

**Knowledge Ownership, Its Influencing Factors, and the Relationships  
with Knowledge Sharing Intentions in Organisations: A Comparative  
Study between Thailand and the UK**

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# **The University of Manchester**

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Doctor of Philosophy

Knowledge Ownership

## **Abstract**

Ownership is an innate perception of individuals which could manifest in their possessive behaviours. Owners of property are inclined to extend a sense of self to their possessions, demand a right to control them and use them as a tool with which to interact or negotiate with other people. Clarifying ownership of knowledge is difficult in terms of whether the knowledge in question should belong to an individual following privacy rights or it should belong to an organisation following intellectual property rights (IPR). Furthermore, conflicts occur between developed countries which have a stronger culture for the IPR than developing countries do. Studying knowledge ownership helps to understand these differing viewpoints. Previous works found that knowledge ownership influences the intentions to share knowledge. Nevertheless, little research has been done to explore the knowledge ownership concept particularly in a cross-cultural context. This thesis suggests that cross-cultural research is an appropriate approach to conduct a study on knowledge ownership because ownership perceptions vary from cultures to cultures. The work of Ekweozor (2008) is extended in this study to include a comparative study between the UK and Thailand to validate previous findings. Furthermore, knowledge ownership concept, its influencing factors and its relationship with knowledge sharing intentions are examined.

Secondary data in the UK context were adopted from Ekweozor (2008)'s work. The Thai version questionnaires translated from her English version were distributed to collect data in the Thai context. The results show that knowledge sharing intentions vary according to types of ownership perception which include individual, organisational and collaborative ownership. Employees who perceive organisational ownership tend to have more intention to share knowledge than the others. In contrast, employees who perceive individual ownership tend to have less intention to share knowledge than the others. In addition, the results reveal that contextual factors including nationality and sector, and conditional factors including types of knowledge, the work environment and personal characteristics, influence what individuals believe about knowledge ownership. Moreover, apart from the mediating role, it is found that knowledge ownership also has a moderating role between the work environment and knowledge sharing intentions.

It should be noted that the study was conducted only in the UK and Thailand thus it may not be able to generalise to other countries. Despite this limitation, this study emphasises that knowledge ownership perception is a crucial factor that influences knowledge sharing intentions in organisations. In addition, knowledge ownership could mediate and moderate the relationship between the work environment and knowledge sharing intentions. It is also recommended that contextual factors should be considered when conducting a study on knowledge ownership perceptions because each context differs in many respects such as cultures, regulations and the work environment. Therefore, in order to strengthen and validate research findings in this area, cross-cultural research is an important strategy. Overall, this study theoretically and practically contributes to and advances knowledge of knowledge ownership by providing empirical evidences and implications for researchers and practitioners in a cross-cultural context.

**Keywords:** *Organisational Ownership, Individual Ownership, Collaborative Ownership, Knowledge Sharing, Comparative Study*

## **Declaration**

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- Saetang, S, *Knowledge Ownership Concept*, Doctoral Consortium, 16<sup>th</sup> European Conference on Information Systems, 9-11 June 2008, Galway, Ireland.
- Saetang, S, Theodoulidis, B. and Ekweozor, U., *The Influence of Knowledge Ownership on Knowledge Sharing: An Empirical Study in UK and Thailand*, 6<sup>th</sup> International Conference on Technology, 15-17 January 2010, Berlin, Germany.

Saranya also published papers in the following journals:

- Saetang, S., Theodoulidis, B., & Ekweozor, U. (2010). *The Influence of Knowledge Ownership on Knowledge Sharing: An Empirical Study in UK and Thailand*. The International Journal of Technology, Knowledge and Society, 6(2), 17-30.
- Theodoulidis, B., Ekweozor, U., & Saetang, S. (2009). *Knowledge Management Case Study: Investigating the Concept of 'Knowledge Ownership'*. Available at SSRN: <http://ssrn.com/abstract=1429540>.

# **1. CHAPTER ONE: INTRODUCTION**

## **1.1 Introduction**

Ownership is closely related to human life in that it subconsciously influences human decision-making which shapes a course of action. Previous studies have shown that individuals develop ownership sensitivity from childhood (Furby, 1976; Furby, 1978). This ownership perception creates the relationship between owners and their belongings. The owners have the power to control or make decisions about giving permission to others to use their belongings. The rapid evolution of information technology has brought with it the awareness of values of information and knowledge. They are treated as the most valuable assets. Therefore, claim over the ownership of knowledge is an increasingly important issue as can be seen from a growing awareness of intellectual property rights.

To survive in a competitive business, organisations need to maintain their own unique knowledge and innovation. Knowledge itself and the ability to create and utilise knowledge are the most important considerations for an organisation's sustainable competitive advantage (Nonaka *et al.*, 2000). Knowledge sharing, which is the key process of knowledge management (Davenport & Prusak, 1998), plays an important role particularly to create and utilise knowledge within the organisation. Due to the fact that new knowledge is gradually developed from the existing knowledge (Nonaka *et al.*, 2000) thus knowledge needs to be shared for a firm to be able to utilise it and create new products and services.

Previous work has shown that knowledge ownership perceptions play a crucial role in influencing knowledge sharing intentions (Constant, 1994; Ekweozor, 2008; Jarvenpaa & Staples, 2001; Raban & Rafaeli, 2007; Theodoulidis & Ekweozor, 2009). If ownership perceptions are treated in an appropriate way, they could be an important strategy to encourage knowledge sharing in an organisation. Nevertheless, there is a lack of research in the area of knowledge ownership. Furthermore, collaborative ownership which is a joint ownership between an individual and an organisation has been mentioned theoretically but its impact on knowledge sharing has not been empirically tested. Additionally, research to date has not dealt with comparing two or more different cultural contexts as cross-cultural research resulting in ethnocentric bias of the findings. Testing a theory within a single

country or single culture may suffer from cultural blind spots and invalid assumptions (Margarethe & Bird, 1993). In order to address these gaps, this thesis aims to contribute to the fundamental knowledge on knowledge ownership perceptions building on prior research in psychology, law and organisational behaviour. In that regard, this research clarifies the types, the roles and the influencing factors of knowledge ownership perceptions. Moreover, empirical work will be conducted to test the impact from the three types of knowledge ownership namely, organisational ownership, individual ownership and collaborative ownership on knowledge sharing intentions in a cross-cultural context. Secondary data was adopted from Ekweozor (2008) for the UK context. Translated questionnaires were used to collect data for the Thai context. This research argues that cross-cultural research is an appropriate strategy to study knowledge ownership because different nations vary in legal systems, educational systems and cultures. In turn, these aspects have an impact on knowledge ownership perceptions and possessive behaviours.

## **1.2 Research Motivations and the Significance of the Research**

Knowledge is often the most valuable asset that individuals pursue to claim ownership of. This is supported by the widespread adoption of intellectual property rights. Whilst intellectual property laws have been adopted in many countries, some conflicts exist over organisational knowledge and personal knowledge as a result of differing viewpoints on legal rights. On one hand, according to privacy rights, knowledge belongs to an individual and should be treated as a personal knowledge or asset because it is part of that individual. Therefore, in an organisational context, employees should have full control and rights over their own knowledge. On the other hand, according to intellectual property rights, knowledge gained from work belongs to an organisation and should be treated as organisational knowledge to be exploited for the organisation's benefits (Dulipovici & Baskerville, 2007; Stone, 2002). Additionally, there is another debate on using the legislation for knowledge sharing protection. On one hand, there should be some protection for the owner's rights on sharing in order to encourage creativity (Marron & Steel, 2000). On the other hand, knowledge should be shared since knowledge is created and grown from existing knowledge (Nonaka et al., 2000). The debate is expanded to an international issue between developed and developing countries on agreement and

acceptance of intellectual property rights. With differing views and contexts, developed countries have stronger acceptances and agree to enforce intellectual property rights. In contrast, developing countries have less acceptance and less support for those rights because of the cultural notion that everything should be shared among individuals for the public benefits as a whole not just for the property owners' benefits (Marron & Steel, 2000).

Research has indicated that ownership perceptions have a profound impact on knowledge sharing intentions (Constant, 1994; Jarvenpaa & Staples, 2001; Navon & Ramsey, 1989; Saetang *et al.*, 2010) and awareness of rights over possessions (Furby, 1980). The decisions and motivations lying behind knowledge sharing are based on a trade-off between privacy rights and intellectual property rights. If individuals perceive that they have privacy rights over their knowledge, they will treat knowledge as their private information or assets and intend to share it only if they gain personal benefits in return. In contrast, if individuals believe in intellectual property rights of their organisations, they will treat their knowledge as the organisation's asset and intend to share it to benefit the organisation (Dulipovici & Baskerville, 2007).

While a debate and conflicts are still taking place over the difficulty to enforce the laws, understanding ownership perception will help to reflect individual beliefs related to their belongings (in this case, their knowledge) and their intentions to share. Hence, knowledge ownership should be considered to advance researches in the area of knowledge management.

The work of Ekweozor (2008) was chosen to be extended because her work includes most of the motivating factors that have focused on knowledge sharing behaviours. Moreover, her data sets are available which are published in the case study of Theodoulidis *et al.* (2009) and can be found from the Internet<sup>1</sup>. This research utilises her data sets based in the UK context.

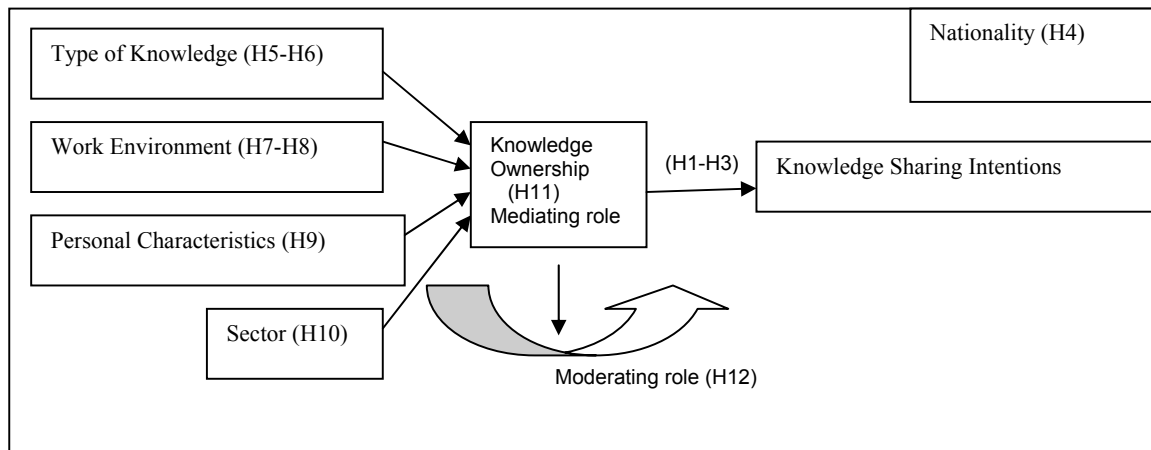
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<sup>1</sup> Available at :  
[http://personalpages.manchester.ac.uk/staff/b.theodoulidis/download/KnowOwn\\_case\\_study.zip](http://personalpages.manchester.ac.uk/staff/b.theodoulidis/download/KnowOwn_case_study.zip)

The influencing factors which include the type of knowledge, the work environment and demographics (this study uses the term ‘personal characteristics’) were replicated from Ekweozor (2008). Nevertheless, this study argues that knowledge ownership perceptions depend on both contextual and conditional factors as compound factors because in different contexts there are different conditions to affect ownership perceptions. Thus, failing to take into account contextual factors may cause bias in research findings. Apart from ‘nationality’, this study suggests ‘sector’ as a contextual factor focusing on the public and private sectors. These two sectors differ in goals, motivation and work procedures (Aycan *et al.*, 1999; Wamsley & Zald, 1973; Wittmer, 1991). These different aspects will shape knowledge ownership perceptions differently. No previous work paid attention to the contextual impact from both ‘nationality’ and ‘sector’ on knowledge ownership perceptions. As such, this presents an opportunity for the research to verify the findings and to explore ownership perceptions in a different context.

Besides a mediating role of knowledge ownership which has been observed in previous work (Ekweozor, 2008), this study also investigates a moderating role in the relationship between the work environment and knowledge sharing intentions. It was found that each individual has different levels of ownership perceptions for example stronger or weaker organisational ownership. This difference should influence the strength of the relationship between the work environment and knowledge sharing intentions. Therefore, this study suggests the moderating role of ownership perceptions on this relationship which will give a better understanding and clearer view of ownerships’ role. Overall, by extending previous research to address the gaps in research, validate previous findings and gain an in-depth understanding on knowledge ownership, this study proposes a research model as shown in Figure 1.1.





**Figure 1.1 Knowledge Ownership Research Model**

In the next section, the choice of research context will be explained followed by the research objectives and research questions.

### **1.3 Choice of Research Context**

The secondary data for the UK context was adopted for this study. Therefore, a comparator should be a country that is different from the UK in many respects. The contrast in cultures and legal systems between the UK and Thailand make it possible to explore knowledge ownership between these countries as a comparative study on knowledge ownership perceptions.

#### **1.3.1 Previous Work: the UK in Context**

Many countries have issued laws to protect and give owners rights to control using these intellectual assets. However, the legislation and concerns of those rights differ from country to country (Bellman *et al.*, 2004; Chatterjee *et al.*, 2002).

The UK is a developed country with a long history and unique culture. As a western country, autonomy and freedom are viewed as part of the human being (Hanssen, 2004). Furthermore, the UK is also one of the countries that intends to promote equity in society. One example could be seen in the establishment of a scheme for disabled people (Priestley *et al.*, 2007). According to Hofstede's theory (Geert; Hofstede & Hofstede, 2005), the UK's culture can be described as low power distance, high individualism, significant masculinity focusing on individual achievements and competitive society, low uncertainty avoidance

and weak long-term orientation. According to Schwartz's work (2006) on the theory of cultural value orientations, the UK is classified as 'West European country culture' which emphasises intellectual autonomy, egalitarianism, and harmony. Egalitarianism and intellectual autonomy share the assumption that people can make their own decisions and can take responsibility for their own actions.

As a developed country, the UK has a strong legal system on intellectual property rights and privacy of individual information (Bellman *et al.*, 2004; Sandra *et al.*, 1995). By the characteristics listed above, the UK was selected to be representative of a western and developed country with individualist characteristics. Previous work (Ekweozor, 2008) investigated knowledge ownership, its relationship with the work environment and its impact on knowledge sharing intentions in the UK. Nevertheless, the factors that were tested in her work for example job characteristics and fairness are western concepts which may not be acceptable to eastern countries (Lee-Ross, 2005). Hence, the research needs an eastern country to be a comparator to extend the work of Ekweozor (2008) and so validate the work findings.

### **1.3.2 Thailand as a Comparator**

Thailand is classified as a developing country according to the World Bank<sup>2</sup> and it has an unclear legal system to protect rights such as property rights (Chaithanakij, 2006b) and privacy rights (Sandra *et al.*, 1995) while those rights affect ownership perspective.

Thais have their own characteristics and identity, thus their knowledge ownership perceptions may differ from other countries especially the western countries. Thais are more concerned about feelings and relationships (Putrasreni Numprasertchai & Swierczek, 2006). The Thai management style is influenced by Asian culture values (e.g. top-down centralised management, concern compromise, strong personal relationships) and puts less weight on focusing on a 'formal performance-based evaluation', which is used in western management style. Thai employees are expected to show obedience to their bosses. Hence, all control and decisions always depend on their bosses or leaders. In that regard, the relationship with bosses is very important and impacts on employees' work satisfaction (F.

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<sup>2</sup> Available at: [www.worldbank.org](http://www.worldbank.org)

G. Adams & Vernon, 2004). According to Hofstede (2005), the Thai culture can be described as high power distance, high collectivism, significant femininity focusing on public achievements, high uncertainty avoidance and with a strong long-term orientation. According to Schwartz (2006), the culture in the South Asian region is high in hierarchy and embeddedness and low in autonomy and egalitarianism. Thailand as a Southeast Asia country, shares these characteristics particularly ‘embeddedness’ which emphasises collective goals and social relationships.

As can be seen from above, Thailand is different from the UK in many aspects. Therefore, it is appropriate to choose these two countries as research context. Additionally, software piracy problems are high in Thailand (Bangkok Post, 2010; Husted, 2000; Shore et al., 2001) indicating that Thais have less concern for intellectual property rights or they may view sharing illegal software as not an unethical thing to do as a collectivist country where everything should be shared. Therefore, this study proposes that these Thai notions and collectivist characteristics will influence knowledge ownership perceptions of Thai employees. In that regard, Thai employees tend to have stronger beliefs on collaborative ownership. Moreover, no previous studies have investigated knowledge ownership perceptions in Thailand. Therefore, Thailand is chosen as a comparator to the UK.

#### **1.4 Research Objectives**

To address the research gaps and gain new insight into knowledge ownership perceptions, the objectives for conducting this study are set out as follows:

1. To explore the concept of knowledge ownership from previous work in the social sciences including its definitions, its types and its roles.
2. To examine mediating and moderating roles of knowledge ownership on the relationship between the work environment and knowledge sharing intentions.
3. To investigate the impact of knowledge ownership perceptions on knowledge sharing intentions.
4. To investigate the factors influencing knowledge ownership perceptions particularly, nationality, sector, the type of knowledge, the work environment and personal characteristics.

5. To extend previous work (Ekweozor, 2008), which has been tested in a western country like the UK, to an eastern country like Thailand as a comparative study.

### **1.5 Research Questions**

To address the research objectives, this study will investigate knowledge ownership perception including its definitions, its types and its roles from the literature and conduct empirical work to answer the following research questions:

1. How do knowledge ownership perceptions affect knowledge sharing intentions?

The first research question investigates the impact of knowledge ownership perceptions on knowledge sharing intentions. All three types of knowledge ownership perceptions which are organisational, individual and collective ownership are also examined as to whether they affect knowledge sharing intentions differently.

2. How do the types of knowledge, the sector, personal characteristics and the work environment influence knowledge ownership perceptions?
  - Do different types of knowledge have different impacts on knowledge ownership perceptions?
  - Do different sector types have different impacts on knowledge ownership perceptions?
  - Do different personal characteristics have different impacts on knowledge ownership perceptions?
  - Do different work environments have different impacts on knowledge ownership perceptions?

The second question investigates the influencing factors on knowledge ownership perceptions. In this study, both contextual factors like sector, and conditional factors including the types of knowledge, the work environment and personal characteristics are observed for their impact on knowledge ownership.

3. Do knowledge ownership perceptions act as a mediator and a moderator on the relationship between the work environment and knowledge sharing intentions?

The third question investigates the roles of knowledge ownership perceptions, whether ownership perception can act as a mediator and a moderator to underlie and alter the relationship between the work environment and knowledge sharing intentions respectively.

4. How are knowledge ownership perceptions between the UK and Thailand different?

The fourth question investigates effects of the contextual factor like nationality between the UK and Thailand to see whether there are any differences or similarities between these two countries on knowledge ownership perceptions.

## **1.6 Structure of the Thesis**

This thesis is structured as follows:

Chapter 1 introduces the research on knowledge ownership by outlining the topics into research motivations and the significance of the research. A comparison of the research context between the UK and Thailand, the research objectives and research questions are also presented here.

Chapter 2 provides a literature review related to knowledge ownership. This starts from a background of knowledge management, knowledge sharing and theories related to motivation and knowledge sharing intentions. Finally, gaps in the research are presented.

Chapter 3 proposes a knowledge ownership research model in order to observe the impact of knowledge ownership on knowledge sharing intentions, and the impact of influencing factors on knowledge ownership. Additionally, the roles of knowledge ownership between the work environment and knowledge sharing intentions are examined.

Chapter 4 discusses the research design and research methodology employed in this study. This study employs a comparative study between Thailand and the UK using a survey method. This chapter discussed research methodology in this cross-cultural setting including the equivalence of research tools and comparability of samples between countries, sampling procedures and inferential statistics used in the analysis.

Chapter 5 provides preliminary data analysis, measurement validity and reliability, and sample descriptions and differences between the UK and Thai samples.

Chapter 6 reports results of hypothesis testing with respect to the hypotheses proposed in Chapter 3. Results are discussed in Chapter 7.

Chapter 7 provides a discussion of the research results and findings. The findings are explained by using the interpretation of the results, the tendency of the results and the comparison with previous work's findings. Implications and conclusions are outlined in Chapter 8.

Chapter 8 presents implications gained from the research findings, limitations, contributions of this thesis and proposes recommendation of future work in the area of knowledge ownership perceptions.

## **1.7 Summary**

This chapter introduces a study on knowledge ownership perceptions which conducted to address the research gaps and seek a better understanding about the knowledge ownership concept. Following a quantitative strategy using questionnaires to collect data from Thailand to be able to compare the secondary data from previous work based in the UK, this study aims to extend previous work to address the gaps into a cross-cultural context between these two countries. The next chapter will look at the relevant literature and give more details of the research gaps along with the extension of previous work.

## **2 CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

Knowledge is the most valuable asset for organisations (Wiig, 1997). Through knowledge and skills, a firm can create new products, processes and services or improve existing ones. In order to be competitive and sustainable in business nowadays, organisations need to know how to generate and utilise their own knowledge. To make knowledge usable to firms, knowledge should be shared among employees (Nonaka et al., 2000). Therefore, encouraging sharing of knowledge especially within organisation is the primary objective for knowledge management (Minsoo, 2004).

With respect to the importance of knowledge, a large and growing body of literature has investigated the knowledge management area particularly knowledge sharing. This chapter describes a background of knowledge management and the importance of knowledge sharing which is a key process of knowledge management. Moreover, some motivation theories, which define factors to encourage positive behaviours (in particular sharing knowledge to colleagues), are explored. The main focus of this research is knowledge ownership perception as it has been found to have an impact on knowledge sharing intentions in past studies. Furthermore, studying on this perception is expected to help to understand the differing viewpoints between intellectual property and privacy rights which are rights that have effects on knowledge sharing attitudes and behaviours. In order to propose a research model, gaps in research on knowledge ownership perceptions have been investigated. Finally, the work of Ekweozor (2008) chosen by this study to be extended to address those gaps is discussed.

### **2.2 Background of Knowledge Management**

This section gives the background information of knowledge management including definitions of knowledge, types of knowledge, definitions and processes of knowledge management along with research area proposed in knowledge management.

### **2.2.1 Knowledge**

Data is “facts, raw numbers” while information is “processed data”, then knowledge can be defined as “personalized information” which was processed in human mind (Alavi & Leidner, 2001, p. 109). Knowledge can be viewed from many perspectives. It can be viewed as a state of mind of knowing and understanding, an object, a process of applying expertise, a condition or a way of having access to information, and capability or ability to use and interpret information (Alavi & Leidner, 2001). Despite various perspectives of knowledge, some definitions of knowledge were suggested as follows. Davenport and Prusak (1998,p.5) described knowledge as “a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating news experiences and information”. This is congruent with the definition of knowledge suggested by Nonaka (1994, p. 15) who defined it as “justified true belief”. This definition describes knowledge as “a dynamic human process of justifying personal beliefs”.

According to Polanyi (1966) , knowledge can be classified into two groups as tacit and explicit knowledge. Nonaka (1994, p. 16) explained that ‘explicit’ or ‘codified knowledge’ is “knowledge that is transmittable in formal, systematic language” and ‘tacit knowledge’, on the other hand, “it has a personal quality which makes it difficult to formalize and communicate”. Tacit knowledge is deeply embedded in human mind which can be acquired in interactions in a specific context. Nonaka (1994) stated further that tacit knowledge can be seen as cognitive and technical elements. Cognitive elements focus on individual ‘mental models’, which refer to how individuals define, understand and interpret the world. Technical elements focus on know-how and skills that are used in a specific context.

‘Information’ and ‘knowledge’ are often used interchangeably. However, the key difference between these two terms is that information is a flow of messages while knowledge is produced by the flow of information, depending on the commitment and beliefs of its processors (Nonaka, 1994). Thus, it can be concluded that knowledge is processed information which is interpreted by an individual from his/her experience, opinion and personal belief.



Constant et al. (1994) defined information and knowledge used in organisations specifically as ‘information products’ and ‘expertise’. The former is often tangible and the latter is often intangible but it is not necessary. The tangible information product can be articulated such as a written document and computer programme. The intangible expertise is knowledge embedded in human memory in forms of knowledge, experience and skills such as ability to type, to ride a horse and to give an advice. However, these two categories have a dynamic boundary. For instance, once computer advice is written into a book; it is transformed from ‘expertise’ to ‘information products’. Moreover, Constant et al (1994) stated that people are aware of the distinction between them and have a different perception on sharing with regard to the types or forms of information. People view ‘expertise’ as part of themselves which reflect their identity and value. Hence, expertise-sharing may depend on self-expression needs. On the other hand, information product sharing may depend on pro-social attitudes and organisational ownership norms. This study follows the work of Constant et al (1994) by separating knowledge into information products and expertise.

### **2.2.2 Knowledge Management**

Knowledge management is a process involving various activities to identify and leverage collective knowledge in an organisation to help to compete with others and to survive in the business world (von Krogh, 1998). Avali and Leidner (2001), concluded from Davenport and Prusak (1998) that knowledge management generally has three aims: to make knowledge visible and show knowledge role in an organisation, to develop knowledge culture by encouraging knowledge sharing and to build a knowledge infrastructure to support collaboration and interaction. Furthermore, they described that knowledge management composes of four processes including creation, storage/retrieval, transfer/sharing and application of knowledge. In order to have an effective knowledge management in organisations, these four processes need to be nurtured and facilitated. There are two general research areas proposed to facilitate those four processes in knowledge management. One focuses on people and facilitating the exchange of their tacit knowledge, while the other focuses on information technology to exert computer system to exchange explicit knowledge (C.P. Pathirage, 2006). The benefit of knowledge is limited when it is isolated and kept within individuals or only among a few groups. To maximise

its benefit, knowledge should be captured and shared widely across the organisation so that the organisation can utilise the knowledge (Nonaka et al., 2000; Pearlson & Saunders, 2009). Therefore, sharing knowledge could be seen as the most important process in knowledge management. This study focuses on this process within the organisational context to explore factors that influence knowledge sharing in order to achieve a successful knowledge management implementation.

## **2.3 Knowledge Sharing and Theory related to Knowledge Sharing Intentions**

Knowledge sharing is one of the main processes of knowledge management. It is a process that knowledge which belonged to someone is made available to and learned by others (Klein *et al.*, 2005). Knowledge tends to grow when it is shared. The availability of shared knowledge is the main source for adapting, extending and creating new knowledge and innovation. To survive in a competitive world, a company has to find ways to create new knowledge, transfer knowledge from personal knowledge to organisational knowledge and utilise that knowledge to benefit the company as a whole (Nonaka et al., 2000).

As knowledge is power, the knower has rights to hoard or share knowledge depending on their motivations (King & Marks, 2008). Knowledge sharing is the most difficult part of knowledge management since it is difficult to encourage people to share knowledge which gives its owners an advantage and power. This sharing behaviour can be caused by a pro-social attitude to voluntarily do for the benefits of others (Alavi & Leidner, 1999) or can be caused by an expectation of something in return (Davenport & Prusak, 1998; Michailova & Hutchings, 2006). Within organisations, there is a large volume of published studies describing theories and motivating factors that encourage positive behaviours to benefit organisations. Some of them have been applied to facilitate knowledge sharing. Thus, the next section will reveal some of motivating factors and theories which help to explain the reasons why people share their knowledge from previous works.

### **2.3.1 Economic Exchange Theory**

Economic exchange relies on transactional contracts (Konovsky & Pugh, 1994) where the exchange depends on the rewards or monetary basis arranged in advance (Blau, 1964). Most relationships among people are under exchange (Simmel, 1971). The basic

assumption is that individuals exchange things to others in order to satisfy their needs (Hemetsberger, 2002). Previous work has found that economic exchange has an impact on knowledge sharing behaviours. Individuals share their knowledge because of the needs for free products such as free software in the case of online communities (Hemetsberger, 2002) and economic incentives such as money (Rafaeli *et al.*, 2007).

### **2.3.2 Social Exchange Theory**

Apart from exchanging tangible resources using market transactions like economic exchange, humans also exchange emotional and intellectual things that tie to long-term relationships (Styhre, 2002). Thus, social exchange has emerged to deal with the exchange outside economic transactions. Social exchange can be defined as “actions that are contingent on rewarding reactions from others” (Blau, 1964, p6). This exchange is based on trust (King & Marks, 2008) and is dependent on reciprocal arrangement (Hemetsberger, 2002). Reciprocal arrangement occurs when individuals exchange things as a result of what they have received in the past or what they wish to get in the future. In contrast to economic exchange, a payment for the exchange is not guaranteed to be paid. Moreover, the payback of exchange is not sum, time and space defined but it is in intangible forms such as social approval (Hemetsberger, 2002), love, respect and knowledge (Liao, 2008). Thus, social exchange relies on relational contracts (Konovsky & Pugh, 1994) in order to maintain relationships and to balance power and image (Jarvenpaa & Staples, 2001). Social exchange theory has been considered by many researchers in knowledge sharing context. It was found that social exchange has effects on knowledge sharing behaviours. The factors derived from the social exchange theory such as trust (Liao, 2008), gaining knowledge, friendship (Hemetsberger, 2002) and peer reputation (Chou & Chang, 2008; Hemetsberger, 2002; McLure Wasko & Faraj, 2005) were found to encourage individuals to share their knowledge in order to achieve those nonmonetary rewards.

### **2.3.3 Theory of Planned Behaviour**

There are other studies focusing on factors that can cause or encourage positive behaviours apart from exchange for things either monetary or non-monetary rewards. For example, Ajzen and Madden (1977) proposed the theory of planned behaviour to predict a person’s intention to perform behaviours in the situations where the behaviour is not completely

controlled by her/him. This theory aims to observe the actual behaviour of people by considering their behavioural intentions. It considers how hard people will try or how much effort people will put to perform behaviours (Ajzen & Fishbein, 1977). According to Ajzen and Fishbein (1977), there are three factors that influence the willingness to perform behaviours that are: attitude, subjective norm and perceived behaviour control.

Firstly, attitude is individuals' judgment about appraisal of behaviour consequence. Individuals will judge the value to estimate if it is worth to perform such behaviour. Secondly, subjective norm is referred to the perception of acceptance to perform behaviour from important people. This is normative aspect or social pressure that people listen to the important ones' thoughts or opinions to decide on engaging in behaviour. If the behaviour is accepted by significant persons, there is a tendency for individuals to perform that behaviour. The interesting work of Terry and Hogg (1996) re-conceptualised 'subjective norms' of the theory of planned behaviour by replacing it with 'group norms' following the perspective of social identity theory. In their work, they defined group norms as "a group prototype that describes and prescribes beliefs, attitudes, feelings, and behaviours that optimally minimize in-group differences and maximize inter-group differences (Terry & Hogg, 1996, p. 779)." In this way, group norms shape group members' thoughts, feelings and behaviours because the member wants to express themselves as a representative of a group rather than as an individual. The reasons to re-conceptualise 'subjective norms' are because of the fact that some behaviours do not relate to or affect their important people so it reduces the impact of the subjective norms on intentions to perform behaviour. Thus, the link between the subjective norms and the intentions is not clear. The norms should be exerted in a wider concept by assessing the perceived behaviour of in-group members (reference group) or how group's members should behave (actual group influence) rather than the perceptions that significant others (non-reference group) would want them to perform (interpersonal influence). The results of their work showed that the effects of group norms were evident only for people who identified strongly with the reference group. Additionally, the effects of personal determinants (i.e. attitudes and perceived behaviour control) were stronger for people who have less identified with the reference group. Moreover, the effects of non-reference group norms (the beliefs or norms from important people which are not group's members) were not significant. Behaviours will be influenced

only by reference group norms (the beliefs or norms from group's members). Thus, this work suggests that group identification is a moderator of the effects of group norms and personal determinants on behavioural intentions (Terry & Hogg, 1996). Finally, perceived behaviour control is the individuals' perception about their performance or their ability to perform behaviour. People will judge how easy or difficult it is to achieve such behaviour within the limit of resource and opportunity. If it is easy to perform, there is a tendency to for individuals to perform the behaviour (Ajzen & Fishbein, 1977; Terry & Hogg, 1996).

The theory of planned behaviour has been applied in various objectives. For example, it is applied to account for the intentions to work in an organisation (Wenger *et al.*, 2002), to explain employees' behaviour of information system use (Huang & Chuang, 2007) and to observe knowledge sharing behaviours (Chou & Chang, 2008; Hansen & Avital, 2005).

#### **2.3.4 Herzberg's Two Factor Theory**

In organisational context, the most influential theory of motivation and job satisfaction is Herzberg's two factor theory (Anderson *et al.*, 2001). This theory identifies two groups of factors that affect the motivation to work (Herzberg *et al.*, 1967). The first group is the motivation factors including intrinsic factors which are the factors related to the job itself, for example, autonomy and variety of job. These factors make employees satisfied with and motivated to commit to their jobs. The second group is the hygiene factors including extrinsic factors which are non-job-related motivational factors, for example, company policies, working conditions and pay. Hygiene factors do not have a direct impact on work motivation since they may not increase the motivation. However, if the hygiene factors were removed, this will cause negative manner or decreased motivation. It was found that these intrinsic and extrinsic factors can encourage employees' commitments (Malhotra *et al.*, 2007) and increase knowledge sharing (Choi *et al.*, 2008). The list of both motivation and hygiene factors can be seen in the Table 2.1.

List of motivation factors:	List of hygiene factors:
Achievement	Pay and Benefits
Recognition	Company Policy and Administration
Work Itself	Relationships with co-workers
Responsibility	Physical Environment
Promotion	Supervision
Growth	Status
	Job Security
	Salary
	Working Conditions
	Personal life

**Table 2.1: Herzberg's two factor theory**

### **2.3.5 Knowledge Ownership Perceptions**

Ownership is an innate perception that develops continuously from childhood. This perception influences attitudes and behaviours (Furby, 1976; Furby, 1978; Killeen *et al.*, 2003). With increasing age, individuals seek more control over their possessions. This ownership perception creates the relationship between owners and their belongings by encouraging owners to take responsibility to take care of the latter (Furby, 1978). The influence of ownership can be seen as two-sided behaviours. On one hand, ownership perception can produce positive behaviours, for example, acts of citizenship, personal sacrifice, experienced responsibility and stewardship upon the owned target. On the other hand, it can also lead to unwillingness to share due to the fear of loss in control over the target or loss of ownership to others. This behaviour, in turn, will impede cooperation (Pierce *et al.*, 2003). As mentioned by Tannenbaum (1993, p. 251), "ownership is attractive to most people...Being an owner is ego enhancing". Thus, if people perceive that they own or have knowledge, this will make them proud so they might be reluctant to share knowledge to others.

Several attempts have been made to reveal the impact of ownership perceptions and possessive behaviours in many areas (Andrew Pendleton, 1998; Buchko, 1992; Pierce *et al.*, 1991). However, there is a lack of studies on the impact of ownership to knowledge

sharing. One reason may be due to the dynamic and complicated nature of ownership over knowledge which is embedded in the mind of owners as an innately human attribute of that person (P. S. Myers, 1996). This makes ownership perception difficult to study because it changes according to the change of context and conditions. For example, once knowledge is shared, any claim over its ownership is in a question. Therefore, this study seeks to understand knowledge ownership perception. By studying this concept, it is expected to yield two main advantages. First, as there is a growing body of concerns over intellectual property rights and innovation of knowledge, understanding knowledge ownership perceptions is a way to gain more insight into people's perceptions and their view on the rights upon their knowledge. Second, knowledge ownership perception is the underlying cause of knowledge sharing intentions and behaviours (Constant, 1994; Jarvenpaa & Staples, 2001). Therefore, understanding knowledge ownership perception helps to find a strategy to facilitate knowledge sharing activities in organisations.

#### **2.3.5.1 Knowledge Ownership as a Lens to Investigate the Paradox of Rights: Intellectual Property Rights and Privacy Rights**

The rapid evolution of technology has accelerated the emergence of knowledge ownership. As both employers and employees have realised the value of knowledge and intellectual property, arguments over ownership have increased and become the most important issue in the field of employment law (Stone, 2002). Attempts to claim and protect the rights over intellectual property have resulted in the widespread use of legal force using intellectual property rights. This legal force has raised disputes particularly with the concerns over human rights such as privacy rights.

Intellectual property rights (IPR) are “natural rights to control the use and distribution of one's artistic, literary, or technological creation” (Larsen, 2003, p. 430). Another definition is “legal entitlements granted by governments within their respective sovereignties that provide patent, trademark, and copyright owners the exclusive right to exploit their intellectual property (IP) for a certain period. The basic rationale for IPR protection is to provide an incentive for innovation by granting IP owners an opportunity to recover their costs of research and development (Chatterjee *et al.*, 2008, p. 1)”. From its definitions, IPRs can be separated into the rights to own, sell ideas and the rights to control the use of them

after sale (Boldrin & Levine, 2002). IPR originated from developed countries and were extended to developing countries by government's regulation activities (Markusen, 2001). In most cases, it has spread through colonisation, for example Malaysia applied British copyright law (Drahos, 2010). However, developing countries often lack of IPR protection (Chatterjee et al., 2008).

Information privacy law is the law that allows individuals to have control over their information with respect to its use and disclosure (Westin, 1967). Privacy rights are the rights allowing a person to "choose the time and place for disclosures of his experience, as well as the company before whom such disclosures are made" (Jourard, 1966, p. 207). In addition, Fried (1968, p. 483) defined 'privacy' as "control over knowledge about oneself".

In the organisational context, employees assume that skills and knowledge gained from training belongs to them since those skills and knowledge are embedded in the employees' mind. Furthermore, they treat those skills and knowledge as a private asset protected by privacy rights. On the contrary, employers who provide such skills and training believe those skills and knowledge belong to the organisation since they invested on those resources protected by IPR particularly the skills or knowledge that has competitive advantage such as a trade secret (Stone, 2002).

Nevertheless, there is no complete clarification on knowledge ownership. Once knowledge is shared it is difficult to identify the owner (Dulipovici & Baskerville, 2007). Thus, individual ownership influenced by privacy rights and organisational ownership influenced by intellectual property rights are always in a question that to whom knowledge would belong, an individual owner or an organisation? It can be seen that ownership perception and rights are related to each other; ownership perception has a profound impact on awareness of rights over the belongings and in turn, that awareness also influences ownership perception.

Due to the difficulty to clarify ownership via a legal framework, to understand perception or belief of ownership and its impact on employees' possessive behaviours should help to find strategies for resolving conflicts over knowledge ownership.



### **2.3.5.2 Knowledge Ownership as a Key Factor Influencing Knowledge Sharing Intentions and Previous research**

Previous research has found that knowledge ownership perceptions influence the decision to share knowledge. Some relevant works are depicted below.

Constant et al. (1994) described the theory of information sharing based on social exchange theory and examined attitudes about sharing information products and expertise in organisations. They conducted experiments using vignettes as a description of the situation to share knowledge with unhelpful co-workers in the past to ask subjects about ownership perceptions and knowledge sharing intentions. The results showed that organisational ownership norm, which is a belief that knowledge is not individuals' asset to hoard selfishly but rather is owned by organisations, encouraged a sharing attitude. Referring to interdependence theory, they explained that people, who have more concerns about social benefits (in this case, organisation's benefits) than their own benefits, tend to have pro-social transformation from their normal reaction based on self-interest or reciprocity by rejecting that request to a supportive reaction based on organisational benefits by giving the advice. In short, people with more concerns about social benefits perceive organisational ownership more strongly than self ownership and tend to have more willingness to share knowledge to those unhelpful colleagues to benefit the organisation. However, motivating factors for sharing differs in each type of knowledge. Sharing tangible information products is influenced by pro-social attitudes (attitudes that individuals care for other people, not only for themselves) and organisational ownership norms. On the other hand, sharing expertise which is part of people's identity is influenced by individual benefits such as increasing self-esteem and self-worth. The results also showed that individuals had more willingness to share expertise which they felt belonged more to them than information products which they felt belonged more to their organisation. One reason is that they may feel more convenient to share their own knowledge in order to achieve their own benefits or interest such as self-expression and self-consistency. Furthermore, it was also found that work experience and schooling (years) increased organisational ownership beliefs (Constant, 1994). In turn, those beliefs increased information products sharing intentions. Thus, organisational ownership mediates the relationship between work experience and the

intention to share information products. However, this mediating role was not found with the intention to share expertise because it was motivated by personal benefits.

Jarvenpaa and Staples (2000) investigated the determinants of the willingness to use collaborative electronic media such as electronic mail, World Wide Web and other collaborative systems for information sharing. One of the major determinants is organisational ownership. The result showed that organisational ownership reduces the use of collaborative electronic media for information sharing which was congruent with the work of Constant et al (1994). They explained that because sharing personal knowledge make individuals satisfied with personal benefits such as self-expression and self-esteem, therefore, people have more willingness to share than organisational knowledge, particularly, in the online context where organisational norms are not strongly promoted and influenced. Hence, people who perceived organisational ownership were less motivated to use collaborative electronic media to share their knowledge.

In addition, Jarvenpaa and Staples (2001) found that beliefs of ownership and property rights affect information and knowledge sharing. By conducting a survey, their results explained that the belief of organisational ownership is positively associated with propensity to share both information products and expertise with people in an organisation and with people in an external organisation. Furthermore, organisational culture and the characteristics of employee such as gender and age influenced beliefs of organisational ownership. The results of Jarvenpaa and Staples (2001) also showed that self ownership or individual ownership is positively associated with organisational ownership, which suggests a collaborative type of ownership in the organisation. Finally, a mediating role of organisational ownership was found to be related to the sharing information products and expertise.

Raban and Rafaeli (2007) conducted experiments using a computer game to investigate ownership perception effects on the willingness to share information online. Their results implied that people are more willing to share private expertise than organisational owned content in a computer system context, particularly when the request to share was made privately. This again confirmed the work of Constant et al (1994) that ownership perception

influences sharing behaviours and individuals are ready to share personal knowledge more than organisational knowledge. This work also suggested that ownership perception can be induced through system design.

The work of Ekweozor (2008) investigated knowledge ownership, its relationship with the work environment and its impact on knowledge sharing intentions in the UK organisational context. In her work, she explained that ownership perception plays an important role in influencing knowledge sharing which is a voluntary behaviour. Her work is based on equity theory and fairness. According to Adam (1965)'s equity theory, if employees perceive unfairness of work condition and performance evaluation, their perceptions can result in dissatisfaction of their work. In turn, they are unlikely to cooperate; in this case, they will be reluctant to share their knowledge. Ekweozor's work (2008) also observed a mediating role of knowledge ownership on the relationship between work environment and knowledge-sharing intentions. Moreover, it was found that a good work environment that makes employees satisfied encourages the organisational ownership perception upon their knowledge and in turn, the organisational ownership encourages the intention to share their knowledge. In contrast, if employees are not satisfied with their work environment, they will perceive that all their skills and knowledge belong to them as an individual asset so they might not share to benefit others or the organisation. The results support previous findings that knowledge ownership influences the propensity to share knowledge. Furthermore, it was found that some aspects of work environment and demographics have an impact on knowledge ownership. That is, knowledge ownership plays a mediating role in the relationship between work environment and knowledge-sharing intentions. All the relevant work on knowledge ownership is summarised in Table 2.2.

