

Doctoral Thesis Summary

**Knowledge Management in Small and Medium
Sized Enterprises in Developing Countries**
(Case study: Vietnam)

Znalostní management v malých a středních podnicích
v rozvojových zemích
(Případová studie: Vietnam)

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Abstrakt

Aby udržely krok s konkurencí, nemají podniky z rozvojových zemí coby opozdilci na světovém trhu lepší možnost, než si zkrátit cestu a přejít rovnou k používání nejmodernějších nástrojů. V tomto případě může být vhodným strategickým nástrojem pro podniky znalostní management (ZM). Ale jak toho dosáhnout, když je ZM obvykle považován za náročný a to i pro podniky ve vyspělých zemích bohatých na zdroje? Cílem tohoto výzkumu je najít odpověď na tuto otázku, a to zejména v souvislosti s Vietnamem - typickou rozvíjející se zemí v jihovýchodní Asii, která se vyznačuje polootevřeným tržním hospodářstvím, konfuciánskou kulturou a převážně malými a středními podniky (MSP). Existují tři fáze tohoto výzkumu: Za prvé, bylo provedeno mini-empirické šetření pro účely orientace. Za druhé, kvantitativní studie pro pochopení skutečných problémů ZM, kterým MSP ve Vietnamu čelí a určení vztahů mezi charakteristikami podniků a způsobem, jakým MSP řeší otázky související se ZM. Za třetí, byla aplikována smíšená metoda (kvantitativní a kvalitativní) pro zjištění, jak efektivně zavést ZM v MSP ve Vietnamu. Data byla shromážděna několika různými způsoby včetně teoretického průzkumu, pohovorů, dotazníku, pozorování MSP ve městě Ho Chi Minh - největším obchodním centru Vietnamu.

Abstract

As latecomers to the global market, businesses from developing countries have no better option than taking a shortcut and leaping directly to the application of the most advanced tools to keep pace with the competition. Knowledge Management may be the appropriate strategic tool for businesses in this case. But how can this be achieved when KM is normally considered challenging, even for resource-rich enterprises in advanced countries? The objective of this research is to find out the answer to this question, especially in the context of Viet Nam - a typical emerging country in Southeast Asia, characterized by a semi-open market economy, a Confucian culture and a majority of SMEs. There are three stages in this research: First, a mini-empirical survey was conducted for the orientation purpose. Second, the quantitative study was conducted to understand the actual KM problems that SMEs in Viet Nam have been facing and to identify the relationships between characteristics of firms and the way SMEs deal with KM-related issues. Third, the mixed method (quantitative & qualitative) was applied to find out how to implement KM effectively in the SMEs in Viet Nam. The data was gathered by different ways including desk survey, direct interview, questionnaire, site observations among SMEs in Ho Chi Minh City – the biggest commercial center of Viet Nam.

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LIST OF ABBREVIATIONS

ACI	Asia Competitiveness Institute
AFTA	Asian Free Trade Area
APEC	Asia-Pacific Economy Cooperation
APO	Asian productivity organization
ASEAN	Association of South East Asia Nations
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GSO	General Statistics Organization
ICT	Information and Communication Technology
IT	Information Technology
ITM	Information Technology Management
KI	Knowledge Index
KEI	Knowledge Economy Index
KM	Knowledge Management
KMP	Knowledge Management Program
LAN	Local Area Network
MPI	Ministry of Planning and Investment
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OJT	On the Job Training
POE	Privately Owned Enterprise
R&D	Research and Development
SME	Small and Medium Sized Enterprise
SOE	State-Owned Enterprise
TQM	Total Quality Management

WTO	World Trade Organization
UK	United Kingdom
US	United States
VCCI	Vietnam Chamber of Commerce and Industry
VPC	Vietnam Productivity Center
VPN	Virtual Private Network

Rozšířený abstrakt

Znalostní management (ZM) představuje pro organizace nejdůležitější faktor konkurenční výhody [1-2]. Praxe však ukázala, že zavedení ZM je velkou výzvou pro podnikání, zejména pro podnikání v rozvojových zemích, kde je nedostatek podpůrných faktorů pro řízení obchodní činnosti obecně a pro ZM obzvlášť. Přestože existuje mnoho studií o ZM, většina z nich je zaměřena na vyspělé ekonomiky (např. Amerika, Evropa, Japonsko) nebo velké/silné rozvíjející se ekonomiky (např. Čína, Indie, Korea); zatímco rozvíjející se ekonomiky jsou integrovanými součástmi světového hospodářství, ale není jim věnována patřičná pozornost. Současné úvahy mají za to, že ZM není použitelný pro podniky s chudými zdroji a zejména pro ty v rozvojových zemích. Nicméně, majíc jiné zkušenosti s vedením malých podniků a na základě pozorování provozu malých a středních podniků (MSP) v rozvojové zemi, se autorka domnívá, že se podniky v rozvojových zemích snaží zavést ZM, aniž by si toho byly vědomy. Dělají to, aby přežily a mohly se dále rozvíjet. Navíc, jako „opozdilci“ na světovém trhu nemají podniky z rozvojových zemí lepší možnost, než si zkrátit cestu a přejít rovnou k používání nejmodernějších nástrojů, aby udržely krok s konkurencí. V tomto případě může být vhodným strategickým nástrojem pro podniky znalostní management. Ale jak toho dosáhnout, když je ZM obvykle považován za náročný a to i pro podniky ve vyspělých zemích bohatých na zdroje? Cílem tohoto výzkumu je najít odpověď na tuto otázku, a to zejména v souvislosti s Vietnamem - typickou rozvíjející se zemí v jihovýchodní Asii, která se vyznačuje polootevřeným tržním hospodářstvím, konfuciánskou kulturou a převážně MSP.

Existují tři fáze tohoto výzkumu: V době psaní neexistují žádné stávající studie o ZM ve Vietnamu, takže je první etapa výzkumu určena čistě pro účely orientace. Druhá a třetí fáze jsou vyčleněny pro různé účely. Pro druhou fázi bylo provedeno dotazníkové šetření za účelem zjištění stávajících problémů ZM, kterým MSP ve Vietnamu čelí a určení, zda jsou charakteristiky podniků faktory ovlivňující zavedení ZM v MSP ve Vietnamu nebo ne. Ve třetí fázi je poté aplikována smíšená metoda (kvantitativní a kvalitativní) pro nalezení odpovědi na otázku „Jak zavést ZM ve vietnamských MSP?“. Data byla shromážděna několika různými způsoby včetně teoretického průzkumu, pohovorů, speciálně připraveného dotazníku rozeslaného poštou a emailem, pozorování na místě. V roce 2010 a na začátku roku 2011 bylo do tohoto výzkumu zapojeno 100 MSP. Tyto firmy se nacházejí převážně ve městě Ho Chi Minh - největším obchodním centru Vietnamu. Existuje jen velmi málo studií, které zkoumají otázky ZM týkající se malých a středních podniků, zejména podniků v rozvojových zemích obecně. Tento výzkum je takřka první snahou prozkoumat možnost zavedení ZM v MSP ve Vietnamu. Tímto výzkumem a praktickým přístupem k problému by autorka

ráda překlenula propast mezi akademiky a odborníky z praxe. Empirický výzkum spočívá ve snaze poučit se z těžce nabytých zkušeností různých MSP ve Vietnamu, zkoumání toho, co dělají a snažit se odhalit faktory, které pohánějí jejich vzájemné operace.

Dizertační práce má se svým na kontextu založeným přístupem a organizačními perspektivami důležitý význam nejen pro odborníky z praxe, ale také pro akademiky. Ačkoli je tato empirická studie provedena v rámci Vietnamu, věříme, že tato zjištění pomohou zainteresovaným stranám pochopit teorii ZM v širším kontextu, a to zejména v zemích s tranzitivní ekonomikou.

Extended abstract

Knowledge management (KM) presents the most important competitive advantage factor for organizations [1-2]. But practice has shown that the application of KM is a big challenge for businesses, especially for business in developing countries, where there is dearth of supportive factors for business management generally and for KM particularly. Although there have been many studies about knowledge management (KM), most of them focused on developed economies (such as American, European, Japan) or big/strong emerging economies (such as China, India, Korea); in contrast, developing economies are integral parts of the world economy, but are not paid adequate attention. Current thinking holds that KM is not applicable for resource – poor enterprises, especially for ones in a developing country. However, possessing experience in running small businesses and having observed SMEs' operations in a developing country, the author believes that businesses in developing countries are struggling to implement knowledge management without being aware of it. They do this both to survive and to develop. Moreover, as latecomers in the global market, businesses from developing countries have no better option than taking a shortcut and leaping directly to the application of the most advanced tools to keep pace with the competition. Knowledge Management may be the appropriate strategic tool for businesses in this case. But how can this be achieved when KM is normally considered challenging, even for resource-rich enterprises in advanced countries? The objective of this research is to find out the answer to this question, especially in the context of a developing country, such as Vietnam – a typical emerging country in Southeast Asia, characterized by a semi-open market economy, a Confucian culture and a majority of SMEs.

There are three stages in this research: At the time of writing there are no existing studies on KM in Vietnam, so the first stage of the research is designed for orientation purposes. The second and the third stages are deployed for different purposes. For the second stage, a quantitative survey is conducted to investigate the actual KM problems that SMEs in Vietnam have been facing and to identify whether the firms' characteristics are the impact factors for KM implementation or not for SMEs in Vietnam. Then in the third stage, the mixed method (quantitative & qualitative) is applied to find the answer for the research question "how to initiate KM in a Vietnamese SME". The data was gathered by various methods including desk survey, interviews, a specially designed questionnaire sent by post and email, on-site observations. More than 100 SMEs were involved in this research in 2010 and early 2011. These firms are located mainly in Ho Chi Minh City – the biggest commercial centre of the country.

There are very few studies which examine KM issues related to medium and small businesses, especially businesses in developing countries in general. This research is almost the first effort to study the possibility of applying KM to SME in Vietnam. This research would like to bridge the gap between academics and practitioners by approaching issues practically. The empirical research is an attempt to learn from the hard earned experiences of various SMEs in Vietnam, examining what they are doing and trying to uncover the factors that drive their related operations.

The dissertation has important implications for not only the practitioners but also for the academics with its context-based approach and organizational perspectives. Although this empirical study is conducted in the context of Vietnam, we believe that these findings will assist interested parties in understanding KM theory in the broader context, especially in countries with transition economies.

CHAPTER 1. INTRODUCTION

Knowledge management (KM) presents the most important competitive advantage factor for organizations [3-4]. But practices have showed that the application of KM is a big challenge for business, especially for business in developing countries, where there is dearth of supportive factors for business management generally and for KM particularly. How can KM be applied in a developing country context when it is normally considered challenging, even for resource-rich enterprises in advanced countries? The objective of this research is to find out the answer to this question.

1.1. The background of the research

Natural resources, capital and labor are now being replaced by knowledge as the basic resource from which socio-economic wealth can be generated [5]. Knowledge Management is known as one of the most promising and advanced tools that can contribute to the creation of a sustainable competitive advantage for business today [1]. The literature has shown that KM practice is different in different context and depends on the specific purpose of organization [6-7].

KM implementation requires various prerequisites such as a substantial information technology platform, specialized personnel, a supportive working environment, supportive organizational structures, etc. Those components are considered the KM enablers or KM success factors. In business, KM's main function is to facilitate the new knowledge creation which, on its turn, becomes the competitive advantage of firms. Thus, KM is paid more and more attention by academics and practitioners seeking to find the optimum ways to harness the advantages from KM for sustainable development of firms.

1.2. Research objectives

1.2.1. Research gap

While there has been a substantial amount of research on the topic of KM and innovation strategies, research based in the context of the Asia Pacific region is still in the development stage [8-9]. Especially, this research is the first in Vietnam to study KM's issues and the possibility to implement KM for SMEs in the country. Existing KM-related studies have built up the sound theoretical foundation for KM, but as KM is a context-based management, it needs to be brought closer to businesses. KM studies have to be embedded in specific contexts to find the practical ways for enterprises to implement successfully.

Characteristics of enterprises may be driving factors that influence the company management generally and KM particularly. There is the paucity of

research that applied this approach after flourishing time in the 60s – 70s. There is the need to examine relationships between the characteristics of enterprises and behaviors within them (e.g. of company management) in the current stage of economy.

This study attempts to contribute to fill these gaps as well as to provide practitioners an applicable management tool to enhance business's sustainability and competitiveness, and ultimately by this to enhance the country's competitiveness.

1.2.2. Research objectives and research questions

The general objective of this study is to contribute to the development of KM theory, and improve understanding on how it could be implemented in the context of developing countries.

Moreover, this research is practice-oriented and solely is conducted upon SMEs in Vietnam. As being almost the first study of KM in the country, the research objective is to build up a context-based theoretical foundation of KM for SMEs in Vietnam as well as to find out the most practical approach for initiating KM in Vietnam business.

Before starting the main research, an orientation study was carried out to provide some preliminary findings. The most important revelation was that SMEs in Vietnam are struggling to solve KM issues without being aware of the academic terms, and the main reason for them to do that is the shortage of competent employees to (firstly) maintain their businesses and then (secondly) to develop them. Observations showed that every SME has its own way to deal with KM issues, but it seems these methods can be grouped according to certain criteria. Therefore, the main research questions are:

Question 1: What is the perception of KM in Vietnam SMEs?

