

# Exploring Knowledge-Hiding Methods and Reasons in a Small Chinese Family Business

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**Abstract:** In the highly competitive business environment, family businesses represent the backbone of the economy in various countries; meanwhile, they face tremendous survival challenges. Knowledge, particularly tacit knowledge, is the key to organisational survival because the hard-to-imitate characteristics could create value and technology innovation. However, it is challenging for family businesses to obtain tacit knowledge because it resides in people's minds; and compared with sharing, people prefer hiding it for self-protection. In recent years, knowledge hiding has increasingly attracted scholars' and practitioners' attention but few in the family business context. Hence, this research aims to investigate how and why the employees hide tacit knowledge in the small family business. The present study used the Self-determination theory (SDT) as the theoretical foundation to explain knowledge hiding behaviours from the motivational perspective. The single case study was conducted in China, as Chinese family business has distinctive cultural characteristics influencing knowledge hiding. Data were collected and analysed from 22 participants in a small Research and Development company through semi-structured interviews and thematic analysis. The findings revealed that skilled employees used various methods to hide knowledge, such as pretending not to know, using no time as an excuse, and hiding the core knowledge. The reasons for knowledge hiding primarily reflected the unfair issues between the family and non-family employees in terms of the favouritism of the owner-manager toward the family employees, no bonus and '996' timetable (people need to work from 9:00 am to 9:00 pm and 6 days per week) for the non-family members. Theoretically, this study contributes to understanding knowledge hiding behaviours by analysing motivations within SDT and corporate contextual influences in the small family business. These findings facilitate enhancing the owner-manager's awareness of the effects of unfairness on knowledge hiding and providing practical solutions to the unfairness and knowledge hiding among employees, as this has immense implications in any business.

**Keywords:** small family business, knowledge hiding, individual motivation, self-determination theory, unfairness, family involvement

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## 1. Introduction:

In the highly competitive business environment, family businesses comprise the bulk of firms in the socioeconomic landscape in nations worldwide (Cunningham, 2020). Concurrently, family businesses encounter tremendous survival challenges (Motoc, 2020). Particularly, small-sized family businesses have outstanding survival issues due to a lack of sustainable innovativeness and resources (human resources, financial resources and knowledge resources) to secure competitiveness (Zhou, 2019). Almost 30% of small businesses can survive in the first five years of start-up (Mas-Verdú, Ribeiro-Soriano and Roig-Tierno, 2015). According to the Chinese National Academy of Development and Strategy (2019), 60% of small businesses had shut down within the first five years, and only 10% of them can survive after ten years. With this backdrop, small family businesses must seek effective methods to enhance their survival abilities and competitiveness.

Knowledge is the primary contributing factor to the survival of small family businesses in knowledge management literature because transferring knowledge is potent to expand the collective wisdom, strengthening the competitive advantages (Hadjielias, Christofi and Tarba, 2021). The small family businesses pervade a wealth of tacit knowledge sources (Motoc, 2020). Most tacit knowledge sources are possessed by skilled employees (Motoc, 2020). Nonetheless, it is challenging for small family businesses to obtain tacit knowledge from skilled employees (Cunningham, 2020). On one side, the distinct corporate context, such as the restrictive conditions and family involvement in business management, brings about the bottleneck of attracting and maintaining a skilled workforce (Cunningham, 2020). Small family businesses have less established incentive mechanisms to maintain their talents (Zhou, 2019). Conflicts between family and non-family members sourced from family involvement can bring about internal competition, thereby causing knowledge hiding (Botero et al., 2021). On the other, unlike explicit knowledge written in the documents, tacit knowledge resides in people's minds (Nonaka and Takeuchi, 1995). As such, people more easily hide tacit knowledge than explicit (Hwang, 2012). Besides, whether to hide it relies on individual motivations (Pereira and Mohiya, 2021). Compared with

knowledge sharing, people may more prefer hiding it for self-protection (Peng, 2013). Therefore, it is significant to construe why people in small family businesses hide their tacit knowledge.