Author	Purposes of Study	Methods	Sample	Findings
Constant et al. (1994).	Study attitudes that underlie information sharing in organisations.	Experiments with questionnaires.	U.S. undergraduate business students and alumni.	<ul style="list-style-type: none"> <li>- Pro-social attitudes and organisational norms encourage information sharing. In contrast, Self interest decreases information sharing.</li> <li>- Work experience and work training are positively associated with organisational ownership.</li> <li>- Sharing attitudes and motivation depend on type of knowledge. Sharing information products depends on pro-social attitudes and organisational ownership norms and sharing expertise depends on self interest.</li> <li>- Individuals had more willingness to share expertise which they feel it belonged more to them than information products which they feel them belonged more to their organisation.</li> </ul>
Jarvenpaa and Staples (2000)	Explore factors that encourage the use of collaborative electronic systems	A survey using questionnaires.	A large state university (1125 staffs).	<ul style="list-style-type: none"> <li>- People who perceived individual ownership were more likely to use collaborative electronic media to share their knowledge than those who perceive organisational ownership because they gained personal satisfaction to do so.</li> </ul>
Jarvenpaa and Staples (2001)	Explore factors that influence organisational ownership of information	A survey using questionnaires.	Two universities; one is in Canada (810 employees) and the other	<ul style="list-style-type: none"> <li>-Individual ownership is positively associated with organisational ownership suggesting collaborative ownership.</li> <li>-Organisational culture and personal characteristics influence</li> </ul>

	and expert.		one is in Australia (1,125 employees).	organisational ownership.
Raban and Rafaeli (2007)	Investigate ownership perception and the willingness to share information online.	Experiment in online context	173 MBA students.	-People will have more willingness to share private expertise than organisational owned content in computer system context particularly when the request to share was made privately.
Ekweozor (2008)	Explore work environment factors that influence organisational and individual ownership and mediating role of knowledge ownership on the relationship of work environment and knowledge sharing intentions.	A survey using questionnaires	397 employees from different sectors in the UK	<p>-Organisational ownership positively associated with knowledge sharing intentions. In contrast, individual ownership is negatively associated with knowledge sharing intentions.</p> <p>- Work environment is positively associated with organisational ownership but it is negatively associated with individual ownership.</p> <p>-Ownership perceptions underlie the relationship between work environment and knowledge sharing intentions.</p>

**Table 2.2: The summary of past work related to knowledge ownership**

### **2.3.5.3 Gaps in Research**

There are some gaps and limitations in previous studies on knowledge ownership which this study seeks to address.

Firstly, little research of knowledge ownership has been done theoretically and empirically although there is awareness of the importance of knowledge. A search on Scopus<sup>3</sup>, the largest abstract and citation database, using the key words ‘ownership’ and ‘organisational ownership’ within social science and humanities from the year 1960 to 2011, found less than ten papers that are relevant to knowledge ownership perceptions.

In addition, some works have mentioned knowledge ownership theoretically but there is no supportive evidence, particularly in the area of cross-cultural research. Despite the debate on intellectual property rights between developing and developed countries as mentioned before, there has been no comparative study to explore the root perceptions underlying those rights like ownership perceptions to date. In the literature, ownership is separated into three types; organisational ownership, individual ownership and collective ownership. ‘Collaborative ownership’ which is a collaborative type of ownership between organisational ownership and individual ownership (Jarvenpaa & Staples, 2001) has been acknowledged conceptually, but rarely examined empirically. This study argues that ‘collaborative ownership’ is a valid ownership perception particularly in collectivist culture and also has an impact on knowledge sharing intentions. To address this gap, this study examines the impact of collective ownership compared with organisational and individual ownership on the intentions to share knowledge.

Secondly, there is a lack of consideration for contextual factors in cooperation with conditional factors. Grover and Davenport (2001, p. 6) stated that:

“Knowledge has the highest value, the most human contribution, the greatest relevance to decisions and actions, and the greatest dependence on a specific situation or context”.

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<sup>3</sup> Available at: <http://www.scopus.com/>

Therefore, claiming ownership over knowledge should consider both context and conditions surrounding the knowledge as a compound factor. According to Webster's dictionary, context is defined as "the whole situation, background or environment relevant to a particular event" (Webster's New World dictionary of the American Language (2 ed.), 1972, p. 307). 'Context', then, in this study, is a situation or an external environment that certain characteristics and cultures are shared and accepted among individuals in that context for example, nation and sector where there are regulations, cultures and values held by the citizens and members in those contexts.

In research design, the social context in which individual competencies and behaviours occur should be considered as an important factor for a number of reasons. Firstly, the social context in which individuals live shapes their attitudes and behaviours (Johns, 2006), for instance, national culture is social influence that shapes the attitudes and behaviours of people in that culture. Furthermore, considering context helps to gain more understanding of person-situation interactions and constraints of those interactions. In turn, it helps to determine what factors hinder or encourage behaviours to occur (Johns, 2006). Finally, some behaviours that occur in one cultural context may not occur in other cultural contexts (Brislin, 1983) or some variables that are appropriate for a particular culture may not be appropriate in another culture. Thus, if cultural context is not a concern taken into account and the findings of a research in a western context are not necessarily re-examined in a non-western context, these may result in cultural bias. Therefore, this study proposes that national culture is an important contextual factor influencing knowledge ownership. As such, cross-cultural research should be employed to cross-validate previous results and findings.

There has been some research highlighting that research on knowledge ownership should be conducted in a cross-cultural context. A series of Furby's work (Furby, 1976; Furby, 1978; Furby, 1980) indicated that ownership perceptions and possessive behaviours were different in different national cultures. The thesis findings are consistent with the cross-cultural work of Navon and Ramsey (1989) who found that possession-related behaviours from different cultural groups were expressed differently. In their work, the study of

possession and exchange of certain materials between Chinese and American preschool children showed that American children were more aggressive and defensive than Chinese children with regard to exchanging possessions. Additionally, Chinese children, as opposed to American children, would try to ensure that everybody got an equal distribution of toys. Furthermore, a factor like job characteristics (or work nature) was proposed in the work of Ekweozor (2008) to have an impact on knowledge ownership, and it was critiqued as being suitable only for western countries which may not be able to explain a situation well in eastern countries (Lee-Ross, 2005).

Apart from reducing the contextual bias, studying ownership in a cross-national context helps reflect on individual perceptions of their possessions, such as their intellectual property, within the cultural context of different nations. In turn, this helps to understand the conflicts or different points of view on intellectual property rights between countries, and in particular between developing countries and developed countries. Developing countries were considered to have less acceptance of intellectual property rights and have more piracy rates than developed countries (Marron & Steel, 2000). The reasons behind this may result from the fact that most developing countries have collectivist cultures where everything is shared among the community or public, thus it might not be seen as unethical to illegally copy or share intellectual property. However, to date, there has been no work exploring ownership perception in developing countries including Thailand which has experienced a lot of software piracy problems in recent times (Bangkok Post, 2010; Business Software Alliance, 2009; Shore et al., 2001).

This study also suggests another contextual factor, sector (the private and public sectors) which has never been considered in knowledge ownership studies despite the extensive research of the private and public sectors in organisational behaviours area. Hofstede and Hofstede (2005) explained that everybody can belong to many groups of people at once and hold many cultural layers, for example a culture at national level and at social class level. In the literature, there is the case of ‘cross-level effect’ in which when “situational variables effect at one level of analysis affect variables at another level” (Johns, 2006, p. 388). To reduce the chance to miss detecting phenomena in the another different level, sector, in



particular public and private sectors, was considered as a sub-level to observe the effects of ownership perception apart from nationality factor. The private and public sectors differ in various respects including characteristics, structure, motivations to work of employees and perceptions of the use of knowledge management (Khojasteh, 1993; McAdam & Reid, 2000; Solomon, 1986; Wright, 2001) which make distinctive constraints on choices and behaviours (Ring & Perry, 1985). Therefore, these differences may have a profound impact on knowledge ownership and knowledge sharing intentions. To examine the influence of sector on knowledge ownership, this study compares such knowledge ownership and knowledge sharing intentions along with the work environment between both sectors. This is expected to reflect the similarities and dissimilarities of preferable ownership perceptions and work environment maintained by those perceptions.

In addition, demographic factors were indicated to have an impact on ownership perceptions (Constant, 1994; Ekweozor, 2008; Jarvenpaa & Staples, 2001). Nevertheless, one of the demographic factors like position status was ignored. Positional status is an important factor affecting individuals' work value (Li *et al.*, 2008) which will shape the perceptions and attitudes toward employees' work and behaviours. Moreover, different position status, in this study between executives and non-executives differs on work motivations (Kovach, 1987). In turn, these differences will influence their knowledge ownership perceptions and their motivations behind such perceptions. Therefore, this study also investigated the impact of position status on ownership perceptions.

Finally, previous works (Constant, 1994; Ekweozor, 2008; Jarvenpaa & Staples, 2001) have focused only on the mediating roles of ownership. The work of Ekweozor (2008) has observed the mediating role of knowledge ownership on the relationship between the work environment and knowledge sharing intentions. The moderating role of knowledge ownership has never been investigated. Individuals tend to have different levels of ownership beliefs. Weaker and stronger ownership beliefs may affect the relationship differently. Individuals with stronger beliefs on individual ownership are expected to have more concerns about their work environment; therefore, the effects of the work environment on knowledge sharing intentions will be stronger than those with stronger

organisational ownership. Thus, observing moderating roles will help to gain more understanding and have a clearer view of the relationship.

In summary, little research has been conducted on the concept of knowledge ownership. Moreover, there are some gaps in the area of cross-cultural research and there is a lack of concern for contextual and conditional factors along with the moderating role of knowledge ownership. This research tries to address those gaps by exploring theoretically and empirically the knowledge ownership concept, its roles and proposing the influencing factors on knowledge ownership in a cross-cultural context between Thailand and the UK. The influencing factors include both contextual factors (nation and sector) and conditional factors (type of knowledge, work environment and personal characteristics). The data and the questionnaire from the past work (Ekweozor, 2008) in the UK were used and replicated in Thailand. In addition to the replication, Ekweozor's work (Ekweozor, 2008) was extended to cover the research gaps. The details of replication and extension are explained in the next section.

#### **2.3.5.4 Replication and Extension of the Work of Ekweozor (2008)**

This study chose the conceptual framework of Ekweozor (2008) to be extended for two reasons. First, this study aims to validate and generalise findings by replicating the work in the context of an eastern country like Thailand. This is a first attempt to conduct a comparative study between Thailand and the UK in the area of knowledge ownership perceptions. Secondary data were also adopted from her work for the UK sample to compare with the Thai sample collected by this study via the same questionnaires. Further details of the research methodology will be explained in Chapter 4. Second, her work covers most of the main motivating factors mentioned in motivation theories composed of four dimensions of work environment which are work nature or job characteristics, fairness of the work condition, knowledge sharing norms, and relationship with colleagues. All of these have influence on intentions and behaviours. In particular, fairness is one of the key principles of motivation (McConnell, 2005). It can be seen as an indirect reward which creates trust between individuals and organisations. In turn, it enhances knowledge sharing (Bartol & Srivastava, 2002). The details of these dimensions will be explained in Chapter 3.

Most of them are western concepts particularly job characteristics and fairness which are rarely tested in non-western countries (Carrell & Dittrich, 1978; Lee-Ross, 2005). Thus, this study took the opportunity to validate these four dimensions along with their relationships with knowledge ownership perceptions in a cross-cultural context between Thailand and the UK.

From past studies, gaps in research mentioned in the previous section have not been examined including the effects of nations and sectors on ownership perceptions, position status and the moderating role of knowledge ownership between the work environment and knowledge sharing intentions. For this reason, our study goes beyond mere replication of Ekweozor's (2008) study and extends it to address those gaps.

## **2.4 Summary**

This chapter provided the background on knowledge and knowledge management. The motivating theories related to knowledge sharing were also described. Knowledge ownership is useful to gain more understandings about intellectual rights and it can be seen as a key factor to influence knowledge sharing. Despite the importance of the topic, there is a lack of knowledge and empirical work in the area of knowledge ownership. Thus, this study explores the knowledge ownership concept and proposes a research model on knowledge ownership in cross-cultural countries arguing that knowledge ownership is affected by contextual factors and conditional factors. The details of knowledge ownership and the research model will be presented in the next chapter.

### **3 CHAPTER THREE: KNOWLEDGE OWNERSHIP RESEARCH MODEL AND HYPOTHESES SETTING**

#### **3.1 Introduction**

This chapter aims to provide a profound knowledge ownership concept including its definitions, its type and its roles from relevant ownership literature. Additionally, the research model composing of contextual factors including nationality and sector and conditional factors including type of knowledge, the work environment and personal characteristics was proposed to observe the impact of those influencing factors on knowledge ownership perceptions and to examine the effects of knowledge ownership on knowledge sharing intentions. Furthermore, mediating and moderating roles of knowledge ownership are investigated. By the end of this chapter, hypotheses are set out to empirically discover answers to the research questions.

#### **3.2 Knowledge Ownership**

Ownership is closely attached to human life in that it subconsciously influences human decision-making, which in turn affects behaviours. Individuals have developed ownership sensitivity from childhood (Furby, 1976; Furby, 1978). With increasing age, individuals require more control over their possessions. This ownership perception creates the relationship between owners and their belongings to take responsibility for the care of them (Furby, 1978). Thus, ownership has an impact on human behaviours. On one hand, it can produce positive behaviours for example; the acts of citizenship, personal sacrifice, and experienced responsibility and stewardship upon the owned target. On the other hand, it can also lead to unwillingness to share due to the fear of loss in control over the target or loss of ownership to others. This behaviour, in turn, will impede cooperation (Pierce et al., 2003). In the next section, the ownership definition, roles and type of knowledge ownership will be clarified.

### **3.2.1 Ownership Definition**

There are numerous definitions for ‘ownership’. It can be understood as “the right to hold a thing entirely as one’s own, including complete and permanent control over it” (Adam, 1989, p. 380). Additionally, Grossman and Hart (1986, p. 694) define ownership as “the power to exercise control”. In this case, ownership is a relationship or control that owners have over their belongings. Pierce and Rodgers (2004) categorised ownership into two states: objective state (formal, real and legal state) and psychological state.

In the objective state, influenced by western legal perspective, ownership is a bundle of rights. The three fundamental rights of ownership are:

- “(1) a right to some share of the owned object’s physical being and/or financial value,
- (2) a right to exercise influence (control) over the owned object, and
- (3) a right to information about the status of that which is owned” (Pierce et al., 1991, p. 125).

In this context, the owners have a certain right to control or to authorise performing activities related to their works such as making a copy, broadcasting and giving a public performance (Bainbridge, 2007). The example of a legal aspect that provides rights to owners’ intellectual work is copyright law. Copyright, referred to in the UK as intellectual property law, is “a property right which subsists in accordance with this part in the following descriptions of work—

- (a) original literary, dramatic, musical or artistic works,
- (b) sound recordings, films, broadcasts or cable programmes, and
- (c) the typographical arrangement of published editions ” (The National Archives, 2007).

Normally, the first author is the person who owns the work. However, the employer is the main priority for ownership of the work which is created in the course of employment. It is subject to any agreement to the contrary (The National Archives, 2007).

In the psychological state, Pierce (2001,p.299) developed the term ‘Psychological ownership’ and defined it as “the state in which an individual feels that an object (i.e., material or immaterial) is experienced possessively (i.e., it’s ‘MINE’ or it is ‘OURS’).” He

explained that the ownership is innate perception which has developed towards a variety of object either material (e.g., car or book) or immaterial (e.g., idea and creation). There are three major routes in developing psychological ownership: 1) controlling the ownership target (object), 2) coming to know the target intimately, and 3) investing the self into the target for example to give labour, effort, time and attention to the target (Pierce et al., 2003).

This study focuses on the ‘psychological ownership’, which investigates people’s perception, not its legal aspects because psychological ownership can shape people intentions and encourage voluntary behaviours (Pierce, 2001) more effectively rather than forcing them by law. This psychological ownership perception is explored with the relevant studies in knowledge sharing. Knowledge sharing is a crucial process in knowledge management in establishing a link between the ownership perception and the research model.

### **3.2.2 The Roles of Knowledge Ownership**

This study has investigated the knowledge ownership roles in psychology, corporate governance and sociology. Three themes have been developed to represent the roles of knowledge ownership: 1) expressing the sense of ‘self’, 2) exercising control and rights and 3) interacting with other people by sharing or hoarding knowledge.

#### **3.2.2.1 Expressing the sense of ‘self’**

Possessions are one of the symbols to express ‘the self’ (Belk, 1988; Richins, 1994). The interaction with possessions may reflect the sense of identity. In other words, people use possessions to define and express themselves to others (who we are), and to ensure the continuity of ‘self’ across time (Pierce et al., 2003; Richins, 1994). Belk (1988) explained that possessions are major contributors, which reflect our identity of ‘we are what we have’. For this reason, personal identity or individual sense of ‘self’ may be reduced by taking away individual belongings. For example, in military camps, new soldiers will have all their belongings removed such as their clothes and also their haircuts, conversation and behaviours will be restricted to lessen their sense of ‘self’ and rebuild a new standardized

military identity. In this case, all individual rights and possessions are controlled and restricted by the military organisation thus identity is re-assigned by the organisation. Individuals may also express 'self' as a member of a group since everybody is in a social community. Group membership defines 'group self' or 'group identity' through either their shared consumption symbols or possessions, for examples, the ownership of many types of automobiles, musical knowledge and preference or knowledge for sport teams. These symbols may indicate a 'group identity', which may inform something about the group styles and tastes in the way individuals may use personal possessions namely, make-up and clothing to define their sense of 'self' (Belk, 1988). In some cases, the loss of ownership can cause mental effects. Pierce et al. (2003) mentioned that the loss of possessions may lead to 'shrinkage of personality' and even at worst case; it may affect a person's health and it may cause the loss of the will to live. In a similar way, knowledge also represents an owner's identity. It expresses who the owner is, the sense of 'self' and qualities of its owner for example, the owner's interest, specialities, characteristics, skill and expertise.

### **3.2.2.2 Exercising control and rights**

Possessions are related to establishing control and rights to the use of an object and to authorise others to use it. It is a natural instinct that humans exert possessions to exercise control over them to gain the feelings of efficacy by producing effects in the environment from childhood (Furby, 1980). The perception of control is "the expectation of having the power to participate in making decisions in order to obtain desirable consequences and a sense of personal competence in a given situation" (Rodin, 1990, p. 4). According to Furby (1980), apart from the sense of 'self', the sense of 'control' associates with possessions and encourages the feeling of pleasure and personal efficacy since individuals feel that they achieve or have power over something either objects or the environment. This power of control though ownership provides individual rights to act on or determine an access to an object.

Not only belongings can be controlled but the power of control can also be extended to an organisation or a group of people for example the control over a company or employees. One explicit example is 'Employee Stock Ownership Plans' (ESOP). The ESOP is a well

known strategy in order to share control and stake with the workers which has developed dramatically especially in U.S. (Rousseau & Shperling, 2003). ESOP operates like a pension fund that employees contribute some amount of their salary to a trust fund, which is then changed to be in the form of stock of their organisations (Buchko, 1992). The work of Rousseau and Shperling (2003) shows that employees' ownership or employee owned companies by ESOP scheme leads to residual control rights; the legal right to control over property (i.e. take possession or even sell it) in the form of equity shares, and the control (their term is 'privileges') over gaining profit sharing, accessing to financial information and participation in decision making regarding use of a firm's assets. Regarding knowledge as possessions, when people gain knowledge either from learning or training, they hold some control and rights over it in order to make a decision on how they will use or who they will share their knowledge. In other words, people who are able to control knowledge have a legitimate claim over ownership of knowledge (Jarvenpaa & Staples, 2001).

### **3.2.2.3 Interacting with other people**

An early work (Isaacs, 1936, cited by Furby (1980, p.37-38)) stated that "the relation between a person and a physical object, whether it be a toy, a utensil, a weapon, a dwelling-place, an ornament, or a conventional unit of currency... is always a triangular relation between at least two people and the thing in question." This suggests that possessions may be seen as mediators in social interaction. According to Mueller and Destefano (1973), an object may be used as a tool for social development which they referred to 'carrots and sticks'; the object's owners create inter-personal interaction by either demanding or inviting others to interact with. For instance, when a child pulls a moving toy, this attracted another child to follow the moving toy around without the first child physically pulling him/her. In this context, the first child discovers the relationship between his/her own action on the toy and the action by another child in order to invite others to be with.

One can use their possessions for interpersonal control. An example is from the study of 'dominance' among children by Krebs (1975). She found that two types of possession-related behaviours; taking things from others and resisting others' attempted takes, seem to be important components of expressing control and power over others. The other example



of interpersonal control is possession-related behaviours in the form of ‘friendship’. The resistance of friendship or creating friendship can be achieved by resisting others to gain access to the belongings or allowing the access. For example, a child invites another child whom he/she wants to be friends and to play toys together or vice versa. Possessive behaviour is an important component of social interaction. In other words, possessions can activate the inter-personal contact (Furby, 1980). Sharing knowledge may be a component of inter-personal interaction or inter-personal control by using knowledge as a medium; the knowledge owners can make a decision to share or refuse to share their knowledge depending on the relationship they have with the receivers.

These three roles of knowledge ownership imply that employees could exercise control over their knowledge which in turn could be used as a mean to control, to interact or to respond to other people by either hoarding or sharing their knowledge with. The next section, the type of knowledge ownership and the work related to knowledge sharing will be explained.

### **3.2.3 Types of Knowledge Ownership**

Saetang et al. (2010) suggested that knowledge ownership can be categorised into two types: organisational ownership and individual ownership. In the former, knowledge is treated as a public good or organisational asset so it tends to be shared publicly for the organisation’s benefits. In the latter, knowledge is treated as a private good or personal attribute; whether it will be shared publicly or not depends on personal interest or benefits. One more type of ownership was suggested which is ‘co-ownership’ or ‘collaborative ownership’ between an organisation and an individual. This type was supported by Javenpaa and Staples (2001).

This research focuses on psychological ownership which is a subjective sense of ownership. Therefore, the definitions of ownership in this study will rely on individual perception and belief on ownership. The next section discusses three types of ownership and its definition and motivation in detail. To validate each type of ownership’s characteristics, hypotheses and empirical observations will be conducted.

### **3.2.3.1 Organisational Ownership**

Organisational ownership is a belief that knowledge belongs to organisations, hence it should be shared within the organisation to benefit the organisation. This belief follows organisational norms or employment contract, which commonly state that employee labour created in the context of employment belongs to the organisation (Constant, 1994; Jarvenpaa & Staples, 2001). These norms are congruent with the intellectual property rights treating the knowledge as a organisational asset owned by the employer unless anything has been agreed to the contrary (Baskerville & Dulipovici, 2006). People who perceived organisational ownership will treat knowledge as public objects or public goods which will be shared to benefit a whole organisation. In this case, it will benefit even a free-rider who is a person that does not contribute anything to a community (Wasko and Faraj, 2000). Organisational ownership, according to Constant et al (1994), is caused by a pro-social attitude which is an attitude that could form volunteer acts or that helps to maintain a good outcome or organisation's benefits. Thus, employees who perceive organisational ownership will feel that sharing knowledge is a good behaviour so knowledge should not be withheld selfishly.

### **3.2.3.2 Individual Ownership**

Personal knowledge contains personal ideas, experience, belief, evaluation, value and characteristics of the owners (Baskerville & Dulipovici, 2006). As knowledge is created and embedded in individual minds, it is difficult for organisations to control individuals' knowledge. In this case, individuals have control over their knowledge upon sharing decision (Jarvenpaa & Staples, 2001). This type of ownership has been defined as 'individual ownership'. In contrast to organisational ownership, individual ownership is a belief that knowledge belongs to each individual. Hence, individuals have control and rights to exchange their knowledge to others to satisfy their own self interests and benefits (Constant, 1994, Wasko and Faraj, 2000). People who perceived individual ownership will treat knowledge as private assets or private goods which will not be shared publicly (Wasko and Faraj, 2000) particularly when there is a cost of sharing such as sharing with unhelpful or unsupportive people (Constant, 1994; Jarvenpaa & Staples, 2001).

### **3.2.3.3 Collaborative Ownership between an Organisation and an Individual**

If ‘organisational ownership’ is a belief based on organisational possessions (theirs) and ‘individual ownership’ is a belief based on individual possessions (mine) then ‘collaborative ownership’ can be defined as a ‘joint-ownership’ between an individual and organisation (ours). This collaborative ownership was supported by the study of Javenpaa and Staples (2001) suggesting that an individual could have a shared ownership with the organisation without the loss of control or rights on the knowledge. This is consistent with the U.S. laws of intellectual property which state that patent or knowledge belongs to an individual worker but the organisation has the right to use the patent or exploit the knowledge without any charge. It was found that collaborative ownership encourages stakeholders to participate and take responsibility on a task together more efficiently such as in the case of coding programme (Beck, 2000, Maruping et al., 2009).

In the similar way as organisational ownership, people who perceived collaborative ownership will treat knowledge as public goods, which will be shared to benefit everyone, even a free-rider (Wasko and Faraj, 2000). This collaborative ownership is public in its characteristics supporting both an organisation’s and an owner’s benefits because it includes all together between individual’s and organisations’ ownership. In contrast, individual ownership is private in its characteristics supporting only an owner’s benefits. For organisational ownership, it has public characteristics within an organisational view, supporting an organisation’s benefit as a whole and it has private characteristics from the view outside the organisation supporting only that organisation’s benefit.

### **3.2.4 Knowledge Ownership Perceptions and Knowledge Sharing Intentions**

Previous studies (Jarvenpaa, 2001, Ekweozor, 2008, Theodoulidis and Ekweozor, 2009) have shown that organisational ownership is positively associated with intentions to share information products and expertise of employees. Organisational ownership perception makes individuals concerned about others’ benefit and makes them believe that sharing knowledge is a good thing to do. On the contrary, individual ownership is negatively associated with intentions to share information products and expertise. In addition, individual ownership perception makes individuals have more concerns on their interests

and benefits. Therefore, they have less intention to share their knowledge particularly with previous unhelpful colleagues. The second research question of this study, which is ‘how do knowledge ownership perceptions affect knowledge sharing intentions?’ aims to find out about the impact of knowledge ownership on knowledge sharing intentions. Hence, the hypotheses are:

H1: Organisational ownership is positively associated with intentions to share information products and expertise.

H2: Individual ownership is negatively associated with intentions to share information products and expertise.

The collaboration between an organisation and an individual makes collaborative ownership, which is a joint-ownership or co-ownership between them have combined characteristics of both organisational and individual ownership. Thus, this study hypothesises the effects of the three types of knowledge ownership perceptions on intention to share knowledge as:

H3: There is a significant difference in intention to share information products and expertise among the three types of knowledge ownership perceptions.

H 3.1: Employees with strong Organisational Ownership (OO) perception have more intention to share information products and expertise than those with strong Individual Ownership (IO) perception or those with Collaborative Ownership (CO) perception.

H 3.2: Employees with strong Individual Ownership (IO) perception have less intention to share information products and expertise than those with strong Organisational Ownership (OO) perception or those with Collaborative Ownership (CO) perception.

### **3.3 Cross-Cultural Research: the UK and Thailand**

Furby (1978) revealed that there are different perspectives on ownership perception in many dimensions among different age and different cultural groups, for example, a

meaning of possession and a motivation for possessive behaviours. In particular for different cultural groups, she found that acquisition process and objective appropriateness are more important for Israeli groups than American groups. The latter groups focus more on rights and control use of possession. She suggested that the findings arise from the fact that almost everything of Israeli children is to be shared as a collective property.

The UK and Thailand differ in many respects which include cultures and legal systems. In turn these differences lead to different beliefs and behaviours. From the work of Furby (1978) and the differences between the UK and Thailand, it can be assumed that possessive behaviours and ownership perception may be different between these countries. In the next section, this study presents those differences in detail and explains the need and the hypotheses for conducting cross-cultural research.

### **3.3.1 Culture Differences: Western and Eastern cultures**

Cultures have an impact on all aspects of human life; according to Lu et al (1999, p. 92), “it not only influences learning, but also impacts what is perceived as right/wrong, acceptable/unacceptable, and ethical/unethical”. Kroeber and Kluckhohn (1952) explained that “culture consists of patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in artefacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values; culture systems may on the one hand, be considered as products of action, on the other as conditioning elements of further action”. Culture can also be seen as a ‘mental programme’ or ‘software of the mind’, which contains a pattern of thinking, feeling, and acting that was learned over a lifetime from the social environment. This pattern distinguishes members of one cultural group from other groups. Cultures influence personality which is a unique set of mental programmes an individual acquires through learning and assimilating process from childhood (Geert; Hofstede & Hofstede, 2005). Oreg and Katz-Gerro (2006) provided a particularly concise and comprehensive definition of culture as ‘the integrated pattern of meanings, beliefs, norms, symbols, and values that individuals hold within a society, with values representing perhaps the most central cultural feature’. This definition will be adopted in the course of the discussion of this research.

The definitions of ownership perceptions vary among different nations and cultures. The western perception is more likely based on individualism, private ownership and individual wealth, whereas the eastern perception is more likely based on collectivism, collective property and collective consumption (Furby, 1978). Additionally, possession-related behaviours from different cultural groups are expressed differently, for example, the study of possession and exchange of materials in Chinese and American preschools (Navon & Ramsey, 1989) showed that American children were more aggressive and defensive than Chinese children with regard to exchanging possessions. Furthermore, Chinese children, as oppose to American children, would try to ensure that everybody got an equal distribution of toys. Hofstede's culture theory (Geert; Hofstede & Hofstede, 2005) defined national culture as having five dimensions: power distance, uncertainty avoidance, individualism and collectivism, masculinity and femininity, and long term orientation. The individualism and collectivism dimension is referred to in many works to distinguish the difference of individuals (Earley, 1993; R. H. Moorman & Blakely, 1995; Workman, 2001) and it is defined as the most important dimension (Carroll & Gannon, 1997; Mezei, 1974). Hence, Hofstede's culture theory particularly, the individualism and collectivism will be focused on in this study.

- **Individualism and Collectivism:** Moorman and Blakely's work (1995) concluded that individualism is the belief of individuals who focused on self-interest and their own goals rather than the goals of the group. In contrast, collectivism is the belief of individuals who are concerned and focused on the group's goals and the well-being of group's members rather than themselves even if it may result in damage to their interests. The differences of 'individualism and collectivism' can be expressed in Table 3.1.

Difference target	Individualism	Collectivism
Content of self	Individual differences	Social categories
Way of achieving self-actualization	'I can do whatever I want'	'I am not a burden to my group'
Basic unites of survival (belief)	Individual	Group
Regulation of behaviour	Personal attitudes and cost-benefit analysis	In-group Norms
Goal focus	Personal	In-group
Difference between in-group and out-group	Weak	Strong
In-group and out-group homogeneity	out-group is more homogeneous	In-group is more homogeneous
Kinds of relations	Horizontal	Vertical

**Table 3.1: Summary of differences between 'individualism and collectivism'.**  
(Modified from (Worchel et al., 1998, p. 202))

Other dimensions of cultures can be explained as follows.

- **Power distance:** this dimension suggests that people in a society have unequal power. The distribution of power at individual level can range from low to high power distance. Normally, eastern countries have a high power distance. This suggests that all decisions are more likely to be made at the top level, for example by top managers in a company. In contrast, western countries have a low power distance, where individuals seem to have more equal in rights.
- **Uncertainty avoidance:** this is the extent to which people in a society are aware of uncertainty and try to avoid that uncertainty, particularly, in unknown situations.
- **Masculinity and femininity:** is the indicator of social value compared to gender roles. The social value is called masculine "when emotional gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success whereas women are supposed to be more modest, tender, and concerned with the quality of life." In contrast, the social value is called feminine "when emotional gender roles overlap: both men and women are supposed to be modest, tender, and concerned with the quality of life" (Geert; Hofstede & Hofstede, 2005, p. 120).
- **Long-term orientation:** focuses on long-term relationship and looks for future rewards particularly, perseverance and thrift. Unlike the long-term orientation, a short-term orientation focuses on the present rewards particularly, respect for a tradition, the preservation of 'face', and the fulfilment of social obligations.

Due to the fact that each country has a variety of different dimensions other than individualism-collectivism such as legal systems, religion and culture aspects, hence one can not separate each country solely by the individualism-collectivism quality (Earley, 1993). However, in order to distinguish each nation, it is assumed that nations having collectivism or individualism are simply the ones in which majority of people hold collectivism or individualism characteristics (Hui & Triandis, 1986). Thus, it is expected that countries which have individualism focus on individual attitudes and benefits will prioritise more on individual ownership. In contrast, countries which have collectivism focus on group benefits will prioritise more on collective ownership.

### 3.3.1.1 The UK Culture

The UK is a developed country with a long history and unique culture. As a western country, autonomy and freedom are viewed as part of human being (Hanssen, 2004). Furthermore, the UK is one of the countries that is concerned in promoting the equity of each person, and this concern can be seen in disabled people scheme (Priestley et al., 2007). According to Hofstede's theory (Geert; Hofstede & Hofstede, 2005), the UK culture can be described as low power distance, high individualism, significant masculinity focusing on individual achievements and competitive society, low uncertainty avoidance and weak long-term orientation. The index score of each dimension of UK culture, rank and description are shown in Table 3.2.

Cultural Dimensions	Score	Rank	UK Culture
Social inequality (Power distance)	35	63-65	A power distance in UK is quite low comparing to Eastern countries such as Thailand. This means that people in this country have more equal rights.
Individualism	89	3	Compared with Easterners, UK are more independent individuals
Masculinity	66	11-13	UK culture is more masculine, emphasizing on personal goals and opportunity for advancement They seek for successful in life.
Uncertainty avoidance	35	66-67	UK are more acceptable to work in a changeable environment where there is no rules and unclearly predictable.
Long-term Orientation	25	32-33	UK culture is more short-term oriented than Eastern cultures. They concern with social and status obligations. Efforts should produce quick results.

***Table 3.2: UK cultural dimensions and description***



According to Schwartz's work (2006) on theory of cultural value orientations, UK is classified as a West European country culture which emphasises intellectual autonomy, egalitarianism, and harmony. Egalitarianism and intellectual autonomy share the assumption that people make their own decisions and take responsibility for their own actions. These characteristics support UK's individualism mentioned by Hofstede and Hofstede (2005) .

### 3.3.1.2 Thai Culture

As Thai people have their own characteristics and identity, their ownership perception might differ from other countries, especially western countries. Thai people are more concerned about feelings and relationship (Putrasreni Numprasertchai & Swierczek, 2006). Thai management style may be influenced by Asian culture values (e.g. top-down centralised management, concern compromise, strong personal relationships) which may put less weight on a formal performance-based evaluation which is used in the western management style. Thai people are highly expected to show obedience to their bosses. Hence, all control and decisions always depend on their bosses or leaders and the relationship with bosses is very important to have an impact on employees' satisfaction on their working (F. G. Adams & Vernon, 2004). According to Hofstede's (2005) theory, the Thai culture can be described as high power distance, high collectivism, significant femininity focusing on public achievements, high uncertainty avoidance and strong long-term orientation. The index score of each dimension of Thai culture, its rank and description are shown in Table 3.3.

Cultural Dimensions	Score	Rank	Thai Culture
Social inequality (Power distance)	64	34-36	All work is led by a senior who are respected by younger members. Decisions are made at the top. A formal process and protocol are important.
Individualism	20	56-61	Compared with Westerners, Thais are more group-oriented. They maintain harmony and avoid direct confrontation.
Masculinity	34	64	Thai culture is more feminine, emphasizing feelings and relationships, saving and giving face. They prefer compromise to resolve conflict.
Uncertainty avoidance	64	44	Thais are moderately comfortable in dealing with uncertainty. They are tolerant of deviation. Changes and

			adjustments are acceptable.
Long-term Orientation	56	9	Thai culture is more long-term oriented than Western cultures. A negotiation will last for as long as it takes to establish a relationship. It is not deadline oriented.
<i>Source: Hofstede and Hofstede (2005); Putrasreni Numprasertchai and Swierczek (2006)</i>			

**Table 3.3: Thai cultural dimensions and description**

According to Schwartz (2006), the culture in the South Asian region is high in hierarchy and embeddedness and low in autonomy and egalitarianism. Thailand which is a Southeast Asian country, shares these characteristics; in particular ‘embeddedness’ which emphasises in a collective goals and social relationship. This ‘embeddedness’ reflects the Thai collectivist characteristics described by Hofstede and Hofstede (2005).

### **3.3.2 Developed and Developing Countries: Legal Aspects**

There are disputes over Intellectual Property Rights between developed and developing countries. The disputes stem from the different point of view developed countries believe that the IPR is important for promoting innovation and economic growth while developing countries believe that it will impede economic growth by limiting existing knowledge usage (Marron & Steel, 2000) and that IPR will create monopoly (Boldrin & Levine, 2002).

The statistic report of Business Software Alliance (2009) for piracy study in 2008 also supports that most Eastern countries, of which the majority are developing countries have a higher piracy rate than Western Europe and North America, where the majority are developed countries. Further evidence can be seen from the study of Marron and Steel (2000), which gives an example of software piracy showing that high-income countries with an individualist culture have lower piracy rates than low-income countries with a collectivist culture (Husted, 2000). Milberg et al. (2000) also found that culture value influences concerns about information privacy. People in countries with higher individualism have more concerns about information privacy than those people in the countries with lower individualism. This suggests that British may have more concerns about their privacy than Thais do and therefore, the British may focus more on individual ownership than the Thais.

### **3.3.3 The Need and Hypotheses of Conducting Cross-Cultural Research**

There is a gap in the knowledge ownership research where there is a lack of conducting cross-cultural research as mentioned in Chapter 2 section 2.3.5.3.

Job satisfaction, work value and perceived of work outcome are determined by personal goal and cultural values. Moreover, leadership styles and managerial behaviours vary across cultures. These, in turn, determine a person's expectation in each culture (Hui, 1990). As Thailand and the UK are different in culture dimensions and legal systems, Thailand and the UK can have a difference on knowledge ownership perception. Thailand is an eastern country where people in the country tend to develop collectivism (Jolanda Jetten, 2002; R. H. Moorman & Blakely, 1995; Pornpitakpan, 1999). In contrast, in western countries such as the UK, people in the country tend to develop individualism (Jolanda Jetten, 2002; R. H. Moorman & Blakely, 1995).

Western culture is based on individualism, private ownership and individual wealth while eastern cultures are based on collectivism, collective property and collective consumption (1994; Furby, 1978). With these cultural differences, hypotheses were set out as follows to answer the first research question which is 'what are the differences of knowledge ownership between the UK (a developed and western country) and Thailand (a developing and eastern country)?':

H4: There is a significant difference of proportion of employees with regard to knowledge ownership perceptions (CO, OO and IO) between an individualist country like the UK and a collectivist country like Thailand.

H 4.1: The majority of employees from the UK are likely to perceive individual ownership (IO) for both information products and expertise.

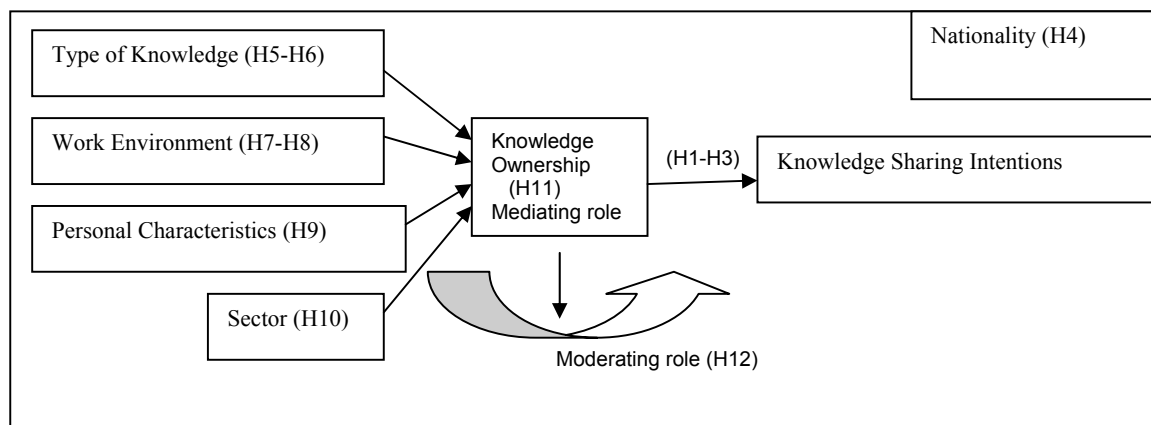
H 4.2: The majority of employees from Thailand are likely to perceive collaborative ownership (CO) for both information products and expertise.

### **3.4 Knowledge Ownership Research Model**

Previous research tends to ignore the nationality and the sector within which the ownership perception was developed. Thus, some characteristics and constraints associated with a

particular context will also be overlooked. This study proposes that contextual factors such as nationality and organisational sector have an impact on ownership perception. To study the impact of nationality on knowledge ownership, this research observed the case in Thailand and UK as a comparative study. As a sub-culture or sub-layer from the nation, the private and the public sector in both countries were examined to distinguish how different sector affects ownership perception. Moreover, conditional factors such as type of knowledge, work environment and personal characteristics also influence the way people feel about their ownership. In turn, this knowledge ownership will affect the intention to share knowledge.

The proposed model can be seen in Figure 3.1.



**Figure 3.1 Knowledge Ownership Research Model**

### 3.4.1 Influence of the Type of Knowledge on Knowledge Ownership

From the definition of knowledge in section 2.2.1 this study follows the work of Constant (1994) where information products refer to manuals, lecture notes and documents. Furthermore, expertise refers to knowledge and advice from employees. It was shown that the types of knowledge have an impact on knowledge ownership perception and in turn, influences knowledge sharing intentions.

Previous research has shown that types of knowledge have impact on ownership perceptions. People tend to perceive organisational ownership more with information products and perceive individual ownership more with expertise (Constant, 1994; Jarvenpaa & Staples, 2001; Saetang et al., 2010). Therefore, it is proposed that:

H5: Individuals tend to associate organisational ownership more with information products than individual ownership.

H6: Individuals tend to associate individual ownership more with expertise than organisational ownership.

### **3.4.2 Influence of the Work Environment on Knowledge Ownership**

Employees could be motivated to perform positive behaviours by work environment factors (Bell & Menguc, 2002; Wiley, 1997). In this study, four aspects of work environment factors adopted from the work of Ekweozor (2008) were examined for their impact on knowledge sharing intentions.