Question 2: Why to initiate KM in Vietnamese SMEs?

Question 3: Do characteristics of firms relate to the way SMEs deal with KM-issues?

Question 4: How to initiate KM in Vietnamese SMEs?

1.3. The structure of the research

The thesis is divided into nine chapters. The thesis has a larger number of chapters for two reasons. First, the research is restricted geographically, so an introduction to the local economy is required to motivate the research as well as a literature review. Second, the research itself has a more complex design than is habitual. While intimately anchored with the literature, this research is

representative of a burgeoning interest in KM in developing countries and also KM in small to mid-sized businesses. Further, the inspiration for the basic research heuristic came from practice rather than theory. Finally, there were practical issues of survey reliability (willingness to be interviewed, saving face in responding to questions, compiling the sample, etc.) which imposed preliminary ground work before the substantive study could be undertaken. This preliminary work is included in this thesis because it constitutes part of the overall work carried out in fulfillment of the requirements for the doctorate.

The first chapter gives a brief instruction about the research: Why the research is formulated, what it aims to achieve, and how it is structured.

The second chapter builds the theoretical background for the study. It reviews the main stream of research in KM field and analyzes the differences between KM practices in the large firm and ones in the SMEs, as well as mentions some issues of KM in the context of a developing country.

The third chapter provides an overview of Vietnam's economy and Vietnam SMEs. In this section we can find the most updated figures of Vietnam economy and SMEs. These data were cited and compiled mostly from international official websites to ensure the objective evaluation of the current situation of Vietnam economy generally and the status of SMEs particularly.

The fourth chapter elaborates the research design of the study. In this section we would learn how the research was planned and the reasons why it was planned in this specific way.

Chapter five describes the methodologies used in this research. In this sector, the methods employed to sampling, data collecting, analyzing collected data were identified. Both qualitative (descriptive and inferential) and quantitative statistics are employed to analyze empirical data in this research.

The sixth chapter presents the findings of the orientation survey. This chapter's results helped the researcher set the direction for the main research including identifying the research questions, scoping the research, formulating hypotheses.

Chapter seven presents the results of the first part of main research to answer the research question which characteristics of firms associate with the ways SMEs deal with KM-related issues in Vietnam. The empirical survey in Vietnamese SMEs was conducted during the second half of 2010 and three first months of 2011. Data collected from more than 100 SMEs was analyzed by

both descriptive and inferential statistics to find the answer for the related research questions.

In chapter eight, a single typical case study (LTV Co. Ltd.) was conducted to find out how KM should initiate in the Vietnamese SME. During the analysis, a KM initiative case study from Britain – company A was taken to compare and to draw the practical suggestions for SMEs in Vietnam. The analyzed results from the empirical survey (presented in Chapter seven) were also employed when necessary.

The last chapter pinpoints the implications, the academic and practical contributions of the research, the limitations and the directions for future research. The structure of the dissertation presents in Figure 1.1.

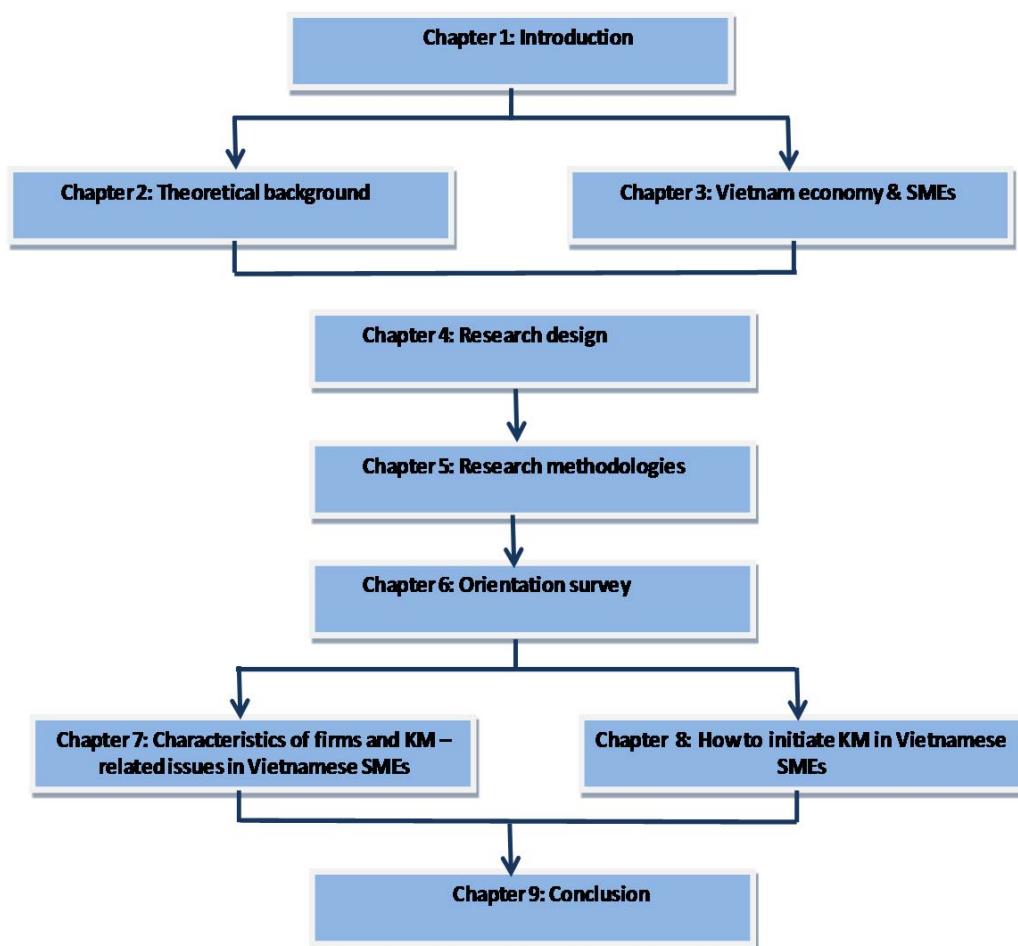


Figure 1.1: Research structure of the thesis – Overview

CHAPTER 2. THEORETICAL BACKGROUD

The starting point of the literature on knowledge management is placed in 1991, the year Ikujiro Nonaka published *The Knowledge-Creating Company* in Harvard Business Review. This article, as well as books and other articles published with Hirotaka Takeuchi, are based on experience of research and development in several Japanese firms with considerable R&D resources and experience creativity rather than protocol bottlenecks in problem solving in new product development – in particular, design and mechanical engineering rather than health-sciences related development. Much of the field of knowledge management is associated with innovation, usually within large firms. Yet the rise of knowledge management in the Occident, at least, fortuitously coincided with developments in general and strategic management theory. The Occident was in awe of Japanese economic power during the eighties and start of the nineties, and this led to questioning the foundations of the Harvard and other traditions of strategic management, with a new emphasis on both the resource base which made strategies possible, and the processes by which firms nurture these resources [10-11]. This built in part upon a reaction against formal long range planning [12-14] which carried the corollary of nurturing resources, or orienting development and choice according to resources. These resources need not be tangible [15] and they must not be easily imitated if they are to constitute a competitive advantage. Ulrich (1987) pointed out the continuity of resource-based competitive advantage with the conventional view of strategy, while pointing out the negligence of the least easily imitated class of capability: organizational capability[16]. Later, Prahalad and Hamel (1990) argued that the core competencies of the firm were the key resource. It seemed natural to plug knowledge into the “resource” slot or the “core competency” slot, and so the knowledge management literature has become relevant to the general management of the firm as well as innovation management, which may be a general concern for some firms, but is secondary for many others, whatever the lip service they may give to such fashions as being innovative or adapting to a relentlessly dynamic environment and so on. This made sense, yet this relation to general management concerns has rarely been articulated [17].

Still, knowledge is considered a key business resource [2, 18-21] and knowledge management has received increasing attention. In this chapter, some basic concepts of KM are demonstrated to give the overview of what people think about knowledge and KM as well as what can be considered as KM practices. By listing down definitions of main stream in the field’s research, we would like to show that KM can be seen in various ways and accordingly, it can be practiced differently. Thus, an organization, depending on the specific

context, may apply KM flexibly to exploit the advantages in such a way as to foster its own success.

2.1. Knowledge

2.1.1. Knowledge definition

Knowledge is a multifaceted concept at multiple levels. The question about the meaning of this terminology is an issue of epistemology, and “... *this debate has intrigued the world’s greatest thinkers from Plato to Popper without the emergence of a clear consensus*” [22]. In the context of business studies, knowledge is focused as an ‘object’ of management – a ‘valuable asset’ that needs to be managed. Below are some of the more notable definitions in KM literature:

- Drucker (1989): Knowledge is information that changes something or somebody – either by becoming grounds for action, or by making an individual (or an institution) capable of different or more effective action[23].
- Nonaka (1994): Knowledge is justified belief that increases an entity’s capacity for effective action[24].
- Sveiby (1997): Knowledge as a capacity to act[25].
- Davenport & Prusak (1998): Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knower. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms [2].
- Zeleny (2005): Knowledge is the purposeful coordination of action *or* Knowledge is an embodied complex of action enabling structures, externalized through a purposeful coordination of requisite activities [26].
- Pillania (2004, 2005, 2008): Knowledge is the whole set of intuitions, reasoning, insights and experience related to technology, products, processes, customers, markets, competition etc., that enable effective action (for business) [27-29].

We can see that even though there was no unanimous definition of knowledge amongst scholars from the early time of KM, knowledge is always defined in strong connection with action itself or capability to take action. While most of the above mentioned definitions of knowledge are quite general, the definition of Pillania (2004) is more specific and understandable for

business community as it includes the social and professional dimensions and also fit well with what is needed for actually doing business.

2.1.2. Explicit and tacit knowledge

Academics in KM have widely accepted that there are two types of knowledge in organization: Tacit and explicit (relatively referred as tacit knowledge and explicit knowledge) [30].

Tacit knowledge includes cognitive and technical elements [24], and is difficult to explain or codify as it is stored and happens in the mind of knower consciously or unconsciously.

Explicit knowledge is a symbolic form of knowledge: Knowledge that can be articulated, codified, communicated in such form as the technical manual of an aircraft or a cooking recipe, etc.

This cannot be considered as a strict classification of knowledge. These two forms of knowledge are mutually dependent and reinforcing qualities of knowledge: tacit knowledge forms the background necessary for assigning the structure to develop and interpret explicit knowledge [31].

The attempt to relatively distinguish these two different forms of knowledge is useful for business as it can facilitate the self-recognition of the firm on the way toward KM.

2.1.3. Knowledge level

The literature examines knowledge at two levels: Individual and collective [24]. In the context of business, the author proposes another three level classification of knowledge: Individual, organizational, and social. Individual knowledge is created by a life-long accumulative process based on his education background, persons 'standards of value' 'inherited' from the family and then further developed, experiences, skill and know-how obtained in working places and from the living environment. Organizational knowledge is formed mostly basing on the individual knowledge of its members. But it is not a simple sum of the individual knowledge [32]. It is formed through "*unique patterns of interactions between technologies, techniques, and people, which cannot be easily imitated by other organizations*" [33]. More than that, organizational knowledge is formed also from other outside sources of knowledge by absorbing ability (as illustrated in Figure 2.2). Social knowledge is a larger concept. It comprises knowledge from the society's members such as individuals and organizations. In this thesis, the study focuses on the first two

levels of knowledge: The individual (as the primary component of the latter one) and the organizational.

The interest in knowledge at the organizational level is increasing as it is considered a key business resource of the firm to achieve a competitive advantage (as documented in Barney, 1991; Davenport and Prusak, 1998; Nonaka & Takeuchi, 1995, Swan and Newell, 2000; Pillania, 2008). The KM concept deals with the question how to manage it in the organization was invented.

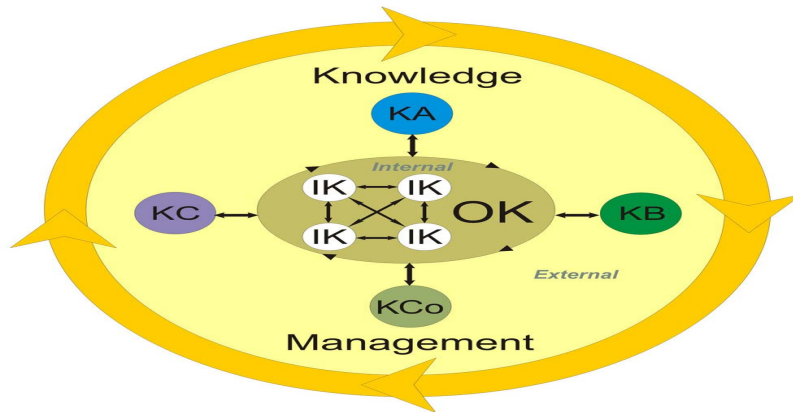
2.2. Knowledge Management

2.2.1. KM definition

KM has a long history even though it has been named only in the last decade of the 20th century. It is a naturally indispensable for the continuity and development of human society. Thousands years ago, when human society was established and basic productive activities (picking fruits, hunting animals...) were started, knowledge was “inherited” from generation to generation and KM was already implemented.