Since Connelly et al. (2012) firstly proposed knowledge hiding as a separate research area in 2012, it has drawn an increasing amount of attention from scholars and practitioners (Chatterjee et al., 2021; Hadjielias, Christofi and Tarba, 2021; Pereira & Mohiya, 2021; Yang and Lee, 2021; etc.). Nevertheless, knowledge hiding research is still “in its infancy stage” (Pereira and Mohiya, 2021, p.369), especially in the family-business context (Hadjielias, Christofi and Tarba, 2021). Furthermore, self-determination theory (SDT) is extensively applied to understand individual motivations in the knowledge sharing field (Halvari et al., 2021 etc.) rather than the knowledge-hiding area (Yang and Lee, 2021). Hence, this study aims to address this gap by investigating how and why the skilled workers hide their tacit knowledge at a small family business in China based on SDT.

## **2. Theoretical lens and foci**

### **2.1 Tacit knowledge**

Existing studies concerning knowledge are primarily built on the distinction of Polanyi (1966): explicit and tacit knowledge. Explicit knowledge is easily codified and written in documents, whereas tacit knowledge is embedded in people’s minds and hard to record and transfer (Nonaka and Takeuchi, 1995). Then, Nonaka and Takeuchi (1995) posited a model to explore the process of knowledge conversion between tacit and explicit states and discovered that this process starts from tacit knowledge at the individual level (Nonaka and Takeuchi, 1995). Tacit knowledge seems to be the fundamental construct of knowledge activities (Nonaka and Takeuchi, 1995). Besides, tacit knowledge from skilled employees is vital to the survival and development of small family businesses due to their personal and dynamic nature (Motoc, 2020). Therefore, this study draws upon the scope of individual-tacit knowledge from skilled professionals.

### **2.2 Knowledge hiding**

Knowledge hiding is not simply short of sharing but “an attempt to retain and hide the knowledge that has been requested by someone else” (Connelly et al., 2012, p.65). In this sense, individual motivations play a pivotal role in knowledge-hiding behaviour (Halvari et al., 2021). Connelly et al. (2012) also portrayed three methods to hide knowledge: evasive, rationalised, and playing dumb. In detail, evasive hiding refers to providing incorrect or misleading information; rationalised hiding occurs when individuals explain not sharing; and playing dumb is when individuals pretend not to know or ignore the request for knowledge from others (Connelly et al., 2012).

Despite knowledge hiding being researched within the last decade, Pereira & Mohiya (2021) posited that knowledge-hiding studies are in their early stage. In family-business research, Hadjielias, Christofi and Tarba (2021) have provided the first empirical evidence on knowledge hiding. Consequently, this research follows the classification of Connelly et al. (2012) to study knowledge hiding in small family businesses.

### **2.3 Family involvement and knowledge hiding**

It is indispensable that knowledge hiding behaviour is affected by the small family-business context (Chatterjee et al., 2021). The most overt characteristic is family involvement in business operation and management; that is, members from the same family govern the company (Botero et al., 2021). Foremost, the family's leading role affects corporate culture and varied activities, including knowledge movements (Motoc, 2020). Corporate culture manifested that the founders' beliefs could be inherited and developed by the following leaders (Botero et al., 2021). In China, the family values outstandingly highlight the commitment and working harmony among corporate members, characterised by collectivism (Zhang, Luo and Nie, 2017). Therefore, Chinese employees working in a collective culture may not perform a behaviour that will damage group benefits (Zhang, Luo and Nie, 2017). If knowledge hiding potentially destroys the group's interests, collective culture would reduce the happening of knowledge hiding.

Furthermore, influenced by family involvement, owner-managers' leadership could invoke personal preference and favouritism (Lin, 2013). Personal preference lies in family relationships and paternalistic leadership, whilst favouritism emerges from differential management (Lin, 2013). Zhou (2019) stated that the owner-managers in Chinese family businesses are challenging to treat non-family and family members equally concerning promotion, salary, and trust. These unequal treatments of family employees can cause an internally competitive environment (Motoc, 2020). It may lead to knowledge hiding as a result of the individual need to protect knowledge ownership (Peng, 2013). Additionally, family businesses may not value satisfying talented people's

psychological needs via reward systems (Zhou, 2019). Gradually, employees feel excluded and distrusted, and thereafter, they are more likely to hide knowledge (Hadjielias, Christofi and Tarba, 2021).