#### **1. Work Nature or Job Characteristics:**

Work nature (or job characteristics) was found to be an important factor to motivate employees because it increases the sense of ownership and responsibility over the work, and makes the work more interesting (Campion *et al.*, 1996).

Hackman and Oldham (1976) presented the Job Characteristics Model (JCM) which is a model of job design including five core dimensions, namely, variety of job, task significance, task identity, autonomy and feedback. When employees experience all five work nature's dimensions in their job, they intrinsically create meaningfulness of the work, experience responsibility and gain knowledge of results of their jobs. These, in turn, indirectly increase work motivation, work satisfaction and quality of work performance (Brass, 1981; Hackman & Oldham, 1976). The definitions of each dimension of work nature are presented in Table 3.4.

<b>Job characteristics/ Work Nature</b>	<b>Definitions</b>
Variety of job	The degree to which employees are required to do many activities and required variety of skills and talents.
Task significance	The degree to which the job has a great impact on others within and outside organisations.
Task identity	The degree to which employees can do a whole job from the start

	to the end with a visible outcome of their efforts.
Autonomy	The degree to which employees are provided freedom and are empowered to make their own decisions over their jobs.
Feedback	The degree to which the results of their jobs and their performance are clearly informed.

**Table 3.4 : Job characteristics dimensions (Work Nature Dimensions)**  
*developed from the work of Hackman and Oldham (1976) and Ekweozor (2008)*

## **2. Fairness:**

Fairness of work condition is an important mechanism to create trust between employees and their organisation (Bartol & Srivastava, 2002). Research evidence suggests that when employees perceive that they are treated fairly, they will determine positive activity such as extra-role behaviour or organisational citizenship behaviours (voluntary help) (Ertu"rk, 2007; Eskew, 1993; Pierce et al., 1991) .

The perceptions that employees perceive about how they are treated by the organisations are termed as organisational justice. There are two types of organisational justice: distributive and procedural justice. The former refers to the perceived fairness of the amounts of compensation or allocated rewards that employees get, whereas the latter focuses on the perceived fairness of the methods used to determine those amounts (Chang, 2005).

Procedural justice comprises of formal procedures, and the way in which those procedures are carried out is called interactional justice. The former is the extent of fair procedures and policies employed in the organisations. The latter could be observed from actions taken or treatment by managers as they enacted procedures and explained decisions (Robert H. Moorman, 1991). This treatment from supervisors to subordinates should be expressed politely and clearly when communicating and explaining to subordinates about how the decision or justice is made. In general, employees determine that procedures are fair when the procedures have no bias and provide them an opportunity to give opinions (Eskew, 1993). The fairness of work condition according to Ekweozor (2008) is judged by the following factors:

- Rewards

This factor is related to distributive justice because it is linked to the outcome received. Rewards include both compensation and non-compensation rewards. Compensation rewards are payments made by an organisation for an employee's work or service in the form of money (salary) or goods and services (i.e. health insurance, holidays and shares). Non-compensation rewards come in form of psychological, emotional and social demands for example, recognition and promotion. In this study, compensation rewards will be referred to as 'remuneration' and non-compensation rewards will be referred to as 'recognition'.

- Work Outcome

This factor relates to distributive justice and indicates how fair the work outcome offered by organisations is, including work schedule, workload and job responsibilities.

- Performance Evaluation

This factor related to procedural justice evaluates decision system and procedures of assessing employees' performance. Elements of fairness are judged by the extent to which performance evaluation allow employee to express their opinion in evaluation and the extent to which standard and ethics were used in organisational performance evaluation.

- Organisational Procedures

This factor is related to procedural justice in the way that employees judge or perceive fairness of procedures employed in their organisations. Elements of organisational procedures encompass the judgement on how formal procedures are decided, how employees are allowed to express their ideas and how employees are provided information for clarification in organisational decision making.

As a result of fairness of these four factors above, employees may payback forward to the organisation by expressing pro-social attitudes and behaving positively to benefit the organisation.

### **3. Knowledge Sharing Norms:**

Group norm is "an idea in the minds of the members of a group, an idea that can be put in the form of a statement specifying what the members or other men should do, ought to do, are expected to do, under given circumstances" (Worchel et al., 1998, p. 96). It can be used

as a mechanism to shape group (or in this case organisation) members' behaviours (Terry & Hogg, 1996). If norms can be used to shape employees' attitude and behaviours in organisations, knowledge sharing norms, in the same way may be used to encourage knowledge sharing intentions as well. Knowledge sharing norms, in this study, were observed by the encouragement from organisational policy and top management to share knowledge among employees.

#### **4. Relationship with Colleagues (Supervisors and Co-workers):**

Relationship with colleagues, either supervisors or co-workers also plays an important role to create positive responses from employees. The work by Thompson and Heron (2005) showed that the good relationship between knowledge workers and their manager alone made a positive response and encourage commitment. Additionally, voluntary help or extra-role behaviours is positively associated with closeness to colleagues (O'Reilly & Chatman, 1986). A high quality of co-workers relationship, as well as supervisor and subordinate relationship may encourage employees to share their knowledge within the organisation.

Previous work (Ekweozor, 2008; Saetang et al., 2010) showed that the work environment condition is positively associated with organisational ownership but it is negatively associated with individual ownership. Constant et al. (1994) suggested that people have more intention to share information when they are happier or they are more satisfied with their colleagues and their organisation. It could be inferred that employees with a better or more satisfaction with the work environment tend to have more positive response and behaviours. Therefore, they are likely to hold organisational ownership beliefs on their knowledge to benefit their organisations. In contrast, employees with a poorer or less satisfaction with the work environment tend to have less positive response and behaviours. Therefore, they are likely to hold individual ownership beliefs on their knowledge to preserve their self-interest and to defend against exploitation by the organisation.

According to the four aspects of the work environment factors, a good quality of the work environment could be decided by these conditions:



1. when employees experience high amount of all work nature dimensions including variety of job, task significance, task identity, autonomy and feedback,
2. when they feel that their work environment condition is fair with regard to remuneration, recognition, work outcome, performance evaluation and organisational procedures,
3. when they receive supportive knowledge sharing norms to encourage knowledge sharing and,
4. when the quality of the relationship with supervisors and the quality of the relationship with co-workers are high.

On the basis of the four aspects of work environment discussed, it is expected that:

H7: Employees who perceive stronger organisational ownership tend to have a better work environment than those who perceive weaker organisational ownership for both information products and expertise.

H8: Employees who perceive stronger individual ownership tend to have a poorer work environment than those who perceive weaker individual ownership for both information products and expertise.

### **3.4.3 Influence of Personal Characteristics (Gender, Age, Position Status, Organisational Tenure and Educational Level) on Knowledge Ownership**

The differences of employees on personal characteristics or demographics (i.e. gender, level of education, age and organisational tenure) influence employees' perception, for example perception on work value, ethical conducts and knowledge ownership. Moreover, it has an effect on behaviours such as organisational commitment and knowledge sharing (Deshpande, 1997; C. P. Lin, 2006).

Constant et al. (1994) found that work experience and work-related training are positively associated with organisational ownership. This indicates that employees' tenure and the level of education will have an impact on knowledge ownership perception. The work of Jarvenpaa and Staples (2001) shows that gender, age and employees' work-group (i.e. administrative staff and faculty members) may affect knowledge ownership perceptions.

They found that women, younger employees and staff members have the propensity to share their knowledge more than men, older employees and faculty members. Li et al. (2008) suggested that there is a lack of concerns about position status which they found increased work value because employees in the higher position like supervisors have more responsibility, empowerment and are more paid than their subordinates. The higher position makes people feel that their work is valuable and important. When employees perceive that their work is valuable and important, they will have more commitment to their organisation. This study will observe position status between executive and non-executive level. Hence, the hypothesis is:

H9: Beliefs about knowledge ownership of information products and expertise are effected by gender, age, educational level, position status and, organisation tenure.

#### **3.4.4 Influence of Sector Type on Knowledge Ownership Perception**

This study focuses on the public and private sectors to observe their impact on knowledge ownership perceptions. Both sectors have different environmental context which has distinctive constraints to shape their employees' decisions, behaviours and choices (Ring & Perry, 1985). The main differences between these two sectors are ownership, funding and control (Boyne, 2002), which were defined as three dimensions of publicness by Bozeman (1987). He argued that no organisation is totally public or private; there is an extent of publicness measured by those three dimensions. There are many definitions and multidimensional concepts in what is labelled as public sector.

For this study, the public sector comprises of organisations that provide utilities and services to the public and has been involved by the government on policy making and funding (Broadbent & Guthrie, 1992). Public organisations are owned by political communities (Boyne, 2002) and they can be separated into three organisational types: public sector institutions, state enterprises and government institutions (Willem & Buelens, 2007). According to Willem and Buelens (2007), government institutions are the federal, regional, and local governments. Public sector institutions are schools, public hospitals, public prisons, and several other non-profit organisations providing services to the public.

State enterprises are similar to private enterprises such as postal services. Government institutions are the most public in its characteristics, public sector organisations are the second most public and state enterprises are the least public. In contrast to the public sector, the private sector comprises of organisations owned by private individuals or shareholders (Boyne, 2002). Thus, this sector is controlled and supported by private entrepreneurs.

A large and growing body of literature has investigated the differences between the public and the private sector. Dealing with uniqueness of environment characteristics, these two sectors differ in organisational culture, organisational climate, work values, employees' motivations, job characteristics, and attitude to their work.

The main focus of organisational culture "is on how organizational members interpret and understand their work-related experiences and how these interpretations and understandings are related to action" (Muijen et al., 1999, p. 553). Organisational culture has an impact on employees' behaviours and serves as an informal mechanism to control and define acceptable behaviours within the organisation (Chatman & Barsade, 1995). According to Gordon (1991), there are three factors that drive culture elements (i.e. assumptions, value and culture patterns of organisations): competitive environment, customer requirements and societal expectations. Competitive environment can range from 'no competitor' or 'monopoly' to 'many competitors'. Customer requirements can be separated into 'reliability' or 'static' demand where technologies and customers' preferences do not change all the time and 'novelty' or 'dynamic' demand where technologies and customers' preferences change regularly. Societal expectations are the way that society expects the value that the organisation will hold, for example as a shift of social value of focusing on property right to human right, health and safety of people and environment are expected from organisations to pay attention to (Gordon, 1991). These three factors make organisational culture different. Although some differences between the two sectors are clarified, there is no straightforward description of the distinction (Solomon, 1986). However, some scholars give differentiation based on its ownership and funding (Wamsley & Zald, 1973). This makes the two sectors different in organisations' goals and organisational culture elements. Private organisations are owned by private individuals so

their goals are focused on organisations' profit. In contrast, public organisations are governed and belong to the government so their goals are focused on social benefits or society gain (Aycan et al., 1999). The private sector depends on marketing demand which is very competitive and dynamic. The market and customers' requirements keep changing; these reasons force the private sector to adapt and operate effectively to succeed (Solomon, 1986). The private sector sets their goals to suit customer requirements. The public sector, on the other hand, is not in competitive and high demand like the private sector but it is in the political climate with many conflict goals and conditions from many stakeholders. This makes the public sector have a high level of role ambiguity and faces difficult criteria and constraints to manage (Cho & Lee, 2001).

Organisational climate can be defined as a contextual situation or condition influencing the employees' thoughts, feeling and their behaviours. While organisational culture is an evolved context developed over the time, the difference between organisational climate and culture is that climate is a temporal situation while culture is developed over time (Gee-Woo *et al.*, 2005). The work of Solomon (1986) found that private sector managers have higher satisfaction with job and organisational climate than public sector managers. This is because public sector employees may have no clarity in roles and goals (Cho & Lee, 2001). They face conflicts in work and intangible objectives so employees set their own goals and behave accordingly (Buchanan, 1975). These cause low satisfaction and commitments to organisations.

In terms of work values, previous work (Van Der Wal *et al.*, 2008) found that work values' preferences depend on sector rather than demographic data. Value is explained as a judgement or quality that determines decision making and action (Van Der Wal *et al.*, 2006). Furthermore, Van Der Wal et. al. (2008) showed that the most important value of the private sector is 'profitability' which is an act to achieve gain, while the most important value of the public sector is 'accountability' which is an act to justify and explain actions to the relevant stakeholders.

In terms of motivations, public sector employees are intrinsically motivated rather than extrinsically motivated. In contrast, private sector employees are extrinsically motivated

rather than intrinsically motivated. Therefore, in the private sector, employees will value money or material rewards more than employees in the public sector (Buelens & Van den Broeck, 2007; Erez & Shneorson, 1980; Houston, 2009; Khojasteh, 1993; Wittmer, 1991). Furthermore, it was found that the lack of motivation is a more significant problem for the public sector than the private sector (Khojasteh, 1993). This is congruent with the results of research revealing that motivation and commitment (Behn, 1995; Moon, 2000) along with identification to the organisation are lower in the public sector (Willem & Buelens, 2007).

Employees choose to work with either the private or the public sector depending on their personality, value and goals (Wittmer, 1991). It was found that public sector employees need more for the work achievement than private sector employees but they tend to take less risk than their private sector counterparts (Rainey *et al.*, 1976). Public sector employees were more concerned with job security (Barton & Waldron, 1978). Moreover, managers in the two sectors differ on the perception of their jobs. Private sector managers demonstrated that they had greater autonomy and challenges on their jobs than public sector managers did. Moreover, they rated autonomy as more important for higher commitment and effective performance than their counterparts did. These findings were consistent with the fact that the public sector is highly bureaucratic. Thus, public sector employees feel more familiar with less autonomy. In contrast, private sector employees feel less satisfied with lower autonomy (Flynn & Tannenbaum, 1993).

Given the findings that private sector employees have more satisfaction, autonomy and challenge on the job than their public counterparts, these factors are likely to encourage private sector employees to commit and identify more with their organisation. These conditions make the private sector have a more effective knowledge sharing environment than the public sector (Willem & Buelens, 2007).

Therefore, it is expected that private sector employees will cling to organisational ownership more than their counterparts in the public sector. Hence, private sector employees tend to have more intentions to share their knowledge to benefit the organisation. On the other hand, public sector employees will cling to individual ownership

more because they seek to accelerate work achievement and have less satisfaction about their job. Based on the discussion from above, the hypotheses are:

H10.A: Private sector employees tend to have a better work environment than public sector employees.

H10.B: Private sector employees tend to perceive organisational ownership more strongly than public sector employees for both information products and expertise.

H10.C: Private sector employees tend to perceive individual ownership more weakly than public sector employees for both information products and expertise.

H10.D: Private sector employees tend to have more intentions to share their knowledge for both information products and expertise than public sector employees.

### **3.5 Mediating Role of Knowledge Ownership on the Relationship between the Work Environment and Knowledge Sharing**

It was found that knowledge ownership perception acts as a mediator to mediate the effects of work conditional factors on the propensity to share knowledge (Constant, 1994; Ekweozor, 2008; Jarvenpaa & Staples, 2001). Mediation is a way to observe the effects of independent factors or predictors, which pass through the mediator, or dependent factors. In this study, the relationship between the work environment and intentions to share information products and expertise mediating by knowledge ownership perception will be examined in a cross-cultural context. Thus, the hypotheses will be set out as follows:

H11: Organisational ownership and individual ownership mediate the relationship between the work environment and the intentions to share information products and expertise.

### **3.6 Moderating Role of Knowledge Ownership on the Relationship between the Work Environment and Knowledge Sharing**

This study argues that in some conditions, knowledge ownership could enhance or reduce the predictive power of work environment on knowledge sharing intention. For example, organisational ownership may reduce the important of the relationship of work environment on knowledge sharing because employees who perceive organisational ownership share their knowledge only by following organisational norms, contract or pro-social behaviours

so they will have less concern about their work environment. Extending from previous research in which there is unobserved aspect on the moderating role of organisational ownership and individual ownership on the relationship between work environment and knowledge sharing intentions. Moderation helps to explain the conditions that cause a weak or ambiguous association or relationship. It is “an independent variable that affects the strength and/or direction of the association between another independent variable and an outcome variable” (Jill, 2000, p. 416).

Lin (2007) found that exchange ideology which is a concern that employees have for loss and gain from exchange with their organisation, moderates the relationship between co-worker congruence and knowledge sharing. In other words, it was hypothesised that the influence of co-worker congruence on knowledge sharing is stronger for individuals with low exchange ideology than for those with high exchange ideology. He explained that employees who have low exchange ideology will have less concern about the benefits from exchanging or sharing their knowledge because they are not motivated by self-interest. Therefore, they are more strongly affected by co-worker congruence on knowledge sharing than individuals with high exchange ideology.

From the motivation behind ownership perception, it was expected that employees who have low organisational ownership or high individual ownership will be motivated by self-interest (Constant, 1994). Therefore, they should be more affected by the work environment on knowledge sharing than individuals with strong organisational ownership or weak individual ownership because they will try to seek a more content work environment and benefits than employees with strong organisational ownership (or weak individual ownership), who tend to voluntarily share their knowledge for the benefit of their organisation without any conditions or expecting things in return.

This study aims to determine whether knowledge ownership could enhance the predictive power of work environment on knowledge sharing intention. Thus, the hypotheses are:

H12: Organisational ownership and individual ownership moderate the relationship between the work environment and the intentions to share information products and expertise. That is:

H12.1: The influence of the work environment on knowledge sharing intentions is stronger for employees with weak organisational ownership than for those with strong organisational ownership.

H12.2: The influence of work environment on knowledge sharing intentions is stronger for employees with strong individual ownership than for those with weak individual ownership.

### **3.7 Summary**

This chapter has described and proposed a research model to observe the knowledge ownership concept more in-depth. To do this, previous work has been examined as a foundation to hypothesise and propose the research model. The results of all hypotheses will be presented in chapter 6. The next chapter will describe the research methodology adopted in this research to gain the data for analysis.



## **4 CHAPTER FOUR: RESEARCH METHODOLOGY**

### **4.1 Introduction**

Research paradigms and research design have led to research methods which are the ways to acquire answers or solutions for research questions and problems. Understanding a research paradigm helps in justifying and clarifying the research design and research methods to be applied. To advance knowledge and research findings, both quantitative and qualitative methods are essential in IS research. As the purpose of this study is to extend the work of Ekweozor (2008), therefore the study follows a quantitative research approach to conduct the research and validate previous findings.

This chapter gives an explanation of the research methodology adopted in this study. It starts by introducing the research paradigm, research design and research methods for this study. Research design leads to the research strategy, research methods for data collection, and data analysis. Following a quantitative strategy, this research applies a survey method using questionnaires to collect data from the Thai context. This research also adopts secondary data from a previous study in the UK context. To be able to compare the results between Thailand and the UK, the equivalence and comparability of research instruments and samples are examined. Additionally, the data collection, sample procedures, data analysis tools adopted in this study and preliminary data analysis are discussed. Finally, ethics considered in the research and the summary of this chapter are presented.

### **4.2 Philosophical Paradigms of Research**

Philosophical paradigm is “a set of shared assumptions or ways of thinking about some aspect of the world” (Oates, 2006, p. 282). Researchers have conducted research based on underlying assumptions in two aspects: Ontology and Epistemology.

Ontology refers to philosophical assumptions related to the nature of reality (Guba & Lincoln, 1994). It concerns the nature of existence whether physical and social reality is objective reality, which exist independently from humans, or subjective reality, which exist

from human action (Orlikowski & Baroudi, 1991). There are two positions which are always referred to for ontology: objectivism and constructionism (constructivism). Objectivism is a position that views social phenomena as external facts independently from social actors. Thus, they are beyond our responsibility to control or influence. In contrast, constructionism is a position that views social phenomena are a constant process of changing by social actors which are social constructions (Bryman & Bell, 2007).

Ontology links with epistemology, which is another set of assumptions related to the study of knowledge (Hussey & Hussey, 1997). Epistemology concerns ways and criteria for constructing and evaluating that knowledge (Orlikowski & Baroudi, 1991). These involve an examination of roles and relationship between researcher and things which being researched (Hussey & Hussey, 1997). Epistemology can be separated into three philosophical paradigms namely, positivism, interpretivism, and critical research paradigm (M. Myers, 1997; Oates, 2006).

Positivism believes that there are patterns and regulations in this world, and that all behaviours and phenomenon are structure and order. They are not random and can be investigated objectively and independently from humans. From this point of view, researchers' role and all possible factors that affect the results of a study are carefully removed (Oates, 2006). Positivist procedure is concerned with inferential statistics, hypothesis testing, mathematical analysis, and experimental and quasi-experimental design (Lee, 1991).

Interpretivism, on the other hand, believes that there is no single version of truth because people perceive and act to each situation differently. This paradigm tries to understand, explain and explore how all the factors are inter-related in a particular social setting subjectively. From this point of view, researchers are the research instrument whereby their observation, interpretation and judgments influence the results of the study (Oates, 2006). Walsham (1993, pp. 4-5) explained that interpretive methods of research in information systems "aimed at producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context".

Finally, critical research is defined by Oates (2006) as “a research is concerned with identifying power relations, conflicts and contradictions, and empowering people to eliminate them as sources of alienation and domination.” This paradigm believes that only understanding and interpretation of the world is not sufficient, it seeks to identify the constraints that limit the conditions and unfairness of the situation then set the assumptions (Oates, 2006).

### **4.3 Research Design**

According to Bryman and Bell (2007), research design is a way to define the framework and methods to collect and analyse data to support propositions or to answer research questions. Five well-known research designs are suggested:

1. Experimental design is a research design that researchers set, control and manipulate independent variables to observe the outcomes from a dependent variable. This design is strong for its internal validity; a way to ensure that there is a relationship between the independent and dependent variable. However, this design is difficult to conduct to study organisational behaviours because in a real situation for example in an organisation, it is difficult to manipulate and control variables and environments.

2. Cross-sectional design is a design that “entails the collection of data on more than one case (usually quite a lot more than one) and at the single point in time in order to collect a body of quantitative or quantifiable data in connection with two or more variables (usually many more than two), which are then examined to detect patterns of association” (Bryman & Bell, 2007, p. 55). In this design, researchers cannot manipulate and control any variables so causal relationship can hardly be claimed in the same way as experiment design does.

3. Longitudinal design is a design that entails time and context which the changes are created. This design involves comprehensive level of analysis of phenomenon through time. Hence, it is time and cost consuming and usually, it is an extension of social survey research to observe phenomenon. Causal relationship can be inferred by this design.

4. Case study design is an intensive examination and analysis of a case study location such as a workplace and an organisation. This design tends to favour qualitative methods because details and explanations are generated from observation and interviews.

5. Comparative design is a research design involving comparing and contrasting the identical or different cases or situations in order to gain more understanding. Comparative design is an extension of cross-sectional design to involve two or more cross-sectional studies. One example of comparative design is cross-cultural research or cross-national research which is research conducted in two or more countries (Bryman & Bell, 2007). The main purpose of cross cultural research is to explore significance and meaning of differences and similarities of the chosen cultures (Shiraev & Levy, 2010).

#### 4.4 Research Strategy

Research strategy can be divided into two main types: quantitative and qualitative research. According to Bryman and Bell (2007), quantitative and qualitative research differ in epistemological and ontology assumptions and purposes as shown in Table 4.1. Quantitative research involves testing theory, includes the practice and norms of natural scientific model (positivism) and has the view that social reality is independent from human as an external, objective reality. In contrast, qualitative research involves creating theories which focus on the ways individuals interpret their social world and has a view that social reality occurs because of individuals' creation. Examples of quantitative methods include survey methods (i.e. questionnaires) and laboratory experiments. Examples of qualitative methods include observation and participant observation (M. Myers, 1997).

	<b>Quantitative Research</b>	<b>Qualitative Research</b>
Principal orientation to the role of theory in relation to research	Deductive; testing of theory	Inductive; generating of theory
Epistemological orientation	Positivism	Interpretivism
Ontological orientation	Objectivism	Constructionism or Subjectivism
Example of methods	Survey, Laboratory experiments	Interview, Observation

***Table 4.1: Fundamental differences between quantitative and qualitative research strategies.***

*adapted from (Bryman & Bell, 2007, p. 28)*

In practical terms, the main difference between quantitative and qualitative research is the role of the researcher and sample size. In qualitative research, researchers play a more important role conducting and interpreting the situations and results than quantitative researchers. Moreover, qualitative research tends to use smaller sample size or participants than in quantitative research (Bryman & Bell, 2007; Patton, 1990).

#### **4.5 Research Methodology employed in This Study**

This study, instead of generating a theory, intends to test theories or assumptions and the ways to test assumption and acquire the knowledge to answer research questions are achieved by a survey and statistics following the work of Ekweozor (2008). Hence, the paradigm of this research is positivism by nature where the phenomena that this study observed are separated from the researcher. Furthermore, the evidence to support or reject the assumptions are gained by statistical testimony without subjective interpretation from the researcher's experience. Additionally, one of the purposes of this study is to conduct a comparative study between Thailand and the UK contexts. As such, the research design is the comparative design to examine the similarities and differences between these two nations. The questionnaire as a quantitative method was adopted as a research tool to collect data in Thailand to be able to compare with the secondary data of the UK from earlier work. In summary, research methodology employed in this study follows a positivistic quantitative strategy as can be seen in the column quantitative research in Table 4.1.

##### **4.5.1 Ekweozor (2008)'s Questionnaire**

Ekweozor (2008)'s questionnaire was translated into Thai language before distributing to respondents. The questionnaire was separated into four main components (see Appendix A for details):

1. A Cover page introduces the purpose of the survey and explains briefly about the questionnaire
2. Part one contains two vignettes which describe scenarios to gauge ownership perceptions and intentions to share information products and expertise.

The questionnaires were distributed to different types of organisations and to different roles of respondents. For the UK context, there are six combinations of organisations types and roles as follows:

- Setting: University                      Role: Administrator
- Setting: University                      Role: Academic
- Setting: Management Consultancy    Role: Consultant
- Setting: Engineering Consultancy    Role: Engineer
- Setting: Sales and Marketing Firm    Role: Sales Representative
- Setting: Company (in general)        Role: Information Management

For the Thai context, there are only three combinations of organisations types and roles as follows:

- Setting: Company (in general)        Role: Employee
- Setting: University                      Role: Administrator
- Setting: University                      Role: Academic

3. Part two contains questions which separated into eights sections asking about respondents' work environment including work nature, work outcome, performance evaluation, organisation procedures, supervisor relationship, co-worker relationship remuneration, recognition and knowledge sharing norms respectively.

4. Part three contains questions about demographic information of the participants such as sex, age, education (highest level achieved for Thai respondents), job and position tenure.

The more details of the design of questionnaire was explained in the work of Theodoulidis et al. (2009) and the example of the questionnaires for both Thai and English versions are in Appendix A.

#### **4.5.2 Projective Vignette**

Projective vignette is a technique commonly used for sensitive questions (T. S. Robertson *et al.*, 1984) composing of a vignette and projective questions with regard to the vignette.

A vignette is an assumed situation used to extract the subjects' judgments and opinions which are normally difficult to be observed (Cavanaugh & Fritzsche, 1985). Projective questions are questions that ask respondents on what someone else should do in the given situations (D. C. Robertson & Anderson, 1993). Projective vignette can reduce biasing effects of socially desirable responses (Constant, 1994) which the respondents try to answer to please others. Hence, by depersonalising the situation from the respondents, the answers will be more honest (D. C. Robertson & Anderson, 1993).

Two projective vignettes were adapted from the work of Jarvenpaa and Staples (2001). One is for information products and the other is for expertise. The two vignettes present the scenarios of unhelpful colleagues in the past. Respondents were asked about their opinions on their colleagues' behaviours, the intention to share knowledge and ownership perceptions (see Appendix A: part 1 for details).

#### **4.5.3 Measures**

Although all the measures and items in the questionnaire were adopted from Ekweozor (2008), reliability and validity of measures or constructs were re-examined. The 'measures' or indicators are something that used to gauge a concept or a construct (Bryman & Bell, 2007). Measures that did not demonstrate reliability and validity via Cronbach alpha and factor analysis were eliminated for both the Thai and the UK context. Likert scaling was used to rate the items for example from 1-4 or from disagree-agree response scale.

The vignettes and measures of ownership and sharing intentions were adapted from the work of Jarvenpaa and Staples (2001). 'Work nature' items were adapted from the Job Characteristics Inventory of Sims et al. (1976) 'Remuneration' and 'Recognition' were adapted from the work of Price and Mueller (1986). 'Work outcome' was adapted from the work of Niehoff and Moorman (1993). 'Performance evaluation' was adapted from the work of Folger and Konovsky (1989). 'Organisation procedures' were adapted from the work of Moorman (1991). 'Supervisor relationship' and 'Co-worker relationship' were adapted from Graen et al. (1982) and, Seers and Graen (1984). 'Knowledge sharing norms' were adopted from the work of Ekweozor (2008) to assess whether organisational policy

and top management encourage knowledge sharing. All of the measures are shown in the questionnaire in Appendix A.

#### **4.6 Equivalence of Research tools and comparability of samples**

The questionnaire was adopted from the work of Ekweozor (2008) as a survey instrument to collect data in Thailand. Therefore, it is important to make sure that the questionnaire adopted in this study has equivalence with the original work to be able to compare between the UK and Thailand contexts. Additionally, a sample of Thai employees in this study should also match with the previous sample of UK employees. Assessment to ensure equivalence could be examined in terms of conceptual/functional equivalence and metric equivalence.

Conceptual/functional equivalence can be achieved when subjects have an equal understanding of the questions in the questionnaires (Malpass & Poortinga 1986). To reduce conceptual/ functional non-equivalence, this was done by two processes: back-translation and pilot-testing:

The questionnaire was back-translated from Thai to English version. This back- translation was applied to ensure consistency between two versions (Sperber *et al.*, 1994) . According to Brislin (1970), the quality of the translation depends on the quality of translators which they should be a bilingual person and have knowledge in the field. As this study needs to replicate previous work in Thailand, the questionnaire was translated by the researcher who is a bilingual student and a Thai native speaker with experience working in a private company and a public university. The translated- questionnaire was also pilot-tested to ensure understanding of questions and functions of the questionnaire. The researcher discussed and consulted with other six Thai researchers while doing the pilot study. All of them have had work experience of more than five years. Some questions were rephrased according to the feedback from the pilot test.

To ensure metric equivalence, which is achieved when the psychometric properties of the sets of data from multiple cultural groups demonstrate the coherence of the structure



(Bryman & Bell, 2007), this research tested for reliability and validity of the measures for both sets of the UK and Thailand sample. The results are provided in details in Chapter 5.

Reliability concerns the consistency of measures. In other words, it is a concern on whether or not indicators or items of a construct tend to associated with indicators of other constructs (Bryman & Bell, 2007). To ensure reliability, Cronbach's alpha is computed. An alpha of 0.7 or more is acceptable as reliability scores (Bryman & Bell, 2007; Field, 2005) indicating that the scales used in the study satisfy in terms of measuring the constructs.

Validity concerns whether or not the indicators of a construct or a concept really measures that construct or concept (Bryman & Bell, 2007). Checking for construct validity, this study assesses three types of validity namely face validity, convergent validity and discriminant validity. Face validity is to ensure that the measure reflect a concept via the questionnaire's items or questions. This can be achieved by consulting the experts in the field (Bryman & Bell, 2007). Convergent validity is an assessment to ensure that a construct comes from the correlated items which theoretically measure the same thing or relate to each other. In contrast to convergent validity, discriminant validity is an assessment to ensure that the measure item is not similar to other items that theoretically should not be similar to or do not measure the same thing (Trochim, 2001).

To ensure comparability of samples, this study refers to the work of Hofstede and Hofstede (2005) which suggested that in order to ensure comparability of samples, samples have to be matched, for example, matching by individuals, situations, institutions or organisations. Furthermore, they introduced two strategies of matching. One is to make the sample very broad to reduce sub-cultural differences for example national polls. The other one is to make the sample very narrow for example comparing between similar subcultures like Spanish nurses and Swedish nurses. If the dissimilarity and similarity found in one sample set are replicated in the other matched samples, the matching is satisfied. This study adopted both strategies of matching by comparing private and public sector employees of the UK with those from Thailand. Additionally, to reduce sub-cultures of organisations, responses were collected from as many organisations as possible in each sector.

Nevertheless, all other criteria for example, occupation, age and sex should be matched too because these influence the meanings of answers (Geert Hofstede, 1998). In reality, matching samples between different countries for every demographic criteria and getting sufficient respondents for statistical analysis are difficult to reach. Hence, some techniques to control the effects of this demographic difference have to be performed to reduce the bias of results and interpretation has to be done with care.

#### **4.7 Data Collection and Sampling Procedures**

This section gives an explanation about research site from which data was collected. In addition, sample procedures and sample size employed in this study were discussed.

##### **4.7.1 Research Site**

This research aims to replicate previous work that had collected data in the UK context to Thailand which is mentioned in Section 1.4 as a comparative study. However, a whole employees' population in those countries cannot be collected as a sample procedure limitation. Moreover, this study also aims to examine the effects of sector difference particularly between the private and public sectors. Therefore, the research site is located in both private and public sectors in Thailand and the UK. According to National Statistical office of Thailand<sup>4</sup> and of the UK<sup>5</sup>, the majority of employment is dominated in the public and private sectors. Hence, collecting and exploring data of respondents from both sectors may help to reflect some of employees' perceptions and characteristics of those nations.

##### **4.7.2 Sampling Procedures**

The previous sample of Ekweozor (2008) was adopted as the secondary data for the UK. Due to the difficulty of respondents to fill the questionnaire especially when there are no monetary incentives in return, snowball sampling was used to collect data for Thai sample. Snowball sampling is a sampling procedure whereby you specify the people who meet your sample's criteria and ask for their help to participate in the study and to recommend others

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<sup>4</sup> Available at: [http://web.nso.go.th/en/survey/bts/bts08\\_bkk.pdf](http://web.nso.go.th/en/survey/bts/bts08_bkk.pdf)

<sup>5</sup> Available at: <http://www.statistics.gov.uk/statbase/product.asp?vlnk=8284>

who also meet the criteria. This method is a suitable method when there are no sampling frame or listing of accessible population (Trochim, 2001).

For the Thailand context, the paper-based questionnaires were distributed to employees of the private and public sectors. Thus, there are no respondents from the non-profit sector. For the private sector, online-based questionnaires were sent to employees in many companies based in Thailand. For the public sector, paper-based questionnaires were distributed to the employees of Kasersart University (Sakonnakorn Campus), Thailand and Songkhla Rajabhat University, Thailand. Additionally, online-based questionnaires were distributed to other employees in Thailand based on a contact list provided by the Office of Educational Affairs, the Royal Thai Embassy in London. A total of 600 respondents (148 from private employees and 452 from public employees) completed and returned the questionnaires.

For the UK context, the respondents were selected only for employees who work in the private and public sectors (368 respondents: 58 from private employees and 310 from public employees) from the whole sample (397 respondents). The excluded data of the UK sample are the respondents who are not based in the UK (15 respondents) and who work for the non-profit sector (14 respondents) in order to match with the Thai sample. The whole UK sample is available on the website<sup>6</sup>. The Thai sample was collected from August 2009 to December 2009 while the UK Sample was collected from October 2006 to March 2007.

#### **4.7.3 Sample Size and Representative of Sample**

As there is no listing of accessible population and this study adopted snowball sampling; a rule of thumb was referred as a guideline to estimate the sufficiency of sample size.

A rule of thumb of sample size is a maximum of these two minimum acceptable sample size: a minimum sample size for testing individual predictors should be  $104 + k$ , and a minimum sample size for testing the overall fit of model should be  $50 + 8k$ , where  $k$  is the

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<sup>6</sup> Available at:  
[http://personalpages.manchester.ac.uk/staff/b.theodoulidis/download/KnowOwn\\_case\\_study.zip](http://personalpages.manchester.ac.uk/staff/b.theodoulidis/download/KnowOwn_case_study.zip)

numbers of predictors (Field, 2005). The predictive factors or influencing factors of knowledge ownership that were measured in this study is 9 work environment factors. Hence, the minimum sample size for testing individual predictors is 113 ( $= 104+9$ ) and the minimum sample size for testing the overall fit of model is 122 ( $= 50+ (8*9)$ ). This study has 600 respondents for Thai sample and 368 respondents for the UK sample; therefore, the sample size is adequate. Although the sample is far from being a representative of the population as a whole for both Thailand and the UK populations, this study applied statistical techniques to infer to the population.

#### **4.8 Ethics in Research**

The questionnaires were distributed with an explanation on what the study was about and how the data would be used along with the contact information of the researcher.

The questions asked respondents on their opinions about their work environment, their ownership perceptions and their intentions to share knowledge within organisations. Those answers are sensitive to their status and the relationship with their colleagues and organisations. Furthermore, demographics and contact information are private and important information. To assure respondents on giving their honest answer, the researcher stated in the covered letter that their responses and their private information would be kept confidentially. Therefore, the respondents' information would not be revealed or be made for commercial purposes. Ethical consideration of this study fulfilled the ethical principles for conducting research with human participants by the British Psychological Society (BPS)<sup>7</sup>.

#### **4.9 Summary**

This chapter explained the research methodology employed in this study including research paradigms, research design, research strategies and methods. The details are summarised on Table 4.2. In the table, context, time, target and action have been framed in order to capture behavioural intentions accurately (Ajzen & Fishbein, 1977).

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<sup>7</sup> Available at: [http://www.bps.org.uk/the-society/code-of-conduct/support-for-researchers\\_home.cfm](http://www.bps.org.uk/the-society/code-of-conduct/support-for-researchers_home.cfm)

	<b>Research Employed in this study</b>
Principal orientation to the role of theory in relation to research	Deductive; testing of theory
Epistemological orientation	Positivism
Ontological orientation	Objectivism
Research Design	Comparative design: Cross-Cultural Research
Research Strategies	Quantitative Research
Research Methods	Survey; Questionnaire
Scope of Research :Context	Organisations in the public and private sector of Thailand and UK.
:Time	Thailand Sample August 2009 - December 2009 UK Sample ; secondary data source October 2006-March 2007
:Activities observed	Knowledge Sharing Intention
:Target observed	Employees employed in public and private sector

***Table 4.2: Research employed in this study***

## 5 CHAPTER FIVE: DATA ANALYSIS

### 5.1 Introduction

This chapter aims to present the preliminary data analysis including reliability and validity of the measures employed in this study by considering the Cronbach's Alpha coefficients and factor loadings of each measure. In addition, the description of the UK and Thailand samples and the differences between those two samples in terms of personal characteristics are provided. Finally, the data analysis tools and techniques employed in the study are explained.

### 5.2 Measurement Reliability

The metric equivalence is achieved when the measures of both the UK and Thai samples indicate evidence of reliability and validity. Reliability scores or Cronbach's Alpha coefficients ( $\alpha$ ) of each construct are presented in Table 5.1. It can be noticed that all of the are greater than .7 indicating the acceptable reliability of the scales (Bryman & Bell, 2007; Field, 2005).

Construct	Reliability scores ( $\alpha$ ) for the UK sample (N=368)	Reliability scores ( $\alpha$ ) for the Thai sample (N= 600)
Remuneration	.955	.922
Recognition	.841	.725
Work Nature*	.809	.794
Work Outcome	.848	.903
Performance Evaluation <sup>a</sup>	.859	.705
Organisational Procedures <sup>b</sup>	.777	.764
Knowledge Sharing Norms	.820	.847
Supervisor Relationship	.885	.821
Co-worker Relationship	.831	.864
Knowledge Sharing Intentions for Information products	.784	.848
Knowledge Sharing Intentions for Expertise	.781	.827

**Table 5.1: Construct reliability**

*\* after deleting 'repetitiveness of tasks' item*

*a after deleting 'personal motives or biases influence' item*

*b after deleting 'all sides affected by the decision represented' item*

### **5.3 Measurement Validity**

To ensure construct validity, this study assesses three types of validity namely face validity, discriminant validity and convergent validity.

The face validity could be achieved by consulting experts in the field (Bryman & Bell, 2007). This study adopted the questionnaire tool and the measures of all constructs from previous work that was empirically tested. Furthermore, all adopted measures were developed from theories or concepts in the literature. These processes can ensure that all constructs used in this study satisfy face validity.

To ensure discriminate validity, the strength of the relationship or the correlation coefficient ( $r$ ) between indicators or items from different constructs should be small (i.e., near zero) (Trochim, 2001). The correlation coefficient matrix between each item of all constructs adopted in this study was calculated for both the Thailand and UK samples. It was found that there are no strong correlations between items from different constructs ( $r < .5$ ). However, there is an exception for the work environment constructs. The two items of 'Recognition' which are 'Further career advancement is given by my organisation in recognition of work well done' and 'Promotions within my organisation are fairly administered'. These two items of 'Recognition' expressed strong correlations with the items of 'Knowledge Sharing Norms' for the UK sample ( $r = .52$  and  $.56$  respectively). However, they are retained because 'Recognition' construct shows high reliability ( $r \geq .5$  according to Cohen (1988)) . Hence, the discriminant validity of all work environment factors' constructs used in this study is satisfactory.

Finally, this study adopts the factor analysis to ensure convergent validity. The factor analysis was conducted for each construct between the Thailand and UK samples. Factor analysis is a technique to reduce a large number of variables to a manageable number of correlated variables (Pallant, 2005). If a factor loading on each item is higher than .3 according to Tabachnick and Fidell (2001), it means that such item correlates to its construct demonstrating a good construct fit. Before conducting factor analysis, a sample has to be examined suitability of data by Bartlett's test of sphericity and its sampling

adequacy by Kaiser-Meyer-Olkin (KMO). Bartlett's test of sphericity should be significant (the significant value ( $p$ ) < .05) and KMO should be .5 or above recommended by Field (2005) to indicate that the sample is suitable for conducting factor analysis.

Eleven constructs are investigated by factor analysis. Nine of them are the work environment factors and two of them are information products and expertise sharing intentions respectively as listed below.

The 'Work Nature' construct composes of the five dimensions namely, variety, task identity, autonomy, task significance and feedback.

The UK sample was first assessed for its suitability for factor analysis. Bartlett's test of Sphericity was highly significant ( $p$  < .001) and the KMO value was .771, exceeding the recommended value of .5 (Field, 2005). This construct explains 66.30% of the variance and the factor loading for each item of the construct was high exceeding the recommended value of .3 (Tabachnick & Fidell, 2001). For the Thai sample, Bartlett's test of sphericity was highly significant ( $p$  < .001) and the KMO value was .788, supporting the factorability of the matrix (or indicating of sampling adequacy). This construct explains 60.17 % of the variance and the factor loading of each item of the construct was high.

