internal management, such as improving internal relationships and emotional bonding (Motoc, 2020; Cunningham et al., 2016; Lin, 2013). Equally, as monetary incentives positively influenced skilled employees' knowledge sharing, particularly with the non-family employees, setting up bonuses is imperative for the case-study business. It is underpinned by the literature (Aleksic et al., 2021; Islam et al., 2018; Witherspoon et al., 2013). Importantly, the owner-manager is aware of these issues and is attempting to solve them to promote knowledge sharing (Cunningham et al., 2017, 2016; Zahra et al., 2007) and improve knowledge hiding (Hadjielias et al., 2021). Hence, the above recommendations on motivating knowledge sharing and mitigating knowledge hiding could act as thought-provoking approaches for the practitioners of family companies across different countries.

To summarise, Theme Three is to explore why skilled employees share and hide tacit knowledge and provide appropriate recommendations for motivating knowledge sharing and mitigating knowledge hiding. The reasons for knowledge sharing and hiding have been discussed in-depth from the corporate context and that of SDT. Skilled employees' knowledge sharing and hiding behaviours originated from different reasons, even if some reasons for both behaviours overlapped, such as close interpersonal relationships and a collective culture with the family notion. Having analysed the motivations for knowledge sharing and hiding behaviours based on SDT, it can be found that knowledge sharing and hiding are not opposite but synergetic, as the motivational reasons triggering these two behaviours are pretty distinctive. Exploring the reasons for knowledge hiding exposed how unfairness between family and non-family employees, caused by family involvement in business operation and management, was the central reason for knowledge hiding behaviours of skilled employees. Therefore, the key to motivating knowledge sharing and improving hiding is to solve unfairness in the family business. Accompanying all the findings in Theme Three, Research Objective 3 has succeeded.

#### **5.4 Conceptual Framework for Simultaneous Knowledge Sharing and Hiding**

**Research objective 4:** *To develop a conceptual framework to visualise knowledge sharing and knowledge hiding simultaneously.*

The last research objective is to build a conceptual framework for simultaneous knowledge

sharing and hiding behaviours. Before explaining the framework in the current study, it is necessary to elaborate the integrated reasons for the simultaneous knowledge sharing and hiding behaviours, as investigating simultaneous both behaviours is the core of the research at hand. Section 5.3 has construed knowledge sharing and hiding separately, rather than as a whole. Therefore, this section will primarily illuminate the integrated reasons for simultaneous knowledge sharing and hiding behaviours and then exhibit the developed conceptual framework.

#### **5.4.1 Integration of All the Reasons for Simultaneous Knowledge Sharing and Hiding.**

In the first instance, knowledge sharing and hiding behaviours are driven by the corporate context of the small family business. The helpful corporate context, such as the collective culture, the owner-manager's support, intimate interpersonal relationships and rewards, can motivate employees to share knowledge. In contrast, the detrimental features, for example, the favouritism of the owner-manager toward family members, the low compensation and the intensive timetable for the non-family employees, cause them to hide knowledge. The detrimental corporate context reflects unfairness between the family and non-family employees, which arose primarily from the family involvement in business operation and management.

However, several same corporate characteristics (collective corporate culture, the intimate interpersonal relationship and high compensation for the family members) influence skilled people, particularly non-family employees, to share and hide knowledge simultaneously. To be precise, the owner-manager supports various formal and informal channels for knowledge sharing and holds an open and sincere attitude towards employees' criticism, which engenders the active occurrence of knowledge sharing. Nevertheless, at the same time, the owner-manager provides unfair treatment between the family and non-family employees, which results in knowledge hiding. Similarly, on the positive side, the collective corporate culture creates a 'big family' work environment and intimate rapports among employees; thereby, knowledge sharing takes place naturally. Nonetheless, on the other side, the collective corporate culture and the 'big family' value make the top managers from the family take the knowledge and knowledge sharing behaviours of the non-family members for granted. Consequently, it causes pressure and dissatisfaction from the non-family group. In

doing so, they choose to hide knowledge. Hence, the above findings demonstrate that the initial first proposition has been extended as below:

***P1: The corporate context affects the happening of knowledge sharing and hiding behaviours simultaneously.***

In the second aspect, the corporate context of the small family business also affects skilled employees' motivations for knowledge sharing and hiding behaviours. In conformity to the statements of Gagne and Deci (2005) and Deci et al. (2017), the outside working environment and individual differences may significantly fulfil the basic psychological needs of autonomy, competence and relatedness or undermine these needs. In this study, the collective culture, the owner-manager's support and close relationships among people can enhance skilled employees' sense of trust toward colleagues and confidence in their knowledge; thereby, knowledge sharing occurs actively in the studied company. In contrast, the same corporate environment makes skilled employees distrustful and afraid of being replaced by others. Then, skilled people will hide tacit knowledge for varied reasons, although some of these are not necessarily detrimental to knowledge sharing and the company, for example, protecting the collective interests (avoiding conflicts to protect interpersonal relationships; the subordinates' self-growth). This result provides more evidence of the bright side of knowledge hiding (Hilliard et al., 2022; Xiao and Cooke, 2019). Herein, the support for the owner-manager, collective corporate culture with a 'big family' value, a close interpersonal relationship and reward systems are the social context. These outcomes elicit the second proposition:

***P2: The corporate context affects the employees' motivations for knowledge sharing and hiding, respectively.***

Within the helpful corporate context, skilled employees develop a sense of trust and confidence to share knowledge. These motivations are viewed as autonomous or controlled motivations for sharing, depending on different knowledge sharing approaches (formal and informal sharing) or groups of people (the family or non-family groups; older or younger). According to Gagne (2009), these motivations within SDT change in strength and quality to drive people to share knowledge.

Influenced by family involvement, knowledge hiding behaviours of skilled employees affect sharing in two ways—undermining motivations for sharing (Deci and Ryan, 2014) or generating motivations for hiding (Gagne et al., 2019; Connelly et al., 2012); this corresponds



with the findings of Gagne et al., (2019). First of all, the corporate context, such as the '996' timetable and low compensations, makes non-family people feel lost in motivation for knowledge sharing, thereby undermining their mood and well-being (Deci and Ryan, 2011). As a result, non-family people decide to hide knowledge instead of sharing (Deci and Ryan, 2014).

Secondly, the corporate context directly drives skilled workers to have autonomous motivations for knowledge hiding. A typical instance is that providing the family employees with flexible working hours and high compensations renders the non-family employees distrust and fearful of being substituted by others, sequentially losing ownership of their tacit knowledge. In line with the literature, trust and distrust are separate motivational constructs (McKnight et al., 2004) because both pertain to different motivations (Hernaes et al., 2018; Černe et al., 2014; Lewicki et al., 1998; Mayer et al., 1995). In this sense, knowledge sharing and hiding are distinct behaviours, as based on SDT, both behaviours are driven by different types of motivations (Gagne et al., 2019; Connelly et al., 2012), as schematically depicted in Table 30. These results demonstrate the third proposition:

**P3:** *Knowledge sharing and hiding are driven by different motivations.*

**Table 30: The types of motivations for knowledge sharing and hiding behaviours based on SDT**

Motivations for Behaviours	Indicative Motivations	Specific Situations	Types of Motivations in SDT
Motivations for sharing	Sense of trust	Formal knowledge sharing	External Motivation
		Informal knowledge sharing with the family members or familiar people	Autonomous (Intrinsic/identified)
		Informal knowledge sharing with those in the fundamental work-related relationship	Introjected
	Confidence	The senior employees	Identified/integrated
		The young employees	Introjected
	Monetary Incentives		External
Motivations for hiding	Sense of distrust		Autonomous (Intrinsic/identified)
	Fears being replaced by others/the ownership of knowledge		Controlled (the external or introjected)
	Time pressure		Autonomous (Intrinsic/identified)
	A short of rewards		Autonomous (Intrinsic/identified)

Source: Researcher's construct

On the other side, motivations for knowledge sharing and hiding are correlated based on SDT. In this case, trust and distrust are correlated with each other. Since the motivations for both behaviours lie with skilled professionals' psychological needs of relatedness in SDT. Skilled employees need to establish good relationships to be better involved in corporate life (Wang and Hou, 2015; Gagne and Deci, 2005). The same situation also appears with the motivations between confidence and fears of being replaced by others. These findings are inconsistent with the study of Gagne et al. (2019) study. Gagne et al. (2019) discovered that most motivations for sharing and hiding are uncorrelated. It may be because Australian and Chinese samples informed the quantitative data in the context of various professional and technology knowledge-intensive firms. Those two samples were impacted by different contextual factors, such as cultural influences, organisational structure, etc. Nevertheless, all the participants in this study were selected from the same small family business. In other words, the participants' motivations for both behaviours are affected by the same contextual factors. Therefore, the consequences have the discrepancy in motivations for knowledge sharing and hiding in the investigation of Gagne et al. (2019). Remarkably, some motivations for knowledge sharing and hiding overlap, such as monetary incentives for the family members and a dearth of these for non-family people. These findings induce the following proposition:

***P4: knowledge sharing and hiding are synergistic behaviours, because people simultaneously hold motivations to share and hide knowledge, driving both behaviours.***

To this end, this research is conducive to learning how and why knowledge sharing and hiding behaviours happen concurrently through the scopes of the corporate context of a small family business and the motivations of skilled people within SDT. It indicates that knowledge sharing and hiding are not opposite but correlated behaviours.

Taken together, the core research question of this study—how and why skilled employees share and hide knowledge simultaneously, has been addressed. The synthesis between emergent themes, research objectives and key concepts is schematically outlined and concluded in Table 31. The last part of this chapter will present a conceptual framework for simultaneous knowledge sharing and hiding behaviours to visualise the findings.