#### **2.4 Self-determination theory (SDT)**

SDT is a critical theory to explain human behaviours by the extent to which basic psychological needs are fulfilled, driven by intrinsic or extrinsic motivation (Ryan and Deci, 2000). Extrinsic motivations, such as rewards and reputation, are the goal-oriented reasons for a behaviour (Ryan and Deci, 2000). Instead, intrinsic motivations from an interest in the activity are associated with an inherent desire for autonomy, competency and relatedness with other people (Gagne & Deci, 2005). Perceived autonomy concerns one's desire to self-regulate their actions, varying with their values and lifestyle (Haas, 2019). Perceived competency lies with one's ability to be exerted (Haas, 2019). Finally, perceived relatedness involves people's sense of belonging and meaningfulness to others (Haas, 2019).

The extant literature has discovered varied motivational drivers for knowledge hiding. For instance, time pressure and competitiveness render people prone to hiding knowledge (Chatterjee et al., 2021). Job insecurity and lack of rewards may increase the possibility of knowledge hiding (Halvari et al., 2021). Huo et al. (2016) underpinned this viewpoint that knowledge hiding occurs when people feel threatened to lose their knowledge ownership. Stenius et al. (2016) discovered that identified motivation based on SDT is the best predictor of tacit knowledge sharing; however, if the sense of importance is missing, it may cause knowledge withholding. On the contrary, external motivation is not associated with knowledge sharing but is positively concerned with knowledge hiding (Stenius et al., 2016). Nevertheless, even if prior studies have found numerous motivational drivers for knowledge hiding, most of them are aligned with knowledge sharing (Stenius et al., 2016). Few apply SDT to independent knowledge-hiding research (Yang & Lee, 2021). Therefore, SDT is adopted as the theoretical foundation in this study.

### **3. Methods**

This study applies a multi-qualitative research method in a single case study to investigate mechanisms and reasons for knowledge hiding in family businesses via understanding the meaning and views of the participants. The case study is an accredited company by the local government regarding its knowledge innovation and employees' learning and developing programmes. Knowledge hiding much depends on their motivations (Halvari et al., 2021); therefore, the qualitative approaches are available for participants to respond to the questions regarding knowledge hiding.

We undertook a cross-sectional documentation analysis followed by semi-structured interviews. The sample included twenty-two skilled employees. The participants were the purposive sampling, screened from three hierarchies (owner-manager, managers, and employees) and different groups (the senior and the young; the family and non-family members). Some participants were often assigned as lecturers or mentors to guide newcomers or apprentices/subordinates. Some of them were selected by the owner-manager and department managers as "role models" to give a speech at the yearly-end conference. Overall, all participants had rich experience in undertaking knowledge sharing practices.

All the participants have used pseudonyms as their names, 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, as depicted in Figure 1.

A template analysis approach was used to analyse all qualitative data. The entire data transcription, coding and analysis processes were achieved whereby Nvivo 12. At last, two themes and two sub-themes were integrated into the final template, as shown in Figure 2.

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

Figure 1: Demographic profile of the participants

Main themes
<p>1. Methods of Knowledge hiding                      Telling <u>others</u> no time                      Pretending not to know                      Hiding core aspects of knowledge</p>
<p>2. Reasons for Knowledge hiding                      2.1 Corporate context of family involvement:                      Collective corporate culture with a 'big family' value  <u>Favouritism</u> of owner-manager toward the family members                      Low compensation and '996' timetables for non-family employees</p>
<p>2.2 Individual motivations for hiding:                      Intrinsic Motivation: Negative feels toward the colleagues and company                      Extrinsic Motivation: a lack of monetary incentives</p>

Figure 2: Final template

## 4. Findings

### 4.1 Theme One: Methods of knowledge hiding

The participants used varied methods to hide knowledge when other people consult knowledge, for example, using no time as an excuse, pretending not to know and hiding core aspects of knowledge. Using no time as an excuse was not a deliberate hiding behaviour, as the participants might not make time to communicate with their co-workers regarding knowledge and technology. This was expressed by one of the participants:

*"We have the '996' timetable, meaning we need to work from 9:00 am to 9:00 pm, and six days per week. Due to this, if my colleagues ask for help when I am in the middle of my job, I will honestly tell them I have no time. However, if I am available, I would like to give them a hand." (Mg9).*

Conversely, pretending not to know and hiding core knowledge was an intentional hiding behaviour in that the skilled employees did not want their colleagues to obtain their knowledge. The main reason was to protect themselves. The participant provided this viewpoint:

*"Each member is a competitor to me. I cannot tell them my core knowledge because it will threaten my career development. If they request my expertise, I will tell them I have no ideas either" (Em7).*

As the above findings presented, the experienced employees in the case-study company often hid knowledge from other colleagues through the three methods: using no time as an excuse, pretending not to know and hiding core aspects of knowledge. The purpose of knowledge hiding behaviours was self-protection.

### 4.2 Theme Two: Reasons for knowledge hiding

The reasons why the skilled employees hid knowledge were analysed from the corporate context and individual motivations. These reasons mainly represented unfair conflicts between the family and non-family employees.

#### 4.2.1 The corporate context of the family involvement

Family involvement played an overt role in forming the collective corporate culture and favouritism of the owner-manager toward her family members, which led the non-family to hide their knowledge. First, the collective corporate culture in the studied company highlighted a 'big family' value. The family people identified this value as the family beliefs deeply affected their perceptions. By contrast, even though agreeing with the 'big family' value, most non-family people felt stressed when the top managers excessively emphasised it and pushed them to behave following this value. As a result, they opted to hide knowledge. A non-family manager demonstrated this:

*"Some top managers required to use their names to register the patents instead of mine. In fact, they did nothing. Meanwhile, they also told me that: 'all the knowledge should belong to the firm, as the company is our big family'. This unfair excuse makes me hide knowledge." (Mg2)*

Another outstanding example was the favouritism toward her family members. As most non-family employees stated, the owner-manager provided her relatives with a series of privileges, including higher compensations, more flexible working hours, and more managerial power than the non-family employees. These unfair situations resulted in knowledge hiding among the non-family members. While had realised the negative influences on knowledge hiding behaviours, the owner-manager conveyed a dilemma to deal with these issues:

*"Respect for seniority, as a fine Chinese tradition, is quite important in our family. When my father handed over the company to me, he asked me to treat my family members well. Therefore, I have to provide better treatments for them. I confess it may cause non-family employees' dissatisfaction and knowledge hiding, which is bad for my business. Now, I am taking actions to lessen their authority, but it takes time."*

Furthermore, the non-family employees experienced low compensations and strict '996' timetables, affecting them to hide knowledge. Only a couple of the non-family employees could attain the annual bonus. They all admitted their salaries stayed low, and no bonus was set up in their monthly wage. Besides, the '996' timetables represented that the employees often worked overtime (9 am-9 pm per day and 6 days per week). It engendered the non-family members' imbalance between life and work. However, this rule only worked for the non-family employees rather than the family members. The following statements from the non-family participants stated the above circumstances:

*"The owner-manager's relatives can come to work later or leave earlier than us without deducting wages. It makes us unhappy, but no one dares to propose against it." (Mg2)*

*"The 996 working schedules made me burn out every day. I only had one day off per week. I prefer hiding knowledge to have a good rest." (Em2).*

In brief, the results demonstrated that knowledge hiding mostly occurred among the non-family members due to a series of unfair issues caused by the family involvement. The unfair issues included the privileges for the family members out of favouritism of the owner-manager and unequal treatment for the non-family members, such as low-level compensations and strict working hours. Therefore, the non-family employees usually chose to hide knowledge.