Some items, which are 'how similar are the tasks you perform everyday' and 'how repetitive are your tasks', have no factor loading. Hence, the 'how repetitive are your tasks' item was dropped to increase reliability. However, the 'how similar are the tasks you perform everyday' item was retained because the reliability of 'Work Nature' construct was high ( $=.809$ ). Furthermore, for the UK sample, the items of 'autonomy' loaded on the 'task identity' dimension. For the Thai sample, the items of 'task identity' and 'feedback' loaded on the 'autonomy' dimension. However, they were retained because this study used the sum of all dimensions to indicate the 'Work Nature' construct which showed high reliability.



Work Nature (Job Characteristics)	Questionnaire Items	Factor Loading for the UK	Factor Loading for Thailand
1. Variety	How much variety is there in your job?	.763	.845
	How much opportunity do you have to do things differently?	.745	.833
	How similar are the tasks you perform everyday?	.767	.504
	How repetitive are your tasks?	.765 (remove)	- (remove)
2. Task Identity	How much opportunity do you have to complete work you start?	.780	.588 (load on Autonomy)
	How often do you see projects or jobs completed?	.777	.521 (load on Autonomy)
3. Autonomy	How much are you left alone to do your work?	.642 (load on Task Identity)	.741
	How much independent thought and action can you input into your job?	.540 (load on Task Identity)	.682
4. Task Significance	How important are the tasks you perform to your organisation?	.801	.523
	To what extent do your work contributions make a difference?	.836	.759
	To what extent are co-workers dependent on your output?	.758	.758
5. Feedback	To what extent do you find out how well you are doing on the job as you are working?	.855	.696 (load on Autonomy)
	To what extent is what is expected of you made clear?	.837	.716 (load on Autonomy)

**Table 5.2: Factor Loadings – Work Nature**

For ‘Work Outcome’ construct, the UK sample was first assessed for its suitability for factor analysis. Bartlett's test of Sphericity was highly significant ( $p < .001$ ) and the KMO value was .680, supporting the factorability of the matrix. This construct explained 77.05 % of the variance and the factor loading of each item of the construct was high.

For the Thai sample, Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .720, supporting the factorability of the matrix. This construct explained 83.8 % of the variance and the factor loading of each item of the construct was high.

Questionnaire Items	Factor Loading for the UK	Factor Loading for Thailand
My work schedule is fair	.913	.893
My workload is fair	.916	.945
My job responsibilities are fair	.799	.908

**Table 5.3: Factor Loadings – Work Outcome**

For ‘Performance Evaluation’ construct, the UK sample was assessed for its suitability for factor analysis. Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .783, supporting the factorability of the matrix. This construct explained 58.06 % of the variance and the factor loading of each item was high, except the item ‘to what extent did the appraiser allow personal motives or biases influence recommendation’ was low comparing to others. After removing this item, the construct explained up to 70.87 %.

For the Thai sample, Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .688, supporting the factorability of the matrix. This construct explained 43.95 % of the variance and the factor loading of each item was high, except the item ‘to what extent did the appraiser allow personal motives or biases influence recommendation’ was low comparing to others. After removing the item, the construct explained up to 53.64 %.

Questionnaire Items	Factor Loading for the UK	Factor Loading for Thailand
To what extent were your views regarding your performance considered	.836	.786
To what extent were you given an opportunity to express your side	.878	.724
To what extent were consistent standards used in evaluating your performance	.793	.713
To what extent did the appraiser allow personal motives or biases influence recommendation	.317 (remove)	.304 (remove)
To what extent was the appraiser ethical in dealing with you	.839	.675

**Table 5.4: Factor Loadings – Performance Evaluation**

For ‘Organisational Procedures’ construct, the UK sample was assessed for its suitability for factor analysis. Bartlett's test of Sphericity was highly significant ( $p < .001$ ) and the

KMO value was .804, supporting the factorability of the matrix. This construct explained 55.91 % of the variance and the factor loading for each item was high, except the item ‘to what extent are all sides affected by the decision represented’ that was low. After removing this item, the construct explained up to 63.45 %.

For the Thai sample, Bartlett's test of Sphericity was highly significant ( $p < .001$ ) and the KMO value was .736 supporting the factorability of the matrix. This construct explained 47.19 % of the variance and the factor loading for each item was high, except the ‘to what extent are all sides affected by the decision represented’ item has no loading. Thus, it was removed from the construct. After removing this item, the construct explained up to 58.71 %.

Questionnaire Items	Factor Loading for the UK	Factor Loading for Thailand
To what extent are formal procedures designed to collect accurate information necessary for making decisions	.626	.715
To what extent are employees allowed to appeal or challenge decisions	.782	.737
To what extent are all sides affected by the decision represented	.593 (remove)	- (remove)
To what extent is useful feedback regarding the decision and its implementation provided	.840	.789
To what extent are requests for clarification or additional information provided	.857	.814

***Table 5.5: Factor Loadings – Organisational Procedures***

For ‘Supervisor relationship’ construct, the UK sample was assessed for its suitability for factor analysis. Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .876, supporting the factorability of the matrix. This construct explained 68.57 % of the variance and the factor loading of each item was high.

For the Thai sample, Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .789, supporting the factorability of the matrix. This construct explains 59.70 % of the variance and the factor loading of each item was high.

Questionnaire Items	Factor Loading for the UK	Factor Loading for Thailand
Do you usually know how satisfied your supervisor is with what you do	.797	.639
How well does your supervisor understand your job needs and problems	.847	.802
What are the chances your supervisor will use his/her power to help you solve your problems at work	.873	.799
What are the chances your supervisor will bail you out at his/her expense	.776	.807
How would you characterise your working relationship with your supervisor	.844	.803

**Table 5.6: Factor Loadings – Supervisor relationship quality**

For ‘Co-worker relationship’ construct, the UK sample was assessed for its suitability for factor analysis. Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .832, supporting the factorability of the matrix. This construct explained 60.01 % of the variance and the factor loading of each item was high.

For the Thai sample, Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .810, supporting the factorability of the matrix. This construct explained 65.56 % of the variance and the factor loading of each item was high.

Questionnaire Items	Factor Loading for the UK	Factor Loading for Thailand
Do you usually know how satisfied your colleagues are with what you do	.757	.698
How well do your colleagues understand your job needs and problems	.793	.834
What are the chances your colleagues will help you solve your problems at work	.818	.866
What are the chances that your colleagues will bail you out at their expense	.733	.846
How would you characterise your working relationship with your colleagues	.770	.793

**Table 5.7: Factor Loadings – Co- worker relationship quality**

For ‘Remuneration’ construct, the UK sample was assessed for its suitability for factor analysis. Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value

was .923, supporting the factorability of the matrix. This construct explained 81.71 % of the variance and the factor loading of each item was high.

For the Thai sample, Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .915, supporting the factorability of the matrix. This construct explained 72.07 % of the variance and the factor loading of each item was high.

Questionnaire Items	Factor Loading for the UK	Factor Loading for Thailand
Considering my <b>job responsibilities</b> , I am fairly rewarded by my salary (including bonuses and benefits)	.914	.807
Considering my <b>education and training</b> , I am fairly rewarded by my salary (including bonuses and benefits)	.884	.829
Considering my <b>experience</b> , I am fairly rewarded by my salary (including bonuses and benefits)	.922	.887
Considering the <b>amount of effort</b> I put in my job, I am fairly rewarded by my salary (including bonuses and benefits)	.914	.919
Considering the <b>work I have done well</b> , I am fairly rewarded by my salary (including bonuses and benefits)	.917	.858
Considering the <b>strains and stresses of my job</b> , I am fairly rewarded by my salary (including bonuses and benefits)	.871	.786

**Table 5.8: Factor Loadings – Remuneration**

For ‘Recognition’ construct, the UK sample was assessed for its suitability for factor analysis. Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .784, supporting the factorability of the matrix. This construct explained 62.40 % of the variance and the factor loading of each item was high.

For the Thai sample, Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .712, supporting the factorability of the matrix. This construct explained 50.85 % of the variance and the factor loading of each item was high.

Questionnaire Items	Factor Loading for the UK	Factor Loading for Thailand
I am fairly recognised within my organisation for the <b>amount of experience</b> I bring to my job	.845	.721
I am fairly recognised within my organisation for the <b>amount of effort</b> I put in my job	.872	.858
I am fairly recognised within my organisation for <b>work I have done well</b>	.862	.819
<b>Further career advancement</b> is given by my organisation in recognition of work well done	.662	.633
<b>Promotions</b> within my organisation are fairly administered	.682	.463

**Table 5.9: Factor Loadings – Recognition**

For ‘Knowledge Sharing Norms’ construct, the UK sample was assessed for its suitability for factor analysis. Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .500, supporting the factorability of the matrix. This construct explained 84.88 % of the variance and the factor loading of each item was high.

For the Thai sample, Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .500 supporting the factorability of the matrix. This construct explained 86.72 % of the variance and the factor loading for each item was high.

Questionnaire Items	Factor Loading for the UK	Factor Loading for Thailand
Organisational policy encourages employees to share their knowledge with each other	.921	.931
Top management encourages employees to share their knowledge with each other	.921	.931

**Table 5.10: Factor Loadings – Knowledge sharing norms**

For ‘Information Product Sharing Intentions’ construct, the UK sample was assessed for its suitability for factor analysis. Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .692, supporting the factorability of the matrix. This construct explained 70.03 % of the variance and the factor loading of each item was high.

For the Thai sample, Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .680, supporting the factorability of the matrix. This construct explained 76.81 % of the variance and the factor loading of each item was high.

Questionnaire Item	Factor Loading for the UK	Factor Loading for Thailand
How appropriate is it for John to ask for a copy?	.868	.800
How justified are you in refusing to give John a copy?(Reverse)	.807	.917
What is the likelihood you will give John a copy?	.834	.907

**Table 5.11: Factor Loadings – Information product sharing intentions**

For 'Expertise sharing intentions' construct, the UK sample was assessed for its suitability for factor analysis. Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .696, supporting the factorability of the matrix. This construct explained 69.72 % of the variance and the factor loading of each item was high.

For the Thai sample, Bartlett's test of sphericity was highly significant ( $p < .001$ ) and the KMO value was .674, supporting the factorability of the matrix. This construct explained 74.91 % of the variance and the factor loading of each item was high.

Questionnaire Item	Factor Loading for the UK	Factor Loading for Thailand
How appropriate is it for John to ask for advice?	.861	.785
How justified are you in refusing to give John advice?	.815	.897
What is the likelihood you will give John advice?	.827	.909

**Table 5.12: Factor Loadings – Expertise sharing intentions**

From the factor analysis carried out above, some items were removed to ensure convergent validity. Nevertheless, most of the constructs used to gauge respondents' perceptions in this

study demonstrated high reliability and high validity which help to ensure that data gained from respondents reflect what the researcher intends to observe.

#### 5.4 Sample Description

The description of the UK and Thai samples along with the missing data are reported in Table 5.13.

Variables	Subgroups	UK (N =368)		Thailand (N=600)	
		Frequency	%	Frequency	%
Gender	Female	202	54.9	336	56.0
	Male	99	26.9	244	40.7
	Missing data	67	18.2	20	3.3
Education	Secondary or High School	50	13.6	1	.2
	HNC/ HDN Diploma	15	4.1	1	.2
	Undergraduate Degree	98	26.6	182	30.3
	Post graduate Degree	130	35.3	386	64.3
	Missing data	75	20.4	30	5
Age	30 or younger	104	28.3	204	34.0
	31 - 40	84	22.8	323	53.8
	41 - 50	65	17.7	39	6.5
	51 - 60	41	11.1	11	1.8
	61 or older	7	1.9	3	0.5
	Missing data	67	18.2	20	3.3
Position Status	Executive	82	22.3	72	12
	Non-Executive	204	55.4	464	77.3
	Missing data	82	22.3	64	10.7
Organisational Tenure	Less than 1 year	61	16.6	60	10.0
	1-5 years	140	38.0	275	45.8
	6-10 years	47	12.8	139	23.2
	11-20 years	35	9.5	91	15.2
	Over 20 years	18	4.9	15	2.5
	Missing data	67	18.2	20	3.3
Sector	Private Sector	58	15.8	148	24.7
	Public Sector	279	75.8	452	75.3
	Missing data	31	8.4	0	0
<i>N = number of respondents</i>					

**Table 5.13: Samples description**

It can be clearly seen that there is difference between numbers of Thai and British respondents for each personal characteristic. Moreover, the Chi-Square tests were conducted to statistically observe the differences between groups of employees separated by personal characteristics for example, gender, age and education between Thai and the



UK samples. The Chi-Square results indicated that Thai and the UK samples are significantly different in proportion of employees in terms of gender, education, age, position status, organisational tenure and sector. The results of Chi-Square tests are presented in Table 5.14.

		UK		Thailand		Chi-Square
Variables	Subgroups	Frequency	%	Frequency	%	
Gender	Female	202	67.1	336	57.9	7.022***
	Male	99	32.9	244	42.1	
	Total	301	100	580	100	
Education	Secondary or High School	50	17.1	1	0.2	136.711***
	HNC/ HDN Diploma	15	5.1	1	0.2	
	Undergraduate Degree	98	33.4	182	31.9	
	Post graduate Degree	130	44.4	386	67.7	
	Total	293	100	570	100	
Age	30 or younger	104	34.6	204	35.2	122.113***
	31 - 40	84	27.9	323	55.7	
	41 - 50	65	21.6	39	6.7	
	51 - 60	41	13.6	11	1.9	
	61 or older	7	2.3	3	0.5	
	Total	301	100	580	100	
Position Status	Executive	82	28.7	72	13.4	28.444***
	Non-Executive	204	71.3	464	86.6	
	Total	286	100	536	100	
Organisational Tenure	Less than 1 year	61	20.3	60	10.3	29.160***
	1-5 years	140	46.5	275	47.4	
	6-10 years	47	15.6	139	24	
	11-20 years	35	11.6	91	15.7	
	Over 20 years	18	54.5	15	2.6	
	Total	301	100	580	100	
Sector	Private Sector	58	17.2	148	24.7	6.994***
	Public Sector	279	82.8	452	75.3	
	Total	337	100	600	100	

***Table 5.14: The proportion of employees by personal characteristics between Thai and the UK samples***

## 5.5 Inferential Statistics

Inferential statistics are the procedures to draw inferences beyond the immediate data (sample data) to the population; for example, using inferential statistics to make judgement of a relationship of variables whether it happens by chance in the study (Trochim, 2001).

In this study, p-value is used to determine the probability of events, effects or the relationship of variables of the population. Social scientists rejects a null hypothesis, stating that there is no effects or no evidences to support an assumption at  $p=.05$ . That is when the probability of the occurrence of effects is less than 95%. In that case, the effects may occur coincidentally or by chance (Coolican, 2004). Therefore, this study refers to  $p\text{-value} \leq .05$  to be able to state that an impact or a relationship of the variables is significantly exists or it does not happen by chance.

## 5.6 Data Analysis tools

In this study, SPSS version 15.0 for Windows is applied as an analytical tool. Some functions or techniques used in this study for various purposes are:

1. Correlation: This analysis is used to explain the strength and direction of a relationship between two variables. Cohen (1988) suggested the guidelines to judge the strength of the relationship ( $r$ ) as follows:

$r = .10$  to  $.29$  or  $r = -.10$  to  $-.29$  small

$r = .30$  to  $.49$  or  $r = -.30$  to  $-.49$  medium

$r = .50$  to  $1.0$  or  $r = -.50$  to  $-1.0$  large

2. Multiple Regression: This analysis is used to observe how well variables (or independent variables) are able to predict outcome (dependent variables).

3. Paired-sample t-test: This analysis is performed to compare the mean scores of the same group in two different conditions for example, pre-test and post-test scores.

4. Analysis of Covariance (ANCOVA): This analysis is similar to analysis of variance (ANOVA). It is used to compare the variance or to explore differences between different groups. ANCOVA allows an additional continuous variable or a

covariate to be statistically controlled. This additional variable is suspected to influence the dependent variable but it is not an independent variable that the study intends to observe.

5. Chi-Square test for independence: This analysis is used to explore whether two categorical variables are related. It compares the proportion of one categorical variable across the different categories of another categorical variable, for example is the proportion of Thais to British people the same for each type of knowledge ownership perceptions? If Chi-Square value is not significant, this means that the proportion of one categorical variable across the different categories of another categorical variable is not significantly different or there is no relationship between those two categorical variables.

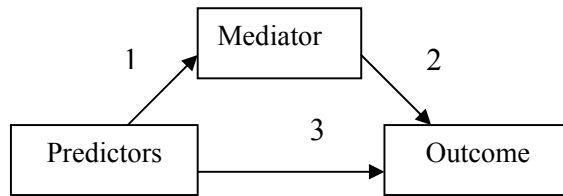
6. K-means clustering is a popular clustering technique to separate data into groups (Tapas et al., 2000). In this study, the sample was separated into two groups by K-means clustering which are strong and weak organisational ownership.

Additionally, mediation and moderation are conducted to observe the mediating and moderating role of knowledge ownership respectively on the relationship between the work environment and knowledge sharing intentions.

- **Mediation**

Mediation occurs when there is a third variable that underlies the relationship between two variables. The third variable is called mediator (Baron & Kenny, 1986).

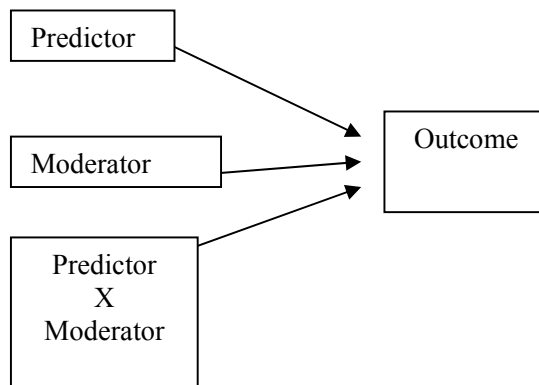
In order to analyse the mediator, the procedures of Baron and Kenny (1986) were used as followed. First step, the independent variables (or predictors) were significantly related to mediators. Second, the mediators were significantly related to the dependent variable (or outcome). Finally, the effect of the independent variables on the dependent variable decreased significantly when the mediators were entered together with the independent variables. However, there is an argument that the independent variables do not necessary to have significant effect on the dependent variable for mediation to take place because the effect could pass through the mediators (Preacher & Hayes, 2008).



**Figure 5.1: Mediator model**  
 Source: Adapted from (Baron & Kenny, 1986)

- **Moderation**

Moderation occurs when a third variable has an impact on or can alter the strength of the relationship between two variables. The third variable is called moderator (J. Cohen *et al.*, 2003). In order to analyse the moderator effects, the multiple regression was used to assess the significance of an interaction effect which is represented by a product term between predictors and moderators (predictor X moderator) on the dependent variable (outcome).



**Figure 5.2: Moderator model**  
 Source: Adapted from (Baron & Kenny, 1986)

## 5.7 The Link between Research Questions and Research Hypotheses

To find the answers for the research questions, hypotheses were conducted corresponding to each research question. The links between them are presented in Table 5.15.

Research questions	Research hypotheses
<p>1. How do knowledge ownership perceptions affect knowledge sharing intentions?</p>	<p>H1: Organisational ownership is positively associated with intentions to share information products and expertise.</p> <p>H2: Individual ownership is negatively associated with intentions to share information products and expertise.</p> <p>H3: There is a significant difference in intention to share information products and expertise among the three types of knowledge ownership perceptions.</p> <p>H 3.1: Employees with strong Organisational Ownership (OO) perception have more intention to share information products and expertise than those with strong Individual Ownership (IO) perception or those with Collaborative Ownership (CO) perception.</p> <p>H 3.2: Employees with strong Individual Ownership (IO) perception have less intention to share information products and expertise than those with strong Organisational Ownership (OO) perception or those with Collaborative Ownership (CO) perception.</p>
<p>2. How do the types of knowledge, the sector, personal characteristics and the work environment influence knowledge ownership perceptions?</p> <ul style="list-style-type: none"> <li>- Do different types of knowledge have different impacts on knowledge ownership perceptions?</li> <li>- Do different sector types have different impacts on knowledge ownership perceptions?</li> <li>- Do different personal characteristics have different impacts on knowledge ownership perceptions?</li> <li>- Do different work environments have different impacts on knowledge ownership perceptions?</li> </ul>	<p>H5: Individuals tend to associate organisational ownership more with information products than individual ownership.</p> <p>H6: Individuals tend to associate individual ownership more with expertise than organisational ownership.</p> <p>H7: Employees who perceive stronger organisational ownership tend to have a better work environment than those who perceive weaker organisational ownership for both information products and expertise.</p> <p>H8: Employees who perceive stronger individual ownership tend to have a poorer work environment than those who perceive weaker individual ownership for both information products and expertise.</p> <p>H9: Beliefs about knowledge ownership of information products and expertise are effected by gender, age, educational level, position status and, organisation tenure.</p> <p>H10.A: Private sector employees tend to have a</p>

	<p>better work environment than public sector employees.</p> <p>H10.B: Private sector employees tend to perceive organisational ownership more strongly than public sector employees for both information products and expertise.</p> <p>H10.C: Private sector employees tend to perceive individual ownership more weakly than public sector employees for both information products and expertise.</p> <p>H10.D: Private sector employees tend to have more intentions to share their knowledge for both information products and expertise than public sector employees.</p>
3. Do knowledge ownership perceptions act as a mediator and a moderator on the relationship between the work environment and knowledge sharing intentions?	<p>H11: Organisational ownership and individual ownership mediate the relationship between the work environment and the intentions to share information products and expertise.</p> <p>H12: Organisational ownership and individual ownership moderate the relationship between the work environment and the intentions to share information products and expertise. That is:</p> <p>H12.1: The influence of the work environment on knowledge sharing intentions is stronger for employees with weak organisational ownership than for those with strong organisational ownership.</p> <p>H12.2: The influence of work environment on knowledge sharing intentions is stronger for employees with strong individual ownership than for those with weak individual ownership.</p>
4. How are the perceptions on knowledge ownership perceptions between the UK and Thailand different?	<p>H4: There is a significant difference of proportion of employees with regard to knowledge ownership perceptions (CO, OO and IO) between an individualist country like the UK and a collectivist country like Thailand.</p> <p>H 4.1: The majority of employees from the UK are likely to perceive individual ownership (IO) for both information products and expertise.</p> <p>H 4.2: The majority of employees from Thailand are likely to perceive collaborative ownership (CO) for both information products and expertise.</p>

***Table 5.15: The link between the research questions and the hypotheses***

## **5.8 Summary**

This chapter demonstrates reliability and validity of all constructs adopted in this study. The results demonstrate that measurement of the constructs is valid and reliable. Furthermore, the description of the Thai and the UK sample was provided to explain the proportion of employees by their personal characteristics. Finally, this chapter also describes techniques and data analysis tools that were used to test hypotheses by this study. The results of hypotheses testing will be reported in the next chapter.

## **6 CHAPTER SIX: HYPOTHESES TESTING AND RESULTS**

### **6.1 Introduction**

As hypotheses have been proposed in Chapter 3, this chapter reports the corresponding results for those hypotheses. A number of statistical techniques were used to provide supportive evidences for the proposed research model according to their functions for example, correlations, T-test, multiple regression analysis and analysis of covariance (ANCOVA). The results were described separately under the subtopics and were also presented whether or not they support the hypotheses.

### **6.2 Knowledge Ownership Perception and Knowledge Sharing Intentions**

**Results of Hypothesis H1:** Organisational ownership is positively associated with intentions to share information products and expertise.

For the UK and Thai samples, in the case of information products and expertise, the relationship between organisational ownership (OO) and knowledge sharing intentions was investigated using Pearson product-moment correlation coefficient. There was positive correlation between the two variables as shown in Appendix B, Table 1 and Table 2 ( $r = 0.258$ ,  $p = .001$  for information products (IP) and  $r = 0.271$ ,  $p = .001$  for expertise).

In addition, the regression results of the Thai sample in Appendix C, Table 4 (Beta = 0.118,  $p = .05$  for IP) – Table 5 (Beta = 0.193,  $p = .001$  for expertise) and the regression of the UK sample in Appendix C, Table 7 (Beta = 0.359,  $p = .001$  for IP) - Table 8 (Beta = 0.238,  $p = .01$  for expertise) also revealed that OO was positively associated with intentions to share information products and expertise since the beta coefficients of OO were positive. Therefore, the hypothesis H1 was fully supported.



**Results of Hypothesis H2:** Individual ownership is negatively associated with intentions to share information products and expertise.

For the UK and Thai samples, in the case of information products and expertise, the relationship between individual ownership (IO) and knowledge sharing intentions for was investigated using Pearson product-moment correlation coefficient. There was negative correlation between the two variables as shown in Appendix B, Table 1 - Table 2 ( $r = -0.341$ ,  $p = .001$  for IP and  $r = -0.113$ ,  $p = .001$  for expertise).

In addition, the regression results of the Thai sample in Appendix C, Table 4 (Beta =  $-0.279$ ,  $p = .001$  for IP) - Table 5 (Beta =  $-0.139$ ,  $p = .001$  for expertise) and the regression results of the UK sample in Appendix C, Table 7 (Beta =  $-0.273$ ,  $p = .001$  for IP) - Table 8 (Beta =  $-0.193$ ,  $p = .001$  for expertise) also confirmed that IO was negatively associated with the intentions to share information products and expertise since the beta coefficients of IO were negative. Therefore, the hypothesis H2 was fully supported.

**Results of Hypothesis H3:** There is a significant difference in intention to share information products and expertise among the three types of knowledge ownership perceptions.

H 3.1: Employees with strong Organisational Ownership (OO) perception have more intention to share information products and expertise than those with strong Individual Ownership (IO) perception or those with Collaborative Ownership (CO) perception.

H 3.2: Employees with strong Individual Ownership (IO) perception have less intention to share information products and expertise than those with strong Organisational Ownership (OO) perception or those with Collaborative Ownership (CO) perception.

To test these hypotheses, there are two processes to be performed: First, preparing data for the analysis by dividing the samples into three groups according to the types of knowledge ownership perception. Second, conducting one-way between groups analysis of covariance

(ANCOVA) to test the differences between the effects of the three types of knowledge ownership perceptions on knowledge sharing intentions.

### 1. Preparing data for analysis

The sample of both Thailand and the UK was clustered into three groups depending on the level of organisational and individual ownership perceptions. K-means clustering was used to divide subjects into three groups, namely organisational, individual and collective ownership according to the definitions described in Chapter 3, section 3.2.3. These three groups were formed by the combination of subgroups derived from the two items: the item “*I would feel that the manual/knowledge belongs to the organisation*” used to measure organisational ownership perception (See an item in the questionnaire shown in Appendix A, part 1) and the item “*I would feel that the manual/knowledge belongs to me*” used to measure the individual ownership perception.

K-means cluster analysis of the former item was used to divide respondents into two subgroups: strong and weak organisational ownership. Similarly, K-means cluster analysis of the latter item was used to divide respondents into two subgroups: strong and weak individual ownership. The combination of the four subgroups can be formed the three groups of knowledge ownership perceptions based on the following conditions:

- 1) A group of **employees with strong OO** (named as ‘OO’) is a group where respondents have a strong organisational ownership perception. Therefore, they are members of the combination group of ‘*strong organisational ownership*’ and ‘*weak individual ownership*’ subgroups. In OO group, an individual has a stronger organisational ownership perception than individual ownership perception with respect to their knowledge.
- 2) A group of **employees with strong IO** (named as ‘IO’) is a group where respondents have a strong individual ownership perception. Therefore, they are members of the combination group of ‘*strong individual ownership*’ and ‘*weak organisational ownership*’ subgroups. In IO group, an individual has a stronger

individual ownership perception than organisational ownership perception with respect to their knowledge.

- 3) A group of **employees with CO** (named as ‘CO’) is a group where respondents neither have a strong organisational ownership perception nor a strong individual ownership perception. Therefore, they are members of the combination group of ‘*strong organisational ownership*’ and ‘*strong individual ownership*’ subgroups or members of the combination group of ‘*weak organisational ownership*’ and ‘*weak individual ownership*’ subgroups. In CO group, an individual has a joint-ownership or collaborative ownership between individual and organisational ownership. The results of cluster analysis for the UK and Thai sample were listed in Table 6.1 and Table 6.2 respectively.

<b>UK</b> (N = 368)	<b>Cluster Analysis of OO</b> using item “I would feel that the manual/knowledge belongs to the organisation”		<b>Cluster Analysis of IO</b> using item “I would feel that the manual/knowledge belongs to me”	
	Cluster 1 (N=299) <b>Strong OO</b>	Cluster 2 (N=67) <b>Weak OO</b>	Cluster 1 (N=159) <b>Strong IO</b>	Cluster 2 (N=205) <b>Weak IO</b>
Information Products	3.76 (.426)	1.69 (.467)	3.36 (.481)	1.50 (.501)
Expertise	3.50 (.501)	1.63 (.486)	3.55 (.499)	1.61 (.490)

**Table 6.1: Cluster analysis of Organisational Ownership (OO) and Individual Ownership (IO) of the UK sample**

*Note: Numerals in cells are means and those inside parentheses are standard deviations*

<b>Thailand</b> (N = 600)	<b>Cluster Analysis of OO</b> using item “I would feel that the manual/knowledge belongs to the organisation”		<b>Cluster Analysis of IO</b> using item “I would feel that the manual/knowledge belongs to me”	
	Cluster 1 (N=473) <b>Strong OO</b>	Cluster 2 (N=127) <b>Weak OO</b>	Cluster 1 (N=341) <b>Strong IO</b>	Cluster 2 (N=257) <b>Weak IO</b>
Information Products	3.68 (.466)	1.72 (.452)	3.57 (.495)	1.52 (.501)
Expertise	3.57 (.496)	1.56 (.498)	Cluster 1 (N= 367) <b>Strong IO</b>	Cluster 2 (N=230) <b>Weak IO</b>
			3.66 (.473)	1.53 (.500)

**Table 6.2: Cluster analysis of Organisational Ownership(OO) and Individual Ownership(IO) of the Thai sample**

*Note: Numerals in cells are means and those inside parentheses are standard deviations*

## 2. Conducting ANCOVA

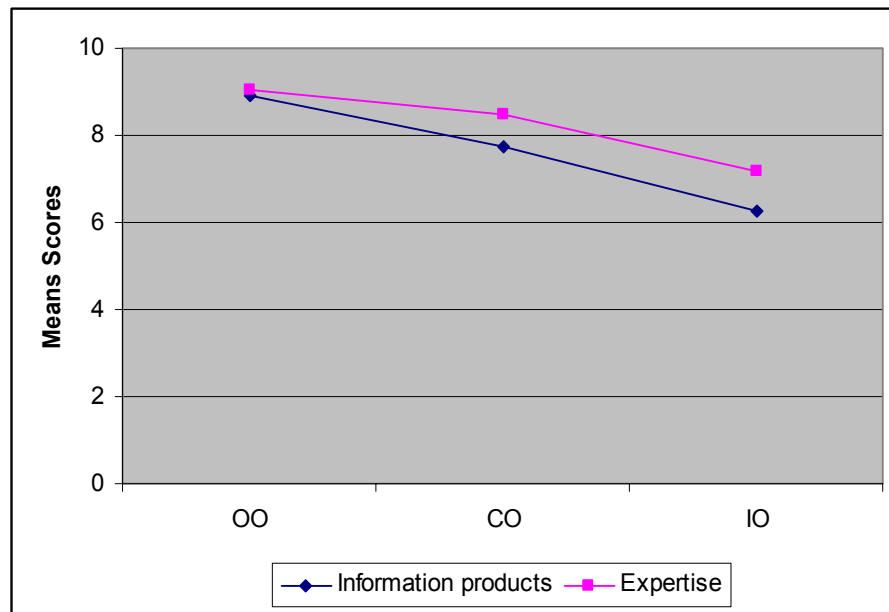
ANCOVA was conducted to explore the differences between those three groups (OO, IO, CO) in information products sharing intentions. Previous research showed that demographics influence knowledge sharing behaviours (J. W. Cohen, 1988). Therefore, gender, age, education, organisational tenure, position status, sector and nationality were controlled. Bonferroni was used to confirm a statistically significant difference between those three groups. The result of hypothesis H3 supported that there was a statistically significant difference in information products sharing intentions for the three ownership groups ( $F(2,796) = 36.63, p = .000$ ). On average, group OO ( $\bar{x} = 8.93, s = 2.59$ ) had a higher level of intention to share information products than group CO ( $\bar{x} = 7.72, s = 2.67$ ) and group IO ( $\bar{x} = 6.27, s = 2.70$ ). It can be noticed that group IO had a lower level of intention to share information products than other groups.

In addition, another ANCOVA was conducted to explore the differences between those three groups of ownership in expertise sharing intentions. Gender, age, education, organisational tenure, position status, sector and nationality were controlled. Bonferroni was used to confirm a statistically significant difference between those three groups. The result of hypothesis H3 also supported that there was a statistically significant difference in expertise sharing intentions for the three ownership groups ( $F(2, 798) = 30.04, p = .000$ ). On average, group OO ( $\bar{x} = 9.05, s = 1.91$ ) had a higher level of expertise sharing intentions than group CO ( $\bar{x} = 8.50, s = 2.30$ ) and group IO ( $\bar{x} = 7.19, s = 2.33$ ). It can be noticed that group IO had a lower level of intention to share expertise than other groups. Therefore, hypothesis H3.1 and H3.2 were supported for both information products and expertise. The details are in the Table 6.3 and are illustrated by the graph in Figure 6.1 bellow.

Intentions to share	Ownership Group	N	Mean ( $\bar{x}$ )	Standard Deviation (s)	F value
Information products N = 806	OO	318	8.93	2.59	36.63**
	CO	378	7.72	2.67	
	IO	110	6.27	2.70	
Expertise N= 808	OO	219	9.05	1.91	30.04**
	CO	422	8.50	2.30	
	IO	167	7.19	2.33	

**Table 6.3: Intentions to share information products and expertise among ownership groups**

\*\* is significant at 0.01 level, N = number of respondents



**Figure 6.1: A comparison of mean scores for intentions to share information products and expertise among ownership perceptions**

### 6.3 Nationality and Knowledge Ownership Perceptions

This section presents the results of the influence of nationality on knowledge ownership perceptions. The more details are described as follows.

**Results of Hypothesis H4:** There is a significant difference of proportion of employees with regard to knowledge ownership perceptions (CO, OO and IO) between an individualist country like the UK and a collectivist country like Thailand.

H 4.1: The majority of employees from the UK are likely to perceive individual ownership (IO) for both information products and expertise.

H 4.2: The majority of employees from Thailand are likely to perceive collaborative ownership (CO) for both information products and expertise.

Knowledge	Nationality	Ownership Perceptions			Chi-Square Test	
		CO N(%)	OO N(%)	IO N(%)	df	$\chi^2$
Information products	The UK (N= 364)	130 (35.7%)	186 (51.1%)	48 (13.2%)	2	28.31* *
	Thailand (N= 598)	313 (52.3%)	208 (34.8%)	77 (12.9%)		
Expertise	The UK (N= 338)	154 (45.6 %)	87 (25.7%)	97 (28.7%)	2	23.22* *
	Thailand (N= 597)	340 (57%)	163 (27.3%)	94 (15.7%)		

**Table 6.4: Chi-square test of the proportion of employees with regard to knowledge ownership perceptions between the UK and Thailand**

**\*\* is significant at 0.01 level, N = number of respondents**

Chi-square test results in Table 6.4 revealed that there was a significant difference in a proportion of employees with regard to knowledge ownership perceptions (CO, OO and IO) between the UK and Thai employees. The results indicated that a proportion of employees with regard to knowledge ownership perceptions varies by nations ( $\chi^2(2) = 28.31$ ,  $p < 0.01$  for information products, and  $\chi^2(2) = 23.22$ ,  $p < 0.01$  for expertise). It was found that the majority of UK employees were likely to perceive OO (51.1%) for information products and they were likely to perceive CO (45.6%) for expertise. Thus, H 4.1 was not supported. The majority of Thai employees were likely to perceive CO for both information products (52.3%) and expertise (57%). Thus, H 4.2 was supported.

The sample was collected from both private and public sectors within the UK and Thailand and these two sectors are different in many respects such as goals, work values and motivations as mentioned in Chapter 3. Therefore, sector should be treated as controlled variables to reduce bias from unmatched samples. The results are reported in Table 6.5 - Table 6.6 as follows.

Private Sector		Ownership Perception			Chi-Square Test	
		CO N(%)	OO N(%)	IO N(%)	df	X <sup>2</sup>
Information Products	Thailand (N=146)	48 (32.9%)	92 (63.0%)	6 (4.1%)	2	.045 , p = .978
	UK (N=56)	19 (33.9%)	35 (62.5%)	2 (3.6%)		
Expertise	Thailand (N=146)	79 (54.1%)	40 (27.4%)	27 (18.5%)	2	3.01, p = .222
	UK (N=55)	24 (43.6%)	22 (40%)	9 (16.4%)		

**Table 6.5: Chi-square test of the proportion of employees with regard to knowledge ownership perceptions in the private sector between the UK and Thailand**  
*N = number of respondents*

In the private sector, Chi-square test results (See in Table 6.5) indicated that there was no relationship between nationality and the types of knowledge ownership for both information products and expertise.

Public Sector		Ownership Perception			Chi-Square Test	
		CO N(%)	OO N(%)	IO N(%)	df	X <sup>2</sup>
Information Products	Thailand (N=452)	265 (58.6%)	116 (25.7%)	71 (15.7%)	2	39.92**
	UK (N=277)	101 (36.5%)	130 (46.9%)	46 (16.6%)		
Expertise	Thailand (N=451)	261 (57.9%)	123 (27.3%)	67 (14.9%)	2	27.23**
	UK (N=260)	120 (46.2%)	58 (22.3%)	82 (31.5%)		

**Table 6.6: Chi-square test of the proportion of employees with regard to knowledge ownership perceptions in the public sector between the UK and Thailand**  
*\*\* is significant at 0.01 level, N = number of respondents*

In the public sector, Chi-square test results (See in Table 6.6) indicated that there was a relationship between nationality and the types of knowledge ownership for both information products and expertise. Thus, a proportion of employees with regard to knowledge ownership perceptions vary by nation. It was found that the majority of UK employees were likely to perceive OO (46.9%) for information products and they were likely to perceive CO (46.2%) for expertise. The majority of Thai employees were likely to perceive CO for both information products (58.6%) and expertise (57.9%).

The results of the public sector supported the hypothesis H4 that there was a difference of knowledge ownership perceptions from different nations. Thai employees tended to perceive more collaborative ownership for both information products and expertise. In contrast, the UK employees tended to change their ownership perception depending on the types of knowledge. However, the results from the private sector did not find any support that there was influence from nationality on ownership perceptions.

It should be noted that other personal characteristics factors including gender, age, education, organisational tenure and position status were not controlled. Therefore, the findings may have bias. Nevertheless, personal characteristics had small effects on knowledge ownership perceptions as can be seen in Appendix B, Table 1 and Table 2 that all correlation coefficients between personal characteristics and ownership perceptions were smaller than .30 which indicated small effects (J. W. Cohen, 1988).

#### **6.4 Influence of the Type of Knowledge on Knowledge Ownership**

**Results of Hypothesis H5:** Individuals tend to associate organisational ownership more with information products than individual ownership.

For the Thailand sample, a paired-samples t-test (See Table 6.7) showed that individuals associated organisational ownership more with information products ( $\bar{x} = 3.27$ ,  $s = .92$ ) than individual ownership ( $\bar{x} = 2.69$ ,  $s = 1.13$ ). For the UK sample, a paired-samples t-test (See Table 6.7) also showed that individuals associated organisational ownership more with information products ( $\bar{x} = 3.38$ ,  $s = .92$ ) than individual ownership ( $\bar{x} = 2.31$ ,  $s = 1.05$ ). Hence, hypothesis H5 was supported.

**Results of Hypothesis H6:** Individuals tend to associate individual ownership more with expertise than organisational ownership.

For the Thailand sample, a paired samples t-test (See Table 6.7) showed that individuals associated organisational ownership more with their expertise ( $\bar{x} = 3.03$ ,  $s = 1.02$ ) than individual ownership ( $\bar{x} = 2.84$ ,  $s = 1.15$ ).



For the UK sample, a paired samples t-test (See Table 6.7) showed that individuals tend to associate individual ownership more with expertise ( $\bar{x} = 2.93$ ,  $s = 1.03$ ) than organisational ownership ( $\bar{x} = 2.85$ ,  $s = 1.02$ ). However, it was not statistically significant.

Hence, hypothesis H6 was not supported for both Thailand and UK samples. All details of the paired samples t-test are presented in Table 6.7.

Context	Thailand		UK	
	OO	IO	OO	IO
Information Products	3.27** (.92) N=598	2.69** (1.13) N=598	3.38** (.92) N=364	2.31** (1.05) N=364
Expertise	3.03* (1.02) N=597	2.84* (1.15) N=597	2.85 (1.02) N=338	2.93 (1.03) N=338
* significant at 0.05 level, ** significant at 0.01 level Numbers in parentheses are standard deviations, N = number of subjects				

**Table 6.7: T-test of Organisational Ownership (OO) and Individual Ownership (IO) for Information Products and Expertise in both Thai and UK samples**

## 6.5 Influence of the Work Environment on Knowledge Ownership

**Results of Hypothesis H7:** Employees who perceive stronger organisational ownership tend to have a better work environment than those who perceive weaker organisational ownership for both information products and expertise.

This hypothesis assumes that employees who have a stronger sense of organisational ownership tend to have a better work environment condition than employees who have a weaker sense of organisational ownership. In other words, all work environment factors will be positively related to organisational ownership for both information products and expertise.

The two subgroups, strong and weak Organisational Ownership (OO) mentioned in the results of hypothesis 3 were used for employees who perceive stronger OO (named the “Stronger OO”) and employees who perceive weaker OO (named the “Weaker OO”) respectively, as listed in Table 6.5 and Table 6.6.

The following work environment conditions are used to decide whether an organisation has a good quality of the work environment (also stated in Chapter 3 section 3.4.2):

1. when employees experience high amount of all work nature dimensions including variety of job, task significance, task identity, autonomy and feedback,
2. when they feel that their work environment condition is fair with regard to remuneration, recognition, work outcome, performance evaluation and organisational procedures,
3. when they receive supportive knowledge sharing norms to encourage knowledge sharing and,
4. when the quality of the relationship with supervisors and the quality of the relationship with co-workers are high.

From those conditions, the work environment factors were separated into nine factors which include work nature, remuneration, recognition, work outcome, performance evaluation, organisational procedures, knowledge sharing norms, superior-subordinate relationship and co-worker relationship. These nine factors were used as criteria to compare the opinions with regard to the quality of the work environment between employees who perceive stronger organisational ownership and those who perceive weaker organisational ownership. To analyse hypothesis H7, the sub-hypotheses of H7.1-7.9 were set out with respect to those nine factors and their results are summarised in Table 6.8.

ANCOVA was conducted to explore the differences between those two groups in the opinion about the quality of the work environment. According to previous work (Ekweozor, 2008; Jarvenpaa & Staples, 2001) demographics have an impact on ownership perceptions. Therefore, gender, age, education, organisational tenure, position status, sector and nationality were treated as controlled variables.