**Table 31: Relationship between key themes, research objectives and key concepts**

Key Themes	Research Objective	Indicative Concepts
<b>Theme 1:</b> The perceptions of individual-tacit knowledge	<b>RO1:</b> To identify how skilled employees perceive tacit knowledge within the Chinese small family business context.	Experience-based, common corporate resources, individual assets
<b>Theme 2a:</b> Knowledge sharing	<b>RO2:</b> To explore how skilled employees share tacit knowledge.	Formal and informal approaches, individual-level and organisational-level behaviours
<b>Theme 2b:</b> Knowledge hiding	<b>RO2:</b> To explore how skilled employees hide tacit knowledge.	Along with sharing, two hiding ways, individual-level and autonomous behaviours
<b>Theme 3a:</b> Reasons for knowledge sharing	<b>RO3:</b> To analyse why they share and hide tacit knowledge as well as to provide the appropriate recommendations for motivating knowledge sharing and mitigating knowledge hiding	Corporate context—the support from the owner-manager, a collective culture with the family notion, close interpersonal relationships, a reward system  Individual motivations—sense of trust and confidence
<b>Theme 3b:</b> Reasons for knowledge hiding	<b>RO3:</b> To analyse why they share and hide tacit knowledge as well as to provide the appropriate recommendations for motivating knowledge sharing and mitigating knowledge hiding	Unfairness between family and non-family groups caused by family involvement  Corporate context—favouritism of the owner-manager, low salaries and no bonuses for non-family employees, close interpersonal relationships  Individual motivations—sense of distrust, fears of being replaced by others, time pressure from ‘996’ working schedules
<b>Theme 3c:</b> Recommendations	<b>RO3:</b> To analyse why they share and hide tacit knowledge as well as to provide the appropriate recommendations for motivating knowledge sharing and mitigating knowledge hiding	Resolving unfairness between family and non-family members

Source: Author’s Construct

#### 5.4.2 Framework for Simultaneous Knowledge Sharing and Hiding Behaviours

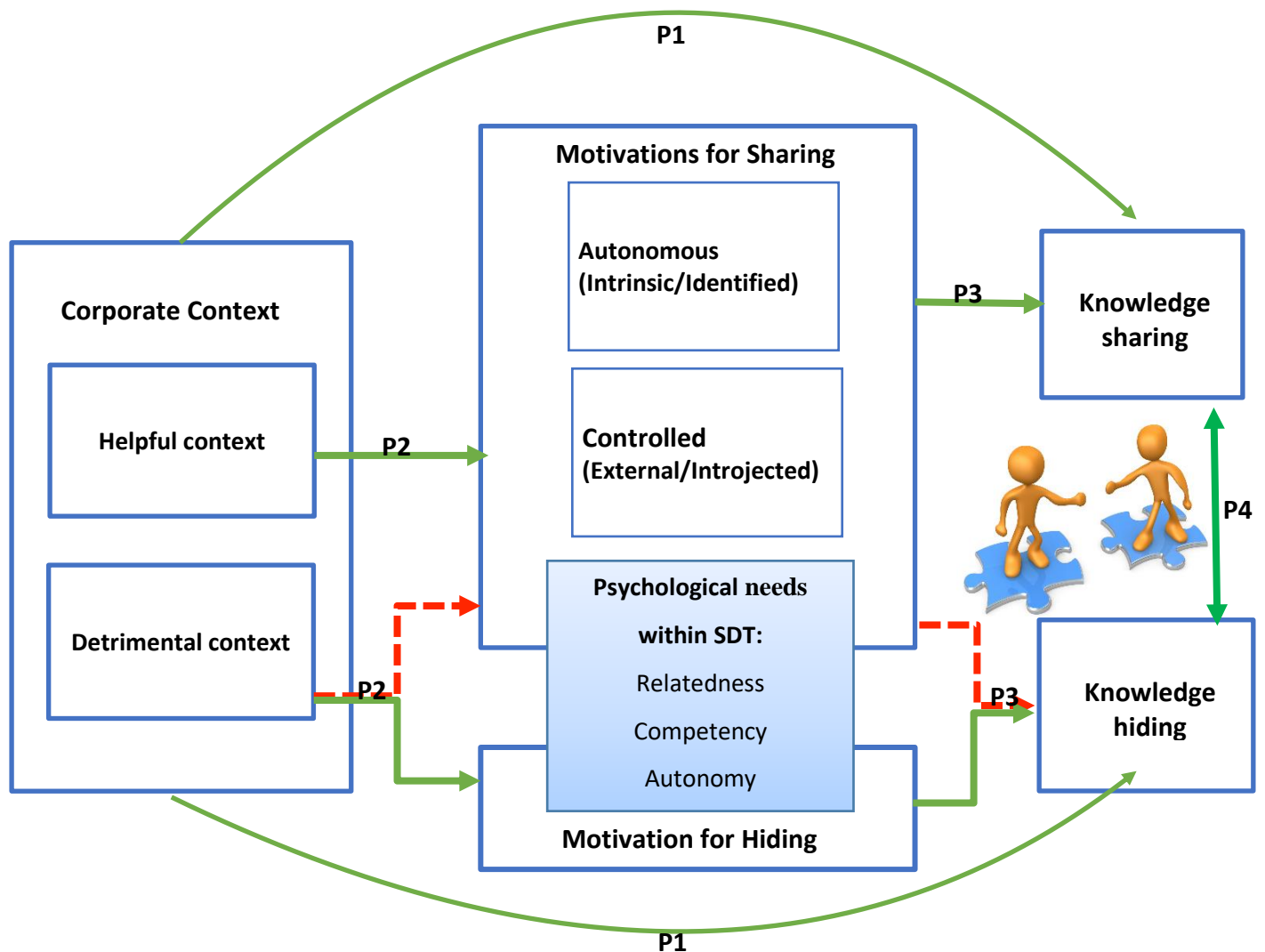
In response to the gaps of this study in Chapter Two, there was a necessity to develop a conceptual framework for simultaneous knowledge sharing and hiding. Through analysing all the illustrative reasons for simultaneous both behaviours, the outcomes presented different voices among the people within the studied small family business, producing corresponding results, depicted in the framework (see Figure 11).

Based on the research findings as discussed in Section 5.4.1, these four propositions constitute the conceptual framework that describes the logical linkage among five concepts

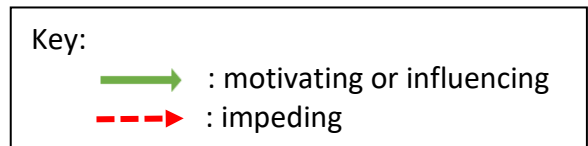
(corporate context, motivations for knowledge sharing, motivations for knowledge hiding, knowledge sharing and hiding behaviours) in the framework (see Figure 11).

By integrating the critical outcomes, a conceptual framework has been developed. This framework may exert referencing influence on other types of enterprises in more regions and countries to probe knowledge sharing and hiding simultaneously because the element of corporate context on the left side has not been defined by any type of enterprises.

**Figure 11: Conceptual framework for simultaneous knowledge sharing and hiding**



Source: Researcher's construct



The framework includes three main components: corporate context on the left side, motivations for knowledge sharing and hiding in the middle, and knowledge sharing and

hiding behaviours on the right side. The green solid line arrows or red dash lines connect each component. The green solid line arrows represent motivating, while the red dashed lines are to undermine motivation.

On the left side, the corporate context is divided into helpful characteristics for knowledge sharing and adverse features leading to knowledge hiding. The classification of the corporate context in this framework does not signify the mutually opposite standpoint between knowledge sharing and hiding. However, it illuminates how different corporate characteristics incur these two behaviours in the same context. The helpful corporate context can foster diverse formal and informal knowledge sharing activities. Likewise, the detrimental corporate context mainly caused by family involvement makes the employees hide knowledge. Thus, two curved solid line arrows link the corporate context to knowledge sharing and hiding separately. The two curved line arrows express the first proposition (**P1**).

In the meantime, the corporate context affects skilled employees' motivations for knowledge sharing and hiding behaviours. The line or dash-line arrows symbolise different influences on knowledge sharing and hiding. The helpful corporate context boosts the employees' knowledge sharing motivations, such as a sense of trust and confidence. On the other hand, the detriment context either undermines their motivations for knowledge sharing or generates motivations for knowledge hiding (Deci and Ryan, 2014; Gagne and Deci, 2005). The solid line and dash-line arrows exhibit the second proposition (**P2**). That is, the corporate context affects the employees' motivations for knowledge sharing and hiding, respectively.

The middle area shows the motivations for knowledge sharing and hiding. These two behaviours have distinct motivational reasons (Pereira and Mohiya, 2021; Gagne et al., 2019; Stenius et al., 2016; Connelly et al., 2012), even though some motivations have some logical parallels (Lewicki et al., 1998). The most typical instance in the current study is the sense of trust and distrust. Significantly, the basic psychological needs of autonomy, relatedness and competency (the central blue area) overlap with motivations for sharing and hiding because all kinds of motivations are analysed as grounding on these needs (Wang and Hou, 2015; Gagne and Deci, 2005). According to Wang and Hou (2015) and Gagne (2009), these three psychological needs are the foundation of SDT. Hence, the central part explores the motivations for knowledge sharing and hiding simultaneously via people's psychological

needs, highlighting that both behaviours are synergetic in the fourth proposition (**P4**) of the framework.

Furthermore, two solid line arrows and one dash-line arrow connect motivations for sharing and hiding separately, showing how knowledge sharing motivations (the sense of trust and confidence) drive sharing behaviours. In contrast, knowledge hiding occurs through undermining the sharing motivations (time pressure impeding autonomy needs) or generating hiding motivations (the sense of distrust or fear of being replaced by others) (Gagne et al., 2019, Deci and Ryan, 2011). The solid line and dash-line arrows in **P3** unfold that knowledge sharing and hiding are triggered by different motivations, respectively.

On the right side, systematically exploring the reasons for knowledge sharing and hiding in the researched small family business via diverse motivations based on SDT, the fourth proposition (**P4**) in Figure 11 surfaces that these two behaviours are synergetic (Hadjielias et al., 2021; Pereira and Mohiya, 2021; Gagne et al., 2019).

To conclude, this framework portrays that knowledge sharing and hiding are synergetic behaviours, driven by different but correlated motivational and corporate reasons. It employs SDT as the theoretical basis to deeply explore different types of motivations (autonomous and controlled) in favour of informing knowledge sharing and hiding behaviours beyond the traditional dichotomy of intrinsic and extrinsic motivation. What's more, based on the research findings discussed in this chapter, the conceptual framework presents four propositions (**P1-P4**) among five concepts, which might inspire more further research to empirically test these propositions. The corporate context is positioned in a general setting rather than specific organisational types; thereby, it might be transferred to the broader contexts, such as multinational, large, or medium-size companies. Hence, the final framework is in favour of depicting how motivations and corporate context trigger knowledge sharing and hiding simultaneously.

## Summary

This chapter was intended to provide an in-depth discussion of the findings of this study. To achieve this, the first three sections aimed to explain the findings on the three main themes and five sub-themes complying with corresponding literature, that is, tacit knowledge,

knowledge sharing, knowledge hiding, reasons for sharing and hiding, and possible recommendations. In exploring each theme, the first research objectives have been accomplished.

To further discuss the outcomes in the current investigation in association with the extant publications, Section 5.4 managed all the findings as a whole and developed a conceptual framework for simultaneous knowledge sharing and hiding behaviours, a new conceptualisation in knowledge management literature. This chapter also introduced each component of the framework in detail and summarised the contributions of the conceptual framework.