In the current study, the definition of Pillania (2004) is used as it defines KM as a comprehensive concept covering all aspects of business concerning people, process, technology, and the environment, just as Drucker (1994) envisioned. According to Pillania (2004), “*KM is a systematic, organized, explicit and deliberate ongoing process of creating, disseminating, applying, renewing and updating the knowledge for achieving organizational objectives*”[27].

At the organizational level, implementing KM is about managing knowledge in all business-related activities (indirect and direct, short term and long term). Managing knowledge includes continuous processes that facilitate the dynamic interactions between and among internal and external knowledge sources by managing enablers effectively. Figure 2.2 is a schematic representation of the formation of organizational knowledge from the internal and external possible knowledge sources and the overview of KM. The most important source of organizational knowledge (OK) is the internal one, that is to say, knowledge coming from the daily interactions among the individuals who are working for the organization (Individual Knowledge - IK). Managing the existing organizational knowledge facilitates the possibility of creating new knowledge by absorbing knowledge from outside – from the bodies with whom the organizational is dealing during the daily operations such as business partners, customers, competitors, related authorities, etc. These processes are spiraling, and it defines KM dynamic nature.



IK: Individual Knowledge
OK: Organizational Knowledge
KA: Knowledge from Authorities

KB: Knowledge from Business Partners;
KC: Knowledge from Customers
KCo: Knowledge from Competitors

Figure 2.1: The formation of Organizational Knowledge and the Overview

2.2.2. KM processes

In the context of business, at the organizational level, KM basically includes ‘three main things: Knowledge creation, knowledge dissemination and knowledge implementation’ [34], and in term of processes, these ‘three main things’ can be generally distinguished in the following 4 sets in many studies: (1) creation, (2) storage/retrieval, (3) sharing/transfer, (4) and application.

Knowledge creation

Developing new content or improving existing content within the organization’s tacit and explicit knowledge are all considered as knowledge creation [31]. In a firm, knowledge can be created by an individual or by the collaboration of many members. The SECI model (Figure 2.3) presents four modes of knowledge conversion between two types of knowledge, and through this conversion process, knowledge evolves to higher levels in term of quality and quantity. SECI stands for (1) Socialization (from tacit knowledge to tacit knowledge), (2) Externalization (from tacit knowledge to explicit knowledge), (3) Combination (from explicit knowledge to explicit knowledge); and (4) Internalization (From explicit knowledge to tacit knowledge) [35]. In this model, authors identified the ‘methods’ which facilitate each type of conversions, for example in the socialization mode, social interaction can be the most suitable ‘method’ that can facilitate the conversion of current tacit knowledge to new tacit one while in the combination mode, the conversion of current explicit

knowledge to new one can be facilitated by merging, categorizing, reclassifying, and synthesizing.

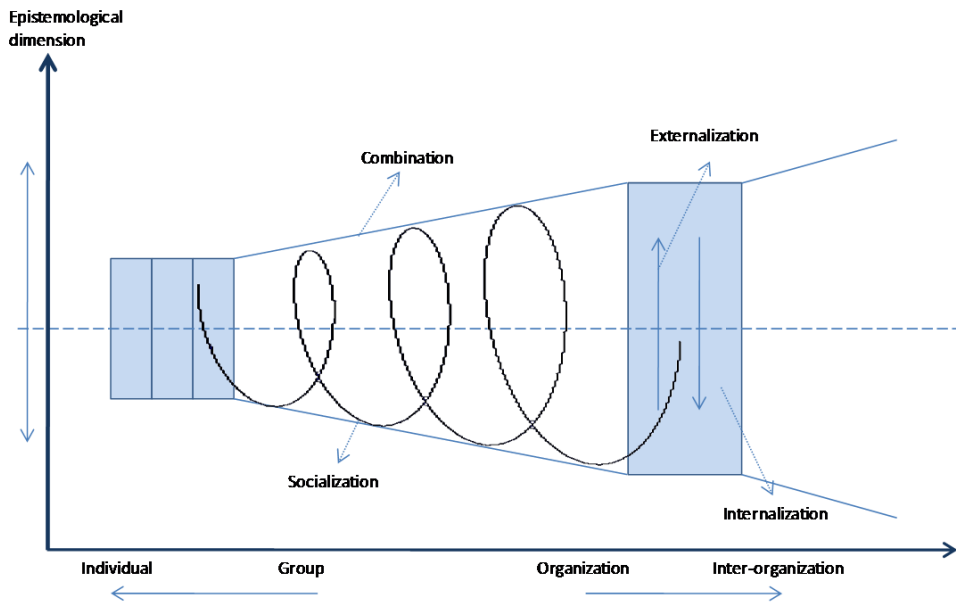


Figure 2.2. Spiral of knowledge creation – Source: Nonaka, 1994

Nonaka and Konno (2000) have suggested it's necessary to create *Ba* for knowledge creation [35]. *Ba* is the common place or space where people can interact and exchange their idea. *Ba* can be a physical place or a virtual space for all members in the firm. With the booming development of IT today, while it may still expensive for a firm to set up and maintain a physical *Ba*, it is not an issue to create a virtual one. Today the issue is how to manage a *Ba* effectively to facilitate knowledge creation process.

Knowledge storage/retrieval

"If only HP knew what it knows it would make three times more profit tomorrow" - Lew Platt, ex CEO Hewlett Packard

Knowledge can be created and also can be forgotten. As stated above, knowledge is classified into explicit and tacit. Both of them need to be saved in the retrieval way. That is one of the main tasks of KM in the firm. If new organizational knowledge is valuable to the firm as it can create the competitive advantage in the market, the existing knowledge plays much more important role – to maintain the business (up to certain level). The statement of Lew Platt, Ex-CEO of Hewlett Packard had proved that only indentifying and capturing the existing knowledge can bring a lot of advantages to the firm. Firm must

have its own memory to be survival and developed. Literature has distinguished the individual memory from the organizational one. While the first one is gained from a person's observations, experiences, and actions, the latter one is gained from the past, experience and events influence current organizational activities [31, 36-37]; And there is the fact that without the firm foundation of current knowledge; it would be difficult for firm to create the new one. With the advantage of IT today, knowledge (both explicit and tacit) can be stored in various components forms such as documents, electronic databases (separated system in computer or database management software), video clips, expert system, etc.

Knowledge in the firm is presented in all minor processes of working procedures, thus knowledge storage must be considered as daily business activities. In order to identify and store efficiently the current and new knowledge, it needs to be very clear in the firm what is considered as 'knowledge' necessary for the firm's operation and how to classify them in order to retrieve afterwards. Among all KM processes, knowledge storage seems most costly one, where technology plays an important role and consequently becomes an important enabler of KM in general. However, IT and other technologies can change the manner of activities, but can decide if the activity is done or not – That is the human being choice.

Knowledge sharing

KS is a very important part of KM: the mechanism that permits knowledge exchange and transfer, increasing the value of the organization. The ultimate goals of KM are converting individual knowledge into organizational knowledge, and leveraging this knowledge to ensure sufficient competence to maintain and develop the business. These goals can be achieved only if KS is implemented properly within the organization. Inkpen (2000) observed: *"...unless individual knowledge is shared throughout an organization, the knowledge will have a limited impact on organizational effect"*[38].

Knowledge sharing is often confused with information sharing because of the latter's obvious visibility. Confusion between information and knowledge can lead to an incomplete understanding about KM and consequent confusion in implementing KM. Thus, some scholars attempted to distinguish knowledge from information. Zeleny (2005) confirmed: *"Knowledge is purposeful coordination of action"* and *"Information is symbolic description of action"*. Again, he asserted: *"while knowledge management should include information management, information management cannot include knowledge management"*[26]. Information sharing itself is valuable for enterprises and difficult to implement, but information sharing is not knowledge sharing.

Knowledge sharing is much more challenging. Information can be easily detached and transferred from the original sources without losing its meaning, but knowledge has to be shared within a specific context for its essence to be grasped [39].

KS remains the most challenging aspect of KM in organizations [40-41], because its effectiveness depends primarily on difficult-to-control human variables, from the person who shares to the person who receives. KS achieves its goal only if the recipient is able to use transferred knowledge, so knowledge must go through a recreation process in the receiver, thus depending upon the recipient's cognitive capacity [42]. Ives et al. (2003) examined KS in the context of human performance and found out a set of 10 inter-related factors that contribute to success of KS in organization [43]. This approach to KS in enterprise is a significant progress in KM. After a long period relying primarily on the development of IT systems, current research on KM tends to center on the issue of KS – how to make people share knowledge. Cabrera and Cabrera (2005) (based on analysis of theories of reasoned action, social capital, social dilemma, and social exchanges) identified some people management practices as most effective in fostering knowledge sharing in the organization: work design, staffing, training and development, performance appraisal, compensation, culture, and technology [44]. However, “...*what draws people to share (knowledge) is different in various organizations and matches the company's core values as well as the look and feel of other organizational processes*” [45].

Knowledge application

Knowledge application is the ultimate objective of KM. It was asserted that knowledge is action – “*what is doing is knowing*” [26, 46]. Without the application, knowledge has no value. The knowledge-based theory of the firm claims that the source of competitive advantage of the firm resides in the application of the knowledge, but not the knowledge itself [31].

KM's core functions are (1) organizing the current knowledge in the firm and (2) facilitating the creation of new knowledge [47]. The concept of new knowledge is rather relative. The existing knowledge of this person can be new to another one. And applying new knowledge means changing the existing habit/manner of doing things or sometimes it also means changing the value perception of the human being. Thus, knowledge application is challenging. It requires special mechanisms for knowledge to be applied in the firm and to create organizational capability. According to Grant (1996), these mechanisms are directives, organizational routines, and group problem solving and decision making [22]. Directives include the specific set of rules, standards, procedures,

and instructions. Organizational routines mean the development of task performance and coordination patterns, interaction protocols, and process specifications. The group problem solving and decision making are established when the directives and organizational routines are not applicable.

2.2.3. *KM enablers*

Chauvel and Despres (2002) defined knowledge management enablers as the structural or functional conditions in an organization that are responsible for the success of a knowledge management initiative [48]. Lee and Choi (2003) considered them as the mechanism or factors for facilitating knowledge creation, sharing, application, and protection within organization [49]. Previous studies have identified many different factors which impact on the success of knowledge management program. Davenport (1998) mentioned that the link to economic performance or industry value, technical and organizational infrastructure, standard and flexible knowledge structure, knowledge-friendly culture, clear purpose and language, change in motivation practices, multiple channels for knowledge transfer, and senior management support are critical for the success of KM in an organization [4]. Later, Lee and Choi (2003) stated that collaboration, trust, learning, centralization, formalization, T-shaped skills, and IT support are the important enablers for KM [49]. From the point of resource-based view, Chuang (2004) indentified that technical resource, structural resource, culture resource, and human resource play the decisive role in the development of KM [50].

In 2006, in his related work, Yeh et al (2006) identified corporate culture, people, information technology, and strategy and leadership as the success drivers of KM [51]. We can see the multidirectional approaches in previous related studies. This consequence was caused by the fact that the concept of knowledge and knowledge management are not static but changing according to the specific context, specific approach. Respecting the impact factors of KM at the organizational level, adopting the institution-based view, it's believed that the role of enablers are different in certain context; Even some factors can be the KM enablers in this context, but in another one, they may not become the KM enablers any more. Moreover, KM enablers are different (or at least, their roles, their contributions are different) in each stages of KM maturity.

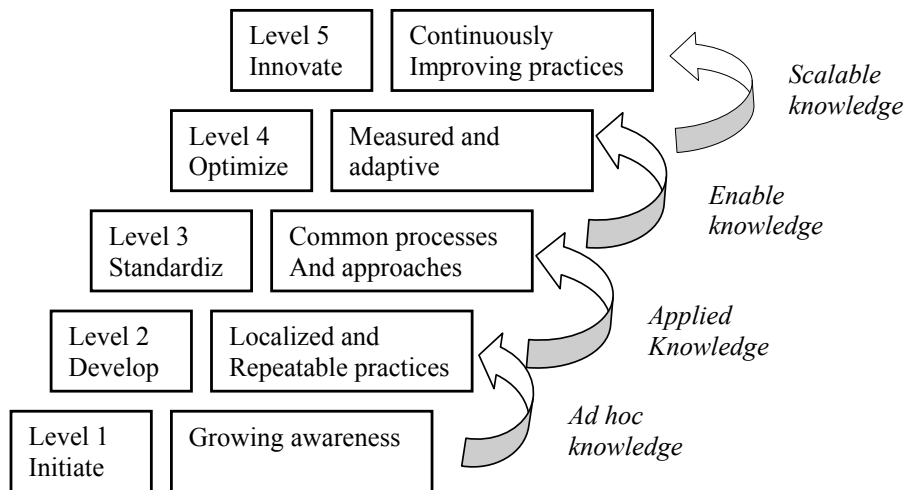


Figure 2.3: APQC's Stages of Knowledge Management Maturity – Source: APQC. www.apqc.org

2.3. Knowledge Management for SMEs

Businesses can be classified by size. Economic statistic categorization may vary somewhat across countries. SMEs tend to differ from large ones in many ways. Ghobadian and Gallear (1997) saw differences in the structure of company, processes, procedures and behavior as summarized in Table 2.1 [52]. According to this vision, a business is small because it is at the early stage of development, or it has not enough resources to become big. There is a considerable pre-agency theory literature on organizational theory and design which documents size as only one among many factors associated with formalization, differentiation, centralization, etc. In practice, doctors' offices and small clinics, some fast food restaurants and small security firms are familiar examples of small firms possessing a high degree of organizational structuring and formalization. However, SMEs don't manage knowledge in the same way as the large ones [53].