The results for hypotheses H7.1-7.9 in Table 6.9 and Table 6.10 indicated that most of work environment factors support the hypotheses that the work environment factors are higher for the group of stronger OO than for the group of weaker OO. Although, some of them did not show significant difference between those two groups, most of them were

slightly higher for the group of stronger OO than for the group of weaker OO as also shown in Figure 6.2 and 6.3. Therefore, H7 was partially supported.

Hypotheses	For information products	For expertise
H7.1: Employees who perceive stronger organisational ownership tend to experience higher amount of work nature than employees who perceive weaker organisational ownership.	Not support	Not support
H7.2: Employees who perceive stronger organisational ownership tend to have fairer remuneration than employees who perceive weaker organisational ownership.	Not support	Not support
H7.3: Employees who perceive stronger organisational ownership tend to have fairer recognition than employees who perceive weaker organisational ownership.	Not support	Support
H7.4: Employees who perceive stronger organisational ownership tend to have a fairer work outcome than employees who perceive weaker organisational ownership.	Not support	Support
H7.5: Employees who perceive stronger organisational ownership tend to have a fairer performance evaluation than employees who perceive weaker organisational ownership.	Support	Not support
H7.6: Employees who perceive stronger organisational ownership tend to have fairer organisational procedures than employees who perceive weaker organisational ownership.	Support	Not support
H7.7: Employees who perceive stronger organisational ownership tend to have a higher quality of the relationship with supervisors than employees who perceive weaker organisational ownership.	Support	Support
H7.8: Employees who perceive stronger organisational ownership tend to have a higher quality of the relationship with co-workers than employees who perceive weaker organisational ownership.	Support	Not support
H7.9: Employees who perceive stronger organisational ownership tend to receive more support by knowledge sharing norms than employees who perceive weaker organisational ownership.	Support	Support

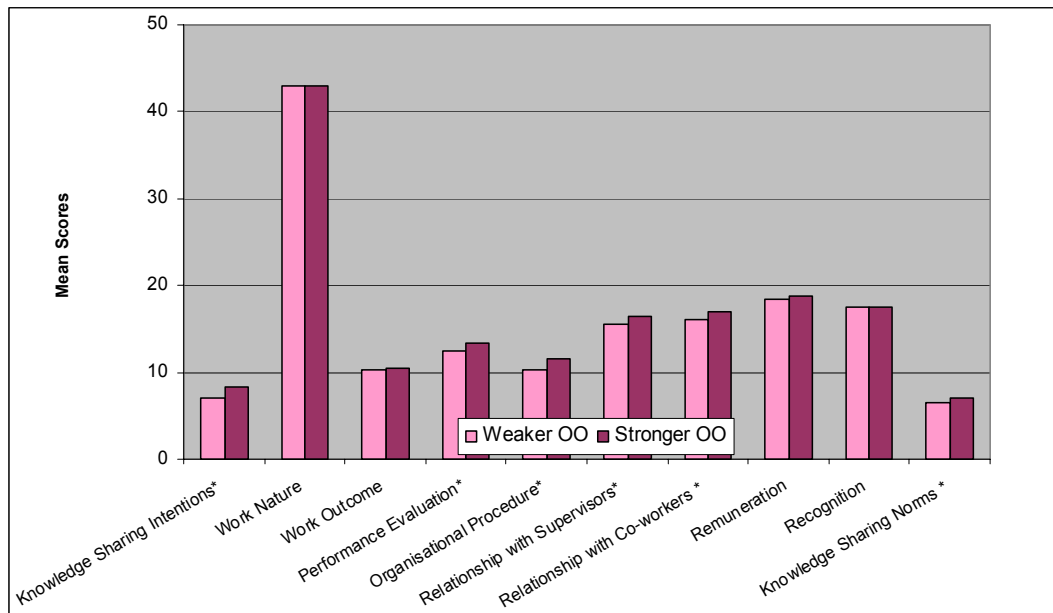
***Table 6.8: Summarised results for H7.1-7.9***

	Both Thailand and UK <sup>c</sup>			Thailand <sup>d</sup>			UK <sup>d</sup>		
Variables for Information Products	Stronger OO N=772	Weaker OO N=194	F	Stronger OO N=473	Weaker OO N=127	F	Stronger OO N=299	Weaker OO N=67	F
Knowledge Sharing Intentions	8.24***	7.09***	F(1,801)=25.50***	7.42*	6.84*	F(1,528)=3.74*	9.80***	7.67***	F(1,266)=31.70***
Work Nature	42.90	43.05	F(1,799)=.09	42.22	42.77	F(1,526)=.85	44.48*	42.46*	F(1,266)=6.14*
Work Outcome	10.52	10.23	F(1,800)=1.76	10.36	9.9	F(1,527)=3.06	10.97	10.33	F(1,266)=2.52
Performance Evaluation	13.43***	12.38***	F(1,462)=10.47***	12.04	11.87	F(1,287)=.21	15.66***	13.16***	F(1,168)=14.89***
Organisational Procedure	11.55***	10.37***	F(1,705)=22.84***	11.27***	10.14***	F(1,505)=15.01***	12.27**	10.91**	F(1,193)=7.74**
Relationship with Supervisors	16.43**	15.54**	F(1,792)=6.73**	15.54	14.86	F(1,526)=2.85	18.26*	16.61*	F(1,259)=5.80*
Relationship with Co-workers	16.88**	16.00**	F(1,800)=8.31**	16.67***	15.32***	F(1,526)=13.04***	17.48	16.56	F(1,267)=2.92
Remuneration	18.79	18.41	F(1,802)=.62	18.63	18.49	F(1,528)=.063	19.09	18.34	F(1,267)=.59
Recognition	17.57	17.50	F(1,802)=.05	18.32	18.18	F(1,528)=.26	16.30	15.28	F(1,267)=2.81
Knowledge Sharing Norms	7.02***	6.42***	F(1,776)=15.09***	7.18***	6.38***	F(1,528)=19.49***	6.74	6.33	F(1,241)=1.84
<p>* significant at 0.05 level, ** significant at 0.01 level, *** significant at 0.001 level</p> <p>c Gender, age, education, organisational tenure, position status, sector and nationality were controlled</p> <p>d Gender, age, education, organisational tenure, position status and sector were controlled</p>									

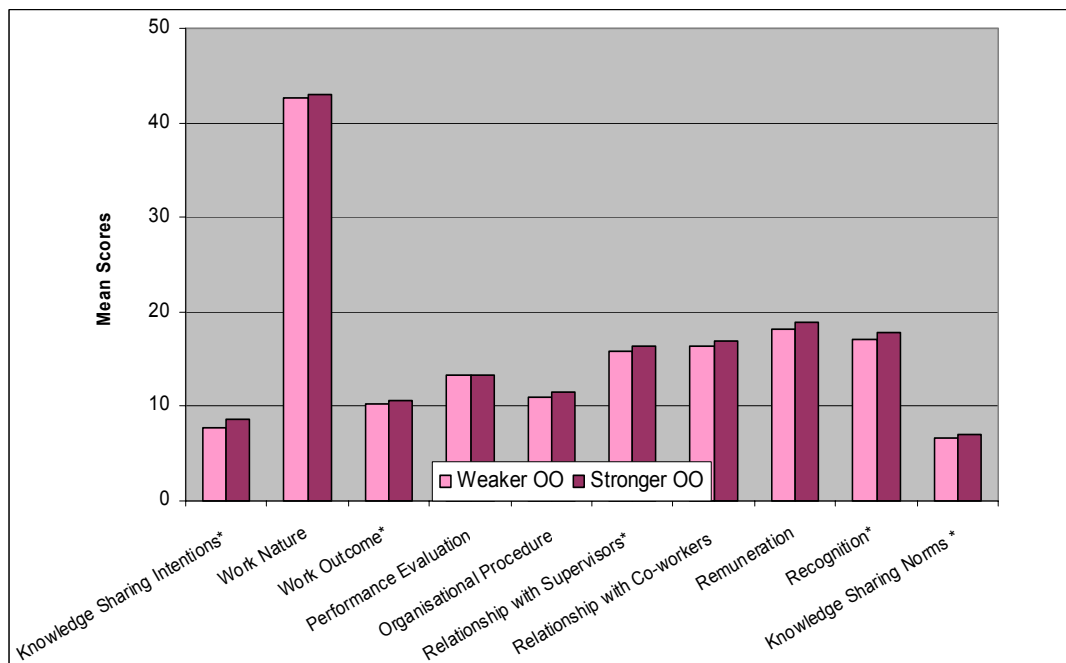
**Table 6.9: Mean scores of the work environment and knowledge sharing intentions for a group of stronger/weaker Organisational Ownership for information products**

	Both Thailand and UK <sup>c</sup>			Thailand <sup>d</sup>			UK <sup>d</sup>		
Variables for expertise	Stronger OO N=658	Weaker OO N=280	F	Stronger OO N=437	Weaker OO N=162	F	Stronger OO N=221	Weaker OO N=118	F
Knowledge Sharing Intentions	8.66***	7.73***	F(1,802)=27.25* **	8.78***	8.04***	F(1,528)=11.43***	8.41***	7.26***	F(1,267)=14.32* **
Work Nature	43.06	42.63	F(1,799)=1.01	42.38	42.20	F(1,526)=.11	44.49	43.35	F(1,266)=2.89
Work Outcome	10.58*	10.18*	F(1,800)=4.13*	10.50***	9.60***	F(1,527)=15.14***	10.73	11.08	F(1,266)=1.10
Performance Evaluation	13.24	13.23	F(1,462)=.00	11.91	12.20	F(1,287)=.89	15.51	14.83	F(1,168)=1.81
Organisational Procedure	11.44	11.05	F(1,705)=3.04	11.10	10.86	F(1,505)=.81	12.27	11.66	F(1,193)=2.48
Relationship with Supervisors	16.42*	15.83*	F(1,792)=3.83*	15.50	15.09	F(1,526)=1.33	18.30 <sup>a</sup>	17.31 <sup>a</sup>	F(1,256)=3.25 <sup>a</sup>
Relationship with Co-workers	16.84	16.37	F(1,800)=3.00	16.47	16.17	F(1,526)=.77	17.65*	16.68*	F(1,267)=4.86*
Remuneration	18.93	18.20	F(1,802)=2.96	18.77	18.13	F(1,528)=1.75	19.19	18.50	F(1,267)=.74
Recognition	17.75**	17.08**	F(1,802)=7.07**	18.46*	17.84*	F(1,528)=5.99*	16.37	15.63	F(1,267)=2.15
Knowledge Sharing Norms	7.00*	6.67*	F(1,776)=5.60*	7.08	6.82	F(1,528)=2.56	6.79	6.42	F(1,241)=2.35
<p>* significant at 0.05 level, ** significant at 0.01 level, *** significant at 0.001 level, <sup>a</sup> significant at 0.07 level</p> <p><sup>c</sup> Gender, age, education, organisational tenure, position status, sector and nationality were controlled</p> <p><sup>d</sup> Gender, age, education, organisational tenure, position status and sector were controlled</p>									

**Table 6.10: Mean scores of the work environment and knowledge sharing intentions for a group of stronger/weaker Organisational Ownership for expertise**



**Figure 6.2: A comparison of mean scores for the work environment and knowledge sharing intentions between a group of stronger and weaker Organisational Ownership for information products**  
*\* shows that it is statistically significant*



**Figure 6.3: A comparison of mean scores for the work environment and knowledge sharing intentions between a group of stronger and weaker Organisational Ownership for expertise**  
*\* shows that it is statistically significant*

**Results of Hypothesis H8:** Employees who perceive stronger individual ownership tend to have a poorer work environment than those who perceive weaker individual ownership for both information products and expertise.

In contrast to Hypothesis H7, this hypothesis assumes that employees who have a stronger sense of individual ownership tend to feel that they have less fair and poorer work environment conditions than those who perceive weaker individual ownership do. In other words, all the above work environment factors will be negatively related to individual ownership for both information products and expertise.

Similarly to H7, to analyse hypothesis H8, the sub-hypotheses of H8.1-8.9 were set out with regard to the nine factors of the work environment which are listed in Table 6.11. The two subgroups, strong and weak Individual Ownership (IO) mentioned in the results of hypothesis 3 were used for employees who perceive stronger IO (named the “Stronger IO”) and employees who perceive weaker IO (named the “Weaker IO”) respectively, as listed in Table 6.12 and Table 6.13.

ANCOVA was conducted to explore the differences between the group of stronger IO and the group of weaker IO in the opinion about the quality of the work environment. Gender, age, education, organisational tenure, position status, sector and nationality were treated as controlled variables. The results of H8.1-8.9 are summarised in Table 6.11.

Hypotheses	For information products	For expertise
H8.1: Employees who perceive stronger individual ownership tend to experience lower amount of work nature than employees who perceive weaker individual ownership for both information products and expertise.	Not support	Not support
H8.2: Employees who perceive stronger individual ownership tend to have less fair remuneration than employees who perceive weaker individual ownership for both information products and expertise.	Support	Support
H8.3: Employees who perceive stronger individual ownership tend to have less fair recognition than people who perceive	Not support	Not support

weaker individual ownership for both information products and expertise.		
H8.4: Employees who perceive stronger individual ownership tend to have less fair work outcome than employees who perceive weaker individual ownership for both information products and expertise.	Not support	Not support
H8.5: Employees who perceive stronger individual ownership tend to have less fair performance evaluation than employees who perceive weaker individual ownership for both information products and expertise.	Not support	Not support
H8.6: Employees who perceive stronger individual ownership tend to have less fair organisational procedures than employees who perceive weaker individual ownership for both information products and expertise.	Not support	Not support
H8.7: Employees who perceive stronger individual ownership tend to have a poorer quality of the relationship with supervisors than employees who perceive weaker individual ownership for both information products and expertise.	Support	Not support
H8.8: Employees who perceive stronger individual ownership tend to have a poorer quality of the relationship with co-workers than employees who perceive weaker individual ownership for both information products and expertise.	Not support	Not support
H8.9: Employees who perceive stronger individual ownership tend to receive less support by knowledge sharing norms than employees who perceive weaker individual ownership for both information products and expertise.	Support	Not support

***Table 6.11: Summarised results for H8.1-8.9***

It was found that the results rarely shown a significant difference between the group of stronger IO and the group of weaker IO. However, most of the work environment factors of the group of weaker individual ownership were slightly higher than those factors of the group of stronger individual ownership as shown in Table 6.12-Table 6.13 and illustrated in Figure 6.4 and 6.5. Therefore, H8 was partially supported. The se result supported H7 in the way that the opposite of ownership perceptions are also true.

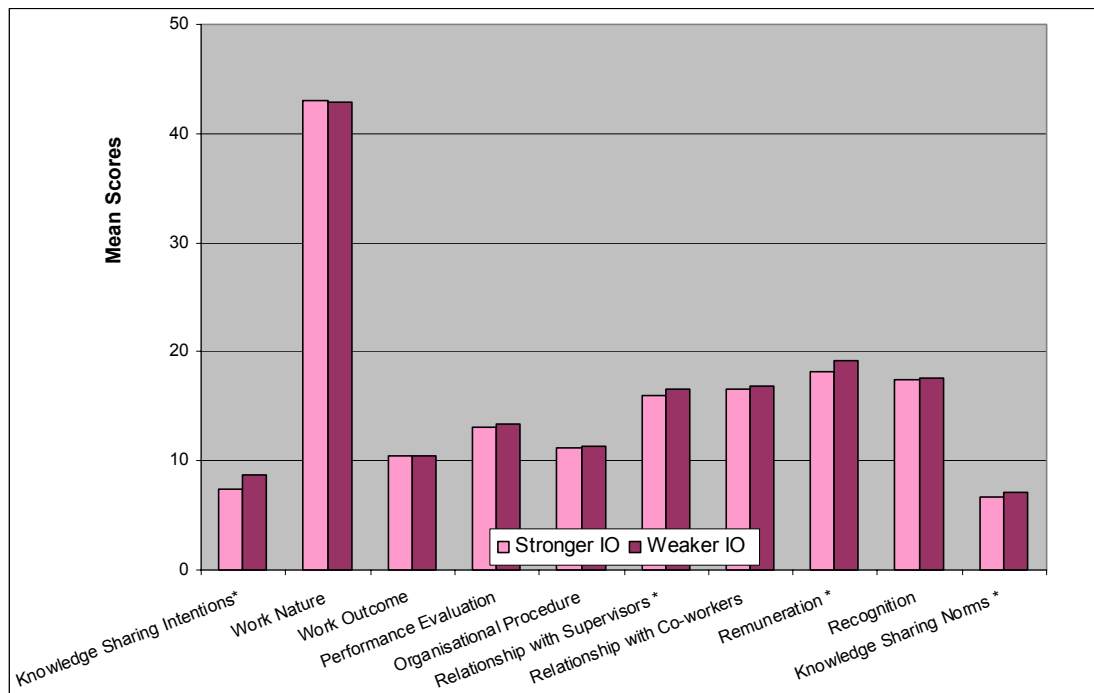


	Both Thailand and UK <sup>c</sup>			Thailand <sup>d</sup>			UK <sup>d</sup>		
Variables for Information Products	Stronger IO N=500 Mean ( $\bar{x}$ )	Weaker IO N=462 Mean ( $\bar{x}$ )	F	Stronger IO N=341 Mean ( $\bar{x}$ )	Weaker IO N=257 Mean ( $\bar{x}$ )	F	Stronger IO N=159 Mean ( $\bar{x}$ )	Weaker IO N=205 Mean ( $\bar{x}$ )	F
Knowledge Sharing Intentions	7.42***	8.69***	F(1,797)=47.79***	6.76***	8.03***	F(1,526)=28.55***	8.76***	9.94***	F(1,264)=18.14***
Work Nature	43.03	42.82	F(1,795)=.26	42.29	42.38	F(1,526)=.11	44.38	43.89	F(1,264)=.56
Work Outcome	10.44	10.46	F(1,796)=.01	9.60***	10.50***	F(1,527)=15.14***	10.49*	11.12*	F(1,264)=3.96*
Performance Evaluation	13.07	13.39	F(1,459)=1.50	12.20	11.91	F(1,287)=.89	14.92	15.61	F(1,166)=1.98
Organisational Procedure	11.26	11.39	F(1,701)=.46	10.86	11.10	F(1,505)=.81	11.59*	12.39*	F(1,191)=4.56*
Relationship with Supervisors	15.92*	16.58*	F(1,788)=5.51*	15.09	15.50	F(1,526)=1.33	17.24*	18.51*	F(1,257)=5.72*
Relationship with Co-workers	16.51	16.88	F(1,796)=2.20	16.17	16.47	F(1,526)=.77	16.83 <sup>a</sup>	17.64 <sup>a</sup>	F(1,265)=3.67 <sup>a</sup>
Remuneration	18.23*	19.21*	F(1,798)= 6.17*	18.13	18.77	F(1,528)=1.75	17.71**	19.87**	F(1,265)=7.94**
Recognition	17.45	17.63	F(1,798)=.63	17.84*	18.46*	F(1,528)=5.99*	15.48*	16.54*	F(1,265)=4.87*
Knowledge Sharing Norms	6.74**	7.08**	F(1,772)=7.40**	6.82	7.08	F(1,528)=2.56	6.24***	7.00***	F(1,239)=11.16***
<p>* significant at 0.05 level, ** significant at 0.01 level, *** significant at 0.001 level, a significant at 0.06 level</p> <p>c Gender, age, education, organisational tenure, position status, sector and nationality were controlled</p> <p>d Gender, age, education, organisational tenure, position status and sector were controlled</p>									

**Table 6.12: Mean scores of the work environment and knowledge sharing intentions for a group of stronger/weaker Individual Ownership for information products**

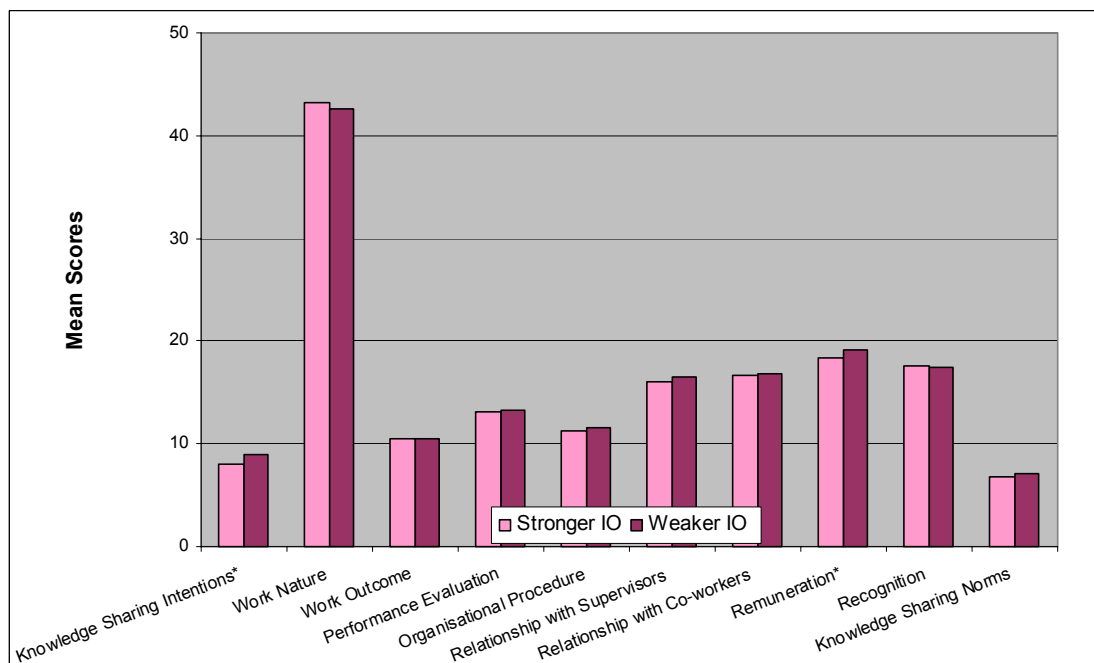
	Both Thailand and UK <sup>c</sup>			Thailand <sup>d</sup>			UK <sup>d</sup>		
Variables for expertise	Stronger IO N=597 Mean ( $\bar{x}$ )	Weaker IO N=338 Mean ( $\bar{x}$ )	F	Stronger IO N=367 Mean ( $\bar{x}$ )	Weaker IO N=230 Mean ( $\bar{x}$ )	F	Stronger IO N=230 Mean ( $\bar{x}$ )	Weaker IO N=108 Mean ( $\bar{x}$ )	F
Knowledge Sharing Intentions	8.06***	8.96***	F(1,799)=28.01***	8.31***	9.01***	F(1,526)=12.57***	7.65***	8.80***	F(1,266)=13.07***
Work Nature	43.14	42.56	F(1,796)=2.06	42.66 <sup>a</sup>	41.79 <sup>a</sup>	F(1,524)=3.40	44.18	43.97	F(1,265)=.08
Work Outcome	10.47	10.43	F(1,797)=.07	10.32	10.15	F(1,525)=.67	10.79	10.97	F(1,265)=.25
Performance Evaluation	13.18	13.30	F(1,460)=.20	11.87	12.19	F(1,286)=1.18	15.38	15.17	F(1,167)=.18
Organisational Procedure	11.21	11.52	F(1,702)=2.25	10.94	11.21	F(1,503)=1.35	11.92	12.34	F(1,192)=.98
Relationship with Supervisors	16.08	16.52	F(1,789)=2.31	15.28	15.54	F(1,524)=.65	17.67	18.58	F(1,258)=2.48
Relationship with Co-workers	16.65	16.75	F(1,797)=.13	16.40	16.34	F(1,524)=.04	17.17	17.56	F(1,266)=.71
Remuneration	18.41*	19.20*	F(1,799)=3.82*	18.16*	19.26*	F(1,526)=6.56*	18.96	18.82	F(1,266)=.03
Recognition	17.58	17.46	F(1,799)=.27	18.39	18.14	F(1,526)=1.33	16.14	15.94	F(1,266)=.14
Knowledge Sharing Norms	6.82	7.04	F(1,773)=3.08	6.98	7.06	F(1,526)=.35	6.53	6.94	F(1,240)=2.61
<p>* significant at 0.05 level, *** significant at 0.001 level, <sup>a</sup> significant at 0.07 level</p> <p><sup>c</sup> Gender, age, education, organisational tenure, position status, sector and nationality were controlled</p> <p><sup>d</sup> Gender, age, education, organisational tenure, position status and sector were controlled</p>									

**Table 6.13: Mean scores of the work environment and knowledge sharing intentions for a group of stronger/weaker Individual Ownership for expertise**



**Figure 6.4: A comparison of mean scores for the work environment and knowledge sharing intentions between a group of stronger and weaker Individual Ownership for information products**

*\* shows that it is statistically significant*



**Figure 6.5: A comparison of mean scores for the work environment and knowledge sharing intentions between a group of stronger and weaker Individual Ownership for expertise**

*\* shows that it is statistically significant*

## **6.6 Influence of Personal Characteristics on Knowledge Ownership**

**Results of Hypothesis H9:** Beliefs about knowledge ownership of information products and expertise are effected by gender, age, educational level, position status and, organisation tenure.

As shown in Appendix C, Table 3, for the Thai sample, only educational level supported the hypothesis for information products. It negatively associated with organisational ownership while positively associated with individual ownership. Thus, the higher educational level (i.e. post-graduation level) employees have, the less they perceive organisational ownership and the more they perceive individual ownership. Other personal characteristics did not support the hypothesis. For expertise, there was no statistically significant result to support that personal characteristics affect ownership perceptions.

As shown in Appendix C, Table 6, for the UK sample, only position status supported the hypothesis in the case of information products. It positively associated with organisational ownership while negatively associated with individual ownership. In the case of expertise, only educational level supported the hypothesis. It positively associated with individual ownership. Other personal characteristics did not support the hypothesis. Hence, H9 was partially supported.

## **6.7 The Public and Private Sector Differences**

**Results of Hypothesis H10.A:** Private sector employees tend to have a better work environment than public sector employees.

Similarly to hypotheses H7 and H8, to analyse hypothesis H10.A, the sub-hypotheses of H10.A.1-10.A.9 were set out with regard to the nine factors of the work environment conditions which are listed in Table 6.14.

K-means cluster analysis of the item ‘sector’ is used to divide respondents into two groups, namely the private and public sectors (See an item in the questionnaire shown in Appendix A, part 3). ANCOVA was conducted to explore the differences between these

two sectors in the opinion about the quality of the work environment. Gender, age, education, organisational tenure, position status, sector and nationality were treated as controlled variables. The detailed results are presented in Table 6.15. The summarised results of hypotheses H10.A.1-H10.A.9 are presented in Table 6.14.

Hypotheses	Results
H10.A.1: Private sector employees tend to experience higher amount of work nature than public sector employees.	Support
H10.A.2: Private sector employees tend to have fairer remuneration than public sector employees.	Support
H10.A.3: Private sector employees tend to have fairer recognition than public sector employees.	Support
H10.A.4: Private sector employees tend to have a fairer work outcome than public sector employees.	Support
H10.A.5: Private sector employees tend to have a fairer performance evaluation than public sector employees.	Support
H10.A.6: Private sector employees tend to have fairer organisational procedures than public sector employees.	Support
H10.A.7: Private sector employees tend to have a higher quality of the relationship with supervisors than public sector employees.	Support
H10.A.8: Private sector employees tend to have a higher quality of the relationship with co-workers than public sector employees.	Support
H10.A.9: Private sector employees tend to receive more support by knowledge sharing norms than public sector employees.	Support

**Table 6.14: Summarised results of work environment for H10.A.1-10.A.9**

It can be seen that all sub-hypotheses H10.A.1-H10.A.9 were supported. Overall, private sector employees tend to have a better work environment than their public sector counterparts. Thus, hypothesis 10.A was supported.

**Results of Hypothesis H10.B:** Private sector employees tend to perceive organisational ownership more strongly than public sector employees for both information products and expertise.

For both information products and expertise, ANCOVA was conducted to compare the organisational ownership perception between the private and public sectors. There was a statistically significant difference between the mean scores of organisational ownership

between those two sectors (see in Table 6.15). Private sector employees tend to perceive organisational ownership more strongly than their public sector counterparts. Hence, H10.B was supported.

**Results of Hypothesis H10.C:** Private sector employees tend to perceive individual ownership more weakly than public sector employees for both information products and expertise.

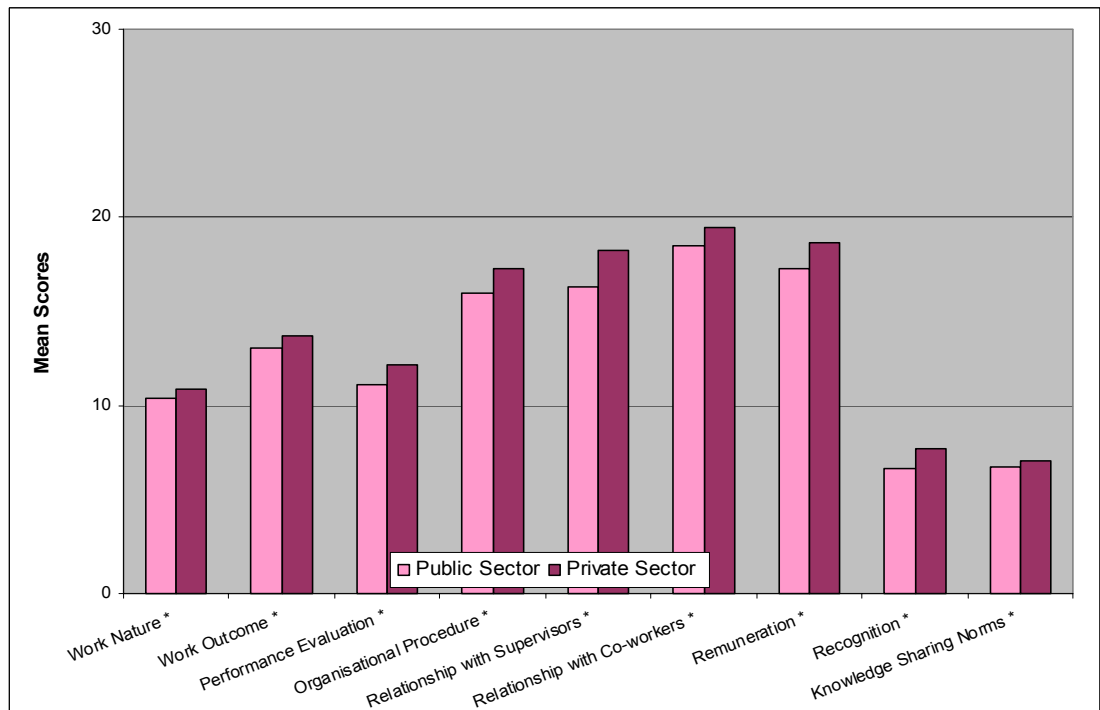
For information products, there was a statistically significant difference between the mean scores of individual ownership between those two sectors in individual ownership perception (See Table 6.15). This is congruent with the hypothesis H10.B that private sector employees tend to perceive individual ownership weaker than public sector counterparts. For expertise, there was no statistically significant difference between the mean scores of individual ownership. Hence, H10.C was partially supported.

**Results of Hypothesis H10.D:** Private sector employees tend to have more intentions to share their knowledge for both information products and expertise than public sector employees.

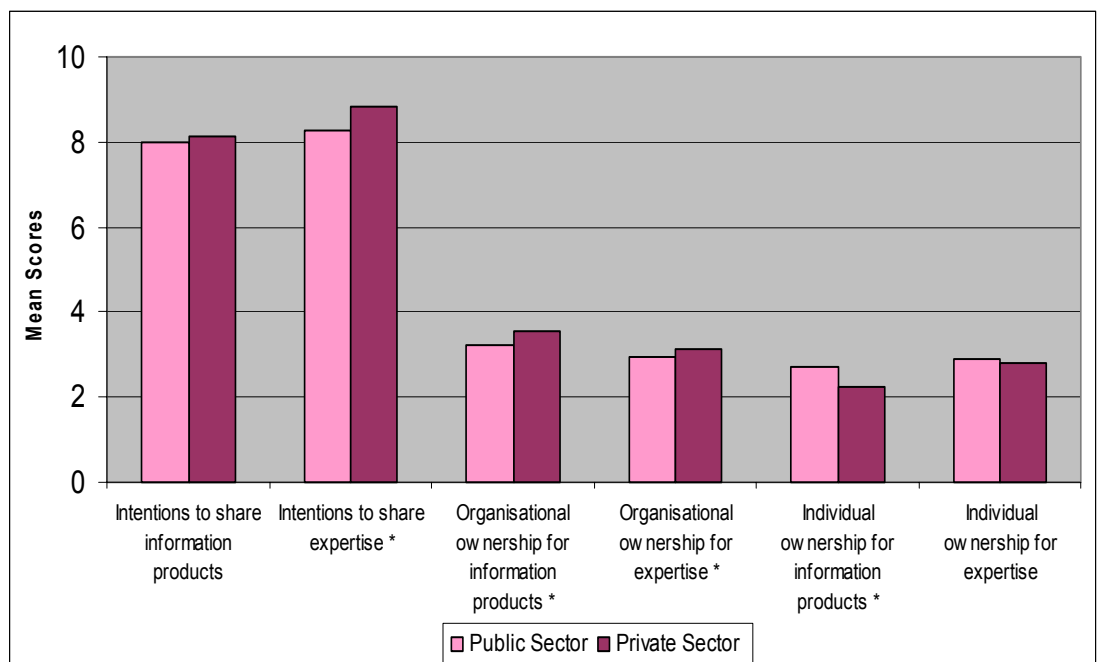
There was a statistically significant difference between the mean score of the intentions to share expertise between the private and public sector employees (See Table 6.15). Private sector employees tend to have more intentions to share their expertise than their public sector counterparts. However, the results showed that private sector employees tend to have more intentions to share information products than their public sector counterparts although it did not gain any statistically significant support. Hence, H10.D was partially supported. All results for H10.A-H10.D are presented in the diagrams in Figure 6.6 and Figure 6.7.

	Both Thailand and UK <sup>c</sup>			Thailand <sup>d</sup>			UK <sup>d</sup>		
Variables	Public Sector Mean ( $\bar{x}$ )	Private Sector Mean ( $\bar{x}$ )	F	Public Sector Mean ( $\bar{x}$ )	Private Sector Mean ( $\bar{x}$ )	F	Public Sector Mean ( $\bar{x}$ )	Private Sector Mean ( $\bar{x}$ )	F
Intentions to share information products	7.98	8.14	F(1,802)=.48	7.24	7.50	F(1,529)=.77	9.25*	10.06*	F(1,267)=4.04*
Intentions to share expertise	8.25**	8.84**	F(1,803)=7.77**	8.53	8.75	F(1,529)=.80	7.70*	9.35*	F(1,268)=4.70*
Organisational ownership for information products	3.23***	3.56***	F(1,803)=17.07***	3.15***	3.69***	F(1,529)=30.66***	3.31	3.51	F(1,268)=1.51
Organisational ownership for expertise	2.94 <sup>a</sup>	3.11 <sup>a</sup>	F(1,803)=3.64 <sup>a</sup>	3.02	3.14	F(1,529)=1.16	2.77*	3.20*	F(1,268)=6.14*
Individual ownership for information products	2.70***	2.23***	F(1,799)=24.66***	2.88***	2.20***	F(1,527)=25.89***	2.43	2.12	F(1,266)=3.06
Individual ownership for expertise	2.92	2.82	F(1,800)=.93	2.85	2.87	F(1,527)=.01	3.05*	2.64*	F(1,267)=5.83*
Work Nature	42.73 <sup>b</sup>	43.61 <sup>b</sup>	F(1,800)=3.28 <sup>b</sup>	42.23	42.64	F(1,527)=.472	43.85	45.15	F(1,267)=2.06
Work Outcome	10.35***	10.86***	F(1,801)=12.81***	10.11*	10.71*	F(1,528)=5.08*	10.76	11.26	F(1,267)=1.26
Performance Evaluation	13.08 <sup>a</sup>	13.67 <sup>a</sup>	F(1,464)=3.52 <sup>a</sup>	11.65***	12.80***	F(1,288)=10.73***	15.41	14.88	F(1,170)=.65
Organisational Procedure	11.09***	12.13***	F(1,708)=18.00***	10.83**	11.68**	F(1,506)=8.49**	11.79**	13.33**	F(1,196)=9.05**
Relationship with Supervisors	15.96***	17.28***	F(1,795)=14.82***	15.05***	16.46***	F(1,527)=12.61	17.79	18.80	F(1,262)=1.78
Relationship with Co-workers	16.26***	18.24***	F(1,803)=41.78***	16.00***	17.57***	F(1,527)=17.38***	16.92***	19.06***	F(1,270)=12.84***
Remuneration	18.51*	19.48*	F(1,805)=4.03*	18.38	19.28	F(1,529)=2.79	18.64	20.46	F(1,270)=2.79
Recognition	17.25***	18.61***	F(1,805)=22.64***	18.24	18.47	F(1,529)=.68	15.55***	18.65***	F(1,270)=20.71***
Knowledge Sharing Norms	6.66***	7.70***	F(1,779)=45.42***	6.83***	7.57***	F(1,529)=16.23***	6.28***	8.16***	F(1,244)=34.63***
<p>* significant at 0.05 level, ** significant at 0.01 level, *** significant at 0.001 level</p> <p><sup>a</sup> significant at 0.06 level, <sup>b</sup> significant at 0.07 level</p> <p><sup>c</sup> Gender, age, education, organisational tenure, position status and country were controlled,</p> <p><sup>d</sup> Gender, age, education, organisational tenure and position status were controlled</p>									

**Table 6.15: Mean scores of knowledge sharing intentions, ownership perceptions and the work environment for the public and private sectors**



**Figure 6.6: A comparison of mean score for the work environment between public sector and private sector**  
*\* shows that it is statistically significant*



**Figure 6.7: A comparison of mean score for ownership perceptions and knowledge sharing intentions between public sector and private sector**  
*\* shows that it is statistically significant*



## **6.8 Mediating Role of Knowledge Ownership Perceptions**

**Results of Hypothesis H11:** Organisational ownership and individual ownership mediate the relationship between the work environment and the intentions to share information products and expertise

The results showed that organisational ownership and individual ownership have a mediating role in the relationship between the work environment (some factors) and the intentions to share information products and expertise. Thus, H11 was partially supported. More details of the results are described as follows.

### **6.8.1 Organisational Ownership as a Mediator in Knowledge Sharing**

For the UK sample, in the case of information products and expertise, the Baron and Kenny test (see Appendix C) provided significant results supporting the hypothesis that organisational ownership perception underlay or mediated the influence of performance evaluation on knowledge sharing intentions.

For the Thai sample, in the case of information products, the Baron and Kenny test (see Appendix C) provided significant results supporting the hypothesis that organisational ownership perception underlay the influence of organisational procedures on knowledge sharing intentions.

In the case of expertise, the Baron and Kenny test (see Appendix C) provided significant results supporting the hypothesis that organisational ownership perception underlay the influence of work outcome on knowledge sharing intentions.

### **6.8.2 Individual Ownership as a Mediator in Knowledge Sharing**

For the UK sample, in the case of information products and expertise, the Baron and Kenny test (see Appendix C) provided significant results supporting the hypothesis that individual ownership perception underlay the influence of knowledge sharing norms on knowledge sharing intentions.

For the Thai sample, in the case of information products and expertise, there was no significant result supporting the hypothesis from the Baron and Kenny test (see Appendix C).

The results were summarised in Table 6.16 and Table 6.17.

<b>UK</b>	<b>Thailand</b>
Information products	Information products
Performance Evaluation ->OO -> Knowledge sharing intentions	Organisational Procedures ->OO -> Knowledge sharing intentions
Expertise	Expertise
Performance Evaluation ->OO -> Knowledge sharing intentions	Work outcome->OO -> Knowledge sharing intentions

***Table 6.16: The summary of mediation Organisational Ownership (OO) on the relationship between work environment and the intention to share knowledge***

<b>UK</b>	<b>Thailand</b>
Information products	Information products
Knowledge sharing norms ->IO -> Knowledge sharing intentions	-
Expertise	Expertise
Knowledge sharing norms ->IO -> Knowledge sharing intentions	-

***Table 6.17: The summary of mediation Individual Ownership (IO) on the relationship between work environment and the intention to share knowledge***

## **6.9 Moderating Role of Knowledge Ownership Perception**

In order to analyse the moderating role of knowledge ownership, the hierarchical regression was used to test for statistical significance of moderating effect. That is to assess the significant effect of the interaction between predictors and moderators (predictor X moderators). In order to reduce multicollinearity, the predictors were mean centred before forming the interaction (J. Cohen et al., 2003). Multicollinearity exists when the two variables (or predictor variables) are highly correlated to each other ( $r=.90$  and above). The results of the moderator effects of the work environment and knowledge ownership (either organisational or individual ownership) on the intention to share knowledge (either information products or expertise) are shown in Table 6.18-6.21.

Variables	Intention to share Information Products			
	UK		Thai	
	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t
Work Nature * OO	-.015	-.184	.041	.711
Work Outcome * OO	.064	.744	-.008	-.131
Performance Evaluation* OO	.021	.272	.010	.165
Organisational Procedure* OO	.034	.383	-.004	-.076
Relationship with Supervisor * OO	.068	.828	-.001	-.024
Relationship with Co-worker* OO	.036	.451	.010	.166
Remuneration* OO	-.107	-1.249	-.014	-.235
Recognition * OO	.064	.507	-.029	-.497
Knowledge Sharing Norm * OO	-.182*	-2.461*	-.080	-1.385
	N=368 R= .483, R <sup>2</sup> = .233 F(9,156) =4.975***		N=600 R= .226 , R <sup>2</sup> = .051 F(6,294) = 2.584*	

**Table 6.18: The moderation effect of the work environment and organisational ownership on the intention to share information products**

Gender, age, education, organisational tenure, position status and sector were controlled.

\* is significant at the 0.05 level., \*\*\* is significant at the 0.001 level.

Variables	Intention to share Expertise			
	UK		Thailand	
	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t
Work Nature * OO	.005	.063	-.029	-.512
Work Outcome * OO	-.022	-.290	.085	1.407
Performance Evaluation* OO	.048	.589	-.089	-1.309
Organisational Procedure* OO	-.060	-.785	.026	.429
Relationship with Supervisor * OO	.067	.869	-.037	-.630
Relationship with Co-worker* OO	-.066	-.872	-.071	1.252
Remuneration* OO	-.013	-.173	-.124*	-2.179*
Recognition * OO	-.043	-.532	.056	.908
Knowledge Sharing Norm * OO	-.058	-.759	.037	.628
	N=368 R= .405, R <sup>2</sup> = .164 F(7,156) = 4.176***		N=600 R= .308 , R <sup>2</sup> = .095 F(10,294) = 2.986***	

**Table 6.19: The moderation effect of the work environment and individual ownership on the intention to share information products**

Gender, age, education, organisational tenure, position status and sector were controlled

\*\*\* is significant at the 0.001 level.