In summary, the four research objectives have been achieved, and consequently, the research question has been addressed successfully. The next and final chapter concludes this study with an explanation of how it offers a novel contribution to knowledge.

## CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

### Introduction

the final chapter aims to present a conclusion to the current study. Hence, it will be organised as follows. It commences with a general overview of the study. The second section portrays the contributions that the current study has made to theory and practice. The last part unfolds the limitations and avenues for future research.

### 6.1 Overview of the Research

In the highly competitive business environment, family businesses represent the backbone of the economy in many countries (Howorth et al., 2014). In the USA, in 2017, family businesses made up over 95% of employer firms and provided 64% of private-sector jobs (Ahluwalia et al., 2017). In the UK, family-controlled businesses created 47% of all private-sector enterprises, and 72% of employers in all SMEs were defined as family-controlled businesses (Cunningham, 2020). China has a similar situation. According to the latest report on the development of Chinese family-run businesses, family businesses represent 85.4% of private-sector enterprises (Si, 2020); they have produced over 60% of GDP growth and over 80% of urban employment opportunities (Zhu, 2020). Small-sized businesses have accounted for over 80% of all family businesses (Liu, 2019).

Even while they are flourishing, family businesses encounter tremendous survival challenges and competitive advantages (Cunningham, 2020; Motoc, 2020; Ahluwalia et al., 2017), particularly true of small firms (Ahluwalia et al., 2017; Cunningham et al., 2017, 2016). It is because small businesses are a dearth of adequate innovative abilities and resources (human, financial and knowledge) to secure competitiveness (Motoc, 2020; Zhou, 2019; Ahluwalia et al., 2017; Letonja and Duh, 2015).

When it comes to knowledge management, knowledge resources, particularly tacit knowledge, are the key to the survival of small family businesses (Zahra et al., 2007). The hard-to-imitate characteristics of tacit knowledge (Nonaka and Takeuchi, 1995) enable small family businesses to achieve technological innovation (Cunningham et al., 2017). However, it is hard for organisations to obtain tacit knowledge from employees because such knowledge is inherent in people's minds; sharing it relies upon individual motivations and is also



influenced by the corporate context (Stenius et al., 2016). However, organisations are not the owners of individual knowledge assets, and employees have no obligation to transfer their unique knowledge to others (Yang et al., 2021). As such, concurring with knowledge sharing, employees may opt to hide their knowledge on purpose; this is determined by individual motivation (Connelly et al., 2012). However, limited research explores knowledge sharing and hiding simultaneously, which has become a new research topic in the knowledge management literature (Pereira and Mohiya, 2021; Gagne et al., 2019; and family business research (Hadjielias et al., 2021). Therefore, it is necessary to investigate knowledge sharing and hiding simultaneously.

Having confirmed the broad research topic, a systematic literature review was conducted in the three corresponding scopes: small family businesses, knowledge management (knowledge sharing and knowledge hiding) and self-determination theories. Three research gaps were discovered in the existing literature on knowledge management and family businesses. First, in the literature on family businesses, a few research on knowledge sharing have looked at large or medium-sized companies (Botero et al., 2021; Pittino et al., 2018; Woodfield and Husted, 2017; Lin, 2013; Zahra et al., 2007) whereas small family businesses remain underrepresented (Hadjielias et al., 2021; Motoc, 2020; Arzubiaga et al., 2019; Cunningham et al., 2017, 2016). In the research on knowledge management, knowledge hiding in the family businesses has received limited attention (Hadjielias et al., 2021). Second, there are theoretical and empirical gaps in the knowledge management literature—probing simultaneous knowledge sharing and hiding behaviours (Hadjielias et al., 2021; Pereira and Mohiya, 2021; Gagne et al., 2019). Third, theoretical and empirical gaps have been found in applying SDT to knowledge hiding research (Hilliard et al., 2022; Yang and Lee, 2021; Wang et al., 2018) and their co-existence with knowledge sharing (Gagne et al., 2019; Stenius et al., 2016). Via a thorough analysis of these gaps, the main aim of the current research was set up: to explore how and why skilled employees share and hide knowledge in a small family business based on SDT.

To break this down, the study aimed explicitly to address four research questions: (1) How do skilled employees perceive their tacit knowledge in the small Chinese family business? (2) How do skilled employees share and hide tacit knowledge? (3) Why do they share and hide knowledge from the motivational and corporate perspectives? (4) What recommendations

can be made for the owner-managers to improve knowledge sharing and hiding behaviours?

In order to address research aim and questions, this project set up four objectives: (1) To identify how skilled employees perceive tacit knowledge; (2) To explore how they share and hide tacit knowledge; (3) To analyse why they share and hide knowledge, and to provide the appropriate recommendations for motivating knowledge sharing and mitigating knowledge hiding; (4) To develop a conceptual framework to visualise simultaneous knowledge sharing and knowledge hiding.

In order to fulfil these research objectives, the thesis adopted a single case study strategy and multiple qualitative methods. The single case study conformed with the 'typical' principles proposed by Yin (2018). The success of the selected small family business was thanks to its employees' knowledge, and the local government accredited it as a 'provincially-excellent learning organisation' due to its training and learning programmes. Furthermore, tacit knowledge is inherent in people's minds; whether to share or hide it is determined by personal motivation (Gagne et al., 2019). Thus, understanding knowledge sharing and hiding depend on how people perceive and interpret these behaviours from their stories and experience. The twenty-two participants included family members and non-family employees selected from different departments and three hierarchies: the owner-manager, managers and employees. All the participants had numerous opportunities to undertake knowledge sharing practices. Additionally, a template analysis approach analysed all data from the corporate documents and the semi-structured interviews.

The results unveiled that the tacit knowledge of skilled employees was experienced-based. However, the perceptions of skilled people with different perspectives (the family and non-family groups) varied from each other. The family group claimed that the tacit knowledge of the employees should belong to the collective; instead, the non-family group insisted that their tacit knowledge was a personal asset. This outcome highlights that tacit knowledge was significant to employees' individual growth and the organisation's development. Nonetheless, an issue regarding the ownership of tacit knowledge existed between the family and non-family members. It was associated with the corporate context of the family business and individual motivations for sharing or hiding.

The current study also revealed that skilled employees primarily shared knowledge through formal and informal approaches. Along with sharing, skilled people also chose to use playing-dumb and rationalised methods to hide knowledge from their colleagues who asked for it. However, some of the reasons were not necessarily detrimental to knowledge sharing or the company, for example, protecting the collective interests (avoiding conflicts to protect interpersonal relationships; the subordinates' self-growth). It indicates the importance of using multiple approaches for the employees to share knowledge in the small family businesses, especially formal fashion. Small family businesses often take advantage of informal knowledge sharing practices due to their small size and socially-based relationships (Cunningham et al., 2017). Meanwhile, the findings also imply that knowledge hiding coincides with sharing behaviours by all means.

Reasons for knowledge sharing and hiding were remarkably different, even if some reasons coincided. The helpful corporate context of the small family business (support from the owner-manager, collective culture, close interpersonal relationships, and a reward system) could make the skilled employees share the tacit knowledge, whereas the negative context caused knowledge hiding. These corporate characteristics also affected employees' motivations for sharing and hiding. Thus, knowledge sharing and hiding were generated by varied motivations. A typical instance was that providing the family employees with flexible working hours and high compensation rendered the non-family employees distrustful and fearful of being substituted by others, sequentially losing ownership of their tacit knowledge. In line with the literature, trust and distrust are separately motivational constructs (McKnight et al., 2004) because they pertain to separate motivations (Hernaus et al., 2018; Černe et al., 2014; Lewicki et al., 1998; Mayer et al., 1995). It indicates that knowledge sharing and hiding behaviours are also separate concepts (Gagne et al., 2019; Connelly et al., 2012).

Nonetheless, analysing skilled professionals' psychological needs for relatedness within SDT also showed that the motivations for both behaviours lay with each other. For instance, trust and distrust were concerned with relatedness needs. In other words, skilled employees needed to establish good relationships with other people to be better involved in corporate life at work (Wang and Hou, 2015; Gagne and Deci, 2005). Also, knowledge sharing and hiding arose from common reasons, such as the intimate relationships among people. These findings highlight that knowledge sharing and hiding are synergetic behaviours and both behaviours

should be understood simultaneously.

The study surfaced that the motivations for knowledge sharing, such as trust and confidence, depended on the sharing mechanisms (formal or informal sharing) or groups of people (the older or younger employees). For example, the employees underscored that trust played a more significant role in informal knowledge sharing than formal sharing because the leaders required them to share knowledge formally. If they did not share well, it would bring problematic influences on their careers. While sharing knowledge on informal occasions, skilled people preferred doing so with those they trusted more. It illustrates that one specific motivation for knowledge sharing could vary in strength and quality (Gagné, 2009). These changes depend on the external environment (Gagné, 2009). These findings also hint that sense of trust and confidence could be viewed as different types of motivations for knowledge sharing, either autonomous or controlled within SDT (Wang and Hou, 2015). Rewards could also yield a sense of confidence in the skilled employees. It is plausible that the external motivations affect and interact with the other types of motivations (Wang and Hou, 2015; Gagne, 2009; Gagne and Deci, 2005). Consequently, the motivations for knowledge sharing are complicated and dynamic, depending on the external context.

On the other hand, the motivations for employees' knowledge hiding mainly exposed the unfair issues between the family and non-family members caused by the corporate context of family involvement. These issues included the favouritism of the owner-manager towards her family members, lack of bonuses, and the '996' working schedule for non-family employees. The unfairness resulted in the non-family employees distrusting their colleagues and fearing being replaced. Within SDT, a sense of distrust reflects employees' dissatisfaction with the psychological needs of relatedness (Gagné, 2009). Fears of being replaced originating from losing knowledge ownership (Connelly et al., 2012) demonstrate that employees' psychological competency needs cannot be fulfilled (Gagné, 2009). Likewise, the '996' working schedule of the non-family workers, in line with time pressure (Connelly et al., 2012), hostilely affected the employees' autonomy (Gagné and Deci, 2005). These findings hint that the unfair problems in the small family business might be the outstanding reasons for engendering the employees' varied motivations for hiding. Therefore, owner-managers should be mindful of and solve the unfairness between their family and non-family groups.

Finally, a conceptual framework was developed to visualise how and why skilled employees shared and hid knowledge simultaneously by integrating all the findings. Through a thorough comparison and discussion between the findings, an integrative conceptual framework with prior literature, the researcher introspected the above outcomes at a deeper level and found that these results might make contributions to theory and practice, as posited in the following section.

## **6.2 Contributions of the Research**

This section unfolds the theoretical contributions and practical implications of the present study.