#### **4.2.2 Individual Motivation for knowledge hiding**

The unfair issues drove the non-family employees to have a sense of distrust, pressure and dissatisfying feelings. Hence, these negative emotions became their motivations for knowledge hiding. More specifically, a sense of distrust of the non-family people arose from their worries of losing knowledge. Contributing knowledge could increase this risk. Besides, most knowledge sharing activities increased the extra workload for the non-family members. Thus, without equal wages and bonuses, they preferred to hide knowledge. Meanwhile, low-level compensations, the '996' working hours and privileges of the family members brought about pressure and dissatisfying emotions to their autonomy of work. The following quotations illustrated these situations:

*"Knowledge sharing tasks are beyond my job duties. However, there is no bonus on our monthly wage. Therefore, why should I do the extra workload? If sharing too much, the learner could steal my knowledge. So, hiding knowledge is a wise choice in the office." (Em1).*

*"No matter how hard I work, the top managers do not want to offer a bonus. They only care about their interests. Besides, following this crazy timetable, my life is not a life. I felt that I am a just working machine. Therefore, why shouldn't I hide knowledge to play dumb?" (Em3).*

As concluded, the unfairness caused by the family involvement generated the non-family people's motivations for knowledge hiding, including a sense of distrust and negative emotions toward their co-workers and company. Accordingly, it influenced the occurrence of knowledge hiding. Conversely, All the family members stated that nothing made them hide knowledge because they worked and shared knowledge to better achieve the common goals for their family and business.

## **5. Discussion**

### **5.1 Methods of knowledge hiding**

The experienced employees in the case-study company often hide knowledge through the three methods: using no time as an excuse, pretending not to know and hiding core aspects of knowledge. This result is concerned with the classification of Connelly et al. (2012). Precisely, using no time as an excuse tends to be the rationalised hiding because the skilled employees give an explicit explanation for those asking for help (Connelly et al., 2012). Furthermore, pretending not to know and hiding core aspects of knowledge are playing-dumb methods because they behave unknown or omit the core knowledge to protect themselves (Connelly et al., 2012). Hence, it indicates that the experienced workers primarily used playing-dumb and rationalised methods to hide their tacit knowledge. However, no evident evasive hiding has been found in the studied company.

The above situations occur primarily due to the collective corporate culture. Zhang, Luo and Nie (2017) discovered that Chinese employees in the collective culture might not do something that will damage organisational benefits. Evasive hiding is detrimental to the collective interests of this company because delivering false knowledge to mislead other people will *"make my colleagues get into the trouble at work"* (Em6). The skilled employees do not hide knowledge in an evasive-hiding way. Therefore, these findings provide valuable evidence on knowledge-hiding methods in the small family business context.

## **5.2 Reasons for knowledge hiding**

Knowledge hiding exposes the unfair conflicts between the family and non-family employees. The unfairness is mainly caused by family involvement in business management. It is determined by the nature of family businesses (Botero et al., 2021). The owner-manager and her family members govern the business operation and internal management. They value the 'big family' culture from this family tradition. Accordingly, they expect all individual and organisational behaviours to be instrumental to the 'big family'. This culture, on the positive side, influences all family people to hide nothing because of the same goals for their family and business (Botero et al., 2021). However, on the negative side, the top managers use the 'big family' as an excuse to persuade the non-family members to quit their knowledge ownership when registering the patents (Huo et al., 2016). Therefore, knowledge hiding more naturally and often occurs among non-family members than among family people.

Further, the unfair issues involve the privileges of the family members and unfair treatment for the non-family members, such as low-level compensation and strict working hours. These findings are consistent with Zhou (2019). Owner-managers in Chinese family businesses are challenging to treat non-family and family members equally concerning promotion, salary, and trust (Zhou, 2019). Therefore, the owner-manager provides her family members with high compensation, flexible working hours and authority but delivers the low-level compensation and a strict '996' timetable for the non-family people, although she knows the adverse outcomes caused non-family people's knowledge hiding toward the company.