Variables	Intention to share Information products			
	UK		Thai	
	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t
Work Nature * IO	.059	.756	.072	1.296
Work Outcome * IO	.028	.360	.063	1.112
Performance Evaluation * IO	.067	.751	.040	.627
Organisational Procedure * IO	.049	.634	.003	.057
Relationship with Supervisor * IO	.029	.361	.096	1.693
Relationship with Co-worker * IO	.054	.704	.053	.929
Remuneration * IO	.044	.573	.042	.754
Recognition * IO	.105	1.296	.008	.145
Knowledge Sharing Norm * IO	.080	1.033	-.038	-.677
	N=368 R= .438, R <sup>2</sup> = .191 F(8,154) =4.322***		N=600 R= .349, R <sup>2</sup> = .122 F(7,293) =5.653***	

**Table 6.20: The moderation effect of the work environment and organisational ownership on the intention to share expertise**

Gender, age, education, organisational tenure, position status and sector were controlled.

\* is significant at the 0.05 level., \*\*\* is significant at the 0.001 level

Variables	Intention to share Expertise			
	UK		Thailand	
	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t
Work Nature * IO	.011	.137	-.031	-.536
Work Outcome * IO	.033	.431	-.014	-.244
Performance Evaluation * IO	-.065	-.764	.141*	2.169*
Organisational Procedure * IO	.034	.430	-.067	-1.071
Relationship with Supervisor * IO	-.020	-.237	-.032	-.469
Relationship with Co-worker * IO	.114	1.459	.041	.670
Remuneration * IO	.090	1.172	-.076	-1.200
Recognition * IO	.132	1.651	-.011	-.173
Knowledge Sharing Norm * IO	.071	.919	-.053	-.877
	N=368 R= .381, R <sup>2</sup> = .145 F(7,155) =3.586***		N=600 R= .292, R <sup>2</sup> = .085 F(10,293) =2.632**	

**Table 6.21: The moderation effect of the work environment and individual ownership on the intention to share expertise**

Gender, age, education, organisational tenure, position status and sector were controlled.

\* is significant at the 0.05 level, \*\* is significant at the 0.01 level.

\*\*\* is significant at the 0.001 level.

**Results of Hypothesis H12:** Organisational ownership and individual ownership moderate the relationship between the work environment and the intentions to share information products and expertise.

The hypothesis 12 is separated into H12.1 and H12.2 as follows to see whether the different degree of organisational and individual ownership (strong/weak) has an impact on the influence of the work environment on knowledge sharing intentions.

**Results of Hypothesis H12.1:** The influence of the work environment on knowledge sharing intentions is stronger for employees with weak organisational ownership than for those with strong organisational ownership.

For information products (see Table 6.18), only knowledge sharing norms for the UK sample gained significant support the hypothesis. The positive relationship between knowledge sharing norms and the intentions to share information products reduced when the level of organisational ownership increased since there is a negative coefficient on the interaction term between knowledge sharing norms and the intentions to share information products ( $\text{Beta} = -.182$ ,  $t(156) = -2.46$ ,  $p=.05$ ). Therefore, the influence of knowledge sharing norms on knowledge sharing intentions is stronger for individuals with weak organisational ownership than for those with strong organisational ownership for the UK context.

For expertise (see Table 6.20), only remuneration of Thai sample gained significant support the hypothesis. The positive relationship between remuneration and the intentions to share expertise reduced when the level of organisational ownership increased since there was a negative coefficient on the interaction term between remuneration and the intentions to share expertise ( $\text{Beta} = -.124$ ,  $t(294) = -2.17$ ,  $p=.05$ ). Therefore, the influence of remuneration on knowledge sharing intentions is stronger for individuals with weak organisational ownership than for those with strong organisational ownership for Thailand context.

It can be seen that instead of enhancing the positive relationship when the organisational ownership level increased, it was reduced. Hence, H12.1 was partly supported for knowledge sharing norms for the UK and remuneration for Thailand context.

**Results of Hypothesis H12.2:** The influence of work environment on knowledge sharing intentions is stronger for employees with strong individual ownership than for those with weak individual ownership.

For information products (see Table 6.19), there was no significantly supported for any work environment factors when they interact with individual ownership. For expertise (see Table 6.21), only performance evaluation of Thai sample gained the significance. The positive relationship between performance evaluation and the intentions to share expertise enhanced with increasing level of individual ownership since there was a positive coefficient on the interaction term between performance evaluation and the intentions to share expertise (Beta = .141,  $t(293) = 2.17$ ,  $p = .05$ ). Therefore, the influence of performance evaluation on knowledge sharing intentions is stronger for individuals with strong individual ownership than for those with weak individual ownership for Thailand context.

In summary, individual ownership and organisational ownership moderated the relationship between the work environment factors particularly knowledge sharing norms, remuneration and performance evaluation, and the intentions to share knowledge (information products and expertise). Therefore, H12 was partly supported.

## **6.10 Summary**

This chapter provides the evaluation of the proposed research model by testing the hypotheses set in Chapter 3. The significant alpha level was set to decide whether to accept or reject the hypotheses at .05 level ( $p \leq .05$ ) to accept the hypotheses). By this chapter, results, tables and graphs are presented and interpreted to support or reject each hypothesis. The discussions and implications of the findings will be provided in the next chapter.

## **7 CHAPTER SEVEN: DISCUSSIONS**

### **7.1 Introduction**

The purpose of this chapter is to discuss the results of the research, the findings and their implications to address the research questions which are:

1. How do knowledge ownership perceptions affect knowledge sharing intentions?
2. How do the types of knowledge, the sector, personal characteristics and the work environment influence knowledge ownership perceptions?
  - Do different types of knowledge have different impacts on knowledge ownership perceptions?
  - Do different sector types have different impacts on knowledge ownership perceptions?
  - Do different personal characteristics have different impacts on knowledge ownership perceptions?
  - Do different work environments have different impacts on knowledge ownership perceptions?
3. Do knowledge ownership perceptions act as a mediator and a moderator on the relationship between the work environment and knowledge sharing intentions?
4. How are knowledge ownership perceptions between the UK and Thailand different?

This chapter presents the findings and its implications into four topics corresponding to the research questions. These will start from the first research question relating to the relationship between knowledge ownership and knowledge sharing intentions, to the fourth research question relating to the influence of nationality which will be summarised in the section of comparison between Thailand and the UK.

### **7.2 Knowledge Ownership and Knowledge Sharing Intentions**

This study found that knowledge ownership perception can be separated into three types, namely organisational ownership, individual ownership and collaborative ownership. In a similar way to the findings of Ekweozor's work (2008) in the UK context, knowledge ownership perceptions were also found to impact on knowledge sharing intentions in the Thailand context (as reported in Chapter 6, the results of H1-H2)..

Research to date on knowledge ownership tends to focus only on organisational and individual ownership perceptions. This left room for collaborative ownership to be examined. Furthermore, there is no work to compare the relationship between the three types of ownership and knowledge sharing intentions. This study addressed these gaps by comparing knowledge sharing intentions among the three types of ownership and found that employees who perceive organisational ownership tend to have more intention to share their knowledge than do those who perceive collaborative ownership and individual ownership. In contrast, employees who perceive individual ownership tend to have less intention to share their knowledge than the others (as reported in Chapter 6, the results of H3). These results are consistent with those of previous studies (Ekweozor, 2008; Jarvenpaa & Staples, 2001). Therefore, knowledge ownership perception is an important factor that should be considered to encourage knowledge sharing in organisations. In particular, encouraging knowledge sharing could be done by promoting organisational ownership. Nevertheless, this study does not intend to conclude that organisational ownership is the most important perception among the three of them and which should therefore be focused on. Individual ownership and collaborative ownership may have other advantages in different contexts. For example, in the context of knowledge creativity and innovation where the owners (often the first creator) gain recognition and fame for the new products or service, in this case, individual ownership may act as a motivator for individuals to contribute to new knowledge in order to gain those private benefits. Moreover, collaborative ownership which is a joint ownership between an individual and an organisation may provoke a sense of belonging to the organisation particularly when employees contribute or make a greater effort into the work. This, in turn, encourages unity within the organisation.

### **7.3 Contextual and Conditional Factors and their Influence on Knowledge Ownership Perception**

Despite the existence of some work on knowledge ownership perceptions, little attention has been paid to how context affects them, particularly contexts like nation and sector. This study is extended from previous works (Ekweozor, 2008; Jarvenpaa & Staples, 2001), which has revealed that conditional factors including the types of knowledge, the work environment and personal characteristics influence ownership perceptions, to examine the impact of both contextual and conditional factors on knowledge ownership perceptions. To do this, the impact of conditional factors was



examined by observing the effects of the types of knowledge, the work environment and the personal characteristics on knowledge ownership perceptions in both Thai and UK context and also in the private and public sectors. Discussions of the findings are presented as follows.

### **7.3.1 Sector and its Influence on Knowledge Ownership**

Sector type is a contextual factor proposed in this study to have an impact on knowledge ownership perceptions due to the differences in many respects. The results of H10.A-H10.D as reported in Chapter 6 suggest that the public and private sectors differ in the work environment, knowledge sharing intentions and knowledge ownership perceptions. Private sector employees tend to perceive that they have a better work environment than public sector employees. In addition, private sector employees tend to have a stronger sense of organisational ownership and higher intentions to share knowledge than their public counterparts. In contrast to organisational ownership, private sector employees tend to have a weaker sense of individual ownership than their public counterparts. These findings were supported by previous work which stated that both sectors are different in many respects including goals, funding, work values and characteristics (Aycan et al., 1999; Wamsley & Zald, 1973; Wittmer, 1991). These differences have an impact on work motivations (Wright, 2001), which in turn may result in different ownership perceptions. Moreover, the present findings are consistent with earlier work which found that private sector employees tend to have more satisfaction with their work and have more commitments than those public counterparts (Buchanan, 1974; Moon, 2000).

Interestingly, this study also found that for public sector employees, national characteristics appear to have influence on ownership perceptions as can be seen from the results that the public sector employees in Thailand are likely to assign collaborative ownership to their knowledge (whether in the form of information products or expertise). This may result from that the public sector employees in Thailand demonstrate collectivist characteristics inherent in the Thai culture. However, that influence from national culture was not found in the private sector. This may stem from the fact that the public sector has to work for the benefit of the public as a whole while the private sector is working for its owners' benefit (Horn, 1995; Van Der Wal et al., 2008). Therefore, the goals, policy, and attitudes of public sector employees tend to be

compliant with those of the public and so absorb national characteristics manifested in managerial decision-making and beliefs.

Furthermore, the results also imply that the differences between the private and public sectors may lead to different preferences in knowledge ownership perceptions. Public sector employees tend to prefer individual ownership because they developed stronger individual ownership. Therefore, in order to promote knowledge sharing in the public sector, individual or collaborative ownership should be the preferred choice to organisational ownership. By allowing public sector employees to claim ownership over their knowledge or giving them recognition and rights as a collaborative owner with their organisation could be a reward to motivate knowledge sharing. For the private sector, the strategy may be different. The results revealed that private sector employees tend to have stronger organisational ownership. Therefore, nurturing the organisational ownership by using organisational norms (Constant, 1994), and maintaining a good work environment (Ekweozor, 2008) should be an effective strategy to indirectly encourage knowledge sharing.

### **7.3.2 Types of Knowledge and its Influence on Knowledge Ownership**

The results of H5-H6 reported in Chapter 6 revealed that types of knowledge influence the way employees perceive knowledge ownership. Individuals tend to have stronger beliefs in organisational ownership than individual ownership for information products. This finding replicates previous findings of Javenpaa and Staples (2001) and Ekweozor (2008). It may result from the fact that information products can be enforced or controlled in organisations more easily by law or employment contracts because they are tangible. Moreover, sharing information products is motivated by organisational benefits rather than self-interest thus this influence of pro-social attitudes is formed to support organisational ownership (Constant, 1994). In contrast, ownership of expertise is difficult to determine because it is an intangible facility of the human mind. Therefore, it is more inaccessible to being controlled by rules, norms or law. In this study, as can be seen from the results of H6, there was no significant support that individuals associated individual ownership more with expertise than organisational ownership for the UK sample. Surprisingly, the results from the Thai sample revealed that Thai employees significantly believed that expertise belongs to the organisation (as can be seen from the results of H6). This implies that expertise gained on the job could

be seen as the organisation's asset by their employees particularly those with collectivist characteristics.

In sum, the results suggest that in the case of information products, organisations could exert laws, policies and employment contracts to provoke organisational ownership beliefs. However, in the case of expertise which is an individual's attribute, the collectivist characteristics should be facilitated to increase organisational ownership such as encouraging employees to participate, to share their opinions and to work as a team.

### **7.3.3 The Work Environment and its Influence on Knowledge Ownership**

The results of H7 reported in Chapter 6 indicate that employees who perceive stronger organisational ownership tend to have a better work environment than those who perceive weaker organisational ownership. This is congruent with the results of H8 as reported in Chapter 6 showing that employees who perceive weaker individual ownership tend to have a better work environment than those who perceive stronger individual ownership. The findings are also consistent with those of Ekweozor (2008), which found that a sense of fairness within the work environment was positively associated with organisational ownership and negatively associated with individual ownership. There are some work environment factors that do not significantly support the hypothesis. There may be many reasons for this. One reason could be that this study tests each work environment factor as single causal factor without the concerns about the interaction of multiple work environment factors in causing effects. However, in real circumstance, the effects may be caused by the work environment factors interacting with each other to impact knowledge ownership perception. Another reason could be due to missing data. In this study, missing data were excluded in analysis thus the sample size and statistical power were reduced. In turn, this circumstance reduced the chance of statistical significance of the hypothesis because statistical significance is sensitive to sample size (Urdan, 2005). Clustering samples into groups to compare between them for example, making a comparison between employees with stronger and weaker organisational ownership also reduced the sample size and thus the chance of statistical significance. Finally, the confounding factors which may be the main cause of the effects were not focused on in this study. These limitations raise some questions that require further investigation in future work.

Furthermore, knowledge sharing intentions for different degrees of ownership perception (either stronger or weaker ownership perception) have been tested and as predicted, employees with stronger organisational ownership or weaker individual ownership have more intentions to share their knowledge than those with weaker organisational ownership or stronger individual ownership.

The results imply that a good work environment, which includes a considerable amount of all work nature dimensions, a fair workplace justice, a high quality of relationship with colleagues, and a high supportive norm, encourages organisational ownership. In turn, this ownership perception enhances knowledge sharing intentions. Therefore, if an organisation seeks to promote knowledge sharing, job design by nurturing or making a good work environment should be key to increasing organisational ownership perception which would result in greater intentions to share knowledge.

Although these results indicated slight differences in work environment and intentions to share knowledge between employees with stronger organisational ownership (weaker individual ownership) and those with weaker organisational ownership (stronger individual ownership), this slightly higher level of the intention to share knowledge may be worth a considerable amount to an organisation which has sought to maintain a good work environment. The results provided by statistics could be subjective and imprecise.

#### **7.3.4 Personal Characteristics and its Influence on Knowledge Ownership**

The findings of this study support previous work (Constant, 1994; Ekweozor, 2008; Jarvenpaa & Staples, 2001) which found that demographics or personal characteristics have influence on knowledge ownership perceptions. In particular, it was found that education and position status influence knowledge ownership perceptions.

The results of H9 reported in Chapter 6 revealed that employees with a higher level of education were more likely to associate individual ownership to their knowledge and less likely to associate organisational ownership to their knowledge compared to employees with lower levels of education. This finding could be explained by the work of Rowley (1996) which indicated that people with a higher level of education tend to be more individualistic with higher self-esteem and preferring job autonomy. Hence,

employees with a higher educational level will value individual ownership more than organisational ownership.

Additionally, it was found that employees with higher position status were more likely to believe in organisational ownership and tended to associate organisational ownership with their knowledge. This finding was congruent with Herzberg's Two Factor Theory (Herzberg, 1966) which states that responsibility is the important factor to increase employees' satisfaction. The higher the position they hold, the more responsibility they take, the higher work values and satisfaction they perceive. More congruence was found from the work of Constant et al. (1994), which implied that the more work experience people have, the more organisational ownership they will perceive because work experience positively grows with position status.

#### **7.4 Mediating Roles of Knowledge Ownership**

Previous work (Ekweozor, 2008) found that ownership perceptions mediate the relationship between the work environment and knowledge sharing intentions; that is, the work environment has indirect effects on knowledge sharing intentions through ownership perceptions. The results of this study confirm previous findings and suggest that the work environment plays a significant role in shaping ownership perceptions which in turn influences knowledge sharing.

##### **7.4.1 Organisational Ownership as a Mediator**

For the UK context, in the case of information products and expertise, organisational ownership was positively influenced by performance evaluation. The fairness of performance evaluation increased organisational ownership and in turn encouraged knowledge sharing intentions. Individual ownership was negatively influenced by knowledge sharing norms. The presence of knowledge sharing norms decreased individual ownership and in turn encouraged knowledge sharing intentions.

For the Thai context, in the case of information products, organisational ownership was positively influenced by organisational procedures. The fairness of organisational procedures increased organisational ownership and in turn encouraged knowledge sharing intentions. In the case of expertise, organisational ownership was positively influenced by work outcome. The fairness of work outcome increased organisational

ownership and in turn encouraged knowledge sharing intentions. The results did not show any significant support for the influence from any work environment factor on individual ownership for either information products or expertise.

It can be seen that for UK employees, the fairness of performance evaluation had the most impact on encouraging organisational ownership. Furthermore, for Thai employees, the fairness of organisational procedures and work outcome had the most impact on encouraging organisational ownership. These findings interestingly confirm that performance-based appraisals are western practices of giving rewards (O'Regan & Ogata, 2007). For eastern countries like Thailand, employees may have less focus on performance evaluation and more on the fairness of organisational procedures and work outcome as treated by their managers.

#### **7.4.2 Individual Ownership as a Mediator**

For UK employees, in the cases of information products and expertise, it was found that individual ownership could be discouraged by knowledge sharing norms. It implies that knowledge sharing norms could be an effective strategy to reduce individual ownership and in turn, increase knowledge sharing activities. However, for Thai employees, there was no significant support for the moderating role of individual ownership for both information products and expertise. This may be caused by many reasons that no work environment factors were found to shape individual ownership in Thailand. One reason may be that Thai people are unlikely to develop individual ownership perception because they are in a collectivist culture which is a shared society where everything is always shared among family, relatives and friends.

#### **7.4.3 The Work Environment and Knowledge Sharing Intentions**

In the process of mediation analysis of ownership perceptions, it was interestingly found that the work environment could directly affect knowledge sharing intentions. The mediation analysis can be seen in Appendix C.

For UK employees, in the cases of information products and expertise, knowledge sharing intentions were positively influenced by performance evaluation. Apart from indirect effects through organisational ownership, performance evaluation also has direct effect on knowledge sharing intentions.

For Thai employees, only in the case of expertise, it was found that the work environment influences knowledge sharing. In particular, work nature and work outcome were found to have direct effects on knowledge sharing intentions.

Therefore, not only ownership perceptions but also the work environment particularly, the fairness of performance evaluation, work nature and work outcome have impact on knowledge sharing intentions.

## **7.5 Moderating Roles of Knowledge Ownership**

From previous findings, ownership perceptions and the work environment could have direct effects on knowledge sharing intentions. Therefore, it may be the case that both of them interact to cause the effects. This study observed the interaction of them or the moderating role of ownership perceptions. As expected, besides having a mediating role in the relationship between the work environment and knowledge sharing intentions, ownership perceptions also have a moderating role in the relationship especially for the work environment like knowledge sharing norms, remuneration and performance evaluation.

### **7.5.1 Organisational Ownership as a Moderator**

For UK employees, only in the case of information products, it was found that organisational ownership moderated the relationship between knowledge sharing norms and knowledge sharing intentions. In particular, the results indicated that knowledge sharing norms had a stronger impact on knowledge sharing intentions for employees with weak organisational ownership than those with strong organisational ownership.

For Thai employees, only in the case of information products, it was found that organisational ownership moderated the relationship between remuneration and knowledge sharing intentions. In particular, the results indicated that remuneration had a stronger impact on knowledge sharing intentions for employees with weak organisational ownership than those with strong organisational ownership.

### **7.5.2 Individual Ownership as a Moderator**

For UK employees, there was no significant support that ownership perception moderated the relationship between the work environment and knowledge sharing intentions for either information products or expertise.

For Thai employees, only in the case of expertise, it was found that individual ownership moderated the relationship between performance evaluation and knowledge sharing intentions. That is, performance evaluation had a stronger impact on knowledge sharing intentions for employees with strong individual ownership than those with weak individual ownership.

Overall, the results revealed that the work environment had a stronger impact on knowledge ownership perception for employees with weak organisational ownership because they had more concerns about the quality of the work environment than those with strong organisational ownership. Furthermore, in a congruent way, the results indicated that the work environment had a stronger impact on knowledge sharing intentions for employees with strong individual ownership because they had more concerns about the quality of the work environment than those with the weak individual ownership.

These findings support the work of Constant et al. (1994), which states that employees with individual ownership were motivated by self-interest or self-benefits and thus they have more concerns about their work environment conditions. In contrast, employees with organisational ownership were motivated by organisational benefits and thus they have fewer concerns about their work environment conditions.

## **7.6 Comparison of the Research Findings**

This section will be separated into two parts. The first part will refer to Ekweozor's work (Ekweozor, 2008) to compare between her study and this study. The second part will focus on a comparison between the findings of the UK and Thailand.

### **7.6.1 Reference to the Work of Ekweozor (2008)**

Ekweozor (2008) analysed the impact of two types of ownership perceptions, organisational and individual ownership, on knowledge sharing intentions. Additionally, the influence of the conditional factors including the type of knowledge, the work



environment and demographics on knowledge ownership and sharing intentions were examined.

This study extends her work by examining the effects of collaborative ownership, which is a joint ownership between individual and organisational ownership, on knowledge sharing intentions. Moreover, this study includes nationality and sector as contextual factors which are considered to impact on knowledge sharing intentions together with the conditional factors. Furthermore, a moderating role was added to examine how ownership perceptions moderate the relationship between the work environment and the sharing intentions because ownership perceptions may occur simultaneously without causally occurring as a result of the work environment.

The present study confirms previous findings that ownership perceptions influence knowledge sharing intentions. In that regard, organisational ownership increases knowledge sharing intentions while individual ownership decreases those intentions. Moreover, types of knowledge, work environment and personal characteristics were found to have effects on ownership perceptions. Finally, ownership perceptions have a mediating role which underlies the relationship between the work environment and knowledge sharing intentions as discussed earlier in section 7.4.

This study contributes additional evidence to suggest that collaborative ownership between an individual and an organisation exists and influences knowledge sharing intentions. Additionally, nationality and organisational sector have an impact on ownership perceptions in that the ownership perceptions differ among nations and sectors. Therefore, comparative research between those different contexts is an appropriate approach used to study the area of knowledge ownership. Finally, apart from its mediating role, ownership perceptions have a moderating role that can increase or decrease the strength of the relationship between work environment and knowledge sharing intentions. This means that instead of having an indirect effect through ownership perception on knowledge sharing intentions, the work environment could also have a direct effect on knowledge sharing intentions. This direct effect could be moderated by ownership perceptions. In particular, individual ownership could increase the effects of the work environment on knowledge sharing intentions. In contrast, organisational ownership could decrease the effects of the work environment on knowledge sharing intentions.

### **7.6.2 Comparison of the findings between the UK and Thailand**

Thailand and the UK are different in many respects; the differences can be summarised as Thailand is a developing-eastern-collectivist country while the UK is a developed-western-individualist country. The results reported in Chapter 6 revealed that there are both similarities and differences in knowledge ownership perceptions between these two countries. The main similarities were found in the effects of the sector, the personal characteristics, and the work environment on knowledge ownership perceptions mentioned earlier. Nevertheless, some remarkable differences concerning knowledge ownership were identified.

Thai employees are more likely to hold a collaborative ownership belief with respect to their knowledge regardless of type of knowledge. UK employees tend to have more concerns about the type of knowledge over the ownership perceptions. They are more likely to assign organisational ownership belief to their information products and more likely to assign collaborative ownership belief to their expertise. In short, the knowledge ownership perceptions of UK employees are more heavily influenced by type of knowledge. These effects of type of knowledge on ownership perceptions were also reflected in the public sector which provided the same results. There may be two reasons to explain these results. First, Thai people have collectivism characteristics therefore they tend to focus more on social benefits than personal benefits. Hence this makes them perceive collective ownership for their knowledge regardless of its type. Second, the UK laws, particularly those referring to intellectual property rights (IPR) are more readily enforced than in Thailand (Business Software Alliance, 2009). Thus, the impact of legal enforcement or company contracts is stronger in the UK especially, with reference to information products which are tangible and more easily enforceable.

In organisational routine, employees usually make a legal agreement on the employment contracts which states that all work created during the course of employment belongs to the organisation. However, in Thailand, since the enforcement of IPR is weak, Thai employees may have less concern for organisational ownership compared to the UK employees. With stronger enforcement of IPR, UK employees have more concerns about their rights. Thus, they may hold stronger beliefs about organisational ownership than Thai employees especially for information products. This suggests that national characteristics are likely to influence knowledge ownership perceptions.

In addition, as a result of the impact of national characteristics in encouraging organisational ownership through the work environment between Thailand and the UK, different strategies may be needed for Thailand and the UK. For the UK as a western country, the western style of appraisals like performance-based evaluation would be a more effective method (Hempel, 2001) to encourage organisational ownership. For Thailand as an eastern country, managers or supervisors are powerful and important persons thus the fairness of organisational procedures and work outcomes as treated by them would be a more effective method.

## **7.7 Summary**

This chapter aims to summarise all the research findings, discussions and to offer some explanations for the findings. This study is an exploratory research in a way because, to date, there has been no comparative research between Thailand and the UK on knowledge ownership perceptions. The findings replicate the results of previous research in that knowledge ownership influences knowledge sharing intentions. The extended findings are that collaborative ownership exists and also has an impact on knowledge sharing intentions. Employees with collaborative ownership perception have more intentions to share knowledge than employees with individual ownership but less than employees with organisational ownership.

Additionally, it was found that nationality, sector, type of knowledge, work environment and personal characteristics influence knowledge ownership perceptions. Understanding both contextual and conditional ownership helps to find suitable ways and strategies to nurture ownership perception that is congruent with organisational purposes. The next chapter provides the conclusions of this study, implications, contributions and limitations. Those implications and limitations lead to recommendations for future work.

## **8 CHAPTER EIGHT: IMPLICATIONS, CONTRIBUTIONS, LIMITATIONS AND FUTURE RESEARCH**

### **8.1 Introduction**

This research was conducted on the assumption that there is another type of ownership perception known as collaborative ownership that combines both individual and organisational ownership and influences knowledge sharing intentions in organisations. Furthermore, the main argument of this research is that not only should conditional factors like type of knowledge, work environments and personal characteristics be considered to have an impact on knowledge ownership perceptions but contextual factors such as nationality and sector should also be considered together as a compound factor. Additionally, this study argues that cross-cultural research is a good way to study knowledge ownership perceptions because different nations vary in context and conditions, which in turn influence ownership perceptions differently.

So far, this research has determined valid types of knowledge ownership and the ensuing effects on intentions to share knowledge, the impact of nationality, sector, types of knowledge, work environment and personal characteristics on knowledge ownership perceptions and the roles of knowledge ownership in the relationship between the work environment and knowledge sharing intentions. In this chapter, some implications are proposed. The contributions and limitations of this study are identified and from that, future work is recommended.

### **8.2 Implications**

This section summarises the implications of the findings. They are separated into sub-topics as follows:

#### **8.2.1 Ownership as a Driver for Knowledge Sharing**

Ownership perceptions have influence on knowledge sharing intentions. This study suggests that to enhance knowledge sharing in the organisational context, organisational ownership should be promoted. One way in which organisational ownership can be promoted is through organisational norms of property rights which emphasise that the knowledge of employees belongs to the organisation and should be shared for

organisational benefits (Constant, 1994). The organisational norms could be promoted as ethical codes which are moral standards that suggest sharing knowledge and the organisational ownership are good things to be encouraged. If employees accept these ethical codes in the work place, then they will share knowledge with their colleagues. Another way in which organisational ownership could be promoted is by facilitating a satisfactory work environment (Ekweozor, 2008). Nevertheless, this does not mean that organisational ownership is a more important perception to be nurtured than other ownership perception. Individual and collaborative ownership may have advantages in other contexts. For example, in online communication via collaborative electronic media, previous work has found that people with individual ownership tend to have more willingness to share their knowledge than those with organisational ownership (Jarvenpaa & Staples, 2000; Raban & Rafaeli, 2007). This can be explained as that in the online community, the enforcement of organisational ownership norms is weaker than in an organisational context and so individuals tend to perceive more individual ownership of their knowledge and tend to have more intention to share it for their own interest such as for the promotion of self-worth and self-satisfaction (Jarvenpaa & Staples, 2000). Moreover, the work of Kim (2007) gave the example of owners who want to share their knowledge online but they still need to claim ownership as individual ownership. He found that many copyright owners chose Creative Commons (CC)<sup>8</sup>, which provided copyright licenses as an individuals-built copyright under the copyright law to protect the work of an individual rather than exercising the full control of copyright because they want to share and allow more people to develop from their original works. Under copyright, the control protects sharing and the benefits are limited only to the owners as private gain. Under CC licenses, the owners gain benefits such as recognition and reputation and knowledge is shared to benefit the public.

In this study, employees with organisational ownership perception tend to have the highest intentions to share knowledge in the organisational context. In contrast, employees with individual ownership tend to have the lowest intentions to share knowledge. Collaborative ownership was found to be in second place in increasing knowledge sharing intentions among the three types of ownership perceptions after organisational ownership. Thus, it is worth consideration. Collaborative ownership may be useful in a win-win situation where the benefits need to be shared among

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<sup>8</sup> Available at: [creativecommons.org/license/](http://creativecommons.org/license/)

stakeholders in this case, between employees and organisations. For example, employees may want to share their knowledge but they need to gain something from their effort, for instance, recognition as a joint owner. Therefore, if some conditions have been added for sharing knowledge like giving the owner recognition, this may encourage employees to hold a belief of collaborative ownership between themselves and the organisations of their knowledge. This view of collaborative ownership was supported by the information semicommons theory of Heverly (2003). Heverly argued that information ownership should not be based only on private ownership schemes but should be based on the semicommons scheme which is “a property model that explicitly recognises the dynamic relationship and interdependence of private and common property uses” (Heverly, 2003, p. 1127). As private and public properties are related to each other, the semicommons theory acknowledges private ownership while allowing a common use or public use of information to increase overall benefits to society. The public use increases value to the private use and the private use increases the value back upon the public use.

As described above, all three types of knowledge ownership perceptions could play an important role in increasing knowledge sharing activities for different purposes and in different contexts. Therefore, it depends on organisational policy to select the focus and nurture the most suitable knowledge ownership perceptions among their employees.

### **8.2.2 Encouraging Knowledge Sharing through the Work Environment**

This study does not seek universal findings of success or failure of knowledge sharing, but tries to relate the amount of sharing intentions to specific characteristics such as ownership perceptions and the work environment. Sharing knowledge was found to be influenced by organisational ownership and personal benefits. Organisational ownership was in turn influenced by organisation norms of property rights and pro-social attitudes to care for the benefit of others rather than personal cost (Constant, 1994).

In this study, an ownership perception was found to mediate for the relationship between the work environment and knowledge sharing intentions. With regard to the work environment particularly, the fairness of performance evaluation, organisational procedures and work outcome encourage organisational ownership. In contrast, knowledge sharing norms discourage individual ownership perceptions. These findings highlight the importance of the fairness of work conditions and supportive management

via norms and managerial policy in enhancing organisational ownership. The sense of fairness creates trust between individuals and the organisations (Bartol & Srivastava, 2002). In turn, it enhances organisational ownership and knowledge sharing. Supportive management to the extent that managers create a facilitative climate of support, and encourage employees, will enhance employees' commitment and performance in work (Yoon *et al.*, 2001), and so, in this case, will increase organisational ownership and ultimately intentions to share their knowledge.

Moreover, ownership perception was also found to moderate the relationship between the work environment and knowledge sharing intentions. For employees with strong organisational ownership perceptions (weak individual ownership), the work environment tends to have less influence on knowledge sharing intentions because the employees have more concerns for the benefit of others above concerns for the work environment. In contrast, for employees with weak organisational ownership perceptions (strong individual ownership), a good work environment can make a positive difference in enhancing knowledge sharing. In particular, elements of the work environment like the fairness of remuneration, performance evaluation and knowledge sharing norms were found to be the important factors to make such a positive difference. These findings point out that the work environment related to both monetary and non-monetary rewards is an important mechanism to encourage positive behaviours like knowledge sharing if they are treated fairly.

### **8.2.3 Ownership Perception- Related Issues Regarding Nationality and Sector**

Previous work found that ownership perceptions differ between countries (Furby, 1976; Furby, 1978). This may be caused by the fact that people in different contexts live in different conditions, have different experiences and different cultures, all of which contribute to shape individual perceptions and behaviours. This study suggests that nationality and sector should be considered as contextual factors for observing knowledge ownership perceptions. It is difficult to suggest any recommendation regarding these contextual factors because they are composed of multiple agencies with varying interests. Therefore, any suggestions have to be prudent. Nevertheless, referring to previous works and the results gained from this study, some recommendations can be made.

### **8.2.3.1 The Influence of Nationality on Ownership Perceptions: Conflicts in Intellectual Property Rights**

This study found that ownership perceptions differ between the Thai and the British employees. One reason that ownership perceptions vary by nation may be caused by the differences of natural cultures and legal systems. Thailand as a collectivist-developing-eastern country has a weaker legal system of protection for intellectual property rights compared to the individualist-developed-western country like the UK (Chaithanakij, 2006a).

Waltraut Ritter, the director of Knowledge Enterprises, a research and advisory company based in Hong Kong, said that in many Asian countries, “people don't believe information has a specific owner” (Evatt, 2006). Furthermore, previous research studying on the impact of national culture on software piracy (i.e. illegally copying or selling software) explained that the cultures in Asian countries tend to consider that all human creations should be shared with the public. This makes the legal protection of intellectual property weak in such regions, such as in Malaysia, Thailand and China (Swinyard *et al.*, 1990). It is congruent with the findings of this study that Thai employees tend to perceive collaborative ownership of their knowledge. Interestingly, it was also found that expertise, which as noted above, is held to be an individual attribute, a facility of the human mind, was assigned to be an organisational asset by Thai employees. Therefore, Thais may not think that it is an unethical thing to share software or intellectual property illegally.

Regarding the conflicts between developing and developed countries on adopting property rights which are a legal aspect of ownership, the UK as a developed country has a stronger legal system and IPR protection hence British people tend to have more concerns about their rights than Thais as can be seen from the findings of this study that British employees perceive knowledge ownership with regard to the type of knowledge. Consequently, changing beliefs and values to adopt a western style of intellectual property rights in Thailand may require more time for re-educative processes to make the public accept and comply with legal dictates. Learning processes and exercises that involve community, by which members can learn from each other, may be an effective strategy to develop such compliance because Thais are influenced by their peers (Kini *et al.*, 2004). Moreover, to gain more agreement on those rights, it is necessary to



demonstrate that those rights can bring benefits to the society for Thais since they have collectivist characteristics which place a greater emphasis on public interests and benefits over individual ones.

#### **8.2.3.2 Ownership Perceptions in the Public and Private Sectors**

The differences between the public and private sectors in goals, values, policy and attitudes make them different in knowledge ownership perceptions and knowledge sharing intentions. Private sector employees are more likely to assign property rights to the organisation in that they develop stronger organisational ownership over their knowledge than public sector employees. This may result from the fact that private employees work for the organisation's benefit and they have a better work environment. In turn, they tend to share their knowledge more. In contrast, public sector employees are more likely to associate individual ownership over their knowledge and have less intention to share knowledge than their private sector counterparts. In the private sector, organisational ownership could be nurtured by maintaining a good working environment. In the public sector, there are two ways to increase knowledge sharing. One way is to nurture their individual ownership by adding some conditions such as giving the owner recognition regarding his/her knowledge as mentioned in 8.2.1. This may motivate public sector employees to share their knowledge more. The other way is to encourage organisational ownership. The latter can be done through organisational norms or facilitating a better work environment (Constant, 1994; Ekweozor, 2008). Either of these two ways can be chosen depending on organisational policy.

Additionally, the findings gained from a comparison between the public and private sectors confirm that a good work environment could be key in encouraging organisational ownership perceptions. This can be seen from the results that the private sector has overall a work environment compared with the public sector. Moreover, private sector employees are more likely to perceive organisational ownership and more likely to share their knowledge than the public sector employees. Therefore, maintaining the work environment with providing high amount of experience of the five dimensions of the core job characteristics (skill variety, task identity, task significance, autonomy and feedback), with fairness, with supportive relationships and with an

encouraging policy may help to generate positive attitudes and behaviours such as organisational ownership and knowledge sharing.

### **8.3 Contributions**

Despite the limitations which will be mentioned in the next section, this research shows significance of research findings to theory, methodology and practices.

In terms of theoretical contribution, this research has used fundamental knowledge to answer the research questions posed and contribute new knowledge to supplement existing knowledge. This study empirically confirms the existence of collaborative ownership recommended in previous work (Jarvenpaa & Staples, 2001). Moreover, new dimensions of influencing factors on knowledge ownership as contextual factors including nationality and sector were extended from past work (Ekweozor, 2008) and were found to have influence on knowledge ownership perceptions. Therefore, they should be considered simultaneously with conditional factors as compound factors. Understanding the differences of contextual effects on knowledge ownership perceptions help to understand the conditions and work environment preferences. These in turn are essential in structuring organisational environments and incentive systems to suit those conditions and preferences. Finally, this study also confirms the emergence of the moderating role of knowledge ownership on the relationship between the work environment and knowledge sharing intentions. The empirical findings in this study enhance understanding of knowledge ownership perceptions and suggest that cross-cultural study is a good way to conduct a research on knowledge ownership because ownership perceptions depend on those contextual and conditional factors which vary from one culture to another.

In terms of methodology, this is the first attempt to observe knowledge ownership perception which is a fundamental element of developing an understanding of intellectual property rights and privacy rights in eastern cultures and developing countries like Thailand. Furthermore, a comparative study between the distinguished countries that have different characteristics, cultures and legal systems such as the UK and Thailand has never been done before. Therefore, this study is a good start for more research in the area of knowledge ownership.

In terms of practices, this study indicates that knowledge ownership perceptions are a main key to enable knowledge sharing activities within an organisation. All types of ownership perceptions could be treated as motivating factors which drive knowledge sharing activities if they are nurtured properly. Individual ownership is motivated by the perception of benefit to the individual. Thus, job appraisals schemes should be operated fairly. Organisational and collaborative ownership are likely to be motivated by the organisation's benefit. Hence, encouraging employees to share their knowledge should demonstrate that it will bring overall benefit to the whole organisation. Additionally, group-based rewards for collective performance could be considered as a motivating strategy particularly for employees with strong collaborative ownership because they are an effective way to build feelings of cooperation, ownership and commitment among employees (Bartol & Srivastava, 2002). Moreover, this study focuses on the importance of contextual factors particularly nationality and sector. It was found that these two contextual factors shape ownership perceptions because different contexts have different conditions, cultures and regulations, which in turn influence ownership perceptions. This was confirmed by previous studies showing that ownership perception and its motivations varies by country to country (Furby, 1976; Furby, 1978). Thus, strategy and rewards systems to motivate employees to share their knowledge in those different contexts should be treated according to those differences. Organisations should promote the work environment where employees hold organisational ownership beliefs and acknowledge individual ownership. A good work environment and good work conditions are important to nurture organisational ownership perceptions and increase pro-social behaviours, which in turn enhance knowledge sharing intentions. Moreover, managers should also think about putting the right man in the right job because it was found that different personal characteristics have different preferences of ownership perceptions. For example, this study found that employees with higher levels of education are likely to assign individual ownership to their knowledge. Consequently, those employees should be responsible for work that gives a chance to show individual performance or acknowledge their work as an individual to increase their sense of self-esteem. Finally, ownership perceptions should be nurtured and supported in a way that suits an organisation's purposes, culture and policy.

#### **8.4 Limitations of the Study**

There are some limitations to this study. Firstly, using secondary data which were collected in different time periods in the UK and Thailand can result in some errors of time difference in the findings. However, the period in question is not too distant (only two-three years previous) thus data can still be used to reflect individual perceptions on ownership and their intentions to share knowledge in a particular situation as proposed in the study proposed. Secondly, using questionnaires with vignettes, asking for perceptions and intentions, limits the findings because respondents may not face the situations described in the vignettes before. However, according to Ajzen (1977), attitudes can predict behaviours and using vignettes to ask about the perception of another person's behaviour can reduce social desirability in responding (Constant, 1994). These can help understand the tendency to perform such behaviours more correctly. Thirdly, adopting quantitative methods like questionnaires has its own limitations on causality. Causality is related to the cause and effect relationship. This study used questionnaires to collect data at once so it is uncertain about the direction of causal influence. To define causal effects indicating what factors predict what outcomes, longitudinal studies or repeated questionnaires should be considered (Bryman & Bell, 2007). Moreover, using questionnaires with Likert scale may cause distortion for many reasons. Respondents may avoid extreme response answer (central tendency bias) or they may try to answer to please others or their organisations (social desirability bias) (Ronglian *et al.*, 2009). Finally, some results showed lack of statistical significance. This does not mean that an effect is not important but it may mean that there is not enough data to draw a conclusion. This study faces a limitation of generalisation, which is related to the question on how the sample is a representative sample and how to be able to generalise the findings beyond this study's cases (Bryman & Bell, 2007). This study adopted convenient sampling whereby contact points of organisations have been selected from previous connections to gain access for questionnaire distribution. Thus, this study cannot claim that the sample used is a representative sample. However, sample size of this study is statistically acceptable (see the sample size in Chapter 4). Moreover, the study adopted inferential statistics which ensured validity and reliability of all measures on the questionnaires. Hence, the findings can make inferences from the sample data to more general conditions.