### **6.2.1 Theoretical Contribution to Knowledge**

As explored how and why skilled employees share and hide knowledge in the small family business in China, the current study has made three principal contributions to fill the theoretical and empirical gaps in the existing literature.

Foremost, this study contributes to extending the understanding of knowledge sharing and hiding behaviours in the context of the small family business. Gaps exist in the literature on family businesses with respect to knowledge hiding (Hadjielias et al., 2021). Incredibly, few studies of knowledge sharing and hiding has been conducted within the small-scale family business (Hadjielias et al., 2021; Motoc, 2020; Arzubaga et al., 2019; Cunningham et al., 2017, 2016). Therefore, the current study contributes to learning how tacit knowledge is shared and hidden in this unique context. More explicitly, the small family business studied often used formal and informal methods to motivate employees to share knowledge. The formal approaches refer to collective training and learning, apprenticeship and mentoring, regular meetings and group knowledge-sharing activities. On the other hand, the informal mechanisms for knowledge sharing involve group movements inside and outside the company, helping behaviours in the office and occasional correcting others' mistakes. However, along with these knowledge-sharing situations, skilled employees mainly use the playing-dumb or rationalised approaches to hide knowledge. When the employees hide knowledge for the collective interests, including avoiding conflicts or protecting the work relationships, knowledge hiding behaviours are considered the positive behaviours within the

company. These outcomes provide fruitful illustrations of knowledge sharing and hiding reasons in the small family business context.

Furthermore, the current study also explains a wide range of reasons for knowledge sharing and hiding. The helpful corporate context of the small family business could provoke skilled employees to share knowledge. These characteristics refer to support from the owner-manager, the 'family' notion incorporated with the collective culture, intimate relationships and corresponding rewards for knowledge sharing behaviours. Meanwhile, the same corporate context of the small business leads to unfair treatments between the family and non-family employees, driving knowledge hiding behaviours. It is noteworthy that the corporate context also heavily influences skilled employees' motivations for sharing and hiding. Consequently, these findings provide valuable theoretical and empirical evidence in understanding how and why skilled people share and hide knowledge in the context of the small family business.

The current study also made some contextual contributions to the Chinese family business. In the case study, the consensus and typical corporate reason for both knowledge sharing and hiding is the collective culture with the family notion. As Lin (2013) and Huang et al. (2011) highlighted, the family notion has a vital status in traditional Chinese culture. In business settings, the family notion could be characterised as collectivism, which manages the employees' behaviours to conform to the collective needs (Xiong et al., 2021; Zhang et al., 2017). Besides, there are some novel outcomes in the Chinese context. For example, Communist Party training and learning could be a practical approach for sharing and exchanging knowledge. Similarly, singing karaoke on KTV is a popular activity to enhance team-building and internal solidarity in China and also is a relaxing situation for exchanging tacit knowledge. The new term of the '996' working schedule is broadly known in Chinese society. The current study is the first to introduce this term to investigate knowledge sharing and hiding, although it has been concerned with the time pressure in previous literature (Ahmad and Karim, 2019; Riege, 2005). Hence, these findings with respect to the collective culture make the contextual contributions to understanding knowledge sharing and hiding in Chinese context.

Second, the current study contributes to addressing a gap in the knowledge management

literature through investigating simultaneous knowledge sharing and hiding in the business settings. Prior literature draws on investigating either knowledge sharing or hiding, respectively; these two behaviours are driven by different motivations (Cormican et al., 2021; Hon et al., 2021; Stenius et al. 2017; Cavaliere et al., 2015; Olatokun and Nwafor, 2012; Connelly et al., 2012). This study underscores this viewpoint; however, it also highlights that knowledge sharing and hiding are synergetic behaviours, occurring simultaneously. This research has been found that knowledge sharing and hiding are influenced by the same reasons: the role of the owner-manager, a collective corporate culture with a 'big family' notion, and intimate interpersonal relationships. Also, skilled employees' motivations for both behaviours are correlated based on SDT (trust and distrust, confidence and fears of being replaced), even if they are not perceived as the same in theoretical scope. Therefore, this study is conducive to advancing the knowledge concerning simultaneous knowledge sharing and hiding behaviours.

Besides, this investigation has developed a conceptual framework for exploring knowledge sharing and hiding simultaneously. This framework portrays that knowledge sharing and hiding are synergetic behaviours, driven by different but correlated motivational and corporate reasons. It employs SDT as the theoretical basis to deeply explore different types of motivations (autonomous and controlled) in favour of informing knowledge sharing and hiding behaviours beyond the traditional dichotomy of intrinsic and extrinsic motivation. What's more, the conceptual framework presents four propositions (**P1-P4**) among five concepts. Researchers could propose more research questions or hypotheses based on four propositions (**P1-P4**) and use different research techniques to achieve their corresponding research aims. The corporate context is positioned in a general setting rather than specific organisational types; thereby, it might be transferred to the broader contexts, such as multinational, large or medium-size companies. Finally, it recalls the conceptions of Pereira and Mohiya (2021) that investigating knowledge sharing and hiding needs primary interview/focus group data and a more theoretical lens. Therefore, this framework contributes to using SDT as the theoretical lens and providing research topics (P1-P4) to investigate simultaneous knowledge sharing and hiding.

Last but not least, the present study supports filling the gaps in the knowledge management literature to applying SDT to knowledge hiding research and the new conceptualisation. Few

studies used SDT to construe knowledge hiding behaviours (Hilliard et al., 2022; Yang and Lee, 2021; Wang et al., 2018) and co-occurrence of knowledge sharing and hiding (Gagne et al., 2019; Stenius et al., 2016). Most knowledge sharing studies have absorbed intrinsic and extrinsic, other than the six types of motivations in SDT proposed by Gagne (2009). Consequently, this research has made some contributions to the body of knowledge regarding SDT as below.

### ***Types of Motivations within SDT***

The study facilitates identifying different types of motivations for knowledge sharing and hiding behaviours based on SDT (listed in Table 30). Especially, it provides novel evidence on the effects of introjected motivations on knowledge sharing and hiding. The common reason is to build a good public impression, regardless of whether they opt for sharing or hiding knowledge (Wang and Hou, 2015). This outcome achieves the suggestions from Gagne et al. (2019) that the relationship between ego-involvement and knowledge sharing/hiding is unclear.

Moreover, it is also beneficial to explain the types of knowledge hiding motivations through people's psychological needs. Distrust has been found related to the needs of relatedness; the non-family employees, particularly young people, fear being instead by others or losing ownership of knowledge, which is associated with competency; time pressure is concerned with the psychological needs of autonomy. Distrust, fears of being replaced and psychological pressure out of intensive time are perceived as autonomous motivations for knowledge hiding. It is because these motivations are sourced from self-interest needs (Wang and Hou, 2015). Thus, these findings posit the concepts of autonomous motivations for knowledge hiding. The extant research has mostly applied SDT to investigating knowledge hiding behaviours from the perspective of undermining sharing motivations (Gagne et al., 2019; Stenius et al., 2016). As Hilliard et al. (2022) set forth, knowledge hiding may be driven by some autonomous motivations, similar to knowledge sharing. Hence, this research enlarges the existing view of knowledge hiding to look into knowledge hiding behaviours in the positions of hiding motivations. It may leverage SDT for future knowledge hiding research.

### ***Interactions among different motivations for knowledge sharing and hiding***

A sense of trust and confidence are the primary motivations for employees' knowledge



sharing in this study. These two motivations could be either autonomous (intrinsic or identified) or controlled (external or introjected) to affect people to share knowledge dependent on external influences. Furthermore, monetary incentives for the young skilled employees could provoke their trust and confidence to share knowledge. Otherwise, an absence of rewards possibly undermines these sharing motivations or simulates their distrust and pressure to hide knowledge. These findings are potent to make sense that different motivations for knowledge sharing and hiding mutually and simultaneously interact, which differentiates from the outcomes in most studies; that is, motivations for knowledge sharing and hiding are relatively uncorrelated (Pereira and Mohiya, 2021; Gagne et al., 2019; Stenius et al., 2016; Connelly et al., 2012). Therefore, with the support of SDT, this study extends the understanding of the synergetic relationship between knowledge sharing and hiding that happen in tandem.

Consequently, through exploring different motivations for knowledge sharing and hiding their interactions within SDT, this study fosters the comprehension of simultaneous knowledge sharing and hiding behaviours beyond the traditional dichotomy of intrinsic and extrinsic motivations. What's more, using different motivations in SDT is instrumental in responding to the calls of Gagne et al. (2019) and Pereira and Mohiya (2021). The research of simultaneous knowledge sharing and hiding entails using primary interview/focus group data and a more theoretical lens, such as SDT.

### **6.2.2 Contributions to Practice**

The current research has primarily provided implications for small family businesses. Caution is needed over how the outcomes will be applied in the real world, as the outcomes of the present study emerged in a qualitative way, which did not attempt to achieve generalisation. The implications of the study are outlined as follows.

First, the small family business probed is a good-model case in China. It has structured and well-planned training and learning programmes. It is why knowledge from skilled employees could help this small family business form competitive advantages through sharing practices, turning this company into a nationally leading R&D manufacturing business. However, as Riege (2005) and Levy et al. (2003) claimed, due to a lack of resources, small-sized enterprises rarely utilise formal approaches in the company. Zahra et al. (2007) also suggested that family

businesses should use formal knowledge sharing mechanisms. When the employees get used to regular learning, they may cultivate an autonomous motivation to learn new knowledge and promote themselves. Eventually, formal knowledge sharing and learning practices can aid create an organisational learning environment. Hence, the formal training and learning programmes contribute to the owner-managers in this context to raise awareness of the significance of formal means for the employees' knowledge sharing at work. In the meantime, informal knowledge sharing behaviours, such as helping acts of communication in teams, happen in varied internal activities. According to Dotsika and Patrick (2013), due to good relationships and a more informally-social structure, organisational members often opt for informal means of tacit-to-tacit knowledge transfer. Hence, owner-managers in family businesses should use a variety of mechanisms and channels for their employees to exchange and share knowledge.

Second, in analysing the corporate context and motivations for knowledge sharing and hiding, this project helps decision-makers consider what could motivate their employees to donate their knowledge and introspect what might cause them to hide knowledge. Thereafter, decision-makers could take appropriate actions to encourage people to share knowledge and reduce the probability of knowledge hiding in the long and short term. More precisely, in the long run, the case-study small family business had a knowledge sharing culture, which developed a friendly environment for people to exchange ideas. This environment gradually influences the employees to identify with the corporate beliefs on the importance of knowledge sharing. As such, they would voluntarily give their knowledge to their colleagues.