As mentioned above, literature has shown that it is not correct if we consider all enterprises are the same - *'the issue that small and medium-sized business will face will not be simply a scaled-down replica of large-company experience'* [7]. There are still very few studies which examine KM issues related to small business [21, 54-55]; SMEs are operating under many pressures (local and global competition, fluctuation in human resources, lack of funding, lack of management skills, etc.).

These pressures are more critical to SMEs because of the indispensable disadvantages caused by the limit of size and inner capabilities. Literature has asserted that KM practices are different in SMEs comparing to the large firms [56-57], but there is the void of in-depth differentiation. The following sub-sections review literature about knowledge sharing issues – the core process of KM and the enablers for KM in SMEs.

Table 2.1. Basic differences between large and SMEs

Large firms	SMEs
Structure Multilayer hierarchical Rigid divisional structure Multiple sites	Flat (single-layer) Flexible structure Normally single site
Procedures & Processes High degree of standardization & formalization System dominated Complicated decision making process Rigid & formulated process Control– oriented	Low degree of standardization & formalization People dominated Simple decision making process Flexible process Result – oriented

Source: Compiled from “TQM ad organization size” – Abby Ghobadian and David Gallear (1997)

2.3.1. KM enablers in SMEs

Existing research reveals only a few studies about KM application in SMEs, especially in the context of developing countries. Those studies recognized significantly different issues for implementing KM in SMEs. Wong (2005) criticized that the success factors for implementation of KM proposed by and Davenport [2, 58] are ‘*too specific which might be hard to generalize across organizations*’ [56]. With an effort to systemize the factors those affect the success of KM implementation of SMEs, Wong analyzed different sets of critical factors identified by different authors and took into account the distinctive issues of SMEs, the set of 11 factors was proposed. Wong’s 11 factors and some other remarkable KM enablers’ sets proposed by different scholars are synthesized in Table 2.2.

In the discussion of proposed factors, the typical characteristics of SMEs were not focused and mentioned as the driving elements of determined critical (or success) factors of KM implementation of SMEs. The result was empirically assessed by academics and few practitioners, but not empirically tested yet.

Pillania (2005, 2006, 2008) published a series of papers about KM related issues in SMEs, but the data used for analysis and discussion in these papers merely based on the empirical research in the automotive manufacturing sector in India, and focused on some aspects of KM in SMEs in India. Thus, as he confirmed, there is the need to carry out the research in other sectors systematically.

Table 2.2. Comparisons of some set of KM enablers

Skyrme and Amidon (1997)	Davenport et al. (1998)	APQC (1999)	Wong (2005)
Knowledge leadership	Senior management support	Leadership	Management leadership and support culture
A knowledge creating and sharing culture	Knowledge friendly culture	Culture	
A well developed technology infrastructure	Technical infrastructure	IT infrastructure	IT
Strong link to a business imperative	Standard and flexible knowledge structure		Strategy and purpose
A compelling vision and architecture	Clear purpose and language		
	Link to economic performance or industry value	Measurement	Measurement
	Organization infrastructure	Structure, roles and responsibilities	Organizational structure
Systematic organizational knowledge processes	Multiple channels for knowledge transfer		Processes and activities
Continuous learning	Change in motivational practices		Motivational aids
			Human resource management
			Training and education

Source: Compiled from "Critical success factors for implementing knowledge management in small and medium enterprises" – Wong, K.Y (2005)

2.3.2. Knowledge sharing issues in SMEs

Among KM processes, knowledge sharing (or knowledge transfer) is considered as the most critical process of KM, and the way to implement it in SMEs is determined by size and typical characteristics of SMEs. Thus, it is especially discussed in this sub-sector.

A literature survey has shown that among numerous KM studies, only a very few are specifically target KS [59]. It is all too difficult to find any systematic research that focuses on KS in SMEs. According Desouza and Awazu (2006), common knowledge of employees of SMEs is deep and broad, and it can actively support small business in KS[53]. Ngah and Jusoff (2009) stated that most of knowledge in SMEs is tacit, hence informal face-to-face social interaction is the most effective technique used in sharing knowledge in SMEs [60]. Yang (2004) has confirmed this proposition in his research – “*Normally, the sharing climate seems to be informal*”[61]. In most studies relating to KS, it’s believed that KS can be supported by social factors such as ‘trust’, ‘emotional commitment and the quality of the relationship’ [39, 61-62]. The argument of these authors implies that KS happens in the appropriate environment, normally an informal one, and will happen naturally if properly facilitated. All of these conclusions correspond to the vision of small businesses being informal versus the formality of large firms. Within this vision, recommended solutions for fostering KS in organizations vary from creating the appropriate working environment for employees to arranging social activities for the purpose of sharing. And the small firm, with its alleged typical characteristics presented in Table 2.3 seems having the advantage over a large company in implementing KS as it is *assumed* that when company is small, it is more easily controlled and directed. Moreover, the owner is also a manager of the small business, which should provide greater executive power. If the owner of a small business has strong commitment to implementing KM, then it is *assumed* that there would not be any significant barrier for KM or KS implementation in the company.

This overview of the literature seems to point out a great opportunity for small business. Implementation of KM in the SMEs is still scarce [54]; and despite the theoretical advantage of relative informality that should facilitate KS, the number of small businesses that explicitly exploit KS is still limited. The differences between large firms and small firms in practicing KS are compiled in Table 2.3.

The Institution-based view has shown that, while studies focusing on technical core elements, such as organizational tasks and technology, are likely to find “no significant problem in applying mainstream theories in these countries”, studies focusing on the organization’s relationship with its broader environment (context-based) are more likely to find “serious difficulties in applying mainstream theories in developing countries, thus necessitating major adjustments” [50].

Table 2.3: Comparisons KS in small and large firms – Compiled from the current literature

	Large company	Small company
Knowledge	Types of knowledge for sharing: Explicit & tacit [60] Formal and informal modes of sharing [27, 60] Primary emphasis upon internal knowledge flow [7]	Type of knowledge for sharing: primarily tacit Basically informal modes of sharing Less emphasis upon internal aspects of knowledge, but greater emphasis upon external aspects.
IT	Fragmented common knowledge [53] Important role of IT system [7, 63];	Deep & broad common knowledge Limited impact of IT system
Champion	The most active role in KS - CKO (Chief Knowledge Officer)	Direct involvement of Owner - Manager

Source: Compiled from the current literature

Knowledge Management is an area of management and organizational behavior, therefore the application of KM varies as to the context of its requirements and circumstances.

2.4. Chapter conclusion

KM has more than two decades of official recognition and development since 1991, when the work of Nonaka was first published in English. It has attracted various academic scholars and practitioners. Many publications have reviewed the literature of KM with the attempt to systemize different approaches in the field to provide a profound background for the researchers and practitioners [46, 64-65]. Despite a huge number of KM studies, there are very few focused on the context of developing countries. While KM belongs to organizational behavior science, it requires adaption to different contexts and thus requires more systematic studies to extend the theory as well as to provide guidelines to practitioners.

CHAPTER 3. VIETNAMESE ECONOMY & SMEs



Figure 3.1. Map of Vietnam

This chapter's objective is to provide some background on the most typical characteristics of the Vietnamese economy, which not only directly and strongly influence the performances of SMEs but also regulate their operations.

Vietnam is a country of more than 86 million people in an area of 331,114 sq. km located in Southeast Asia (See the map of Vietnam – Figure 3.1). After more than 30 years of continuous fierce wars and reunification in 1975, Vietnam fell into the economic stagnation. The Socialist Republic of Vietnam was established in 1976, a very critical time for the country. In 1986, the Sixth Communist Party Congress approved broad economic reform (called “Doi Moi” in Vietnamese) which led the country to the totally new stage of development. The economic reform has taken place in many sectors, but typically has focused on these three main areas:

- Transformation from a centrally planned and controlled economy to a market economy regulated by the government (so-called socialism-oriented market policy).
- A gradual shift from the policy of giving priority to the state-owned enterprises and collective entities to the policy of developing multi-sector businesses including a formal acceptance of private sector.
- Investment policy changes from the former emphasis upon heavy industries to policies of priority for development of food and consumer goods production and the production of goods for export.

This economic reform has dramatically improved Vietnamese economy. Amazingly, from a country that had to rely mainly on imported food during the 80s, Vietnam has become one of the world's second-largest exporters of rice, coffee and spices. Some of milestones in Vietnam's economy development are as follows:

- 1975: The war stopped. The Southern and the Northern parts of Vietnam were reunited.
- 1976: The Socialist Republic of Vietnam was officially established.
- 1986: the Sixth Communist Party Congress approved broad economic reform.
- 1994: US lifted the economic embargo on Vietnam.
- 1995: Vietnam became a member of ASEAN.
- 2002: Vietnam – US trade agreement was signed.
- 2006: Vietnam became a member of WTO

- 2007: Full realization of AFTA (ASEAN Free Trade Area)

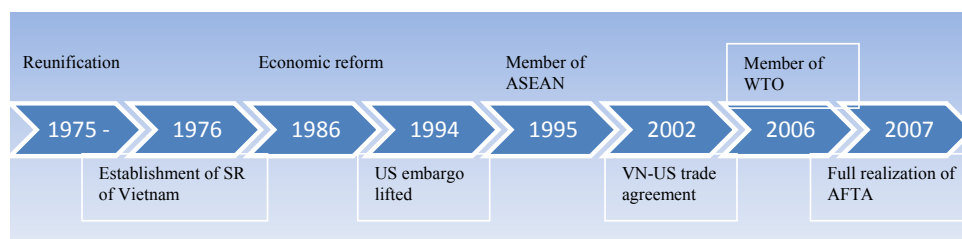


Figure 3.2: The milestones that significantly affected the Vietnamese economy

3.1. Vietnam’ socio-economic panorama:

3.1.1. Some macroeconomic figures

With the “Doi Moi” strategy, Vietnam became one of the fastest-growing economies in the world, averaging around 8% annual gross domestic product (GDP) growth from 1990 to 1997 and 6.5% from 1998-2003. From 2004 to 2007, GDP grew over 8% annually, slowing slightly to 6.2% in 2008 and 5.3% in 2009, and then recovering to 6.52% through third quarter 2010 (Figure 3.2).

Export products of Vietnam include crude oil, garments/textiles, footwear, fishery and seafood products, rice, pepper, wood products, coffee, rubber, and handicrafts. The major markets for these products are U.S., EU, ASEAN, Japan, China, and South Korea. In 2009, affected by the global crisis, Vietnam’s exports (\$56.6 billion) declined by 9.7% while imports (\$68.8 billion) were down by 14.7% from 2008. The country was still running a trade deficit, reaching over \$12 billion (GSO, 2010).

Inflation has been a persistent problem for Vietnam (Figure 3.3). Last year the inflation rate hit 11.75 percent and it has been increasing continuously from the beginning of 2011. The fact that the Vietnamese dong was devaluated two times during last few months (the latest time – in January 2011 - it was 9.3%) is a signal of the serious weakness of the national economy and the embarrassment of the central government at the macro economical level. In spite of this battle to control inflation, Vietnam is considered as an attractive place for international investors because of the country’s success in keeping prices low and the stability of the political regime. On the other hand, this competitive edge is threatened by a heavy dependence on imported materials (80 percent of products use imported materials, mainly from China) and Vietnam is “too far downstream in the global supply chain”, where the profit margin is very small [66].

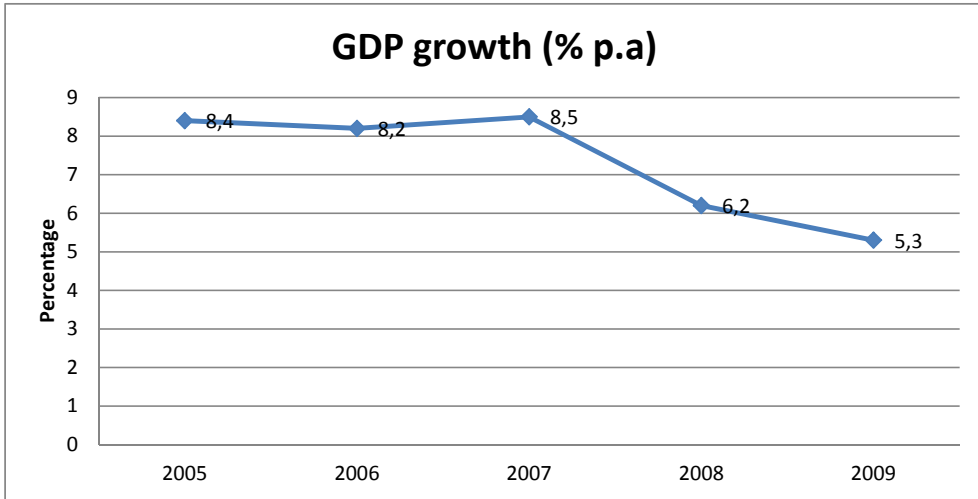


Figure 3.3. GDP growth of Vietnam- Source: GSO of Vietnam (2009)

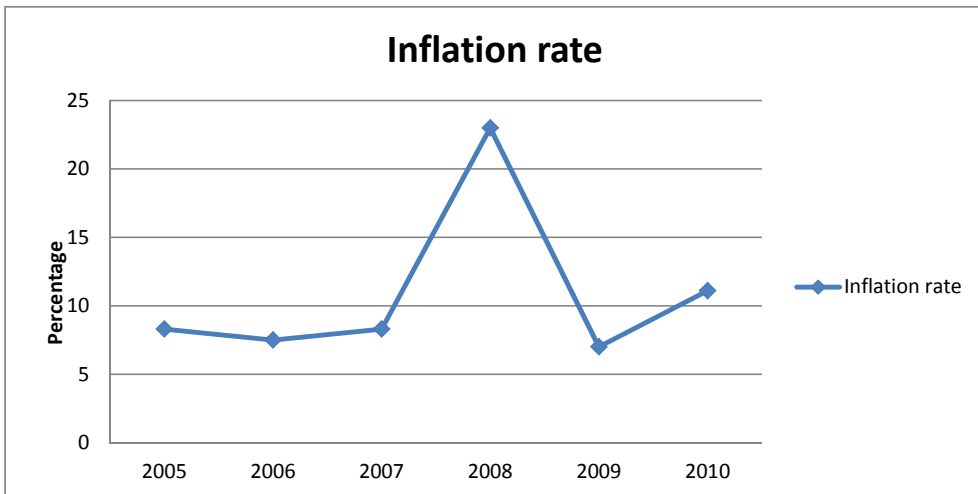


Figure 3.4: Vietnam inflation rate from 2005-2010. Source: General statistics office of Vietnam

Despite the GDP growth of 7.26% per year during over last 10 years, Vietnam still underperforms in terms of quality, productivity, efficiency and the competitiveness of the economy, and macro balances are unstable. Export products from the country are mostly raw materials and industrial goods are mainly manually made. Productivity is much lower than that of other regional economies (Table 3.1).