Finally, the unfair conflicts trigger the non-family people's motivations for knowledge hiding. Differential treatments enable the non-family people to distrust their colleagues because their knowledge may be learned and taken away by others (Lin, 2013). Within SDT, distrust refers to people's intrinsic motivation to relatedness (Gagne & Deci, 2005), which involves people's sense of belonging (Haas, 2019). Besides, time pressure caused by the '996' timetable concerns the people's intrinsic autonomy, namely one's desire to self-regulate their actions according to their values and lifestyles (Haas, 2019). The non-family members do not have sufficient working autonomy in the '996' timetable due to an imbalance the work and life. At this point, distrust and psychological pressure from unfair treatments are intrinsic motivations for the non-family employees' knowledge hiding, as these motivations enable fulfilling their internally psychological balance and interest (Gagne & Deci, 2005). Finally, low compensations inspire non-family people to hide knowledge because sharing knowledge is an extra workload, but they cannot obtain corresponding returns. Performing knowledge hiding, a goal-oriented behaviour, cannot be satisfied by external incentives (Ryan and Deci, 2000). Thus, a lack of external incentives could be considered extrinsic motivations for knowledge hiding in this study. Consequently, these findings facilitate understanding knowledge-hiding motivations based on SDT.

## **6. Conclusions**

This study investigated how and why skilled employees hide their tacit knowledge in a Chinese small family business. The skilled employees often hide their knowledge by playing-dumb and rationalised approaches. The reasons for knowledge hiding mainly source from the unfair conflicts between the family and non-family people, which are caused by the family involvement in business operation and management. In the meantime, the unfairness triggers the non-family members' motivation for hiding knowledge.

### **6.1 Contributions**

This study mainly makes three prominent contributions to the knowledge-management literature and the family-business context. First, it addresses the gap in studying knowledge hiding in the family-business literature (Hadjielias, Christofi and Tarba, 2021) by probing the methods and reasons for knowledge hiding from the skilled people's perspectives. The playing-dumb and rationalised approaches are the main methods for knowledge hiding in the studied small family business, rather than evasive hiding. The primary reasons were the collective corporate culture and unfairness between the family and non-family employees. Consequently, it provides valuable evidence on learning the methods and reasons for knowledge hiding in the small family business context.

Second, the present study proposes the theoretical concepts of intrinsic and extrinsic motivations for knowledge hiding. In this project, distrust and psychological pressure are the intrinsic motivation for knowledge hiding because these motivations enable fulfilling their internally psychological balance and interest in relatedness and autonomy (Gagne & Deci, 2005). In contrast, a shortage of external incentives for the non-family people is the external motivation because sharing knowledge is an extra workload, but they cannot obtain corresponding

returns. Performing knowledge hiding, a goal-oriented behaviour, cannot be satisfied by external incentives (Ryan and Deci, 2000). However, currently, studies have used SDT to analyse knowledge-hiding behaviours (Yang & Lee, 2021), and most knowledge-hiding research has perceived the motivations for hiding as one of the antecedents, other than an independent motivational perspective (Halvari et al., 2021; Connelly et al., 2012). Hence, this research contributes to theoretical advancements in construing knowledge-hiding motivations through intrinsic and extrinsic motivations based on SDT.

Finally, this project makes contextual contributions to knowledge management and Chinese family businesses literature. The 'big-family' value influenced by family involvement and characterised by the collective culture brings about the positive effects on non-hiding behaviours for the family and negative influences on the knowledge hiding for the non-family members simultaneously. It extends the knowledge of knowledge hiding behaviours in knowledge management and Chinese family businesses literature from contextual and cultural dimensions.

## 6.2 Implications

For practitioners, this study underscores that decision-makers in small family businesses should take action to improve knowledge hiding in the long and short terms. First, it is necessary to create a fair working environment within the "big family" culture. Resolving unfair issues between the family and non-family groups takes time because it is not easy to change the "family" value in a short period. Second, in the short run, practitioners need to consider increasing the rewards and adjusting the working hours for the employees because the dearth of rewards and long working hours engenders people's intrinsic motivations of knowledge hiding.

## 6.3 Limitations

The present study has several limitations, which will envisage recommendations for further investigations. At first, although using a multi-qualitative research method in a single case study could produce in-depth and robust understandings of knowledge hiding, it may limit the generalisation to a broader context (Easterby-Smith et al., 2021). Second, a single case study was conducted in China. Thus, it is possibly hard to infer similar outcomes in other countries. Significantly, the current study discovered the effects of the collective culture on knowledge hiding, which varies from other types of cultures.

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