Decision-makers should also take a proper view of the 'big family' value in the nature of family businesses. This viewpoint refers to how to wisely involve family members in the business and management and how to balance the treatment between the family and non-family employees. Top managers in family businesses need to exert the positive sides of family involvement, for example, taking the reasonable and favourable suggestions of the family members and enhancing the close social relationships among people through various interactions between family and non-family people. It will enable the non-family people to perceive themselves as part of the company, thereby enhancing their commitment and sense of obligation. Knowledge sharing, under these circumstances, would occur naturally and easily. Conversely, owner-managers in this context also should be aware of and combat the

negative sides of the 'big family' notion. For instance, the family employees' authorities and privileges need to be restricted, as these privileges can lead to unfairness and make the non-family employees feel excluded in the workplace. In these situations, skilled employees prefer to hide rather than share knowledge. Remarkably, unfairness between the family and non-family employees is the primary reason for knowledge hiding. It is challenging and time-consuming to establish an advantageous culture and resolve the conventional unfairness in this context. Therefore, owner-managers need to build a long-standing vision to create a knowledge-sharing culture and solve unfair issues.

The second set of practical approaches is short-term actions. It is plausible that some family businesses may need to improve knowledge sharing and mitigate knowledge hiding validly over a short period. Through exploring the corporate context and individual motivations in this study, it is evident that increasing rewards and adjusting working hours are urgent tasks. Salaries and working hours adversely affect employees in their daily lives. A dearth of rewards for non-family employees and the long working hours engenders a psychological burden. As such, a lack of rewards and time pressure become autonomous motivations for knowledge hiding. Equally, recognition and rewards could strengthen employees' confidence and trust in the company. In this sense, it is helpful for the employees to transfer knowledge sharing motivations from external to autonomous. To this end, alleviating these problems might be conducive to motivating knowledge sharing and mitigating knowledge hiding in a short period.

As concluded above, setting up the knowledge sharing corporate culture and adopting a wide variety of knowledge sharing approaches, raising compensation and reasonably adjusting working hours could also be employed by other types of firms. It is because improving the corporate context not only enhances the positive external interventions but also triggers different types of people's motivations to share knowledge. In some cases, improving the corporate characteristics, for instance, by raising the compensation, enables employees to convert external motivations (sharing for money or building one's public image in front of colleagues) into autonomous motivations (sharing for helping others). As presented in this study, giving rewards to employees could affect their confidence. Moreover, from the motivational standpoint, these remedies may impede their motivations for knowledge hiding through satisfying their psychological needs for autonomy (to be self-regulating in performing

a behaviour), competence (to be potent in what they do) and relatedness (to feel connected and in sympathy with others) (Ryan and Deci, 2000; Ryan et al., 1985). Therefore, by learning different types of motivations for knowledge sharing and hiding, top managers could adopt suitable remedies to elevate corporate members' motivations for knowledge sharing and lower their motivations for hiding.

### **6.3 Limitations and Recommendations for Future Research**

Every study has its own caveats. Thus, there is no exception to the present study. This section will postulate these limitations, which will envisage recommendations for further investigations. At first, this study did not make methodological contributions to the topics of knowledge sharing and hiding, as the majority of previous qualitative research on the same topics has adopted semi-structured interviews. Although using multi-qualitative research methods with a small sample in a single case study may yield an in-depth understanding of knowledge sharing and hiding, it may limit generalisation to a broader context (Easterby-Smith et al., 2021). However, twenty-two participants from three hierarchies (the owner-manager, managers and employees) and varied groups (family and non-family groups; old and young) can produce a robust understanding of knowledge sharing and hiding in a small family business. Therefore, subsequent studies could consider using multiple comparative case-studies approaches to probe parallel research topics.

Furthermore, a single case study was conducted in China. Thus, it is possibly hard to infer similar outcomes in other countries. Especially, the current study discovered the effects of the collective culture on knowledge sharing and hiding; this varies from Western culture. Therefore, in future, comparative work regarding simultaneous knowledge sharing and hiding could be approached in other nations that share common or contrasting cultural features.

Additionally, SDT as the theoretical foundation helps discover different types of motivations for knowledge sharing and hiding through investigating a sense of trust, confidence, distrust, fears of being replaced and time pressure. It contributes to gaining an in-depth understanding of knowledge sharing and hiding. However, other types of motivational drivers will influence these two behaviours, such as altruism, reciprocity, etc. As such, the current study envisages that scholars will need to involve these drivers in studying the new conceptualisation of simultaneous knowledge sharing and hiding.

On the other side, the current study provides valuable evidence of knowledge hiding in the context of a small family business within SDT. Noteworthy, people's motivations for knowledge hiding were understood by analysing the psychological needs for autonomy, relatedness and competency. However, this study did not specifically explore how these psychological needs affected motivations for knowledge hiding. Plus, this research put forward a novel theoretical concept of autonomous motivations for knowledge hiding behaviours. It is because distrust, fears of being replaced by others and psychological pressure may autonomously cause discontent for non-family employees; thereby, they hide knowledge. It has also been uncovered different types of motivations within SDT for knowledge hiding behaviours. For example, low compensation may be an external motivation for the non-family members' knowledge hiding; fears of being replaced or losing the ownership of knowledge seem to be relevant to an introjected motivation of the young employees because they hid knowledge to keep the public impression; meanwhile, fears of being replaced and time pressure are likely to be identified motivations for knowledge hiding, as the non-family members believe it essential to hide knowledge when facing potential threats of being replaced by others and working long hours. However, this study has not measured the relationships between the specific type of motivations and knowledge hiding behaviours. Therefore, scholars and practitioners may account for perceiving knowledge sharing as an independent research topic to verify or understand these different types of motivations in SDT for knowledge hiding behaviours in the future.

Lastly, the conceptual framework presents different four propositions (**P1-P4**) among the five concepts: the corporate context, various motivations for sharing, various motivations for hiding, three psychological needs, knowledge sharing and hiding behaviours. These propositions have the opportunity to provide potential research topics for sequential study. Thus, future researchers may develop these four propositions into more research questions or hypotheses and use appropriate research methods to achieve their aims. As the corporate context in this framework has not been defined by the specific types of enterprises, this framework contributes to using SDT as the theoretical lens and providing research topics for researchers. Therefore, the conceptual framework is likely to be transferable to broader settings, for instance, multinational, large or medium size companies.

## Summary

The conclusion chapter has comprehensively summarised the current study and provided valuable contributions to knowledge and practice. Theoretically, this research contributes to addressing the central gap that applies SDT to investigate simultaneous knowledge sharing and hiding behaviours in small family businesses context. Practically, this study may facilitate decision-makers in small family businesses to be mindful of the significance of improving knowledge sharing and hiding. The consequences emerging in this thesis could provide valuable guidance for this context to consider knowledge sharing and hiding, and unfairness between family and non-family members in the short and long run. Through an in-depth analysis of the findings and the conceptual framework, the researcher has outlined several limitations of the present research, helping offer avenues for further study in parallel areas.

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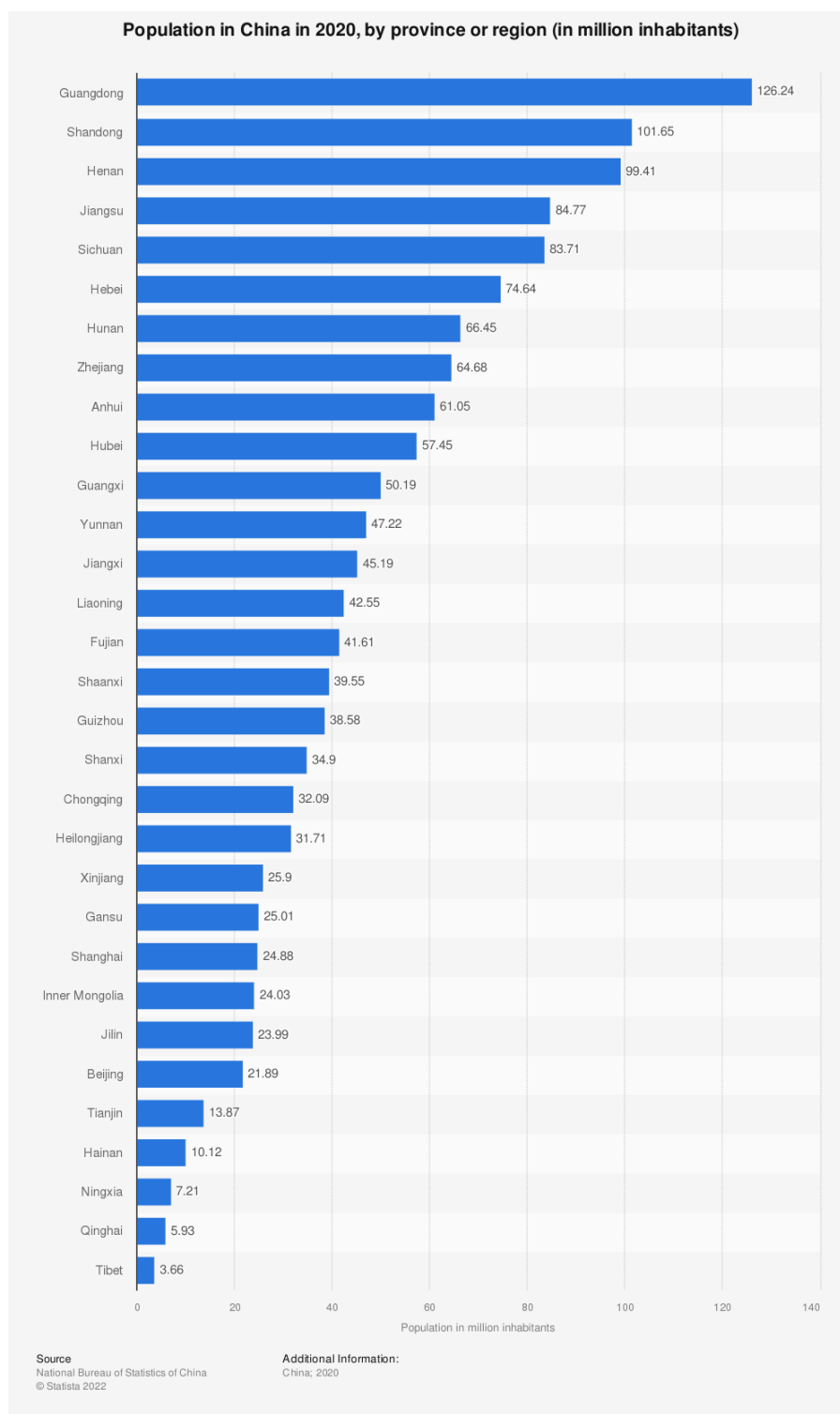
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## APPENDICES

### Appendix I

#### Population in China in 2020, by province or region



Source: National Bureau of Statistics of China published on Statista (2022)

## Appendix II

### Final Interview Question List

1. How would you describe your knowledge?
2. In which way do you often share knowledge?
3. How would you describe knowledge sharing within the context of your experience in your company?
4. Why do you like sharing your knowledge with others from your perspective?
5. How about your sense of trust and confidence affect your knowledge sharing behaviours?
6. Considering the organisational factors, what makes you autonomously share knowledge with others?
7. On what occasions do you prefer not sharing or hiding your knowledge?
8. Why do you hide your knowledge during the above occasions, dependent on your own perspective?
9. Considering the organisational factors, what influences you to hide knowledge from others?
10. What recommendations would you like to make to enable knowledge sharing in your company?