The Vietnamese Government has privatized state-owned enterprises (SOEs), but the implementation has been slowing down. In reality most of the large corporations (including banks and key industries such as aviation, oil, electricity, telecommunication, etc) still operate under the umbrella of the government. Within the framework of economic reform, while subsidies to SOEs have been cut state-owned enterprises still have privileged access to resources, especially to land and capital.

Table 3.1. Manufactured exports, 2000 – 2008

Country	Value of manufactured export (bil. USD)			World market share			Annual growth rate		
	2000	2005	2008	2000 %	2005 %	2008 %	2000-2005 %	2005-2008 %	2000-2008 %
Cambodia	1.1	3	4.6	0.02	0.03	0.03	22.2	15.4	19.6
China	228.4	722.6	1,370.1	3.79	7.44	9.51	25.9	23.8	25.1
Indonesia	42.9	55	82.4	0.71	0.57	0.57	5.1	14.4	8.5
Korea, Rep.	166.5	277.7	409.4	2.76	2.86	2.84	10.8	13.8	11.9
Malaysia	87.5	120.4	140.1	1.45	1.24	0.97	6.6	5.2	6.1
Philippines	36.6	39.4	45.2	0.61	0.41	0.31	1.5	4.6	2.7
Singapore	129.6	215.4	303.7	2.15	2.22	2.11	10.7	12.1	11.2
Thailand	58.7	95.9	149.1	0.97	0.99	1.04	10.3	15.9	12.4
Vietnam	6.8	17.5	41.2	0.11	0.18	0.29	21	33	25.4

Source: UN Comtrade, available at: <http://comtrade.un.org/db/default.aspx>

The macro-economic issues have caused a lot of difficulties for enterprises in Vietnam. In addition to these challenges, there are still other factors that are challenges for doing business in the country, especially for the private enterprise, such as limited access to financing, policy instability, inadequately educated workforce, inadequate supply of infrastructure, foreign currency regulations, tax regulations, poor work ethic in the national labor force, corruption, tax rates, etc [66]. Many of these challenges are captured by the Economic Freedom Index.

3.1.2. Vietnam's economic freedom [67]

Economic freedom is an index that indicates the freedom level of a country's economic environment. It is assessed and published by The Heritage Foundation. Every year, the economic freedom indexes of 183 countries have been evaluated and published. It is calculated basing on 10 different sub-indexes including business freedom trade freedom, fiscal freedom, government spending,

monetary freedom, investment freedom, financial freedom, property rights, freedom from corruption, labor freedom, and ranking from 1 (minimum) to 100 (maximum). In 2011, Vietnam’s economic freedom score is 51.6, ranking at the 139th position in the 2011 Index (see Figure 3.5 – Country comparisons) with the detailed scores of 10 pillars described in Table 3.2. In the Asia – Pacific region, Vietnam is ranked 30th out of 41st countries. The overall score of 51.6 of Vietnam is lower than the world and regional averages.

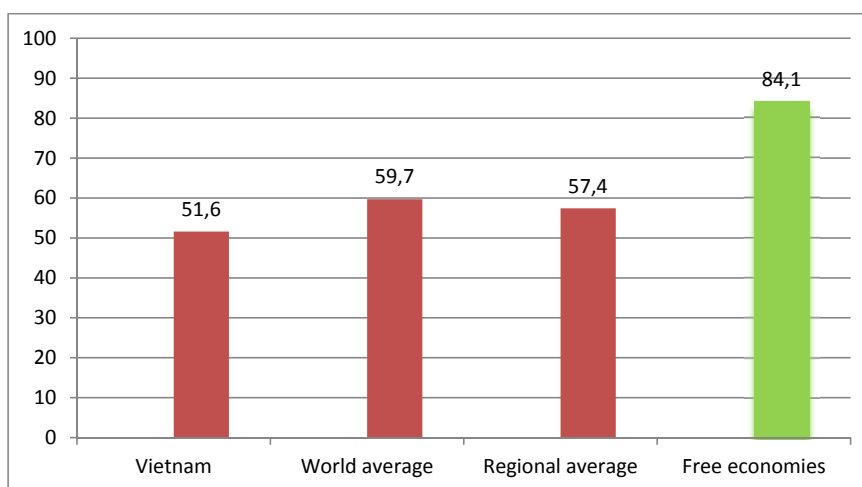


Figure 3.5. Vietnam’s economic freedom index in comparisons – Available at: <http://www.heritage.org/index/country/Vietnam>

Table 3.2. Economic freedom of Vietnam

Score	Component	World average	Score	Component	World average
61.6	Business freedom	64.3	15.0	Investment freedom	50.2
68.9	Trade freedom	74.8	30.0	Financial freedom	48.5
75.9	Fiscal freedom	76.3	15.0	Property rights	43.6
75.1	Government spending	63.9	27.0	Freedom from corruption	40.5
79.1	Monetary freedom	73.4	68.2	Labor freedom	61.5

Source: <http://www.heritage.org/index/Country/Vietnam>

Despite ongoing reform efforts, the regulatory environment is still not efficient or transparent. Bureaucracy, corruption, weak judiciary, vulnerable policies... have caused a lot of disadvantages for doing business in Vietnam.

3.1.3. Corporate governance in Vietnam

In the report of Vietnam competitiveness 2010, Porter assessed that “*despite impressive growth in quantity, sophistication and quality of companies in Vietnam remain weak*” (p.95). The weakness is obviously reflected via some indicators such as weak corporate governance and transparency, the limited role in policy dialogue and advocacy, and the low level of education and extent of staff training [66].

In the national competitiveness report 2008 - 2009 of the Republic Korean Institute for Industrial Policy Studies, Vietnam is ranked lowest among peer countries in corporate governance and restructuring efforts (Figure 3.6). The number of companies with advanced international management standards is still limited. Most firms are still managed by the experiences of CEOs without any standards or set rules, especially among SMEs. The weakness of corporate governance and information disclosure of firm operations are issues which cause the investors’ and business partners’ concerns when dealing with local firms.

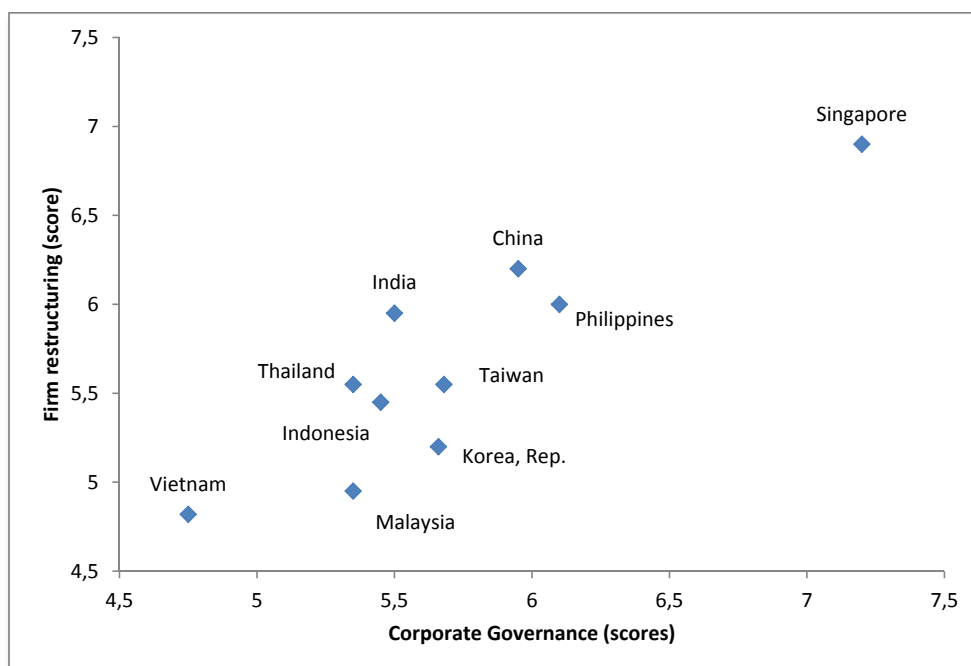


Figure 3.6. Corporate governance and restructuring efforts, 2008-2009 – Source: Korean Institute for Industrial Policy Studies, National Competitiveness Research 2008-2009 in (Porter, 2010)

3.2. SMEs in Vietnam

3.2.1. Definition and the role of SME in Vietnamese economy

Definition

According to Government Decree 90/2001/ND-CP dated 23 November 2001, SMEs in Vietnam are defined as ‘independent production and business establishments, which make business registration according to the current law provisions, each with registered capital not exceeding VND 10 billion or annual labor not exceeding 300 people’ (10 billion VND ~ 600,000 USD – by the exchange rate in 2001).

This means in practice that SMEs include all enterprises set up and operating under the Enterprise Law, the State Enterprise Law, the Cooperative Law, and the business households making registration under the Government Decree No. 02/2000/ND-CP of the Government of February 3, 2000 on business registration. In other words, SMEs include many forms of business organization such as state-own companies, private enterprises, limited companies, joint stock companies, cooperatives and business households or family businesses.

Decree 56/2009/ND-CP became effective as of 20 August 2009 (See Appendix 1), and replaced the government Decree 90/2001/ND-CP dated 23 November 2001 on supporting development of SMEs. This decree defines SMEs as follows: Small and medium-sized enterprises are business establishments that have registered their business according to law and are divided into three levels: very small, small and medium according to the sizes of their total capital (equivalent to the total assets identified on an enterprise’s accounting balance sheet) or the average annual number of laborers (total capital is the priority criterion), as indicated in Table 3.3.

The current definition has been updated to reflect the practical changes of business in Vietnam. While a manufacturing company is considered a small one with 100 employees (most of them are workers – The number of workers is big as our business model now is still labor-intensive), a trade or service company with more than 50 employees is considered a medium-sized firm.

SMEs’ contribution to the socio-economic development of the country is recognized, especially in job creation and increasing income as indicators of poverty reduction – “*The private sector was responsible for nearly all the new jobs created in Vietnam between 2000 and 2008*” [68]. The number of SMEs is increasing and has become the most dynamic driver of the national economy.

Table 3.3. Classification of SMEs in Vietnam

	Very small enterprises	Small-sized enterprises		Medium-sized enterprises	
	Number of employees	Total capital	Number of employees	Total capital	Number of employees
I. Agriculture, forestry and fishery	10 persons or fewer	VND 20 billion or less	Between over 10 persons and 200 persons	Between over VND 20 billion and VND 100 billion	Between over 200 persons and 300 persons
II. Industry and construction	10 persons or fewer	VND 20 billion or less	Between over 10 persons and 200 persons	Between over VND 20 billion and VND 100 billion	Between over 200 persons and 300 persons
III. Trade and service	10 persons or fewer	VND 10 billion or less	Between over 10 persons and 50 persons	Between over VND 20 billion and VND 50 billion	Between over 50 persons and 100 persons

Note: 2009 Exchange rate is 1 USD ~ 18.000 VND

Table 3.4. Number of registered enterprises 2000-2009

Year	Number of registered enterprises	Growth rate %	Accumulated number
2000	14.453		14.453
2001	19.642	35.90	34.095
2002	21.668	10.31	55.763
2003	27.774	28.18	83.537
2004	37.306	34.32	120.843
2005	39.958	7.11	160.801
2006	46.744	16.98	207.545
2007	58.196	24.50	265.741
2008	65.319	12.24	331.060
2009	84.531	29.41	415.591

Source: Agency for Enterprise Development – The Ministry of Planning and Investment - Vietnam

Figure 3.7 demonstrates the GDP structure by ownership of Vietnam in 2000 and in 2009. The figure shows contribution of state-own, FDI and private

sectors to GDP. We can see that enterprises in the private sector play an important role in the national economy (48.4% in 2000 and 48.80% GDP in 2009). There is no statistic available for the exact contribution of SMEs to GDP, but taking into account that 98.4% private enterprises are SMEs and the number or SMEs among SOEs is increasing rapidly in the last few year because of the privatization process, we may estimate the percentage of SMEs contribution in the national economic growth.