## **8.5 Future Research**

Knowledge ownership, which was the focus of this study, serves as a starting point for research involving knowledge sharing in organisations in Thailand and the UK. More replicated work to assess the validity of the findings in other countries would be valuable. Furthermore, a direct measure of collaborative ownership in the questionnaire may gain more advantage over clustering samples into the three ownership groups adopted in this study because clustering samples reduces the sample size. Additionally, interaction between work environments could be examined because in real life multiple factors may interact in causing effects on ownership perceptions. Future research may also want to focus on other knowledge management activities such as knowledge creativity because some companies pay attention to creating new knowledge rather than sharing it. Moreover, it is considered that qualitative methods would usefully supplement and extend the quantitative analysis. To gain more insight into individuals' ownership perceptions and reduce the limitations of quantitative methods, qualitative methods should be conducted, for example interviews and longitudinal study. Finally, studying knowledge sharing and knowledge ownership in other contexts for example, in an online community of practice, is also worth exploring. Communities of practice are "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger et al., 2002, p. 4). Thus, an online community of practice is a group of people who share their interest using the Internet. The reason for this is that, nowadays web communities are growing dramatically and they are the places where many people share their knowledge (Plant, 2004). Furthermore, an online community has changed the society in many respects such as culturally and in practices of organisational norms, particularly when it is more difficult to exert any rules, policies and laws in an online context. Those cultures and norms not only shape knowledge ownership perceptions and knowledge sharing behaviours but may also shape them differently from those in the organisational context. Therefore, studying in the online context may help to gain more insight and contribute to new insights on knowledge on knowledge ownership and the knowledge sharing area.

## **8.6 Summary**

This chapter has summarised the research findings and implications for future work. This study is an exploratory research in the sense that, to date, there has been no comparative research conducted between two culturally incongruent countries such as Thailand and the UK on knowledge ownership. The findings replicate previous research that knowledge ownership influences knowledge sharing intentions. The extended findings are that collective ownership exists and also has an impact on knowledge sharing intentions. Employees with collective ownership have intentions to share knowledge more than employees with individual ownership, however, less than employees with organisational ownership.

Additionally, it was found that nationality, sector, type of knowledge, the work environment and personal characteristics influence knowledge ownership perceptions and tendency to contribute to different types of knowledge ownership. Understanding both contextual and conditional ownership helps to find suitable ways and strategies to support the ownership that is appropriate to organisational interest.

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## APPENDIX A

### UK Survey Questionnaire: Cover Page

#### **Study Investigating Attitudes towards Knowledge Sharing in the Workplace**

Thank you very much for participating in our survey. Your valuable input is very much appreciated.

We are based at the Centre of Research in Information Management at the University of Manchester and are conducting a survey that looks at the influence of the work environment on knowledge sharing.

The attached survey questionnaire is divided in two parts:

**Part 1** requires some role playing and presents you with two short scenarios of knowledge exchange situations in which you are required to respond on how you would react.

**Part 2** deals with questions that assess your work environment.

Please note that there are not right or wrong answers. We are looking for gut-level responses. We assure you that all responses are confidential and will be anonymised.

All in all this survey should not take more than 15 - 20 minutes of your time. We also welcome any comments on how you found the experience.

Many thanks again for your participation.

*\*\*\* The UK survey questionnaire was adopted from the work of Ekweozor (2008) which was also published in the case study of Theodoulidis et al. (2009)*

## **UK Survey Questionnaire: Part 1**



**Scenario 1**

**Background:** You and John are administrators in the same university and belong to the same department. About a month ago John refused to help you with a report you were asked to write by the head of department. (Assume that John had the time and resources to help you)

**Current Situation:** You have just put 40 hours of work into writing a manual on how to process student payments following the merger of two departments. Now John would love to have a copy of this document for his own work and asks you for a copy.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for John to ask for a copy of the manual?	1	2	3	4
How justified are you in refusing to give John a copy of the manual?	1	2	3	4
What is the likelihood you will give John a copy of the manual?	1	2	3	4

Putting aside John's requests how much would you feel the manual belongs to you personally?

	Not at all	Slightly	Moderately	Strongly
I would feel the manual belongs to me	1	2	3	4
I would feel the manual belongs to the department	1	2	3	4
I would feel the manual belongs to the university	1	2	3	4

**Scenario 2**

**Background:** You and Linda are administrators in the same university and belong to the same department. About a month ago you asked Linda for some advice on a complex set of student registration procedures you were developing because you knew she had done similar work in the past. Linda refused your request. (Assume that Linda had the time and resources to help you)

**Current Situation:** On your own initiative you have spent 40 hours of your time attending an Advanced Excel training course. Now Linda asks you to review some of her work to see if she correctly used the techniques you learned in the course.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for Linda to ask you to review her work?	1	2	3	4
How justified are you in refusing to review her work?	1	2	3	4
What is the likelihood you will review her work?	1	2	3	4

Putting aside Linda's requests how much would you feel the knowledge and expertise gained at the training course belongs to you?

	Not at all	Slightly	Moderately	Strongly
I would feel the knowledge belongs to me	1	2	3	4
I would feel the knowledge belongs to the department	1	2	3	4
I would feel the knowledge belongs to the firm	1	2	3	4

**Scenario 1**

**Background:** You and John are lecturers in the same university and belong to the same department. About a month ago John refused to help you with the development of a new course module. (Assume that John had the time and resources to help you)

**Current Situation:** You have just put 40 hours of work into developing a particularly interesting set of lecture notes for a new module that is being introduced to your postgraduate students. Now John would love to have a copy of this document for his own work and asks you for a copy.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for John to ask for a copy of the lecture notes?	1	2	3	4
How justified are you in refusing to give John a copy of the lecture notes?	1	2	3	4
What is the likelihood you will give John a copy of the lecture notes?	1	2	3	4

Putting aside John's requests how much would you feel the lecture notes belongs to you personally?

	Not at all	Slightly	Moderately	Strongly
I would feel the lecture notes belongs to me	1	2	3	4
I would feel the lecture notes belongs to the department	1	2	3	4
I would feel the lecture notes belongs to the university	1	2	3	4

**Scenario 2**

**Background:** You and Linda are lecturers in the same university and belong to the same department. About a month ago you asked Linda for some advice on a complex EPSRC proposal you were developing because you knew she had done similar work in the past. Linda refused your request. (Assume that Linda had the time and resources to help you)

**Current Situation:** On your own initiative you have spent 40 hours of your time attending an advanced proposal writing course. Now Linda asks you to review some of her work to see if she correctly used the techniques you learned in the course.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for Linda to ask you to review her work?	1	2	3	4
How justified are you in refusing to review her work?	1	2	3	4
What is the likelihood you will review her work?	1	2	3	4

Putting aside Linda's requests how much would you feel the knowledge and expertise gained at the training course belongs to you?

	Not at all	Slightly	Moderately	Strongly
I would feel the knowledge belongs to me	1	2	3	4
I would feel the knowledge belongs to the department	1	2	3	4
I would feel the knowledge belongs to the firm	1	2	3	4

**Scenario 1**

**Background:** You and John are consultants in the same management consultancy belong to the same department and are working on the same project. About a month ago John refused to help you with an important presentation you were preparing for the same project. (Assume that John had the time and resources to help you)

**Current Situation:** You have just put 40 hours of work into developing a particularly complex strategy document for the same project. Now John would love to have a copy of this document for his own work and asks you for a copy.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for John to ask for a copy of the strategy document?	1	2	3	4
How justified are you in refusing to give John a copy of the strategy document?	1	2	3	4
What is the likelihood you will give John a copy of the strategy document?	1	2	3	4

Putting aside John's requests how much would you feel the strategy document belongs to you personally?

	Not at all	Slightly	Moderately	Strongly
I would feel the strategy document belongs to me	1	2	3	4
I would feel the strategy document belongs to the department	1	2	3	4
I would feel the strategy document belongs to the consultancy	1	2	3	4

**Scenario 2**

**Background:** You and Linda are consultants in the same management consultancy and belong to the same department. About a month ago you asked Linda for some advice on a complex risk assessment report you were developing because you knew she had done similar work in the past. Linda refused your request. (Assume that Linda had the time and resources to help you)

**Current Situation:** On your own initiative you have spent 40 hours of your time attending an advanced strategic planning training course. Now Linda asks you to review some of her work to see if she correctly used the techniques you learned in the course.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for Linda to ask you to review her work?	1	2	3	4
How justified are you in refusing to review her work?	1	2	3	4
What is the likelihood you will review her work?	1	2	3	4

Putting aside Linda's requests how much would you feel the knowledge and expertise gained at the training course belongs to you?

	Not at all	Slightly	Moderately	Strongly
I would feel the knowledge belongs to me	1	2	3	4
I would feel the knowledge belongs to the department	1	2	3	4
I would feel the knowledge belongs to the consultancy	1	2	3	4

**Scenario 1**

**Background:** You and John are senior engineers in the same engineering firm belong to the same department and are working on the same project. About a month ago John refused to help you with a presentation on a certain topic for a project you were heading. (Assume that John had the time and resources to help you)

**Current Situation:** You have just put 40 hours of work into developing a particularly complex specification document for a project with a high profile client. Now John would love to have a copy of this document for his own work and asks you for a copy.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for John to ask for a copy of the specification document?	1	2	3	4
How justified are you in refusing to give John a copy of the specification document?	1	2	3	4
What is the likelihood you will give John a copy of the specification document?	1	2	3	4

Putting aside John's requests how much would you feel the specification document belongs to you personally?

	Not at all	Slightly	Moderately	Strongly
I would feel the specification document belongs to me	1	2	3	4
I would feel the specification document belongs to the department	1	2	3	4
I would feel the specification document belongs to the firm	1	2	3	4

**Scenario 2**

**Background:** You and Linda are senior engineers in the same engineering firm and belong to the same department. About a month ago you asked Linda for some advice on a complex risk assessment report you were developing because you knew she had done similar work in the past. Linda refused your request. (Assume that Linda had the time and resources to help you)

**Current Situation:** On your own initiative you have spent 40 hours of your time attending an advanced strategic planning training course. Now Linda asks you to review some of her work to see if she correctly used the techniques you learned in the course.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for Linda to ask you to review her work?	1	2	3	4
How justified are you in refusing to review her work?	1	2	3	4
What is the likelihood you will review her work?	1	2	3	4

Putting aside Linda's requests how much would you feel the knowledge and expertise gained at the training course belongs to you?

	Not at all	Slightly	Moderately	Strongly
I would feel the knowledge belongs to me	1	2	3	4
I would feel the knowledge belongs to the department	1	2	3	4
I would feel the knowledge belongs to the firm	1	2	3	4

**Scenario 1**

**Background:** You and John are field representatives and belong to the same team. About a month ago you were struggling to reach your target and asked John to help you with your pitch. (Assume that John had the time and resources to help you).

**Current Situation:** You have just put 40 hours of work into writing an excellent pitch which has dramatically increased your sales. Now John would love to have a copy of this pitch for his own work and asks you for a copy.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for John to ask for a copy of the pitch?	1	2	3	4
How justified are you in refusing to give John a copy of the pitch?	1	2	3	4
What is the likelihood you will give John a copy of the pitch	1	2	3	4

Putting aside John's requests how much would you feel the pitch belongs to you personally?

	Not at all	Slightly	Moderately	Strongly
I would feel the pitch belongs to me	1	2	3	4
I would feel the pitch belongs to the team	1	2	3	4
I would feel the pitch belongs to the firm	1	2	3	4

**Scenario 2**

**Background:** You and Linda are field representatives and belong to the same team. About a month ago you asked Linda for some advice on how to close a deal because you were struggling to hit your targets. Linda did not provide you with the advice you requested. (Assume that Linda had the time and resources to help you)

**Current Situation:** On your own initiative you have spent 40 hours of your time attending road trips to fine tune how you close deals and have come up with a very effective method. Now Linda wants you to go over her pitch to see if she can improve her method of closing deals.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for Linda to ask you to review her pitch?	1	2	3	4
How justified are you in refusing to review her pitch?	1	2	3	4
What is the likelihood you will review her pitch?	1	2	3	4

Putting aside Linda's requests how much would you feel the knowledge and expertise gained from attending the road trips belongs to you?

	Not at all	Slightly	Moderately	Strongly
I would feel the knowledge belongs to me	1	2	3	4
I would feel the knowledge belongs to the team	1	2	3	4
I would feel the knowledge belongs to the firm	1	2	3	4

**Setting: Company****Role: Information Management****Scenario 1**

**Background:** You and Linda are administrators in the same firm and belong to the same department. About a month ago you asked Linda for some advice on a complex set of system procedures you were developing because you knew she had done similar work in the past. Linda refused your request. (Assume that Linda had the time and resources to help you)

**Current Situation:** You have just put 40 hours of work into writing a manual streamlining the processing of tender applications following the merger of two departments. Now John would love to have a copy of this document for his own work and asks you for a copy.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for John to ask for a copy of the pitch?	1	2	3	4
How justified are you in refusing to give John a copy of the pitch?	1	2	3	4
What is the likelihood you will give John a copy of the pitch	1	2	3	4

Putting aside John's requests how much would you feel the pitch belongs to you personally?

	Not at all	Slightly	Moderately	Strongly
I would feel the pitch belongs to me	1	2	3	4
I would feel the pitch belongs to the team	1	2	3	4
I would feel the pitch belongs to the firm	1	2	3	4

**Scenario 2**

**Background:** You and Linda are administrators in the same firm and belong to the same department. About a month ago you asked Linda for some advice on a complex set of system procedures you were developing because you knew she had done similar work in the past. Linda refused your request. (Assume that Linda had the time and resources to help you).

**Current Situation:** On your own initiative you have spent 40 hours of your time attending an Advanced Excel training course. Now Linda asks you to review some of her work to see if she correctly used the techniques you learned in the course.

	Not at all	Slightly	Moderately	Strongly
How appropriate is it for Linda to ask you to review her work?	1	2	3	4
How justified are you in refusing to review her work?	1	2	3	4
What is the likelihood you will review her work?	1	2	3	4

Putting aside Linda's requests how much would you feel the knowledge and expertise gained at the training course belongs to you?

	Not at all	Slightly	Moderately	Strongly
I would feel the knowledge belongs to me	1	2	3	4
I would feel the knowledge belongs to the team	1	2	3	4
I would feel the knowledge belongs to the firm	1	2	3	4

## UK Survey Questionnaire: Part 2

### Section 1: Your view on the nature of your job

Please select only **one** category that best describes your perceptions of the nature of your job.

1. How much variety is there in your job?

☐ None    ☐ Little    ☐ Moderate    ☐ Large    ☐ Very Large

2. How much opportunity do you have to do different things as part of your job?

☐ None    ☐ Little    ☐ Moderate    ☐ Large    ☐ Very Large

3. How much are you left on your own to do your work?

☐ Never    ☐ Rarely    ☐ Occasionally    ☐ Frequently    ☐ Always

4. How much independent thought and action can you input into your job?

☐ None    ☐ Little    ☐ Moderate    ☐ Large    ☐ Very Large

5. To what extent do you find out how well you are doing on the job as you are working?

☐ None    ☐ Little    ☐ Moderate    ☐ Large    ☐ Very Large

6. Regarding your job to what extent is what is expected of you made clear?

☐ None    ☐ Little    ☐ Moderate    ☐ Large    ☐ Very Large

7. How repetitive are your tasks?

☐ Not at all    ☐ Slightly    ☐ Moderately    ☐ Largely    ☐ Very Largely

8. How similar are the tasks you perform in a typical work day?

☐ Not at all    ☐ Slightly    ☐ Moderately    ☐ Largely    ☐ Very Largely

9. How often do you see projects or jobs to completion?

☐ Never    ☐ Rarely    ☐ Sometimes    ☐ Frequently    ☐ Always

10. How much opportunity do you have to complete work you start?

☐ None    ☐ Little    ☐ Moderate    ☐ Large    ☐ Very Large

11. How important are the tasks you perform to your organisation?

☐ Not at all    ☐ Slightly    ☐ Moderately    ☐ Largely    ☐ Very Largely

12. To what extent are co-workers dependent on your work output?

☐ Not at all    ☐ Slightly    ☐ Moderately    ☐ Largely    ☐ Very Largely

13. To what extent do your work contributions make a difference?

☐ Not at all ☐ Slightly ☐ Moderately ☐ Largely ☐ Very Largely

## **Section 2: Your view on your work outcomes**

Please select **one** category which you best agree with:

1. My work schedule is fair.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

2. My workload is fair.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

3. My job responsibilities are fair.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

## **Section 3: Your view on your past performance evaluation**

Please select **one** category which you best agree with:

1. Are performance evaluations conducted routinely as part of your job?

☐ Yes ☐ No

If No please go to **Section 4**.

If Yes please answer the following questions concerning your last performance evaluation.

2. To what extent were your views regarding your performance considered?

☐ Not at all ☐ Slightly ☐ Moderately ☐ Largely ☐ Very Largely

3. To what extent were you given an opportunity to express your side?

☐ Not at all ☐ Slightly ☐ Moderately ☐ Largely ☐ Very Largely

4. To what extent were consistent standards used in evaluating your performance?

☐ Not at all ☐ Slightly ☐ Moderately ☐ Largely ☐ Very Largely

5. To what extent did the appraiser allow personal motives or biases to influence recommendation?

☐ Not at all ☐ Slightly ☐ Moderately ☐ Largely ☐ Very Largely

6. To what extent was the appraiser ethical in dealing with you?

☐ Not at all ☐ Slightly ☐ Moderately ☐ Largely ☐ Very Largely

## **Section 4: Your view on decision making within your organisation**

Please select **one** category which you best agree with:



1. To what extent are formal procedures designed to collect accurate information necessary for making decisions?  
☐ Not at all   ☐ Slightly   ☐ Moderately   ☐ Largely   ☐ Don't Know
2. To what extent are employees allowed to appeal or challenge decisions?  
☐ Not at all   ☐ Slightly   ☐ Moderately   ☐ Largely   ☐ Don't Know
3. To what extent are all sides affected by the decision represented?  
☐ Not at all   ☐ Slightly   ☐ Moderately   ☐ Largely   ☐ Don't Know
4. To what extent is useful feedback regarding the decision and its implementation provided?  
☐ Not at all   ☐ Slightly   ☐ Moderately   ☐ Largely   ☐ Don't Know
5. To what extent are requests for clarification or additional information provided for?  
☐ Not at all   ☐ Slightly   ☐ Moderately   ☐ Largely   ☐ Don't Know

**Section 5: Your view on the quality of your relationship with your supervisor**

Please select **one** category which you best agree with:

1. As part of your role, do you have a supervisor (boss) you report to?

☐ Yes                      ☐ No

If No please go to **Section 6**.

If Yes please answer the following questions concerning your relationship with your supervisor.

2. Do you usually know how satisfied your supervisor is with what you do?  
☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always
3. How well does your supervisor understand your job needs and problems?  
☐ Not at all   ☐ Slightly   ☐ Moderately   ☐ Largely   ☐ Very Largely
4. Regardless of how much formal authority your supervisor has built into his/her position what are the chances that he/she will use his/her power to help you solve your problems at work?  
☐ None   ☐ Small   ☐ Moderate   ☐ High   ☐ Very High
5. Again regardless of the amount of formal authority your supervisor has what are the chances that he/she will "bail you out" at his/her expense?  
☐ None   ☐ Small   ☐ Moderate   ☐ High   ☐ Very High
6. How would you characterize your working relationship with your supervisor?  
☐ Very Poor   ☐ Below Average   ☐ Average   ☐ Above Average   ☐ Excellent

### Section 6: Your view on the quality of your relationship with your co-workers

Please select **one** category which you best agree with:

1. Do you usually know how satisfied your colleagues are with what you do?  
☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always
2. In general how well do your colleagues understand your job needs and problems?  
☐ Not at all   ☐ Slightly   ☐ Moderately   ☐ Largely   ☐ Very Largely
3. In general what are the chances that your colleagues will help you solve your problems at work?  
☐ None   ☐ Small   ☐ Moderate   ☐ High   ☐ Very High
4. In general what are the chances that your colleagues will “bail you out” at their expense?  
☐ None   ☐ Small   ☐ Moderate   ☐ High   ☐ Very High
5. How would you characterize your working relationship with your colleagues?  
☐ Very Poor   ☐ Below Average   ☐ Average   ☐ Above Average   ☐ Excellent

### Section 7: Your view on how you are compensated (i.e. base pay including bonuses benefits and perks) by your employer

Please select **one** category which you best agree with:

1. Considering my **job responsibilities** I am fairly rewarded by my salary (including bonuses and benefits)  
☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree
2. Considering my **education and training** I am fairly rewarded by my salary (including bonuses and benefits)  
☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree
3. Considering my **experience** I am fairly rewarded by my salary (including bonuses and benefits)  
☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree
4. Considering the **amount of effort** I put in my job I am fairly rewarded by my salary (including bonuses and benefits)  
☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree
5. Considering the **work I have done well** I am fairly rewarded by my salary (including bonuses and benefits)  
☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree
6. Considering the **strains and stresses of my job** I am fairly rewarded by my salary (including bonuses and benefits)

☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree

**Section 8: Your view on how well you are recognised for your work**

Please select **one** category which you best agree with:

1. I am fairly recognised within my organisation for the **amount of experience** I bring to my job.

☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree

2. I am fairly recognised within my organisation for the **amount of effort** I put in my job.

☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree

3. I am fairly recognised within my organisation for **work I have done well**.

☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree

4. **Further career advancement** is given by my organisation in recognition of work well done.

☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree

5. **Promotions** within my organization are fairly administered.

☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree

**Section 9: Your view on what are the knowledge sharing practices within your organisation**

Please select **one** category which you best agree with:

1. Organisational policy encourages employees to share their knowledge with each other.

☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree

2. Top management encourages employees to share their knowledge with each other.

☐ Strongly Agree   ☐ Agree   ☐ Neither Agree nor Disagree   ☐ Disagree   ☐ Strongly Disagree

## UK Survey Questionnaire: Part 3

### Additional Information

Please provide us with the following information. We assure your anonymity. All the information you provide will be dealt with as confidential.

Are you ☐ Male ☐ Female

What is your age group?

- ☐ 30 or younger
- ☐ 31 – 40
- ☐ 41 – 50
- ☐ 51- 60
- ☐ 61 or older

Please tell us your educational background. Please select **all** that apply:

- ☐ Secondary or High School
- ☐ HNC/HND Diploma
- ☐ Undergraduate Degree
- ☐ Postgraduate Degree
- ☐ Professional Qualifications

How long have you been employed by your organisation?

- ☐ Less than 1 year
- ☐ 1-5 years
- ☐ 6-10 years
- ☐ 11-20 years
- ☐ Over 20 years

How long have you spent in your current role?

- ☐ Less than 1 year
- ☐ 1-2 years
- ☐ 3-5 years
- ☐ Over 5 years

What is your Job

Title?:.....  
.....

What is your Organisation Type ☐ Private ☐ Public ☐ Non Profit/Non Government

Please state your Organisation's

Sector:.....

Please state your

Country:.....  
.....

# Thailand Survey Questionnaire: Cover Page

เรียนท่านผู้กรอกแบบสอบถาม

เนื่องจากข้าพเจ้า น.ศ.สรัญญา แซ่ตั้ง อาจารย์ประจำภาควิชาเทคโนโลยีสารสนเทศ มหาวิทยาลัยเกษตรศาสตร์ วิทยาเขตเฉลิมพระเกียรติ จังหวัดสกลนคร นักเรียนทุนรัฐบาลระดับปริญญาเอก กำลังทำวิทยานิพนธ์เรื่อง ความสัมพันธ์ระหว่าง มุมมองด้านความเป็นเจ้าของความรู้ (Knowledge Ownership) และ ภาวะแวดล้อมในองค์กร (Work Environment) กับการแลกเปลี่ยนความรู้ภายในองค์กร (Knowledge Sharing) ซึ่งเป็นส่วนหนึ่งของการสำเร็จการศึกษาหลักสูตรปริญญาเอกที่ Manchester Business School, University of Manchester และมีความจำเป็นต้องการเก็บข้อมูลจากบุคลากรในมหาวิทยาลัยในประเทศไทยซึ่ง แบ่งเป็นฝ่ายวิชาการ (อาจารย์และนักวิจัย) และฝ่ายสนับสนุนวิชาการ ซึ่งเป็นกลุ่มประชากรในงานวิจัยของข้าพเจ้า จึงใคร่ขอความร่วมมือจากทุกท่านๆ ด้วยความสมัครใจ พยายามช่วยตอบในทุกข้อของแบบสอบถาม เกี่ยวกับการประเมินปัจจัยแวดล้อมในการทำงานและมุมมองด้านความเป็นเจ้าของความรู้ตามที่ท่านมีความเห็น ซึ่งใช้เวลาในการตอบประมาณ 15 – 25 นาทีตามแบบสอบถามที่ได้แนบมาพร้อมนี้

ข้อมูลที่ได้จากการตอบแบบสอบถามของท่านจะใช้เพื่อการศึกษา วิเคราะห์ข้อมูลเท่านั้น จะไม่มีการรายงานข้อมูลในระดับตัวบุคคล หรือ ระบุดัตตนของท่าน รวมทั้ง E-mail address ของท่านจะใช้เพื่อส่งข้อมูลกลับเท่านั้น และจะเก็บรักษาข้อมูลให้เป็นความลับ

ขอขอบคุณทุกท่านที่ให้ความร่วมมือ และสละเวลาในการตอบแบบสอบถาม

น.ศ.สรัญญา แซ่ตั้ง

PhD Student  
Manchester Business School, University of Manchester  
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\*\*\* *The Thai survey questionnaire was translated from the work of Ekweozor (2008) which was also published in the case study of Theodoulidis et al. (2009)*

## **Thailand Survey Questionnaire: Part 1**

ต่อไปนี้เป็นสถานการณ์ 2 สถานการณ์ ที่คุณต้องจำลองการตัดสินใจของคุณในการตอบคำถามที่มีต่อสถานการณ์ทั้งสอง โปรดตอบคำถามในแต่ละข้อ โดยใช้เครื่องหมาย **X** ในข้อที่คุณคิดว่าตรงมากที่สุด เพียงข้อเดียว

### สถานการณ์ที่ 1 (Scenario 1)

**ข้อมูลพื้นฐาน :** ตัวคุณเองและประภายทำงานตำแหน่งบุคลากรฝ่ายสนับสนุนวิชาการที่มหาวิทยาลัยเดียวกันและอยู่แผนกเดียวกัน เมื่อเดือนที่แล้วประภายปฏิเสธที่จะช่วยเหลือคุณในการเขียนรายงานที่คุณได้รับคำสั่งจากหัวหน้าแผนก. (สมมุติว่าประภายมีเวลาและทรัพยากรที่ช่วยคุณได้)

**เหตุการณ์ปัจจุบัน :** คุณได้ใช้เวลา 40 ชั่วโมงในการเขียนคู่มือสำหรับกระบวนการการจ่ายเงินของนักศึกษา ตอนนี้ประภายต้องการที่จะได้สำเนาคู่มือนี้สำหรับงานของเขา และขอคุณทำสำเนา (copy)

1. คุณคิดว่าเหมาะสมแค่ไหนที่ประภายจะขอทำสำเนา (copy) คู่มือจากคุณ?

☐ ไม่เหมาะสมอย่างยิ่ง (1) ☐ ค่อนข้างไม่เหมาะสม (2) ☐ ค่อนข้างเหมาะสม (3) ☐ เหมาะสมอย่างยิ่ง (4)

2. คุณมีแนวโน้มอย่างไร ในการที่จะปฏิเสธคำขอทำสำเนา (copy) จากประภาย?

☐ ไม่ปฏิเสธเลย (1) ☐ ค่อนข้างจะไม่ปฏิเสธ (2) ☐ ค่อนข้างจะปฏิเสธ (3) ☐ ปฏิเสธแน่นอน (4)

3. คุณมีแนวโน้มอย่างไร ในการที่จะให้สำเนาคู่มือแก่ประภาย?

☐ ไม่ให้แน่นอน (1) ☐ ค่อนข้างจะไม่ให้ (2) ☐ ค่อนข้างจะให้ (3) ☐ ให้สำเนา (4)

4. ถ้าไม่คำนึงเรื่องคำขอของประภาย, โปรดใส่ความคิดเห็นเรื่อง ความป็นเจ้าของต่อสื่อการสอนดังต่อไปนี้

\*\*\*เรียงความคิดเห็นจาก 1. ไม่เห็นด้วย ไปยัง 4. เห็นด้วยอย่างยิ่ง

	ไม่เห็นด้วย		เห็นด้วยอย่างยิ่ง
คุณคิดว่าคู่มือเป็นสมบัติของคุณ	1	2 3	4
คุณคิดว่าคู่มือเป็นสมบัติของแผนกคุณ	1	2 3	4
คุณคิดว่าคู่มือเป็นสมบัติขององค์กรของคุณ	1	2 3	4

### สถานการณ์ที่ 2 (Scenario 2)

**ข้อมูลพื้นฐาน :** ตัวคุณเองและสิริยา ทำงานตำแหน่งบุคลากรฝ่ายสนับสนุนวิชาการ ที่มหาวิทยาลัยเดียวกันและอยู่แผนกเดียวกัน. เมื่อเดือนที่แล้ว คุณขอความช่วยเหลือจากสิริยา ให้อธิบายและแนะนำเกี่ยวกับระบบการลงทะเบียนของนักศึกษาที่ค่อนข้างซับซ้อน ซึ่งสิริยาเคยทำมาก่อน สิริยาปฏิเสธที่จะช่วยเหลือคุณ. (สมมุติว่าสิริยามีเวลาและความรู้ที่ช่วยคุณได้)

**เหตุการณ์ปัจจุบัน :** คุณได้ใช้เวลา 40 ชั่วโมงในการฝึกอบรมคอร์ส Advanced Excel ตอนนี้สิริยา ต้องการความช่วยเหลือจากคุณในการตรวจสอบงานที่เธอทำว่า เธอได้ทำถูกต้องหรือไม่จากเทคนิคที่คุณได้จากการอบรม Advanced Excel

5. คุณคิดว่าเหมาะสมแค่ไหนที่สิริยาขอให้คุณช่วยดูงานของเธอ

☐ ไม่เหมาะสมอย่างยิ่ง (1)   ☐ ก่อนข้างไม่เหมาะสม (2)   ☐ ก่อนข้างเหมาะสม (3)   ☐ เหมาะสมอย่างยิ่ง (4)

6.คุณมีแนวโน้มอย่างไร ในการที่จะปฏิเสธคำขอจากสิริยา

☐ ไม่ปฏิเสธเลย (1)   ☐ ก่อนข้างจะไม่ปฏิเสธ (2)   ☐ ก่อนข้างจะปฏิเสธ (3)   ☐ ปฏิเสธแน่นอน (4)

7.คุณมีแนวโน้มอย่างไร ในการที่จะช่วยตรวจสอบงานให้สิริยา

☐ ไม่ช่วยแน่นอน (1)   ☐ ก่อนข้างจะปฏิเสธ (2)   ☐ ก่อนข้างจะช่วย (3)   ☐ ช่วยแน่นอน (4)

8.ถ้าไม่คำนึงเรื่องคำขอของสิริยา, โปรดใส่ความคิดเห็นเรื่องความป็นเจ้าของต่อความรู้ที่คุณได้รับการอบรมดังต่อไปนี้

\*\*\*เรียงความคิดเห็นจาก 1. ไม่เห็นด้วย ไปยัง 4. เห็นด้วยอย่างยิ่ง

	ไม่เห็นด้วย			เห็นด้วยอย่างยิ่ง
คุณคิดว่าความรู้ที่คุณได้รับการอบรมเป็นสมบัติของคุณ	1	2	3	4
คุณคิดว่าความรู้ที่คุณได้รับการอบรมเป็นสมบัติของแผนกคุณ	1	2	3	4
คุณคิดว่าความรู้ที่คุณได้รับการอบรมเป็นสมบัติขององค์กรของคุณ	1	2	3	4



ต่อไปนี้เป็นสถานการณ์ 2 สถานการณ์ ที่คุณต้องจำลองการตัดสินใจของคุณในการตอบคำถามที่มีต่อสถานการณ์ทั้งสอง โปรดตอบคำถามในแต่ละข้อ โดยใช้เครื่องหมาย **X** ในข้อที่คุณคิดว่าตรงมากที่สุด เพียงข้อเดียว

### สถานการณ์ที่ 1 (Scenario 1)

**ข้อมูลพื้นฐาน :** ตัวคุณเองและประกาย ทำงานตำแหน่งอาจารย์ ที่มหาวิทยาลัยเดียวกันและอยู่แผนกเดียวกัน .เมื่อเดือนที่แล้ว ประกายปฏิเสธที่จะช่วยเหลือคุณในการพัฒนาโครงสร้างของรายวิชาเปิดใหม่ (สมมติว่าประกายมีเวลาและทรัพยากรที่ช่วยคุณได้)

**เหตุการณ์ปัจจุบัน :** คุณได้ใช้เวลา 40 ชั่วโมงในการพัฒนาสื่อการสอนสำหรับรายวิชาเปิดใหม่ให้มีความน่าสนใจมากยิ่งขึ้น ตอนนี้ประกายต้องการที่จะได้สำเนาสื่อการสอนนี้สำหรับงานของเธอ และขอคุณทำสำเนา (copy)

1. คุณคิดว่าเหมาะสมแค่ไหนที่ประกายจะขอทำสำเนา (copy) สื่อการสอนนี้จากคุณ?

☐ ไม่เหมาะสมอย่างยิ่ง (1) ☐ ก่อนข้างไม่เหมาะสม (2) ☐ ก่อนข้างเหมาะสม (3) ☐ เหมาะสมอย่างยิ่ง (4)

2. คุณมีแนวโน้มอย่างไร ในการที่จะปฏิเสธคำขอทำสำเนา (copy) จากประกาย?

☐ ไม่ปฏิเสธเลย (1) ☐ ก่อนข้างจะไม่ปฏิเสธ (2) ☐ ก่อนข้างจะปฏิเสธ (3) ☐ ปฏิเสธแน่นอน (4)

3. คุณมีแนวโน้มอย่างไร ในการที่จะให้สำเนาสื่อการสอนแก่ประกาย ?

☐ ไม่ให้แน่นอน (1) ☐ ก่อนข้างจะไม่ให้ (2) ☐ ก่อนข้างจะให้ (3) ☐ ให้สำเนา (4)

4. ถ้าไม่คำนึงเรื่องคำขอของประกาย, โปรดได้ความคิดเห็นเรื่อง ความปั่นป่วนของต่อสื่อการสอนดังต่อไปนี้

\*\*\*เรียงความคิดเห็นจาก 1. ไม่เห็นด้วย ไปยัง 4. เห็นด้วยอย่างยิ่ง

	ไม่เห็นด้วย			เห็นด้วยอย่างยิ่ง
คุณคิดว่าสื่อการสอนเป็นสมบัติของคุณ	1	2	3	4
คุณคิดว่าสื่อการสอนเป็นสมบัติของแผนกคุณ	1	2	3	4
คุณคิดว่าสื่อการสอนเป็นสมบัติขององค์กรของคุณ	1	2	3	4

### สถานการณ์ที่ 2 (Scenario 2)

**ข้อมูลพื้นฐาน :** ตัวคุณเองและสิริยา ทำงานตำแหน่งอาจารย์ ที่มหาวิทยาลัยเดียวกันและอยู่แผนกเดียวกัน. เมื่อเดือนที่แล้ว คุณขอความช่วยเหลือจากสิริยา ให้อธิบายและแนะนำ

เกี่ยวกับการเขียนข้อเสนองานวิจัย (Research Proposal) ที่ค่อนข้างซับซ้อน ซึ่งสิริยาเคยทำมาก่อน สิริยาปฏิเสธที่จะช่วยเหลือคุณ (สมมติว่าสิริยามีเวลาและความรู้ที่ช่วยคุณได้)

**เหตุการณ์ปัจจุบัน :** คุณได้ใช้เวลา 40 ชั่วโมงในการฝึกอบรมคอร์ส Advanced proposal writing course

ตอนนี้สิริยา ต้องการความช่วยเหลือจากคุณในการตรวจสอบงานที่เธอทำว่า เธอได้ทำถูกต้อง เหมาะสมหรือไม่ จากเทคนิคที่คุณได้รับ จากการอบรม

5. คุณคิดว่าเหมาะสมแค่ไหนที่สิริยาขอให้คุณช่วยงานของเธอ

☐ ไม่เหมาะสมอย่างยิ่ง (1) ☐ ก่อนข้างไม่เหมาะสม (2) ☐ ก่อนข้างเหมาะสม (3) ☐ เหมาะสมอย่างยิ่ง (4)

6. คุณมีแนวโน้มอย่างไร ในการที่จะปฏิเสธคำขอจากสิริยา

☐ ไม่ปฏิเสธเลย (1) ☐ ก่อนข้างจะไม่ปฏิเสธ (2) ☐ ก่อนข้างจะปฏิเสธ (3) ☐ ปฏิเสธแน่นอน (4)

7.คุณมีแนวโน้มอย่างไร ในการที่จะช่วยตรวจสอบงานให้สิริยา

☐ ไม่ช่วยแน่นอน (1) ☐ ก่อนข้างจะปฏิเสธ (2) ☐ ก่อนข้างจะช่วย (3) ☐ ช่วยแน่นอน (4)

8.ถ้าไม่คำนึงเรื่องคำขอของสิริยา, โปรดใส่ความคิดเห็นเรื่องความป็นเจ้าของต่อความรู้ที่คุณได้รับการอบรมดังต่อไปนี้

\*\*\*เรียงความคิดเห็นจาก 1. ไม่เห็นด้วย ไปยัง 4. เห็นด้วยอย่างยิ่ง

	ไม่เห็นด้วย		เห็นด้วยอย่างยิ่ง
คุณคิดว่าความรู้ที่คุณได้รับการอบรมเป็นสมบัติของคุณ	1	2 3	4
คุณคิดว่าความรู้ที่คุณได้รับการอบรมเป็นสมบัติของแผนกคุณ	1	2 3	4
คุณคิดว่าความรู้ที่คุณได้รับการอบรมเป็นสมบัติขององค์กรของคุณ	1	2 3	4

ต่อไปนี้เป็นสถานการณ์ 2 สถานการณ์ ที่คุณต้องจำลองการตัดสินใจของคุณในการตอบคำถามที่มีต่อสถานการณ์ทั้งสอง โปรดตอบคำถามในแต่ละข้อ โดยใช้เครื่องหมาย **X** ในข้อที่คุณคิดว่าตรงมากที่สุด เพียงข้อเดียว

### สถานการณ์ที่ 1 (Scenario 1)

**ข้อมูลพื้นฐาน :** ตัวคุณเองและประภาส ทำงานที่บริษัทเดียวกันและอยู่แผนกเดียวกัน เมื่อเดือนที่แล้ว ประภาสปฏิเสธที่จะช่วยเหลือคุณในการเขียนรายงานที่คุณได้รับคำสั่งจากหัวหน้าแผนก. (สมมติว่าประภาสมีเวลาและทรัพยากรที่ช่วยคุณได้)

**เหตุการณ์ปัจจุบัน :** คุณได้ใช้เวลา 40 ชั่วโมงในการเขียนคู่มือสำหรับอธิบายกระบวนการการทำงานที่คุณรับผิดชอบ (Work Procedure) ตอนนี้ประภาสต้องการที่จะได้สำเนาคู่มือนี้สำหรับงานของเขา และขอคุณทำสำเนา (copy)

1. คุณคิดว่าเหมาะสมแค่ไหนที่ประภาสจะขอทำสำเนา (copy) คู่มือจากคุณ?

☐ ไม่เหมาะสมอย่างยิ่ง (1) ☐ ค่อนข้างไม่เหมาะสม (2) ☐ ค่อนข้างเหมาะสม (3) ☐ เหมาะสมอย่างยิ่ง (4)

2. คุณมีแนวโน้มอย่างไร ในการที่จะปฏิเสธคำขอทำสำเนา (copy) จากประภาส?

☐ ไม่ปฏิเสธเลย (1) ☐ ค่อนข้างจะไม่ปฏิเสธ (2) ☐ ค่อนข้างจะปฏิเสธ (3) ☐ ปฏิเสธแน่นอน (4)

3. คุณมีแนวโน้มอย่างไร ในการที่จะให้สำเนาคู่มือแก่ประภาส?