## Appendix III

### An Example of Field notes in Chinese

知识：涉及到有关工作的个人原则、专业技能、个人经历及专业知识。  
知识分享（行为）与同事、上级在公司里，分享个人与工作相关的  
采访问题：专业知识、技能、个人经历的行为，如：培训、老师、  
带徒弟（新员工）。

研究课题：对中国倍受嘉奖的小公司中，知识分享（共享）的促进因素和阻碍因素的研究

调查者和学校信息：文博 利物浦约翰摩尔斯大学商学院

Email: [b.wen@2018.ljmu.ac.uk](mailto:b.wen@2018.ljmu.ac.uk)

导师：Dr Aileen Lawless, Dr Deborah Humphreys, Dr Scott Foster

1. 请您描述一下在您公司知识分享（共享）的经历？
2. 在你和别人分享你的知识的时候，你享受这个过程吗？
- ③ 如果享受的话，你认为这能促使你更愿意分享吗？ 享受
- 如果不能，为什么？会阻碍你分享吗？
4. 如果你认为知识对你的公司/别人是有用的，你愿意分享你的知识吗？ → 愿意
- ⑤ 如果是，你认为这个过程能促使你更愿意分享吗？
- 如果不能，为什么呢？会阻碍你分享吗？ 信任与知识分享关系？
6. 在你分享知识的时候，你相信你的同事吗？
- ⑦ 如果相信，这能促使你更愿意分享吗？
- 如果不能，为什么？会阻碍你分享吗？ 信任
8. 你认为你的总经理的 ~~角色~~ 在分享知识中起什么作用？是促进还是阻碍呢？为什么？ 角色与知识分享关系？
9. 你认为你的公司 ~~扁平式~~ 结构对你分享知识起什么作用？促进还是阻碍呢？为什么？
- 这么说吧，你分享知识，有对上层，和平级，那么这种没有很多等级的结构，对你分享知识的作用？
10. 在你们公司，有没有对知识分享的奖励机制？
11. 如果有，你认为奖励是促进你分享知识，还是阻碍呢？为什么？
- 如果没有，你认为如果有了奖励，你更愿意分享还是不愿意分享？为什么？
12. 还有什么关于你内在的因素促使你分享知识？
13. 还有什么公司外在的因素促使你分享知识？
14. 还有什么关于你内在的因素阻碍你分享知识？ 阻碍因素？不同
15. 还有什么公司外在的因素阻碍你分享知识？
16. 你对于促使知识分享有没有改善措施？ 信任与知识分享关系？

扁平式  
传统  
式上中下  
多层组织  
结构  
改变为  
平级横向式结构  
扁平化

Source: Original Chinese field notes



## 采访问题:

研究课题: 对中国倍受嘉奖的小公司中, 知识分享(共享)的促进因素和阻碍因素的研究

调查者和学校信息: 文博 利物浦约翰摩尔大学商学院

Email: [b.wen@2018.ljmu.ac.uk](mailto:b.wen@2018.ljmu.ac.uk)

导师: Dr Aileen Lawless, Dr Deborah Humphreys, Dr Scott Foster

知识: 隐性知识: 涉及到与工作相关的专业技能, 专业知识, 个人经历等;

知识分享: 与同事, 上下级分享个人与工作相关的专业知识, 技能, 个人经历相关的过程

和行为, 如培训, 师带徒, 会议过程等; 这种工作程序过程中的知识, 传讲/告诉别人

1. 请您描述一下在您公司知识分享(共享)的经历?

2. 在你和别人分享你的知识的时候, 你享受这个过程吗?

3. 享受帮助别人的过程和分享知识的关系 → 利他主义

3. 如果你认为知识对你的公司/别人是有用的, 你愿意分享你的知识吗? → 主观感受

4. 在这个过程中, 您的感受如何? → 主观感受

5. 知识的有效性和分享知识的关系? 起到哪些作用?

6. 在你分享知识的时候, 你相信你的同事吗?

7. 信任感和分享知识的关系? 起到哪些作用?

7. 你认为总经理在你分享知识中起哪些作用? 为什么? → 引导

8. 你认为你的公司组织结构对你分享知识起什么作用? 促进还是阻碍呢? 为什么? (大公司工作经验) 知识传播速度与效率性

9. 在你们公司, 有没有对知识分享的奖励机制?

10. 如果有, 你认为奖励是促进你分享知识, 如果是阻碍作用? 为什么?

如果没有, 你认为如果有了奖励, 你更愿意分享还是不愿意分享? 为什么?

11. 还有没有什么关于你内在的因素促使你分享知识?

12. 还有没有什么公司外在的因素促使你分享知识?

13. 还有没有什么关于你内在的因素阻碍你分享知识?

14. 还有没有什么公司外在的因素阻碍你分享知识?

15. 你认为改善知识分享效果有什么方法?

性格 → 招聘/试用期

pilot interview:

1. 提问方式有引导性, 如促进或者阻碍。

2. 有些问题过于敏感, 如总经理的作用

3. 关于阻碍因素上, 没有更直接更具像化的解释。

4. 选诱导性问题

5. 远程采访

Source: Original Chinese field notes

## Appendix IV

## Examples of Corporate Documentation

[illegible]

## 合规性评价会议记录

JL-9.1.2/4.5.2-02

时 间:	2018年3月18日	记录人:		地 点:	四楼会议室
参会人员:	王景州、李巧玲、孙永刚、徐海平、刘中宝				
<b>一、评价目的:</b>					
环境、职业健康安全管理体系运行过程中公司遵循法律法规及其他要求情况的自我评价。					
<b>二、评价依据:</b>					
1、GB/T24001-2016；GB/T28001-2011					
2、相关法律法规及其它要求。					
<b>三、会议内容:</b>					
主持人：环境、职业健康安全管理者代表 王景州					
<b>会议流程:</b>					
1、王景州对公司今年查新、收集法律法规及其它要求、遵守情况进行概述。					
2、对重要环境因素清单、危险源清单进行审议。					
3、与会人员进行讨论，最终得出结论。					
<b>发言部门:</b>					
1、综合办张丽。					
综合办共识别出环境因素 145 项，危险源 140 项，其中重要环境因素 5 项，重要风险因素 8 项 15 项。针对天然气使用、新增设备，现硝基车间外堆棚饰过槽识别评价有变化。					
<b>四、管理方案:</b>					

公司经过研究，2017年3项电力消耗、投料设备、巡检设备改造等降低劳动强度目标指标管理方案均落实，效果明显，提升环境、职业健康安全绩效。
五、管理分析：
法律法规更新，2018年共搜集法律法规及其它要求211项，更新了18条法律法规，新增10项标准。经评审公司均合规。
遵守情况：公司2018年5月4日分批进行职业病危害因素、职业健康检查，没有职业病情况发生；2017年10月27日进行环境监测，废水、废气、噪声达标排放；岗位颗粒物、噪声经过检测，结果未出；各项环境法律法规及其它要求均遵守。2017年进行了安评，公司按照当地环保部门要求，
绩效方面，进行大量环境、职业健康安全方面治理工作，管理体系运行有效，员工的环境、职业健康安全意识明显提高，没有重大环境事故，没有重大安全事故发生。
六、结论
从相关证据来看，公司适用的211项相关的法律法规及其它要求，均合规。

Source: Original version of Minutes of meeting: an example of formal knowledge sharing



## Appendix V

### An Example of the Chinese Transcript

10. 你认为总经理在你分享知识中起角色？为什么？

总经理，就是支持你呗，我提出什么要求，如花钱，她会毫不犹豫的权力支持你，也不是不愿意花这些钱。如果她不肯花钱，我就按照不花钱的方案直接说（分享）了。一般我都会提出两种方案，第一是花钱，第二是省钱。都是几套方案，让他选择。

而我们公司之所以能存活这么多年，优势是经营方式比较灵活，在内部，国企要是经营一点事，这批那批的（需要经历多个部门审批，过程繁琐），咱这，就是一个老板一拍板，做决策，速度和效率很快，

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速度上决定了事业。

**Comments:** The flexible management styles of the owner manager enable various practices in different departments to be readily executed.

The case-study company has a long history in KS. Since the company was built by the former owner manager who was the father of the current owner manager, KS has been embedded in the corporate culture. This culture and management visions of the owner manager largely encouraged employees to share their knowledge. On one hand, when the former owner manager run business, there existed the rewards to KS for those whose knowledge contributed to company. The rewards contained bonus and promotions, which provided the sense of honour. On the other hand, the modest attitudes of the former manager towards criticism and queries from employees triggered employees to spontaneously share valuable knowledge for company. It has been inherited by the current owner manager and positively facilitated KS throughout the company still.