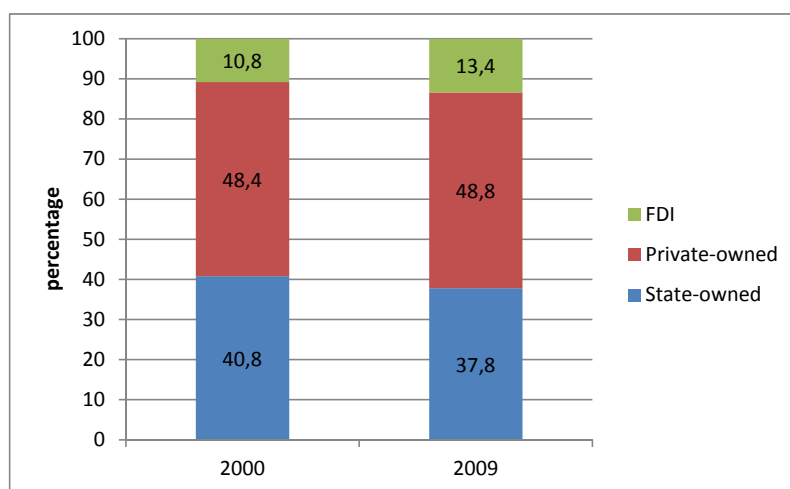


Figure 3.7. Vietnam GDP structure by ownership in 2000 and 2009 – Source: GSO Vietnam

3.3.2. SME's issues

Although the business environment has improved and is more supportive, many obstacles still remain for real business development in Vietnam (as mentioned in part 3.1), especially for privately – owned SMEs. In this subsection, SMEs' issues are discussed by classifying into them two main groups: macroeconomic issues and the issues of SMEs themselves.

Macroeconomic related issues:

A survey conducted in 2009 by the VCCI-ACI revealed that 65.1% of the companies (with a sample size of 63.000 firms) asserted that exporting would be very important for their business development in the following year. Thus the global crisis has strongly affected Vietnamese business, including a large part of SMEs.

There is still the discrimination between state-owned enterprise (SOE) and privately owned enterprise (POE). In comparison with SOE, POE's access to

financing is much more limited. While SOE have the privilege of getting granted governmental funds or having the support from government as the guarantee for a debt, SMEs have to bear the fluctuant and high interest from commercial banks with strict conditions. Beginning in the last months of 2009, Vietnam government decided to tighten the money supply by increasing interest rates (Saving interest in April is 17%) [69]. The high inflation rate and changing monetary policy cause a lot of problem for enterprises; And SMEs are the first ones who are suffered.

Another issue is SMEs' difficulties in accessing public premises. While SOEs own public lands with very cheap rental fee, POEs have to struggle for having a space for their factories or companies. In most of the cases, POEs have rented infrastructure from SOEs.

Vietnam has achieved much success on its way towards a market economy, but is still at the very first step. Distortion of the market has badly influenced the operation of SMEs. The lack of transparency in information and limited access to information and forecasts from the governmental entities don't facilitate the SME's operation in spite of new government programs launched to support SMEs.

Internal issues

Beside difficulties caused by the macro business environment, SMEs also have their own internal problems. Despite the quick development in number of SMEs, the capacity of SMEs is limited. The average size of SMEs in Vietnam is rather small with about 50 employees and less than 500,000 USD of property while lacking of the collaboration among SMEs in the same field. This is an obstacle for SMEs to move from labor-intensive to capital-driven economic model, and to invest in new technology or to meet the bigger demand from customers.

The low educational background of the business owners who normally also work as the CEOs of firms is a critical issue of SMEs in Vietnam. A survey conducted by the Vietnamese authorities among 63.000 enterprises throughout Vietnam in 2009 revealed that 43% of enterprises top managers haven't graduated from high school and only 2.99% were University postgraduates [70]. There are more than 40% of entrepreneurs never attended any business training courses (National scientific study 2009 in Porter 2010). These figures can explain why the quality of corporate governance in Vietnam is too low. The background of entrepreneurs decides the vision of doing business – Where they want to go, what they can do, and how they can do. Strategic plan is rarely paid attention in Vietnamese SMEs. This weakness among SMEs is the main barrier

to move from the labor-intensive business model to the knowledge-driven business model, which is considered the most effective business model today.

3.3. KM in Vietnam

The World Economic Forum has classified Vietnam into the group of countries at the first stage of economic development. In its assessment of the competitiveness of world economies for 2009-2010, Vietnam was ranked 75 among 133 countries. According to this assessment, in comparison with other economies/countries in the region, Vietnam was ranked higher than Philippines and Cambodia only (Laos and Myanmar are not in the evaluated countries). The overall index is determined by three sub-indexes including basic requirements, efficiency enhancers, and innovation factors. These three groups of sub-indexes comprise of 12 pillars: institution, infrastructure, macroeconomic stability, health and primary education, higher education & training, goods market efficiency, labor market efficiency, financial market sophistication, technological readiness, market size, business sophistication, and innovation [71]. The competitiveness index rank of Vietnam and some regional countries in 2009-2010 is presented in Table 3.5.

Even in 2010, Vietnam has moved up 20 points, but its competitiveness is still low not only in the global ranking (75/132 economies), but also in the regional ranking (only higher than Philippines and Cambodia). Current Vietnamese economy development model is mainly based on low labor cost and intensive capital investment. To achieve the next 10-year strategic objective of become a middle-income country, Vietnam economy needs to raise productivity and competitiveness as the core of growth. In the same report, Porter suggested what Vietnam government needs to do to improve the competitiveness at the national level including improvement of education and training (the first solution), technological innovation. At the company level, academic researchers have proved that KM is an effective strategic tool to create the competitive advantage [18, 32, 72-73].

Vietnam economic structure cannot become any more productive by relying merely on low labor cost and capital investment. According to the World Bank survey, Vietnam is still lagging in the development towards a knowledge based economy (Table 3.6). There are two basic indexes which affect the ranking of a country. KEI (The Knowledge Economy Index) is the index of the country environment to demonstrate the level of facilitating the effective use of knowledge for economic development. It is calculated basing on four pillars related to the knowledge economy: Economic incentive and institutional regime, education, innovation, and ICT. KI (The Knowledge Index) measures the ability

of country to generate, adopt, and diffuse knowledge. KI is calculated mainly basing on three pillars: Education, innovation, and ICT.

Table 3.5. Competitiveness Index Rank of Vietnam and Seven Regional Countries over 133 Economies in 2009-2010

Country	Overall index		Sub-indices					
			Basic Requirements		Efficiency Enhancers		Innovation Factors	
	2009	2010	2009	2010	2009	2010	2009	2010
Singapore	3	3	2	3	2	1	10	10
Korea, Rep.	19	22	23	23	20	22	16	18
Malaysia	24	26	33	33	25	24	24	25
Thailand	36	38	43	48	40	39	47	49
Indonesia	54	44	70	60	50	51	40	37
Vietnam	75	59	97	74	61	57	55	53
Philippines	87	85	95	99	78	78	74	75
Cambodia	110	109	112	113	103	103	107	106

Source: The World Economic Forum

The report of Vu Hong Dan in “Knowledge Management in Asia: Experiences and Lesson” – A report of the APO survey on the status of KM in member countries is the first official document that mentions about KM in Vietnam [74]. In this report, she revealed that KM is very new concept in Vietnam in general and in the country’s firms and organizations in particular: “... So far, this concept has not been mentioned in any official government policy or document. It has been introduced by the Vietnam Productivity Center (VPC) in several workshops, awareness-training courses, and pilot projects conducted since the beginning of 2000. But these are only a few small beginning steps, and very limited audiences have been introduced to the concept. Some large foreign companies may be applying it, since it is already used in their parent companies abroad. Otherwise KM is still new to other kinds of organizations, including the research institutes (pp.344).

In the same study, Vu Hong Dan also mentioned that “although almost there is no significant attempt has been made in Vietnam to apply KM, some practices in the country have laid down a good foundation/promotion for KM applications in the future, including the application of KM in the SME sector” (pp.344).

Table 3.6. Knowledge Indicators of Vietnam in comparison with regional economies in 2009

Country	Rank in all countries	KEI	KI	Economic Incentive Regime	Innovation	Education	ICT
Korea, Rep.	20	7.82	8.43	6.00	8.60	8.09	8.60
Singapore	26	8.44	8.79	9.68	9.58	5.29	9.22
Malaysia	54	6.07	6.06	6.11	6.82	4.21	7.14
Thailand	57	5.52	5.66	5.12	5.76	5.58	5.64
Philippines	93	4.12	4.03	4.37	3.80	4.69	3.60
Vietnam	97	3.51	3.74	2.79	2.72	3.66	4.85
Indonesia	105	3.29	3.17	3.66	3.19	3.59	2.72
Lao PDR	120	1.94	2.09	1.47	2.00	2.25	2.03
Myanmar	130	1.34	1.69	0.31	1.30	3.06	0.70
Cambodia	134	1.56	1.54	1.63	2.07	1.93	0.62

Source: World Bank website

This good foundation/promotion includes raising awareness about the knowledge-based economy, the government effort to develop the information and communication technology, the high priority of science and technology in official policy document, the governmental program to support the development of knowledge assets in firms aiming at increasing the awareness of Vietnamese firms of the protection of intellectual property rights, and the increasing number of enterprises who have been applying international standard management tools, and the governmental program to promote SMEs [74]. This report was made in 2008, and after three years, there is no any significant progress yet. If in 2008, among 128 countries, KEI of Vietnam ranked at the position 71st, in 2010, among 145 countries, Vietnam stood at 97th position with a slightly higher KEI (3.51/2.92).

3.4. Chapter conclusion

In this chapter, some basic economical figures of Vietnam were presented, outlined the “panorama” of Vietnamese economy at the current time. In such tough business environment, SMEs face a lot of difficulties. SMEs, with their typical characteristics, are the most sensitive entities in the economy. Thus, they need to be handled with care by all government. Vietnamese government has tried to support SMEs but still fails to provide what business really needs – A fair, transparent and stable business environment, and the easy access to the public properties such as capital market and land.

When other countries in the region have already begun their journey toward the knowledge-based economy, Vietnam is still at the start. The obvious consequence is the competitiveness of the country is almost at the lowest level not only of the worldwide ranking but also of the regional ranking. At the company level, KM is not paid adequate attention even at the large corporations in Vietnam, and then it is considered a luxurious management tool for SMEs. People also think that it is expensive and only connects with the high technology or innovation, or R&D, etc. Accordingly, the few practitioners who have heard of KM believe that KM is inapplicable and impossible for SMEs in such a developing country as Vietnam. Taking the different approach on KM, the author believes that KM is a natural requisite for effective general management and there are several ways to practice KM depending on each company's conditions. SMEs can harness the advantages of KM to have better integration into the global market. However, their KM implementation must be different from that of large companies in the same country, as well as from the SMEs in the different institutional environments with different level of available resources.

KM needs to be considered at the strategic issue not only at the organizational level but also at the country level. If Vietnamese firms can practice it well, it would turn the national economy into knowledge – based one and contribute effectively to the structure change of the national economy in the positive way.

The review of the literature (Chapter 2) and the overview of Vietnamese SMEs and their role in the economy and institutional context of Vietnam (Chapter 3) set the stage for the empirical work described in this dissertation. This empirical research investigated the perception, practice, and utility of KM among Vietnamese SMEs.

CHAPTER 4. RESEARCH DESIGN

4.1. Grounded theory approach

This thesis dissertation describes research on KM issues for SMEs in Vietnam. Studies on KM for SMEs in the context of developing countries are still rare. Further, at the time of writing, this research is the first such study in Vietnam. The author, who possesses experience in running small businesses and having observed SMEs' operations in Vietnam for many years, believes that businesses in developing countries are struggling to implement knowledge management without being aware of it. This experience suggested the following questions: *What is really going on in SMEs related to KM? What are the KM issues of SMEs and how are they trying to deal with them? Is there any better way for SMEs to solve these problems?*

The nature of these research questions partially determined the methodology to be used. The state of current research further contributed to the choice of methodology. Although hands-on experience suggested the basic research questions, it was important to align this naïve inquisition with work already done by other researchers. The literature review revealed two main relevant streams in KM empirical studies:

- The search for KM success factors in companies and/or their relationship with company performance [75-78] . Normally, quantitative statistics were employed here answer research questions.
- Deeper studies of one or several aspects/processes of KM in companies [6-7, 79]. The case study approaches are often used in such research.

In general, previous studies in KM aimed at companies/organizations which have implemented KM. In contrast, KM is still a new and unpopular concept in Vietnam [80] not only for businesses but also for government and other regulatory authorities as well as consultant companies.

Taking into account all the related conditions for implementing the research and the objectives of the research, the grounded theory approach was chosen to set up the direction and to develop the hypotheses of the research. This grounded theory approach allowed the formulation of hypotheses based on conceptual ideas and the verification of the hypotheses generated by constantly comparing conceptualized data on different levels of abstraction, or discovering the concern and examining how it can be solved [81].