☐ ไม่ให้แน่นอน (1) ☐ ค่อนข้างจะไม่ให้ (2) ☐ ค่อนข้างจะให้ (3) ☐ ให้สำเนา (4)

4. ถ้าไม่คำนึงเรื่องคำขอของประภาส, โปรดใส่ความคิดเห็นเรื่อง ความเป็นเจ้าของต่อสื่อการสอนดังต่อไปนี้

\*\*\*เรียงความคิดเห็นจาก 1. ไม่เห็นด้วย ไปยัง 4. เห็นด้วยอย่างยิ่ง

	ไม่เห็นด้วย			เห็นด้วยอย่างยิ่ง
คุณคิดว่าคู่มือเป็นสมบัติของคุณ	1	2	3	4
คุณคิดว่าคู่มือเป็นสมบัติของแผนกคุณ	1	2	3	4
คุณคิดว่าคู่มือเป็นสมบัติขององค์กรของคุณ	1	2	3	4

### สถานการณ์ที่ 2 (Scenario 2)

**ข้อมูลพื้นฐาน :** ตัวคุณเองและสิริยา ทำงานที่บริษัทเดียวกันและอยู่แผนกเดียวกัน เมื่อเดือนที่แล้ว คุณขอความช่วยเหลือจากสิริยา ให้อธิบายและแนะนำเกี่ยวกับการทำรายงานงบประมาณประจำปีของบริษัทที่ค่อนข้างซับซ้อน ซึ่งสิริยาเคยทำมาก่อน สิริยาปฏิเสธที่จะช่วยเหลือคุณ (สมมติว่าสิริยามีเวลาและความรู้ที่ช่วยคุณได้)

**เหตุการณ์ปัจจุบัน :** คุณได้ใช้เวลา 40 ชั่วโมงในการฝึกอบรมคอร์ส Advanced Excel ตอนนี้สิริยา ต้องการความช่วยเหลือจากคุณในการตรวจสอบงานที่เธอทำว่า เธอได้ทำถูกต้องหรือไม่จากเทคนิคที่คุณได้จากการอบรม Advanced Excel

5. คุณคิดว่าเหมาะสมแค่ไหนที่สิริยาขอให้คุณช่วยดูงานของเธอ

☐ ไม่เหมาะสมอย่างยิ่ง (1) ☐ ค่อนข้างไม่เหมาะสม (2) ☐ ค่อนข้างเหมาะสม (3) ☐ เหมาะสมอย่างยิ่ง (4)

6. คุณมีแนวโน้มอย่างไร ในการที่จะปฏิเสธคำขอจากสิริยา

☐ ไม่ปฏิเสธเลย (1) ☐ ก่อนข้างจะไม่ปฏิเสธ (2) ☐ ก่อนข้างจะปฏิเสธ (3) ☐ ปฏิเสธแน่นอน (4)

7.คุณมีแนวโน้มอย่างไร ในการที่จะช่วยตรวจสอบงานให้สิริยา

☐ ไม่ช่วยแน่นอน (1) ☐ ก่อนข้างจะปฏิเสธ (2) ☐ ก่อนข้างจะช่วย (3) ☐ ช่วยแน่นอน (4)

8.ถ้าไม่คำนึงเรื่องคำขอของสิริยา, โปรดใส่ความคิดเห็นเรื่องความป็นเจ้าของต่อความรู้ที่คุณได้จากการอบรมดังต่อไปนี้

\*\*\*เรียงความคิดเห็นจาก 1. ไม่เห็นด้วย ไปยัง 4. เห็นด้วยอย่างยิ่ง

	ไม่เห็นด้วย			เห็นด้วยอย่างยิ่ง
คุณคิดว่าความรู้ที่คุณได้จากการอบรมเป็นสมบัติของคุณ	1	2	3	4
คุณคิดว่าความรู้ที่คุณได้จากการอบรมเป็นสมบัติของแผนกคุณ	1	2	3	4
คุณคิดว่าความรู้ที่คุณได้จากการอบรมเป็นสมบัติขององค์กรของคุณ	1	2	3	4

## Thailand Survey Questionnaire: Part 2

คำถามประเมินสิ่งแวดล้อมในการทำงานของ แบ่งเป็น 8 ส่วน (Sections)

โปรดตอบคำถามในแต่ละข้อ โดยใช้เครื่องหมาย **X** ในข้อที่คุณคิดว่าตรงมากที่สุด เพียงข้อเดียว

### Section 1: มุมมองในเรื่อง ลักษณะของงาน (Work Nature)

1. คุณคิดว่าลักษณะงานของคุณ มีความหลากหลาย (variety) มากน้อยเพียงใด?  
☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด
2. ในการทำงานของคุณ คุณมีโอกาสทำในสิ่งที่แตกต่างกัน (different things) มากน้อยเพียงใด ?  
☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด
3. คุณถูกเปิดโอกาสให้ทำงานด้วยตัวเอง แค่ไหน ?  
☐ ไม่เคย ☐ แทบไม่ค่อย ☐ บางโอกาส ☐ บ่อย ☐ เสมอ
4. คุณได้แสดงความคิดเห็นและวางแผนงานในงานของคุณเอง มากน้อยแค่ไหน?  
☐ ไม่เคย ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด
5. คุณมีโอกาสทราบถึง ผลลัพธ์ของงานของคุณ มากน้อยแค่ไหน?  
☐ ไม่ทราบ ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด
6. ในการทำงาน มีสิ่งที่ยังบอกว่าเป็นผลงานหรือความรับผิดชอบของคุณเท่ากับเพียงใด?  
☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มีกำกับไว้บ้าง ☐ มีกำกับไว้อย่างชัดเจน
7. งานของคุณ มีความซ้ำซ้อน (repetitive) แค่ไหน?  
☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด
8. งานของคุณมีความเหมือนกันแค่ไหน (How similar are the tasks) ในแต่ละวัน?  
☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด
9. คุณคิดว่า โปรเจกหรืองานของคุณสำเร็จลุล่วง บ่อยครั้งแค่ไหน?  
☐ ไม่เคย ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ บ่อย ☐ เสมอ
10. คุณมีโอกาสมากน้อยแค่ไหน ที่จะทำงานที่คุณเป็นผู้ริเริ่มจนสำเร็จลุล่วง?  
☐ ไม่มีโอกาส ☐ ไม่ค่อยมีโอกาส ☐ ปานกลาง ☐ มาก ☐ มากที่สุด
11. งานที่คุณทำมีความสำคัญกับองค์กรแค่ไหน?  
☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด
12. งานของผู้อื่น ขึ้นอยู่กับงานของคุณแค่ไหน?  
☐ ไม่เกี่ยวข้องกันเลย ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด
13. งานของคุณ มีส่วนที่ทำให้เกิดความแตกต่าง ความแปลกใหม่ (make a difference) ให้กับองค์กรหรือไม่?  
☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด

## Section 2: ความคิดเห็นเรื่อง ผลลัพธ์ของงาน (Work Outcome)

1. คุณคิดว่า คุณได้รับตารางปฏิบัติงานของคุณ (work schedule) อย่างยุติธรรม?

☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง

2. คุณคิดว่า คุณได้รับการแบ่งภาระงาน (Workload) อย่างยุติธรรม?

☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง

3. คุณคิดว่า คุณได้รับการแบ่งหน้าที่ที่รับผิดชอบ (Job Responsibilities) อย่างยุติธรรม?

☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง

## Section 3: ความคิดเห็นต่อการประเมินประสิทธิภาพการทำงาน (performance evaluation)

1. ในการทำงาน คุณมีโอกาสร่วมประเมินประสิทธิภาพการทำงานของตัวเอง หรือไม่?

☐ ใช่ ☐ ไม่ใช่

ถ้าตอบ ไม่ใช่, ให้ข้ามไปตอบคำถามใน ส่วนที่ 4 (Section 4) ค่ะ ถ้าตอบ ใช่, ให้ตอบคำถามต่อไปทั้งหมดค่ะ

2. คุณคิดว่า รายงานการประเมินตนเองของคุณ ได้รับการพิจารณา มากน้อยแค่ไหน?

☐ ไม่ได้รับการพิจารณาเลย ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ ได้รับพิจารณามาก ☐ ได้รับพิจารณามากที่สุด

3. คุณได้รับโอกาสในการพูดหรือแสดงออก ในส่วนการประเมินตนเอง มากน้อยแค่ไหน?

☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด

4. เกณฑ์ที่ใช้ในการพิจารณาประสิทธิภาพการทำงาน ได้มาตรฐานแค่ไหน?

☐ ไม่ได้มาตรฐาน ☐ ได้มาตรฐานเล็กน้อย ☐ ปานกลาง ☐ ได้มาตรฐานมาก ☐ ได้มาตรฐานมากที่สุด

5. คุณคิดว่า ผู้ประเมินใช้ความคิดเห็นส่วนตัว(personal motives) หรือ อคติส่วนตัว(bias) ร่วมในการประเมิน ประสิทธิภาพการทำงานแค่ไหน?

☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด

6. คุณคิดว่า ผู้ประเมินมีจรรยาบรรณในการประเมินประสิทธิภาพการทำงานของคุณ แค่ไหน?

☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด

## Section 4: ความคิดเห็นต่อการตัดสินใจในองค์กร ในเรื่องระเบียบพิจารณา กฎ ระเบียบ แผน นโยบายต่างๆ (organisational procedures)

1. ระเบียบการพิจารณาในเรื่องต่างๆ (formal procedures) ในองค์กรของคุณ มีการรวบรวมข้อมูลต่างๆอย่างเหมาะสมและเพียงพอต่อการตัดสินใจ มากน้อยเพียงใด?

☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ ไม่ทราบ

2. ในองค์กรของคุณ คุณคิดว่าพนักงานได้รับโอกาสในการร้องเรียน หรือเสนอความคิดเห็น มากน้อยเพียงใด?

☐ ไม่มีโอกาส ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มีโอกาสมาก ☐ ไม่ทราบ

3. คุณคิดว่า การพิจารณาและตัดสินใจในเรื่องต่างๆขององค์กร จากผู้บริหาร มีผลกระทบต่อทุกฝ่าย มากน้อยเพียงใด?

☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ ไม่ทราบ

4. คุณคิดว่าการพิจารณาและตัดสินใจในเรื่องต่างๆขององค์กรจากผู้บริหาร มีการรับฟังผลตอบรับ (feedback) จากผู้อื่น มากน้อยเพียงใด?

☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ ไม่ทราบ

5. คุณคิดว่าการพิจารณาและตัดสินใจในเรื่องต่างๆขององค์กร คุณสามารถร้องขอคำอธิบาย หรือข้อมูลเพิ่มเติม ได้มากน้อยเพียงใด?

☐ ไม่มี ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ ไม่ทราบ

#### **Section 5: ความคิดเห็นต่อความสัมพันธ์กับหัวหน้างาน (Relationship with Supervisor)**

1. โดยปกติ คุณทราบระดับความพึงพอใจ ที่หัวหน้ามีต่อ งานของคุณ?

☐ ไม่ทราบเลย ☐ แทบไม่ค่อยทราบ ☐ บางครั้ง ☐ รับทราบบ่อยครั้ง ☐ รับทราบเสมอ

2. คุณคิดว่า หัวหน้างานของคุณเข้าใจความต้องการและปัญหาในการทำงานของคุณ แค่ไหน?

☐ ไม่เข้าใจเลย ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ เข้าใจมาก ☐ เข้าใจมากที่สุด

3. หัวหน้างานของคุณเคยใช้อำนาจ (power) ในตำแหน่งหน้าที่ของเค้า ช่วยคุณแก้ไขปัญหาในการทำงานของคุณหรือไม่?

☐ ไม่เคย ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด

4. หัวหน้างานของคุณ เคยช่วยคุณ แม้ว่าอาจจะทำให้ท่านต้องเสียเวลา หรือ เหน็ดเหนื่อย บ้างหรือไม่?

☐ ไม่เคย ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด

5. คุณคิดว่าความสัมพันธ์ระหว่างคุณกับหัวหน้างานของคุณเป็นเช่นไร?

☐ ไม่ดี ☐ ไม่ค่อยดี ☐ ปานกลาง ☐ ค่อนข้างดี ☐ ดีมาก

#### **Section 6: ความคิดเห็นต่อความสัมพันธ์กับเพื่อนร่วมงาน (Relationship with Co-workers)**

1. โดยปกติ คุณทราบระดับความพึงพอใจ ที่เพื่อนร่วมงานมีต่อ งานของคุณ?

☐ ไม่ทราบเลย ☐ แทบไม่ค่อยทราบ ☐ บางครั้ง ☐ รับทราบบ่อยครั้ง ☐ รับทราบเสมอ

2. คุณคิดว่าเพื่อนร่วมงานของคุณ เข้าใจความต้องการและปัญหาในการทำงานของคุณ แค่ไหน?

☐ ไม่เข้าใจเลย ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ เข้าใจมาก ☐ เข้าใจมากที่สุด

3. โดยปกติเพื่อนร่วมงานของคุณ ให้ความช่วยเหลือคุณในการแก้ไขปัญหาในการทำงาน?

☐ ไม่เคย ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด

4. เพื่อนร่วมงาน เคยช่วยคุณ แม้ว่าอาจจะทำให้เค้าต้องเสียเวลา หรือ เหน็ดเหนื่อย บ้างหรือไม่?

☐ ไม่เคย ☐ เพียงเล็กน้อย ☐ ปานกลาง ☐ มาก ☐ มากที่สุด

5. คุณคิดว่าความสัมพันธ์ระหว่างคุณกับเพื่อนร่วมงานของคุณ เป็นเช่นไร?

☐ ไม่ดี ☐ ไม่ค่อยดี ☐ ปานกลาง ☐ ค่อนข้างดี ☐ ดีมาก

#### **Section 7: ความคิดเห็นที่มีต่อรายได้ สิทธิประโยชน์ต่างๆ (Remuneration)**

1. พิจารณาจาก งานที่ได้รับมอบหมาย คุณได้รับรายได้ รวมทั้งสิทธิประโยชน์ต่างๆ อย่างยุติธรรม?

- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง
2. พิจารณาจาก การศึกษาและหลักสูตรที่คุณได้เข้ารับการอบรม คุณได้รับรายได้ รวมทั้งสิทธิประโยชน์ต่างๆ อย่างยุติธรรม?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง
3. พิจารณาจาก ประสบการณ์ คุณได้รับรายได้ รวมทั้งสิทธิประโยชน์ต่างๆ อย่างยุติธรรม?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง
4. พิจารณาจาก กำลัง ความสามารถที่คุณทุ่มให้แก่งาน คุณได้รับรายได้ รวมทั้งสิทธิประโยชน์ต่างๆ อย่างยุติธรรม
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง
5. พิจารณาจาก ผลงาน คุณได้รับรายได้ รวมทั้งสิทธิประโยชน์ต่างๆ อย่างยุติธรรม?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง
6. พิจารณาจากความกดดันและความเครียดในการทำงาน คุณได้รับรายได้ รวมทั้งสิทธิประโยชน์ต่างๆ อย่างยุติธรรม?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง

#### **Section 8: ความคิดเห็นที่มีต่อการยอมรับในงานของคุณ (Recognition)**

1. คุณได้รับการยอมรับ เกี่ยวกับประสบการณ์ของคุณในการทำงาน?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง
2. คุณได้รับการยอมรับ เกี่ยวกับกำลัง ความสามารถที่คุณทุ่มเทให้แก่งานของคุณ?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง
3. คุณได้รับการยอมรับ ต่อภาระหน้าที่ ที่คุณได้ทำสำเร็จลงเป็นอย่างดี?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง
4. คุณคิดว่า การที่จะเจริญก้าวหน้าในหน้าที่การงานในองค์กรของคุณ เกิดจากการทำผลงานให้เป็นที่ยอมรับ?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง
5. คุณคิดว่า การเลื่อนขั้นและปรับตำแหน่งในองค์กรของคุณ ได้รับการพิจารณาอย่างยุติธรรม?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง

#### **Section 9: ความคิดเห็นต่อการแลกเปลี่ยนความรู้ในองค์กร**

1. นโยบายขององค์กร สนับสนุนให้พนักงานแลกเปลี่ยนความรู้ซึ่งกันและกัน?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง
2. ผู้บริหารในระดับสูง สนับสนุนให้พนักงานแลกเปลี่ยนความรู้ซึ่งกันและกัน?
- ☐ เห็นด้วยอย่างยิ่ง ☐ เห็นด้วย ☐ ไม่แน่ใจว่าเห็นด้วยหรือไม่เห็นด้วย ☐ ไม่เห็นด้วย ☐ ไม่เห็นด้วยอย่างยิ่ง



## Thailand Survey Questionnaire: Part 3

### Additional Information

1. เพศ

☐ ชาย ☐ หญิง

2. คุณอายุ อยู่ในช่วงใด?

☐ 30 ปี หรือต่ำกว่า ☐ 31 – 40 ☐ 41 – 50 ☐ 51 – 60 ☐ 61 ปี หรือ สูงกว่า

3. การศึกษาระดับสูงสุดของท่าน?

☐ ประกาศนียบัตรวิชาชีพ (Professional Qualifications)

☐ มัธยมศึกษา หรือ มัธยมปลาย (Secondary/ High school)

☐ อนุปริญญา (Diploma)

☐ ปริญญาตรี (Undergraduate Degree)

☐ ปริญญาโท หรือสูงกว่า (Postgraduate Degree)

4. คุณทำงานในองค์กรของคุณ มาเป็นระยะเวลาเท่าไร?

☐ น้อยกว่า 1 ปี ☐ 1 - 5 ปี ☐ 6 - 10 ปี ☐ 11 - 20 ปี ☐ มากกว่า 20 ปี

5. คุณอยู่ในตำแหน่งปัจจุบัน มาเป็นระยะเวลาเท่าไร?

☐ น้อยกว่า 1 ปี ☐ 1 - 2 ปี ☐ 3 - 5 ปี ☐ มากกว่า 5 ปี

6. โปรด ระบุตำแหน่งงานของคุณ ณ .ปัจจุบัน เช่น อาจารย์

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## APPENDIX B

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1.Individual ownership	1.000	-0.254***	-0.341***	0.061a	-0.044	0.184***	0.035	-0.153***	0.207***	-0.166***	0.005	-0.092**	-0.171***	-0.154***	-0.096**	-0.131***	-0.015	-0.141***	-0.015
2.organisational ownership	-0.254***	1.000	0.258***	-0.014	0.101**	-0.168***	0.088**	0.111**	-0.175***	0.074**	0.098**	0.193***	0.225***	0.125***	0.102	0.064	0.013	0.141	0.044
3.Intention to share information products	-0.341***	0.258***	1.000	-0.027	0.113***	-0.203***	-0.032	0.121***	-0.032	0.370***	0.121***	0.103**	0.330***	0.185***	0.128***	0.117***	-0.084**	0.007	0.067*
4.gender	0.061b	-0.014	-0.027	1.000	-0.092**	0.056	-0.043	-0.039	0.196***	0.089**	-0.010	-0.019	-0.030	-0.005	0.052	-0.074**	-0.004	-0.052	0.090**
5.age	-0.044	0.101**	0.113***	-0.092**	1.000	0.118***	0.524***	0.281***	0.085**	0.173***	0.197***	-0.066a	0.118**	-0.022	-0.025	0.018	-0.036	-0.096**	-0.037
6.highest education	0.184***	-0.168***	-0.203***	0.056	0.118***	1.000	0.175***	0.030	0.140***	-0.281***	0.101**	-0.170***	-0.258***	-0.130***	-0.064a	-0.130***	0.119***	-0.099**	-0.008
7.organisational tenure	0.035	0.088**	-0.032	-0.043	0.524***	0.175***	1.000	0.216***	-0.026	-0.103**	0.105**	-0.170***	-0.072	-0.148***	-0.093**	-0.089**	0.002	-0.126***	-0.089**
8. position status	-0.153***	0.111**	0.121***	-0.039	0.281***	0.030	0.216***	1.000	-0.171***	0.186***	0.220***	0.073**	0.148***	0.124***	0.079**	0.035	0.050	-0.074**	0.010
9.Sector	0.207***	-0.175***	-0.032	0.196***	0.085**	0.140***	-0.026	-0.171***	1.000	0.086**	-0.057**	-0.154***	-0.054	-0.131	-0.175	-0.071	-0.166	-0.230	-0.096**
10.Country	-0.166***	0.074**	0.370***	0.089**	0.173***	-0.281***	-0.103**	0.186***	0.086**	1.000	0.180***	0.141***	0.506***	0.299***	0.119***	0.027	-0.272***	-0.118***	0.106***
11.Work nature	0.005	0.098**	0.121***	-0.010	0.197***	0.101**	0.105**	0.220***	-0.057	0.180***	1.000	0.221***	0.303***	0.330***	0.329***	0.061b	0.274***	0.081*	0.181***
12.Organisational Procedures	-0.092**	0.193***	0.103**	-0.019	-0.066b	-0.170***	-0.170***	0.073*	-0.154***	0.141***	0.221***	1.000	0.459***	0.422***	0.383***	0.320***	0.262***	0.378***	0.273***
13. Performance Evaluation	-0.171***	0.225***	0.330***	-0.030	0.118**	-0.258***	-0.072	0.148***	-0.054	0.506***	0.303***	0.459***	1.000	0.574***	0.327***	0.292***	0.122**	0.205***	0.206***
14. Supervisor Relationship	-0.154***	0.125***	0.185***	-0.005	-0.022	-0.130***	-0.148***	0.124***	-0.131***	0.299***	0.330***	0.422***	0.574***	1.000	0.448***	0.242***	0.241***	0.230***	0.307***
15. Co-worker Relationship	-0.096**	0.102**	0.128***	0.052	-0.025	-0.064a	-0.093**	0.079**	-0.175***	0.119***	0.329***	0.383***	0.327***	0.448***	1.000	0.164***	0.324***	0.303***	0.297***
16. Remuneration	-0.131***	0.064a	0.117***	-0.074**	0.018	-0.130***	-0.089**	0.035	-0.071**	0.027	0.061b	0.320***	0.292***	0.242***	0.164***	1.000	0.332***	0.310***	0.298***
17. Recognition	-0.015	0.013	-0.084**	-0.004	-0.036	0.119***	0.002	0.050	-0.166***	-0.272***	0.274***	0.262***	0.122**	0.241***	0.324***	0.332***	1.000	0.455***	0.288***
18. Knowledge Sharing Norms	-0.141***	0.141***	0.007	-0.052	-0.096**	-0.099**	-0.126***	-0.074*	-0.230***	-0.118***	0.081*	0.378***	0.205***	0.230***	0.303***	0.310***	0.455***	1.000	0.208***
19. Work Outcome	-0.015	0.044	0.067*	0.090**	-0.037	-0.008	-0.089**	0.010	-0.096**	0.106***	0.181***	0.273***	0.206***	0.307***	0.297***	0.298***	0.288***	0.208***	1.000

**Table 1: Correlation of Organisational Ownership(OO), Individual Ownership (IO),demographics, the work environment and knowledge sharing intentions for information products of both Thailand and UK samples (N=968)**

\* is significant at 0.05 level , \*\* is significant at 0.01 level, \*\*\* is significant at 0.001 level  
a is significant at 0.06 level, b is significant at 0.07 level

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1.Individual ownership	1.000	-0.149***	-0.113***	-0.012	-0.033	0.091**	-0.010	0.008	0.030	0.023	0.052	-0.036	0.042	-0.015	-0.013	-0.086**	-0.028	-0.077**	0.033
2.organisational ownership	-0.149***	1.000	0.190***	-0.035	0.054	-0.085*	0.072*	0.021	-0.109***	-0.090**	0.087**	0.092**	0.066	0.040	0.091**	0.046	0.120***	0.079**	0.079**
3.Intention to share expertise	-0.137***	0.271***	1.000	-0.048	0.026	0.022	0.000	0.027	-0.118***	-0.110***	0.117***	0.082*	0.087*	0.040	0.085**	0.040	0.151***	0.105**	0.094**
4.gender	-.012	-0.035	-0.046	1.000	-0.092**	0.056	-0.043	-0.039	0.196***	0.089**	-0.010	-0.019	-0.030	-0.005	0.052	-0.074**	-0.004	-0.052	0.090**
5.age	-0.033	0.054	0.024	-0.092**	1.000	0.118***	0.524***	0.281***	0.085**	0.173***	0.197***	-0.066a	0.118**	-0.022	-0.025	0.018	-0.036	-0.096**	-0.037
6.highest education	0.091**	-0.085*	0.010	0.056	0.118***	1.000	0.175***	0.030	0.140***	-0.281***	0.101**	-0.170***	-0.258***	-0.130***	-0.064a	-0.130***	0.119***	-0.099**	-0.008
7.organisational tenure	-0.010	0.072*	-0.016	-0.043	0.524***	0.175***	1.000	0.216***	-0.026	-0.103**	0.105**	-0.170***	-0.072	-0.148***	-0.093**	-0.089**	0.002	-0.126***	-0.089**
8. position status	0.008	0.021	0.018	-0.039	0.281***	0.030	0.216***	1.000	-0.171***	0.186***	0.220***	0.073**	0.148***	0.124***	0.079**	0.035	0.050	-0.074**	0.010
9.Sector	0.030	-0.109***	-0.123***	0.196***	0.085**	0.140***	-0.026	-0.171***	1.000	0.086**	-0.057**	-0.154***	-0.054	-0.131	-0.175	-0.071	-0.166	-0.230	-0.096**
10.Country	0.023	-0.090**	-0.109***	0.089**	0.173***	-0.281***	-0.103**	0.186***	0.086**	1.000	0.180***	0.141***	0.506***	0.299***	0.119***	0.027	-0.272***	-0.118***	0.106***
11.Work nature	0.052	0.087**	0.142***	-0.010	0.197***	0.101**	0.105**	0.220***	-0.057	0.180***	1.000	0.221***	0.303***	0.330***	0.329***	0.061b	0.274***	0.081*	0.181***
12.Organisational Procedures	-0.036	0.092**	0.086*	-0.019	-0.066b	-0.170***	-0.170***	0.073*	-0.154***	0.141***	0.221***	1.000	0.459***	0.422***	0.383***	0.320***	0.262***	0.378***	0.273***
13. Performance Evaluation	0.042	0.066	0.083a	-0.030	0.118**	-0.258***	-0.072	0.148***	-0.054	0.506***	0.303***	0.459***	1.000	0.574***	0.327***	0.292***	0.122**	0.205***	0.206***
14. Supervisor Relationship	-0.015	0.040	0.060	-0.005	-0.022	-0.130***	-0.148***	0.124***	-0.131***	0.299***	0.330***	0.422***	0.574***	1.000	0.448***	0.242***	0.241***	0.230***	0.307***
15. Co-worker Relationship	-0.013	0.091**	0.097**	0.052	-0.025	-0.064a	-0.093**	0.079**	-0.175***	0.119***	0.329***	0.383***	0.327***	0.448***	1.000	0.164***	0.324***	0.303***	0.297***
16. Remuneration	-0.086**	0.046	0.040	-0.074**	0.018	-0.130***	-0.089**	0.035	-0.071**	0.027	0.061b	0.320***	0.292***	0.242***	0.164***	1.000	0.332***	0.310***	0.298***
17. Recognition	-0.028	0.120***	0.172***	-0.004	-0.036	0.119***	0.002	0.050	-0.166***	-0.272***	0.274***	0.262***	0.122**	0.241***	0.324***	0.332***	1.000	0.455***	0.288***
18. Knowledge Sharing Norms	-0.077*	0.079*	0.095**	-0.052	-0.096**	-0.099**	-0.126***	-0.074*	-0.230***	-0.118***	0.081*	0.378***	0.205***	0.230***	0.303***	0.310***	0.455***	1.000	0.208***
19. Work Outcome	0.033	0.079*	0.104**	0.090**	-0.037	-0.008	-0.089**	0.010	-0.096**	0.106***	0.181***	0.273***	0.206***	0.307***	0.297***	0.298***	0.288***	0.208***	1.000

**Table 2: Correlation of Organisational Ownership (OO), Individual Ownership (IO), demographics, the work Environment and knowledge sharing intentions for expertise of both Thailand and UK samples (N=968)**

\* is significant at 0.05 level , \*\* is significant at 0.01 level, \*\*\* is significant at 0.001 level  
a is significant at 0.06 level, b is significant at 0.07 level

## **APPENDIX C**

### **Mediator analysis**

The work of Ekweozor (2008) showed that the work environment could shape organisational and individual ownership which in turn affect knowledge sharing intentions. According to this notion, this study aims to investigate whether knowledge ownership has a mediating role to underlie the relationship between the work environment conditions and knowledge sharing intentions in both Thai and the UK context.

Previously, the Baron and Kenny test or so called the causal steps approach was used to analyse the mediating role of ownership perceptions on the relationship between the work environment and knowledge sharing intentions (Baron & Kenny, 1986). This test composes of three equations and conditions:

In the first equation, the independent variables (or predictors) should significantly predict the mediators. In the second equation, the independent variables should significantly predict the outcome variable (or dependent variable). Finally, in the third equation, when both mediators and the independent variables are entered simultaneously, the mediators should significantly predict the outcome variable and the effect of the independent variables on the outcome variable must be less than it was in the second equation. However, there is an argument that the independent variables do not necessary to have significant effect on the outcome variable for mediation to take place because the effect could pass through the mediators (Preacher & Hayes, 2008). Thus, the second equation may be not necessary to hold for mediation to occur. Accordingly, to test the mediating role of ownership perception on the relationship between the work environment (independent variables) and knowledge sharing intentions (outcome variable), three regression analyses were conducted and all, demographics were entered in the regressions at the first step as controlled variables. These regression analyses were as described below:

- 1) Regression of the work environment variables on organisational ownership (1.A) and individual ownership (1.B).
- 2) Regression of the work environment variables on intention to share information products and expertise.

3) Regression of all the work environment and organisational ownership/ individual ownership on intention to share information product and expertise

### **Organisational Ownership as a Mediator**

- Information products

For the Thai sample, as shown in Table 3, column 1A, organisational procedures significantly predicted organisational ownership ( $\text{Beta} = 0.150, p=.05$ ) and organisational ownership significantly predicted intention to share information products (IP) ( $\text{Beta} = 0.118, p=.05$  in Table 4, column 3A). When organisational ownership was entered simultaneously with the work environment, it was found that organisational procedures did not significantly predict the intention to share information products (See Table 4, column 3A). For other work environment, there were no statistically significant results. Hence, these results suggest that in the Thai context, organisational ownership mediates the effect of organisational procedures on the intention to share information products.

For the UK sample, as shown in Table 6, column 1A, performance evaluation significantly predicted organisational ownership ( $\text{Beta} = .375, p= .001$ ) and then, organisational ownership significantly predicted the intention to share information products ( $\text{Beta} = 0.359, p= .001$  in Table 7, column 3A). However, performance evaluation did not significantly predict the intention to share information products when organisational ownership was entered simultaneously with the work environment (See Table 7, column 3A). For other work environment factors, there were no statistically significant results. Hence, the results suggest that in the UK context, organisational ownership mediates the effect of performance evaluation on the intention to share information products.

- Expertise

For the Thai sample, as shown in Table 3, column 1A, work outcome significantly predicted organisational ownership ( $\text{Beta} = 0.189, p=.01$ ) and then, organisational ownership significantly predicted the intention to share expertise ( $\text{Beta} = 0.193, p=.001$  see Table 5, column 3A). Nevertheless, work outcome did not significantly predict the intention to share expertise when organisational ownership was entered simultaneously with work environment variables (See Table 5, column 3A). These results, therefore,

suggest that organisational ownership mediates the effect of work outcome on the intention to share expertise in the Thai context. For other work environment factors, there were no statistically significant results.

For the UK sample, as shown in Table 6, column 1A, performance evaluation significantly predicted organisational ownership (Beta = 0.224,  $p = .01$ ). Then, organisational ownership significantly predicted the intention to share expertise (Beta = 0.238,  $p = .01$  in Table 8, column 3A). Finally, performance evaluation did not significantly predict the intention to share expertise when organisational ownership was entered simultaneously with work environment variables (See Table 8, column 3A). Hence, organisational ownership mediated the effect of performance evaluation on the intention to share expertise. For other work environment factors, there were no statistically significant results.

### **Individual Ownership as a Mediator**

- Information products

For the Thai sample, as shown in Table 3, column 1B, there was no statistically significant support for the regression of any work environment on individual ownership. Hence, there was no evidence to support that individual ownership mediated the effect of work environment on the intention to share information products.

For the UK sample, as shown in Table 6, column 1B, knowledge sharing norms significantly predicted individual ownership (Beta = -.300,  $p = .001$ ) and then, individual ownership significantly predicted the intention to share information products (Beta = -0.273,  $p = .001$  in Table 7, column 3B). When individual ownership was entered simultaneously with work environment variables, knowledge sharing norms did not significantly predict the intention to share information products (See Table 7, column 3B). Hence, the results suggest that in the UK context, individual ownership mediates the effect of knowledge sharing norms on the intention to share information products. For other work environment factors, there were no statistically significant results.

- Expertise

For the Thai sample, there was no statistically significant support for regression of any work environment on individual ownership as can be seen in Table 3, column 1.B. Hence, there was no evidence supporting that individual ownership mediated the effect of work environment on the intention to share expertise.

For the UK sample, as shown in Table 6, column 1.B, knowledge sharing norms significantly predicted to individual ownership (Beta = -.167,  $p = .06$ ) and individual ownership significantly predicted the intention to share information products (Beta = -0.193,  $p = .001$  in Table 8, column 3B). When individual ownership was entered simultaneously with work environment variables, knowledge sharing norms did not significantly predict the intention to share expertise (See Table 8, column 3B). Hence, in the UK context, it was found that individual ownership mediates the effect of knowledge sharing norm on the intention to share expertise. For other work environment factors, there were no statistically significant results.

Variables	Organisational ownership				Individual Ownership			
	1.A) For information products		1.A) For expertise		1.B) For information products		1.B) For expertise	
	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t
Sex <sup>c</sup>	.091	1.593	.016	.266	.014	.239	.003	.041
Age <sup>c</sup>	.058	.824	.068	.925	-.056	-.777	-.035	-.467
Highest education <sup>c</sup>	-.209***	-3.559***	-.165	-2.655	.163**	2.738**	-.014	-.227
Organisational tenure <sup>c</sup>	.091	1.239	.015	.193	.041	.558	-.007	-.093
Position status <sup>c</sup>	-.110	-1.732	-.024	-.365	-.022	-.339	.013	.197
Sector <sup>c</sup>	-.243***	-3.956***	-.028	-.432	.248***	4.011***	-.018	-.284
Work nature	.006	.103	.050	.807	.044	.753	.078	1.258
Work Outcome	.039	.666	.189**	3.196**	.055	.948	.046	.758
Performance Evaluation	-.012	-.180	-.064	-1.010	.007	.120	-.043	-.690
Organisational Procedure	.150*	2.610*	.009	.145	.049	.846	-.030	-.494
Relationship with Supervisor	.042	.674	.048	.794	-.060	-1.025	-.013	-.217
Relationship with Co-worker	.051	.831	.041	.676	-.018	-.302	.027	.446
Remuneration	-.048	-.814	.014	.228	-.062	-1.086	-.108	-1.789
Recognition	.012	.194	.084	1.383	.001	.009	.027	.435
Knowledge Sharing Norm	.100	1.664	.002	.031	-.069	-1.208	-.007	-.116
	R= .361, R <sup>2</sup> = .130 F(7,294) = 6.130***		R= .227, R <sup>2</sup> = .052 F(7,294) = 2.235*		R= .310, R <sup>2</sup> = .096 F(6,294) = 5.121***		R= .049, R <sup>2</sup> = .002 F(6,294) = .118	

**Table 3: Regression between predictors and ownership perceptions for Thailand (N=600)**

*c* is controlled variable

\* is significant at the 0.05 level.

\*\* is significant at the 0.01 level.

\*\*\* is significant at the 0.001 level.



Variables	Intention to share Information Products					
	2) Predictor variables		3.A)All predictors and organisational ownership		3.B)All predictors and individual ownership	
	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t
Sex <sup>c</sup>	-.048	-.807	-.048	-.807	-.044	-.770
Age <sup>c</sup>	.142 <sup>a</sup>	1.927 <sup>a</sup>	.142 <sup>a</sup>	1.927 <sup>a</sup>	.126	1.778
Highest education <sup>c</sup>	-.186**	-3.041**	-.186**	-3.041**	-.140*	-2.351*
Organisational tenure <sup>c</sup>	-.045	-.602	-.045	-.602	-.034	-.467
Position status <sup>c</sup>	-.065	-.985	-.065	-.985	-.071	-1.118
Sector <sup>c</sup>	-.061	-.967	-.061	-.967	.008	.127
Work Nature	.045	.749	.045	.749	.058	.991
Work Outcome	.031	.528	.031	.528	.047	.817
Performance Evaluation	.067	1.099	.067	1.099	.069	1.175
Organisational Procedure	-.001	-.020	-.001	-.020	.013	.218
Relationship with Supervisor	.091	1.517	.091	1.517	.074	1.284
Relationship with Co-worker	.095	1.596	.095	1.596	.090	1.570
Remuneration	.029	.490	.029	.490	.012	.202
Recognition	-.021	-.351	-.021	-.351	-.021	-.362
Knowledge Sharing Norm	.020	.334	.020	.334	.000	.006
Organisational Ownership			.118*	1.956*		
Individual Ownership					-.279***	-4.798***
	R=.226, R <sup>2</sup> = .051 F(6,294)=2.584*		R=.226, R <sup>2</sup> = .051 F(6,294)=2.584*		R= .349, R <sup>2</sup> = .122 F(7,294) =5.672***	

**Table 4: Regression between predictors and intention to share information products for Thailand (N=600)**

*c* is controlled variable

\* is significant at the 0.05 level, *a* is significant at the 0.06 level.

\*\* is significant at the 0.01 level.

\*\*\* is significant at the 0.001 level.

Variables	Intention to share Expertise					
	2) Predictor variables		3.A) All predictors and organisational ownership		3.B) All predictors and individual ownership	
	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t
Sex <sup>c</sup>	-.014	-.224	-.012	-.194	-.013	-.212
Age <sup>c</sup>	.073	.982	.058	.790	.068	.925
Highest education <sup>c</sup>	-.073	-1.132	-.023	-.370	-.078	-1.229
Organisational tenure <sup>c</sup>	-.073	-.963	-.076	-1.014	-.073	-.977
Position status <sup>c</sup>	-.071	-1.070	-.071	-1.074	-.071	-1.071
Sector <sup>c</sup>	-.047	-.739	-.054	-.851	-.049	-.768
Work Nature	.139*	2.247*	.148*	2.467*	.148*	2.423*
Work Outcome	.132*	2.192*	.101	1.666	.137*	2.285*
Performance Evaluation	.075	1.133	.109	1.706	.063	.960
Organisational Procedure	-.021	-.331	.004	.071	-.030	-.470
Relationship with Supervisor	.008	.122	.014	.217	.001	.020
Relationship with Co-worker	-.002	-.027	.011	.167	-.002	-.036
Remuneration	-.057	-.929	-.032	-.546	-.076	-1.248
Recognition	.033	.504	.035	.540	.032	.487
Knowledge Sharing Norm	-.003	-.048	.011	.185	-.006	-.101
Organisational Ownership			.193***	3.345***		
Individual Ownership					-.139*	-2.428***
	R= .225, R <sup>2</sup> = .051 F(8,294) = 1.907 <sup>a</sup>		R= .267, R <sup>2</sup> = .071 F(8,294) = 2.734**		R= .264, R <sup>2</sup> = .070 F(9,294) = 2.379*	

**Table 5: Regression between predictors and intention to share expertise for Thailand (N=600)**

*c* is controlled variable

\* is significant at the 0.05 level.

\*\*\* is significant at the 0.001 level.

Variables	Organisational ownership				Individual Ownership			
	1.A) For information products		1.A) For expertise		1.B) For information products		1.B) For expertise	
	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t
Sex <sup>c</sup>	.029	.378	-.018	-.224	-.023	-.290	-.099	-1.194
Age <sup>c</sup>	.050	.567	.004	.039	-.129	-1.402	-.028	-.295
Highest education <sup>c</sup>	-.067	-.884	-.118	-1.478	.133	1.693	.200*	2.462*
Organisational tenure <sup>c</sup>	.137	1.550	.133	1.433	.001	.015	-.111	-1.174
Position status <sup>c</sup>	.152*	2.011*	.065	.811	-.205**	-2.639**	-.045	-.554
Sector <sup>c</sup>	-.103	-1.264	-.212*	-2.463*	.014	.153	.183*	2.100*
Work nature	.024	.269	.073	.760	.117	1.466	.062	.755
Work Outcome	-.041	-.523	-.081	-.981	-.012	-.142	-.022	-.273
Performance Evaluation	.375***	5.111***	.224**	2.894**	-.032	-.403	.091	1.163
Organisational Procedure	.054	.608	.089	.952	-.064	-.721	-.064	-.785
Relationship with Supervisor	-.102	-1.129	-.056	-.582	-.035	-.430	-.067	-.844
Relationship with Co-worker	-.006	-.071	.095	1.079	-.024	-.294	-.032	-.396
Remuneration	-.040	-.512	-.077	-.937	-.113	-1.384	-.012	-.150
Recognition	-.104	-1.217	-.074	-.823	.012	.117	-.052	-.613
Knowledge Sharing Norm	-.015	-.172	.019	.206	-.300***	-3.465***	-.167 <sup>a</sup>	-1.888 <sup>a</sup>
	R= .457, R <sup>2</sup> = .209 F(7,157) = 5.655***		R= .347, R <sup>2</sup> = .120 F(7,157) = 2.925**		R= .391, R <sup>2</sup> = .153 F(7,157) = 3.856***		R= .298, R <sup>2</sup> = .089 F(6,157) = 2.446*	

**Table 6: Regression between predictors and ownership perceptions for UK (N=368)**

*c* is controlled variable

\* is significant at the 0.05 level.

\*\* is significant at the 0.01 level.

\*\*\* is significant at the 0.001 level

Variables	Intention to share Information Products					
	2) Predictor variables		3.A)All predictors and organisational ownership		3.B)All predictors and individual ownership	
	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t
Sex <sup>c</sup>	.101	1.238	.090	1.156	.096	1.230
Age <sup>c</sup>	-.009	-.094	-.019	-.216	-.030	-.336
Highest education <sup>c</sup>	-.062	-.779	-.036	-.472	-.020	-.262
Organisational tenure <sup>c</sup>	.094	1.011	.040	.450	.104	1.158
Position status <sup>c</sup>	.188*	2.367*	.142b	1.837b	.136	1.749
Sector <sup>c</sup>	-.177*	-2.068*	-.133	-1.619	-.142	-1.712
Work Nature	.046	.486	.085	1.066	.102	1.097
Work Outcome	.068	.829	.102	1.320	.048	.596
Performance Evaluation	.232**	2.998**	.114	1.420	.202**	2.691**
Organisational Procedure	.055	.592	.083	1.056	.011	.126
Relationship with Supervisor	-.015	-.162	.073	.964	-.039	-.416
Relationship with Co-worker	.109	1.246	.137	1.762	.094	1.116
Remuneration	.108	1.331	.141	1.864a	.064	.799
Recognition	.089	.990	.149	1.872a	.056	.634
Knowledge Sharing Norm	.009	.096	.047	.554	-.075	-.811
Organisational Ownership			.359***	4.709***		
Individual Ownership					-.273***	-3.526***
	R=.352, R <sup>2</sup> = .124 F(7,157)=3.033**		R=.437, R <sup>2</sup> = .191 F(7,157)=5.062***		R= .438, R <sup>2</sup> = .191 F(8,157) =4.410***	

**Table 7: Regression between predictors and Intention to share information products for UK (N=368)**

*c* is controlled variable

\* is significant at the 0.05 level.

\*\* is significant at the 0.01 level.

\*\*\* is significant at the 0.001 level.

Variables	Intention to share Expertise					
	2) Predictor variables		3.A)All predictors and organisational ownership		3.B)All predictors and individual ownership	
	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t	Beta (standardized coefficient)	t
Sex <sup>c</sup>	.060	.731	.064	.805	.041	.504
Age <sup>c</sup>	.113	1.209	.108	1.187	.107	1.169
Highest education <sup>c</sup>	.024	.299	.051	.652	.062	.777
Organisational tenure <sup>c</sup>	.036	.384	.006	.070	.014	.156
Position status <sup>c</sup>	.132	1.659	.112	1.440	.123	1.574
Sector <sup>c</sup>	-.318***	-3.710***	-.272	-3.203	-.283***	-3.306***
Work Nature	.125	1.545	.085	1.065	.137	1.727
Work Outcome	.051	.627	.057	.720	.046	.583
Performance Evaluation	.124	1.605	.074	.959	.143 <sup>a</sup>	1.877 <sup>a</sup>
Organisational Procedure	.131	1.650	.090	1.138	.119	1.521
Relationship with Supervisor	.084	1.085	.062	.819	.072	.937
Relationship with Co-worker	.119	1.474	.080	1.000	.113	1.419
Remuneration	.048	.598	.051	.656	.045	.578
Recognition	.154 <sup>b</sup>	1.857 <sup>b</sup>	.147 <sup>b</sup>	1.820 <sup>b</sup>	.144	1.765
Knowledge Sharing Norm	.084	.953	.062	.717	.053	.604
Organisational Ownership			.238**	3.078**		
Individual Ownership					-.193***	-2.435***
	R= .333, R <sup>2</sup> = .111 F(6,157) =3.149**		R= .405, R <sup>2</sup> = .164 F(7,157) =4.204***		R= .381, R <sup>2</sup> = .145 F(7,157) =3.634***	

**Table 8: Regression between predictors and intention to share expertise for UK (N=368)**

*c* is controlled variable

*a* is significant at the 0.06 level, *b* is significant at the 0.07 level.

\*\* is significant at the 0.01 level.

\*\*\* is significant at the 0.001 level.