Source: Original transcripts of one of the participants

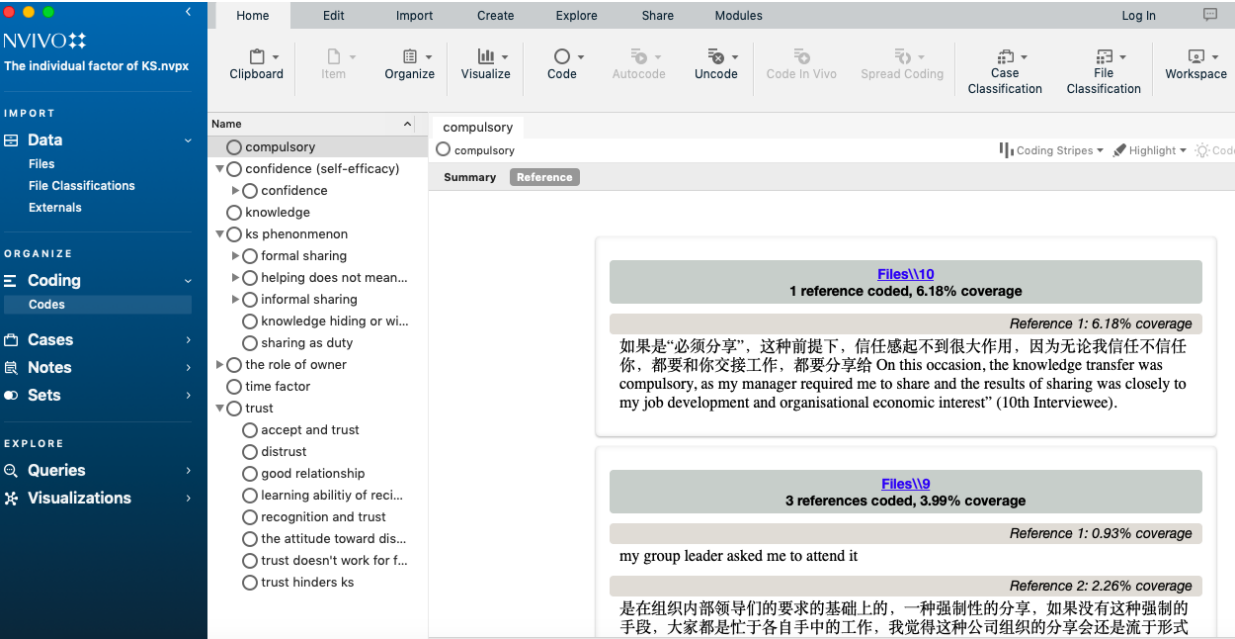
## Appendix VI

### An Example of Codes and Quotations

Quotations		Codes
I would be a guider and promoter in KS. My main responsibility is to build up the various platform and create a free and safe atmosphere for KS to our employees. Only if the employees feel safe and comfortable they will share spontaneously and boldly. I cannot command or push them to share. As thus, it would be counterproductive. Apparently, every sharing activity and every sharing content should put the company's interest first.	5	central role of owner-manager
<p>总经理或者高层领导会对知识分享起到一个主导因素。</p> <p>如果我对推进一个工作遇到困难，需要领导支持，这样总经理就会出面，帮助进行部门之间，人员之间的协调工作。比如采购部门需要我协助完成任务，经理会来找到我，让我帮忙。我在协助完成共同任务的过程中，这也是知识分享的过程。</p> <p>总经理对于知识分享：</p> <p>她的想法是比较全面的，在知识分享过程中，不仅仅是完成一个工作，而且在沟通的过程中，会加强人的关系，所以她的意思是，你跟整个部门的大部分人进行知识分享的过程，可以起到一个部门共同进步的目的。</p>	6	<p>Coordinator</p> <p>As the owner, her version is comprehensive, and her experience is rich, so she can encourage the KS to be one of the organisational targets for the whole company.</p>
<p>每年公司要接受外部的审核机构对我们公司的质量认证，环境安全方面，员工健康方面的进行考核。总经理就会请外审的老师对操作规程，成产工艺的知识进行培训，这一部分是很花钱的，但是总经理非常支持这种类型的知识分享。我觉得总经理这种思路是正确的</p>	16	<p>Invited the outside experts to give a training to our employees.</p> <p>The owner values KS and supports it by money investment</p>
我们的总经理传递给我们积极的知识，正面的能量，促进我们更好的工作。她会强调知识和技能关键点给我	17	She shared the positive perceptions to encourage us to overcome hardship and establish confidence in life and work.



An Example of Coding by Nvivo



Source: Researcher’s coding process

### Examples of the Participant Information Sheet (English and Chinese versions)



Appendix 7

#### LIVERPOOL JOHN MOORES UNIVERSITY Participant Information Sheet

*Thank you for reading this information sheet and for considering to participate in this research*

LJMU's Research Ethics Committee Approval Reference:

**Title of Study:**

Identifying the enablers and barriers to knowledge sharing within an award-winning Chinese SME.

Dear (Name of participants)

You are being invited to take part in a study. Before you decide it is important for you to understand why the study is being done and what participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for taking the time to read this.

**1. Who will conduct the study?**

**Study Team**

**Principal Investigator:**

Bo Wen

PhD student, Liverpool Business School, Liverpool John Moores University, Liverpool, UK

Email: [B.wen@2018.ljmu.ac.uk](mailto:B.wen@2018.ljmu.ac.uk)

**2. What is the purpose of the study?**

The study is important as knowledge sharing has been identified as a key factor in organisational success. Your organisation is acknowledged as a successful SME and I would like to explore with you how knowledge is shared. This will enable me to identify the enablers and barriers to knowledge sharing and I would ask you to describe your experience of knowledge sharing **in this company**.

The following questions will provide the focus:

1: What enables you to share knowledge?

2: Are there any barriers which stop you sharing knowledge?

3: What recommendations would you make to enable knowledge sharing **in this company**.

**3. Why have I been invited to participate?**

You have been invited because you have been identified as an individual who understands how knowledge is shared in this company. In addition, your tenure within this company is two or more years. This means you are familiar with your company. Also you understand the forms of the knowledge sharing within your company.

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**4. Do I have to take part?**

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. You can withdraw at any time by informing me without giving a reason and without it affecting you in any way.

**5. What will happen to me if I take part?**

You will be invited to take part in an one-to-one semi-structure interview on enablers and barriers to knowledge sharing. This will take around 40-50 minutes in a quiet room. Your owner manager has given permission for you to be away from your work during working hours or at your off-duty time. The interview will be recorded by an electronic device (iphone) with your permission.

If you are the employee participant, when the final interview completes, you will be asked to forward the participant recruitment email with participant information sheet onto others that you think might be interested in participating so that they can contact the researcher directly. The criteria of recommended potential participant is his/her tenure of two or more year within your company

**6. Will I be recorded and how will the recorded media be used?**

The audio recordings of your activities made during this study will be used only for analysis. No other use will be made of them without your written permission. No one outside the project will be allowed access to the original recordings

Interviews will be audio recorded on a password protected audio recording device and as soon as possible the recording will be transferred to secure storage and deleted from the recording device.

**7. What should I consider?**

After the interview, you will be asked to recommend another interviewee for me. The criteria is that his or her tenure has to be two year or more.

**8. Are there any possible disadvantages or risks from taking part?**

During the interview, I only discuss your perceptions and experiences of knowledge sharing within this SME. There is no perceived disadvantages and risks from taking part.

**9. What are the possible benefits of taking part?**

It is hoped that this work will help you and your SME to understand how knowledge is shared.

**10. What will happen to the data provided and how will my taking part in this project be kept confidential?**

The information you provide as part of the study is the study data. Any study data from which you can be identified (e.g. from identifiers such as your name, date of birth, audio recording etc.), is known as personal data. This includes more sensitive categories of



personal data (sensitive data) such as your race; ethnic origin; politics; religion; trade union membership; genetics; biometrics (where used for ID purposes); health; sex life; or sexual orientation.

When you agree to take part in a study, we will use your personal data in the ways needed to conduct and analyse the study and if necessary, to verify and defend, when required, the process and outcomes of the study. Personal data will be accessible to the study team.

When we do not need to use personal data, it will be deleted or identifiers will be removed. Personal data does not include data that cannot be identified to an individual (e.g. data collected anonymously or where identifiers have been removed). However, your consent form, contact details, audio recordings etc. will be retained for 5 years.

Responsible members of Liverpool John Moores University may be given access to data for monitoring and/or audit of the study to ensure that the study is complying with applicable regulations

#### 11. Limits to confidentiality

Please note that confidentiality may not be guaranteed; for example, due to the limited size of the participant sample, the position of the participant or information included in reports, participants might be indirectly identifiable in transcripts and reports. I will work with the participant in an attempt to minimise and manage the potential for indirect identification of participants in the publication.

I will keep confidential anything they learn or observe related to illegal activity unless related to the abuse of children or vulnerable adults, money laundering or acts of terrorism.

In certain exceptional circumstances where you or others may be at significant risk of harm, I may need to report this to an appropriate authority. This would usually be discussed with you first. Examples of those exceptional circumstances when confidential information may have to be disclosed are:

- The investigator believes you are at serious risk of harm, either from yourself or others
- The investigator suspects a child may be at risk of harm
- You pose a serious risk of harm to, or threaten or abuse others
- As a statutory requirement e.g. reporting certain infectious diseases
- Under a court order requiring the University to divulge information
- We are passed information relating to an act of terrorism

#### 12. What will happen to the results of the study?

I intend to publish the result in a PhD thesis, journal articles and conference papers.

#### 13. Who is organising this study?

This study is organised by Liverpool John Moores University.

#### 14. Who has reviewed this study?

This study has been reviewed by, and received ethics clearance through, the Liverpool John Moores University Research Ethics Committee (Reference number: 19LBS020).

**15. What if something goes wrong?**

If you have a concern about any aspect of this study, please contact me and I will do their best to answer your query. I should acknowledge your concern within 10 working days and give you an indication of how they intend to deal with it. If you wish to make a complaint, please contact the chair of the Liverpool John Moores University Research Ethics Committee ([researchethics@ljmu.ac.uk](mailto:researchethics@ljmu.ac.uk)) and your communication will be re-directed to an independent person as appropriate.

**16. Data Protection Notice**

Liverpool John Moores University is the sponsor for this study based in the United Kingdom. We will be using information from you and/or your medical records in order to undertake this study and will act as the data controller for this. This means that we are responsible for looking after your information and using it properly. Liverpool John Moores University will process your personal data for the purpose of research. Research is a task that we perform in the public interest. Liverpool John Moores University will keep identifiable information about you for 5 years after the study has finished.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the study to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained. To safeguard your rights, we will use the minimum personally-identifiable information possible.

You can find out more about how we use your information at URL and/or by contacting [secretariat@ljmu.ac.uk](mailto:secretariat@ljmu.ac.uk).

If you are concerned about how your personal data is being processed, please contact LJMU in the first instance at [secretariat@ljmu.ac.uk](mailto:secretariat@ljmu.ac.uk). If you remain unsatisfied, you may wish to contact the Information Commissioner's Office (ICO). Contact details, and details of data subject rights, are available on the ICO website at: <https://ico.org.uk/for-organisations/data-protection-reform/overview-of-the-gdpr/individuals-rights/>

**17. Contact for further information**

**Principal Investigator:**

Bo Wen

PhD student, Liverpool Business School, Liverpool John Moores University, Liverpool, UK

Email: [B.wen@2018.ljmu.ac.uk](mailto:B.wen@2018.ljmu.ac.uk)

**Contact Details of Academic Supervisors:**

**First Supervisor:**

Dr Aileen Lawless

Reader in HRD, Liverpool Business School, Liverpool John Moores University

Email: [A.lawless@ljmu.ac.uk](mailto:A.lawless@ljmu.ac.uk)

**Second Supervisor:**

Dr Deborah Humphreys

Reader in HRD, Liverpool Business School, Liverpool John Moores University

Email: [D.M.Humphrey@ljmu.ac.uk](mailto:D.M.Humphrey@ljmu.ac.uk)

**Third Supervisor:**

Dr Scott Foster

Liverpool Business School, Liverpool John Moores University

Email: [S.foster@ljmu.ac.uk](mailto:S.foster@ljmu.ac.uk)

Thank you for reading this information sheet and for considering to take part in this study.