4.2. Research questions

The main research questions are presented in Table 4.1.

Table 4.1. Research's questions

Question 1:	What is the status of KM in Vietnam?
Sub-question 1a:	<i>Are there any official documents of government mentioned about KM in Vietnam?</i>
Sub-question 1b:	<i>Is the concept of KM popular in Vietnam, especially among businesses?</i>
Sub-question 1c:	<i>Are there any SMEs which have practiced KM?</i>
Question 2:	<i>What are the KM-related activities those SMEs are practicing in Vietnam?</i>
Sub-question 2a:	<i>What are the KM-related activities those SMEs are practicing?</i>
Sub – question 2b:	<i>What can be the motivation for SMEs to practice KM-related activities?</i>
Question 3:	<i>Do characteristics of firms somehow relate to the way SMEs deal with KM issues?</i>
Question 4:	<i>How should KM be implemented in SMEs in Vietnam?</i>

4.3. Research development

To answer these questions, the research flow is illustrated in Figure 4.1 was followed.

Employing the approach of the grounded theory, the researcher conducted an orientation survey (Stage 1) among enterprises in Vietnam to have the overview about how SMEs are operating in Vietnam, what are their problems, how they are dealing with these issues, etc. The gathered data from the stage 1 helps to determine the framework of more systematic study. The results from the stage 1 also help the researcher develop variables and formulate the study's hypotheses for the stage 2.

In the stage 2, the associations between determined variables were tested to find out which factors can influence the KM practices of SMEs in Vietnam. In this step, the quantitative statistics are employed to analyze data.

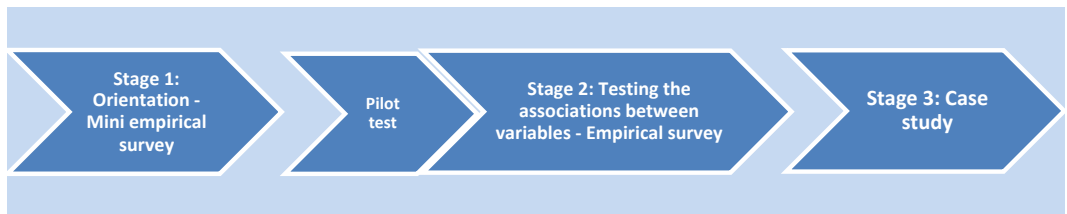


Figure 4.1. Empirical research's flow

The best practice was selected among the firms examined in the earlier stages of this research, and further studied in the stage 3 to find the answer to the following question: *How should KM be implemented in SMEs in Vietnam?* In this step, some aspects of KM and related to firm's characteristics are analyzed and discussed.

4.4. Hypotheses development

As shown in Figure 4.1, research commenced with a mini survey to provide an empirical basis to orient hypothesis development.

These orientation surveys, conducted in the first months of 2010 revealed that even not being aware the term, some SMEs have practiced KM-related activities. Most of companies are facing with human resource problems, and indeed it is KM or somehow related to KM's issues. The most popular issue is the lack of competent employees for their businesses. The issue is paid more attention in companies where CEOs have clear long term development plan and have better educational background. The concern levels of the issue are different between the state-owned companies and private companies. A list of KM activities which are practiced by SMEs in Vietnam also summarized in order to develop the hypotheses for the next stage of the study.

Hypotheses are developed and presented in the two-dimensional matrix as described in the model below (Table 4.2).

According to the results of the orientation survey, KM related activities in Vietnamese SMEs may be determined and grouped in following categories:

1. Information technology application level
2. Advanced management tools & system application level
3. Training effectiveness
4. Record system effectiveness
5. Level that high staff turnover could badly affect on SMEs' businesses
6. Innovation level

Table 4.2: Two – Dimensional Matrix of characteristics of enterprises and KM issues in Vietnamese SMEs

Characteristics of enterprises \ KM issues	Applied information technology	Applied management tools	Training effectiveness	Record system effectiveness	Staff turnover	Innovation
Sector of business						
Age of firm						
Size of firm						
Ownership of firm						
Management vision						

Sector of business

There are various types of businesses in a national economy. The research described in this dissertation focuses on two main sectors, service and manufacturing, to reduce complexity and due to time constraints. Do both these sectors manifest the same KM issues and ways of dealing with those issues?

H1: There is association between the sector of business and the way firm deal with KM issues.

Age of firms

In the literature, there have been many efforts to study the relationship between the firm’s performance and firm’s age [82-84]. In the theories of firm growth there are various determinants those can affect on the performance of firms and age is one of those. In this light, the hypothesis 3 was developed in attempt to find out if firm age can somehow influence the way it deals with KM issues or not.

H2: There is association between the age of business and the way firm dealing with KM issues.

Size of business

SMEs are usually categorized as organizations below a given number of employees (in Vietnam, it is equal or fewer than 300 employees for agricultural and industrial manufacturers and 100 employees for trading and service firms) or a given amount of legal capital (in Vietnam, it's 100 billion VND for agricultural and industrial manufacturers, 50 billion VND for trading and service firms). However, there is lack of homogeneity within SMEs in this category. Although size classifications within SMEs are not the sole differentiating factor, studies have shown that SME size affects behavior, structure, decision-making, process development and leadership style, communications and change implementation, for example TQM [85] Husband and Mandal, 1999). Therefore, the size of a business may be associated with the way that business deals with KM issues.

H3: There is association between the size of business and the way firms deal with KM issues.

Management vision

In previous KM studies, management leadership has been highlighted as the most critical factor that can affect the success of KM in an enterprise [75, 86-87]. Leaders make strategic and operational decisions, set priorities for enterprises. For KM, as it relates to many behavioral changes of organization, the strong support and the actual commitment from top manager are compulsory for the success. And for SMEs in a developing country, it would be more crucial: the role of leader is much more important in the context of a small and resource-poor company where it is tougher to make decision on company's priorities. Vision of company's top management (long-term or short term) strongly influences its behaviors, and KM activities are not exceptional.

H5: There is an association between the vision of management and the way of business dealing with KM issues.

4.5. Chapter conclusion

There is little scientific business research as yet in Vietnam. As a result, it is very challenging to conduct an empirical research in this country. Business people normally have no belief in results from scientific work, and the researching should not expect much interest, support and collaboration from them.

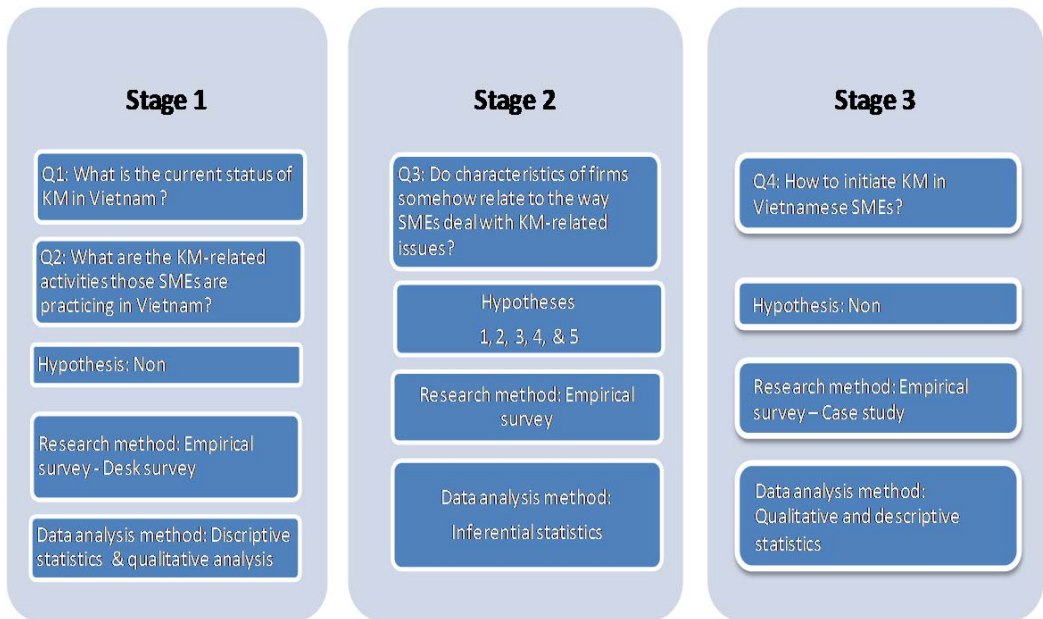


Figure 4.3. Summary of research design

The current research is designed with the grounded practical approach from the point of view of the business owner as well as that of the academic, and originated from real requirements of SMEs in Vietnam. There are three different stages in this research with flexible usage of research methodologies mixed between quantitative and qualitative (see Chapter V. Research methodology). The design of this study is summarized in Figure 4.2.

CHAPTER 5. RESEARCH METHODOLOGIES

This chapter describes the methodologies used in the research for this dissertation. It describes in detail the research process, the development and measurement of variables, questionnaire design, and sampling design of different stages in the study.

5.1. Research process

There are three main stages to the research design (Figure 4.3). The first stage of the research was designed for orientation purposes because there were no existing studies on KM in Vietnam when research commenced. The results from the orientation survey also help the researcher set up the framework for the second stage as well as develop hypotheses for the study. The third stage was carried out to find out the answer for the question of how a Vietnamese SME should initiate KM in specific context. This current chapter describes the methodologies of each stage.

5.1.1. First stage: Orientation

A first-hand perceptual overview to orient further study was necessary in the context of Vietnam, where general business management practice is still at low levels of development, in contrast with most business contexts covered in the KM literature. Thus, a mini-empirical survey was conducted to identify the current status of knowledge management in Vietnam, to study the organization's concept of knowledge management, and to investigate possible approaches for further research. This survey had the following characteristics:

Type: Face – to – face interviews with semi - open questionnaire.

Sample: A convenience sampling method was used and 15 interviews were conducted. Interviewee had to meet the following criteria:

- Top management position;
- The size of company in the range of SME;
- Company located in Ho Chi Minh City (where most of SMEs are registered).

5.1.2. Second stage: Testing Hypotheses

The second stage aims at identifying which factors may affect the way firms deal with KM issues and which ones have done a better job of implementing KM best practices in order to learn from these firms.

Type: Designed questionnaire (see Appendix 3)

Sampling: The original plan was set up with stratified & systematic random sampling from the Yellow Page Directory of Hochiminh City. At the beginning, the questionnaire were delivered both by post and via emails to more than 500 companies randomly selected in the Yellow Pages of Hochiminh City, but more than 50% of emails failed to reach the destination (i.e. the email addresses are wrong). Perhaps as a result of this, the general response rate was too low. It became obvious that there was insufficient reliable infrastructure to apply the random sampling procedures typical of research of Western businesses. And the researcher had to proceed to carry out the survey via available networks to contact CEOs/business owners of SMEs.

In this second round, the questionnaires were sent to more than 380 CEOs/business owners, and the response rate was quite positive – 145 responses were received, about a 38% response rate. Of these, 110 sets of data met requirements for analysis (currently operating, in the range of SMEs, consistent in response). With the permission of respondents, 25 visits to companies were made to obtain a better view of what was really going on inside these firms.

All related evaluations about company's performance and company's point of view are announced by the legal representative – CEOs or main shareholders of firms.

Data processing method: Inferential statistics are employed to test hypotheses about associations between two sets of data in Stage 2.

5.1.3. Stage 3: case study of best practices

Type: survey protocol

Sample: A single case study was selected from 110 companies. The research process's details are presented in figure 5.1.

5.2. Research instruments:

5.2.1. Survey instruments

For Stage 1 - Orientation: A semi-structured questionnaire was designed for face-to-face interviews (See Appendix 2 - Questionnaire for orientation). The duration of each interview was about two hours and noted. The content of interviews was analyzed by the steps recommended by Mayring (2000)[88]. Figure 5.2 illustrates the main procedure.