*Note: A copy of the participant information sheet should be retained by the participant with a copy of the signed consent form.]*



## 利物浦约翰摩尔大学 参与者信息表格

感谢您阅读这份信息表格，并考虑参与这个研究。

利物浦约翰摩尔大学研究道德委员会授权号码：19L85020

**研究课题：**对中国倍受嘉奖的小公司中，知识分享（共享）的促进因素和阻碍因素的研究

亲爱的：（研究参与者）

你被邀请来参与这项研究。在您决定之前，重要的是您需要明白为什么这项研究正在进行，什么参与将被涉及。请花些时间认真阅读以下信息。如果你希望，可以和别人讨论。如果有任何不清楚的地方或者你想得到更多信息，请问我。花些时间来决定是否你愿意参加这项研究。感谢您百忙之中阅读这份信。

### 1. 谁将进行这项研究？

主要调查者：

文博

利物浦约翰摩尔大学商学院博士研究生

Email: [b.wen@2018.ljmu.ac.uk](mailto:b.wen@2018.ljmu.ac.uk)

### 2. 研究项目的目的是什么？

这个研究十分重要，因为知识分享（共享）被认为是企业成功的关键因素。贵公司被认可为一个成功的中小型公司，我想要与您一并探索知识是如何被分享的。这将使我来鉴别知识分享（共享）的促进因素和阻碍因素。我想邀请您来叙述关于您个人知识分享（共享）的经验。

知识创新

共10名以上

这个研究报告主要围绕以下三个问题开展：

1. 什么促使你去分享知识？
2. 有哪些阻碍因素阻止您分享知识？
3. 你认为有哪些改善措施有助于在你的公司中的知识的分享？

### 3. 为什么你被邀请参加？

您被邀请参加因为您了解在贵公司中，知识被分享的过程。而且，你在公司任期超过两年，这意味着你对你的公司十分熟悉。

### 4. 你必须参加吗？

这取决于您个人的意愿。如果你真的决定要参加，您将保存这份信息单，并且被要求在同意表格上签字。你可以随时离开这项研究，并且不用给予原因。你的离开不会对你有任何影响。

### 5. 如果你要参加，将会发生什么？

你将被邀请参加一对一的访问，访问关于知识分享（共享）的促进因素和阻碍因素。这将在一个安静的房间里持续 40-60 分钟。你的总经理已经允许当您参加采访时，您



可以离开您的岗位。采访过程在您的允许下，将被全程录音。

**6. 你会被录音吗？录音资料将被如何利用？**

录音只会被用于分析过程。在没有你书面允许下，录音将不会被用于其他地方。在这个项目之外，没有任何人可以得到原始录音。

我将会用一个密码保护的设备进行设备录音，一旦录音被传输，安全保存，录音将会被删除。

**7. 你应该考虑什么？**

在采访结束之后，你可能会被要求推荐一位员工来作为下一个被采访者。标准为他/她的任期必须两年以上。

**8. 有没有潜在的风险/坏处存在？**

在采访过程中，我只会对您关于知识分享（共享）的观点和经历进行询问。没有可见的坏处和风险。

**9. 有没有潜在的益处？**

这项研究将会帮助您的公司明白知识是如何被分享的。

**10. 被提供的数据将会被怎样处理？你参加这项研究将怎样被保密？**

你的个人信息和个人特征将不会出现在任何报告和出版论文当中。

**11. 保密性的有限性**

请注意，保密性可能被保证，例如，由于参加者样本的有限，参与者或者信息的职务，参与者可能会被间接地认出。我将与你协商，把潜在的简介信息最小化。

**12. 这个研究的结果将会怎样处理？**

我将会把结果发表在最终的博士论文，学术会议论文和相关的学术杂志中。

**13. 谁正在组织这个研究？**

这个研究被利物浦约翰莫尔斯大学组织。

**14. 谁已经审查这个研究？**

这个研究已经被利物浦约翰莫尔斯大学研究道德委员会审查和接受。授权号码：19LBS020。

**15. 如果出现错误怎么办？**

如果你对这个研究有任何顾虑，请联系我，我将尽我们最大努力来回答您的问题。我将在 10 个工作日回答您的问题，给予您一个回答他们将怎么处理错误地方。如果你希望投诉，请联系利物浦约翰莫尔斯大学研究道德委员会的主席（[researchethics@lmu.ac.uk](mailto:researchethics@lmu.ac.uk)）。您也可以与您认为合适的单独的人进行沟通。

**16. 数据保护注意事项**

利物浦约翰莫尔斯大学是英国这项研究的支持者。我们为了进行学术研究从您这里获得数据，我们也是扮演着数据控制者的角色。这意味着我们有责任照顾好你的信息，并合理的运用。利物浦约翰莫尔斯大学本着研究的目的对您的信息进行处理。学术研究是我们对公众利益贡献的任务。利物浦约翰莫尔斯大学将保护您的信息 5 年，直到这个研究结束。



你参与、改变或移动你的信息的权利是有限的，因为我们为了研究的可靠性和准确性，需要用具体的方法管理你的信息。如果您想离开研究，我们将保存已经获得的信息。为了安全保护你的权利，我们将用最小使用个人信息鉴别。

你能够在 URL 发现更多我们怎样使用您的信息或者联系 [secretariat@lmu.ac.uk](mailto:secretariat@lmu.ac.uk)

如果你十分关心你个人信息将会被怎样处理，请在第一时间联系利物浦约翰莫尔斯大学 [secretariat@lmu.ac.uk](mailto:secretariat@lmu.ac.uk)。如果你不满意，你可以联系信息委员办公室。联系信息和数据调查对象权利的细节在信息委员办公室的网站上提供：<http://iuc.org.uk/for-organisations/data-protection-reform/overview-of-the-gdpr/individuals-rights/>

#### 17. 研究者联系信息：

##### 主要研究者

文博

利物浦约翰莫尔斯大学商学院博士研究生

Email: [b.wen@2018.lmu.ac.uk](mailto:b.wen@2018.lmu.ac.uk) 或 283805706@qq.com

##### 研究导师信息：

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感谢您阅读信息表格。考虑参与我们的研究。

注意：参与者需要保留一份此表格和一份参与者签字的同意表格。

Source: Chinese version of participant information sheet

## Examples of the Signed Participant Consent Form (English and Chinese versions)

Appendix 7



**LIVERPOOL JOHN MOORES UNIVERSITY**  
**CONSENT FORM FOR INTERVIEW**

*Insert Title of Project:* What are the enablers and barriers of knowledge sharing within an award-winning Chinese SME?

*Insert Name of Researcher and School/Faculty:* Bo Wen (Liverpool Business School)

1. I confirm that I have read and understand the information provided for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily ☒
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and that this will not affect my legal rights. ☒
3. I understand that any personal information collected during the study will be anonymised and remain confidential ☒
4. I agree to take part in the above study (if appropriate please specify the type of study or particular intervention you are seeking consent for – eg focus group, interview, training programme) ☒

*For studies involving the use of audio / video recording of interviews, focus groups etc or where there is a possibility that verbatim quotes from participants may be used in future publications or presentations please include the following:*

5. I understand that the interview/focus group will be audio / video recorded and I am happy to proceed ☒
6. I understand that parts of our conversation may be used verbatim in future publications or presentations but that such quotes will be anonymised. ☒

Name of Participant Sally

Date 2019.12.23.

Signature Sally

Name of Researcher Bo Wen

Date 23/12/19

Signature Bo Wen

Name of Person taking consent  
(if different from researcher)

Date

Signature

*Note: When completed 1 copy for participant and 1 copy for researcher*

Source: Original English version of a signed consent form



## 利物浦约翰摩尔斯大学 参与者同意表格

研究课题：对中国倍受嘉奖的小公司中，知识分享（共享）的促进因素和阻碍因素的研究

调查者和学校信息：文博 利物浦约翰摩尔斯大学商学院

1. 我确定我已经阅读并理解上述关于研究的信息。我已经有机会去考虑信息，咨询问题并获得了满意的回答。 ☒

2. 我理解了我参加这项研究是自愿的，我可以随时离开这项研究，并且不用给予原因。这不会影响他们的合法权利。 ☒

3. 我理解了这项研究中涉及我的个人信息将被匿名并且保密。 ☒

4. 我同意工参加这项研究。 ☒

对于研究，可能涉及到录音/录像，在未来的出版论文或者演讲可能会逐字逐句的引用参与者的话，请包括一下：

5. 我明白采访/领导小组将会被录音/录像，我接受。 ☒

6. 我明白我们的对话的部分可能被逐字逐句用于未来出版论文或演讲，但这种引用将被匿名。 ☒

联系人姓名：何素花 日期：2019.12.23 签字：何素花

研究者姓名：文博 日期：2019.12.23 签字：文博

同意人姓名：何素花 日期：2019.12.23 签字：何素花  
(如果与研究提供的不同)


注意：当完成采访，一份给予参与者，一份被参与者保留。

Source: Original Chinese version of a signed consent form

## Appendix IX

### An Example of the Signed Gatekeeper Consent Form (English version)

Appendix 5



**LIVERPOOL JOHN MOORES UNIVERSITY  
GATEKEEPER CONSENT FORM**

**Title of Project:** What are the enablers and barriers of knowledge sharing within an award-winning Chinese SME?

**Name of Researchers:** Bo Wen

Please tick to confirm your understanding of the study and that you are happy for your organisation to take part and your facilities to be used to host parts of the project.

*Please add some brief information about your project here that clarifies exactly what the gatekeeper is agreeing to*

1. I confirm that I have read and understand the information provided for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☒
2. I understand that participation of our organisation and students/members in the research is voluntary and that they are free to withdraw at any time, without giving a reason and that this will not affect legal rights. ☒
3. I understand that any personal information collected during the study will be anonymised and remain confidential. ☒
4. I agree for our organisation and students/members to take part in the above study. ☒
5. I agree to conform to the data protection act ☒

Name of Gatekeeper: 张楠	Date: 2019. 12. 23	Signature: 张楠
Name of Researcher: BO WEN	Date: 23/12/2019	Signature: 文博
Name of Person taking consent: (if different from researcher)	Date:	Signature: Bo wen

Source: Original English version of a signed gatekeeper consent form