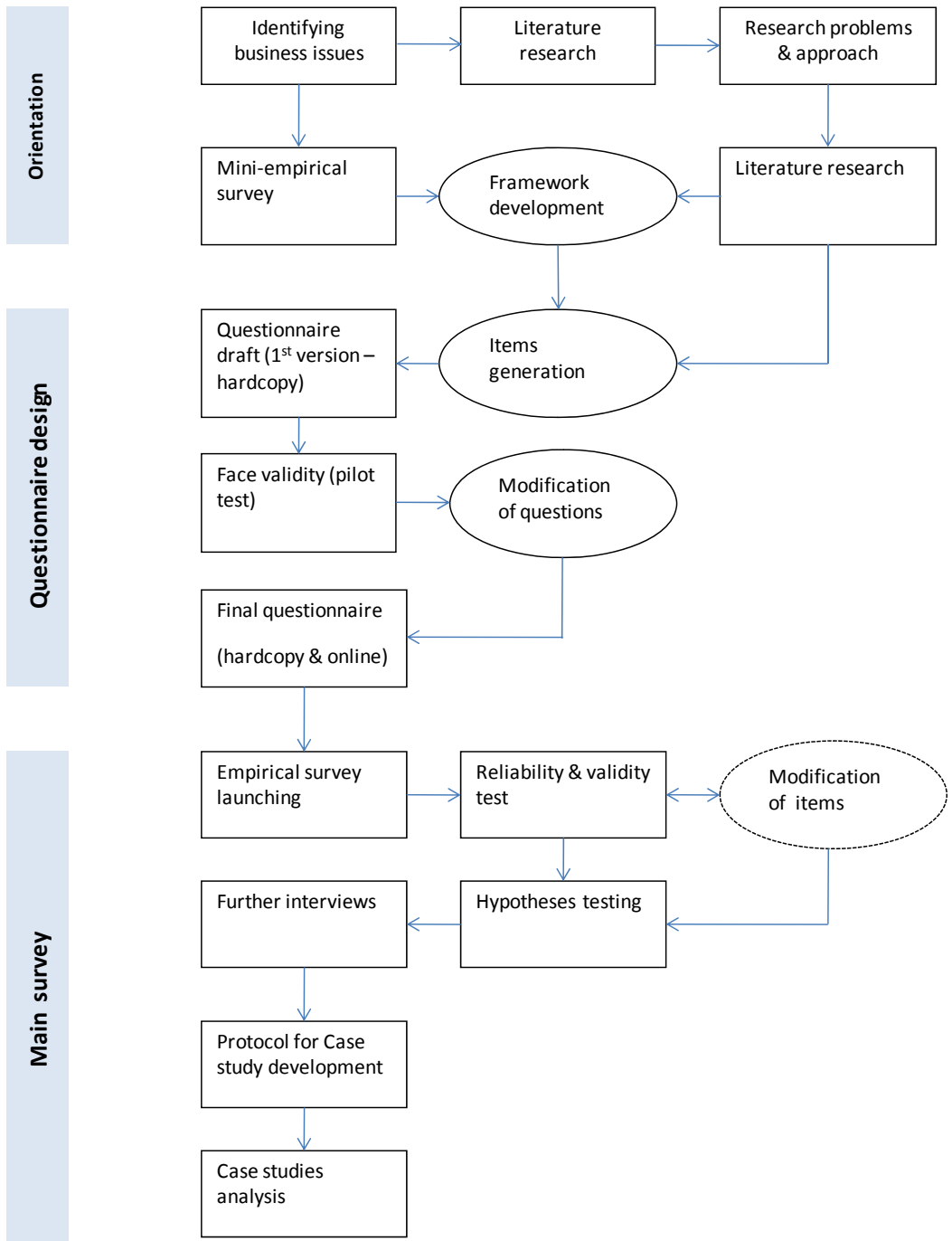


Figure 5.1. Research process of the study

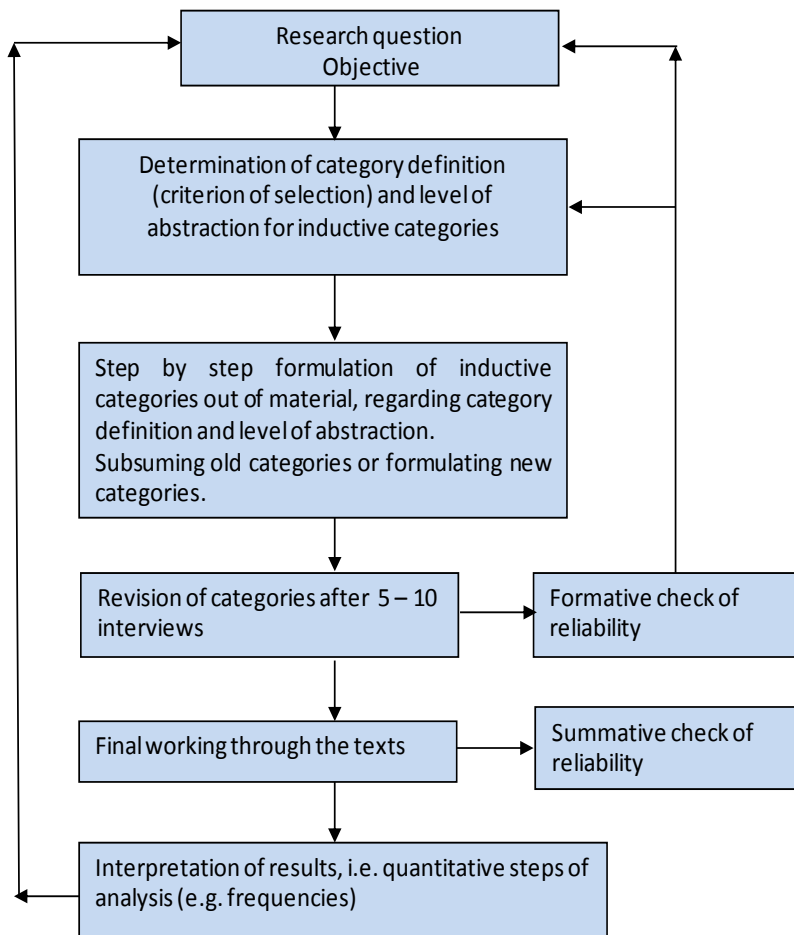


Figure 5.2. Step model of inductive category development as describe in Mayring, 2000.

For Stage 2 - Testing hypotheses

The findings from the first stage provided the guidelines for the research. In this second stage, five main hypotheses (including 30 sub-hypotheses) are tested to find out which characteristics of firms need to be paid attention when initiate KM for SMEs.

A questionnaire was developed for stage 2. In this questionnaire, questions were designed in varying ways according to different purposes – quantitative and qualitative analyses (see Appendix 3: Questionnaire for CEOs of Vietnam SMEs). Two versions of the questionnaire were created. The first one was printable for sending by email or by post as the author had to take into account the fact that a big percentage of CEOs are very limited in the use of IT. Another

version was designed for online response by CEOs who are familiar with working on the Internet.

For stage 3 - Case studies

For the second step in stage 2, the instrument is the protocol for case study. The sample was selected representing for the best practices among population of the study. A research protocol including the detailed set of activities was developed to facilitate the deeper exploratory study of investigations from the previous stages.

5.2.2. Variable development & measurement

Variable development

There are 11 variables in this research. A set of six variables presented KM issues in SMEs were selected based on (1) the KM literature review and (2) the empirical results of the first stage and listed as follows:

1. Level of applied IT
2. Level of applied management tools
3. Knowledge sharing level of working environment
4. Training effectiveness
5. Effectiveness of record system
6. Innovation level

Another set of variables presented characteristics of firms and management was developed. Four background variables are:

1. Size of firm
2. Age of firm
3. Business sector of firm
4. Ownership of firm

And one variable related to management is management vision on business development.

Variable measurement

The first set of variables was obtained by simple and direct questions (see Appendix 3a - Questions 1 to 5). Firms were then grouped for analysis according to the set criteria (see Appendix 4 - Code book). The measurements of the second set of variables are described as follows:

Measurement of the level of applied IT in the firm

CEOs were requested to list which IT tools were applied by their firms at the current time (Question number 5 – Appendix 3). Based on the list of each firm, the IT application level was relatively classified in a five levels namely “Very high - High - Middle - Low - Very low”. The criteria to classify the IT application level of firm was developed in consultation with IT experts in Vietnam (see Appendix 4 - Code book). Some cross checks were performed by the author to have the final confirmation of the coherence between what CEOs reported about their company and the reality information technology in their firm. For example, there are various ways of implementing e-commerce. On the questionnaire, CEOs were asked to list down if they implement e-commerce or not. Many SMEs’ CEOs reported that their companies apply e-commerce when in fact what they were referring to was secondary e-commerce activities (they sell their products on some other company’s website, or just advertise their products/services on their own website). In the latter case, the fact that firms are applying e-commerce doesn’t mean that they have a high level in applying IT tools. This kind of error is the consequence of ambiguity in the concept (among Vietnamese SME’s, certainly, but also in Vietnam generally, and perhaps worldwide). These biases were checked and eliminated by the author.

Measurement of the level of applied management tools

CEOs were requested to list out which management tools/systems are applied in their companies’ operation (Question number 6 – Appendix 3). Basing on the list of each firm, the application level of management tools/system of company is classified relatively into three levels: High - Middle – Low, taking into account the advice from consultants from SMEDEC – Small and Medium Enterprise Development Support Center in Vietnam. Once again, this factor was cross-checked to avoid the bias.

Measurement of Knowledge sharing level of working environment

A set of 9 sub-questions was developed to measure the level of knowledge sharing culture in firms (Question 12 – Appendix 3). This set was modified from the research of Yang (2007). They were measured on a five point Likert scale ranging from “strongly disagree” to “strongly agree”. Some modifications were made after the pilot test, for example, the question “does your subordinator often call you during your holidays to ask about job-related issues?” was assumed to be a signal of a positive sharing knowledge environment in the original version [89], but for Vietnamese SMEs, during the pilot test, it was found out that this assumption does not hold. It shows the level of tasks

delegation in the company, i.e. in the companies where tasks are authorized well and managed well, the answers of CEOs for this question were negative, and vice versa.

Measurement of training effectiveness

In the research, training effectiveness was measured by a set of five sub-questions (See question number 21 – Appendix 3) to obtain the CEOs' evaluation of their training of their employees. They were measured on a five point Likert scale. The first three items were the point of view of CEOs about training and training effectiveness in SMEs, and the measurement scale is ranging from “strongly disagree to strongly agree”. Other two items described the training activities in the firm, and the measurement scale is ranging from “very frequently to never”.

Measurement of record system effectiveness

Results from the orientation survey reveals that record system seems to be the problem of most of enterprises in Vietnam. During the survey, some CEOs confirmed that they are storing documents related to daily business; normally they are customers' profiles and contracts. And they are stored manually as hardcopies or softcopies on computes. Job-related reports are not paid much attention among SMEs (see chapter 6 – 6.1). Accordingly, in this study the record system effectiveness is measured by the its usage in daily dealing with business issues (See Appendix 3 - Question 23) and in the way the job-related reports is used in the firm (Appendix 3 – Question 24). In this study, record system effectiveness is classified into 3 levels: High – medium – low.

Measurement of top management vision

Vision of top management plays a decisive role in the direction and the development of company. This vision was measured by the question as to whether the company has the strategic plan in written form or not. The two cross-checked questions related to the business plan and the imagination of CEOs about the long term (3-5 years) future of the company were asked to lead up to the determinant question. It is characteristic of Vietnam businesses that people confuse between business plan and strategic plan. There is confusion as well between imagination and dreams about the development of company on the one hand, and a real strategic plan on the other. Thus, the task of the researcher is to clarify these concepts to make sure that CEOs gave the right answers. In the cases where the explanation was impossible, cross-check questions were used to make the final decision (See questions 27, 28, 29 – Appendix 3).

Measurement of innovation level of firms

Innovation is always challenging because it is very difficult to agree on a common definition [90]. Accordingly, it is difficult to measure the innovation level of firms. In this study, innovation is perceived as the ability to adapt to the changes in business including minor improvements in working processes, the way to provide services, or the application of advanced technology/tools for their daily business, etc. This perception on innovation in SMEs is supported by Peters and Waterman (1982). They stated that “*innovative companies are especially adroit at continually responding to change of any sort in their environments and are characterized by creative people developing new products and services*”[91].

In the current research, innovation level of firms is measured by a set of four items to reflect the evaluation of CEOs on the innovation levels of their firms (See question number 25 – Appendix 3) with the five point Likert scale ranging from “strongly disagree to strongly agree).

5.3. Language of the questionnaire

The question was developed in English language and then translated into Vietnamese by the researcher. Taking into account that KM is a new concept in Vietnam [80], the questionnaire avoided using jargon and the technical terminology of the field. Care was taken for the logical flow of questions, which was adjusted to ensure comprehension by respondents.

5.4. Pilot testing of the questionnaire

A pilot test is necessary for any questionnaire. Even though adapted from that of the orientation stage, the questionnaire was tested because the context might be different and the characteristics of respondents might be different. The pilot test was conducted with five respondents from five companies. CEOs were asked to fill in the questionnaire independently, and then an interview with each respondent was made to check if they had understood the questions in the designed way or not. Respondents were also asked to comment on the clarity, bias, ambiguity and the length of each question. Accordingly, the questionnaire was adjusted, restructured to be shorter and easier to answer.

5.5. Chapter conclusion

This study is the first empirical research about KM for SMEs in the country – a developing country in Southeast Asia in very first stage of transforming

from the centralized planning economy toward the market economy. Specific conditions of the research and its practice-oriented objectives have decided the research approach and methodologies used in this study.

The theory grounded approach was employed in the first stage of the research. The findings from this stage have oriented the main research in the second stage. The main research includes two steps: (1) testing hypotheses, and (2) case studies. Both quantitative (descriptive and inferential) and qualitative statistics are used in the author's effort to find out the best answers for the practical research's questions. A final case study stage afforded more complete answers to the motivating research questions as to how a Vietnamese SME should initiate KM.

CHAPTER 6. ORIENTATION STAGE - DATA ANALYSIS & DISCUSSION

In this chapter, the details of methods used for data analysis and the results of the stage 1 are presented. As mentioned in chapter 4 and chapter 5, the study in this stage is developed based on the grounded theory approach while it includes both qualitative and quantitative research methods. Those methods are used flexibly depending on the nature of research questions and the objectives. There are three different steps that are interconnected in this research. Each subsequent step is developed based on the findings of the previous one. And each step also aims at finding the answer for its own research questions. Accordingly, each step of the study requires different research strategy and methodologies as stated by Yin (1993) [92]. The research's structure and related questions as well as the research methods for each step are described in the figure 6.1. This chapter focuses on the first stage of the research.

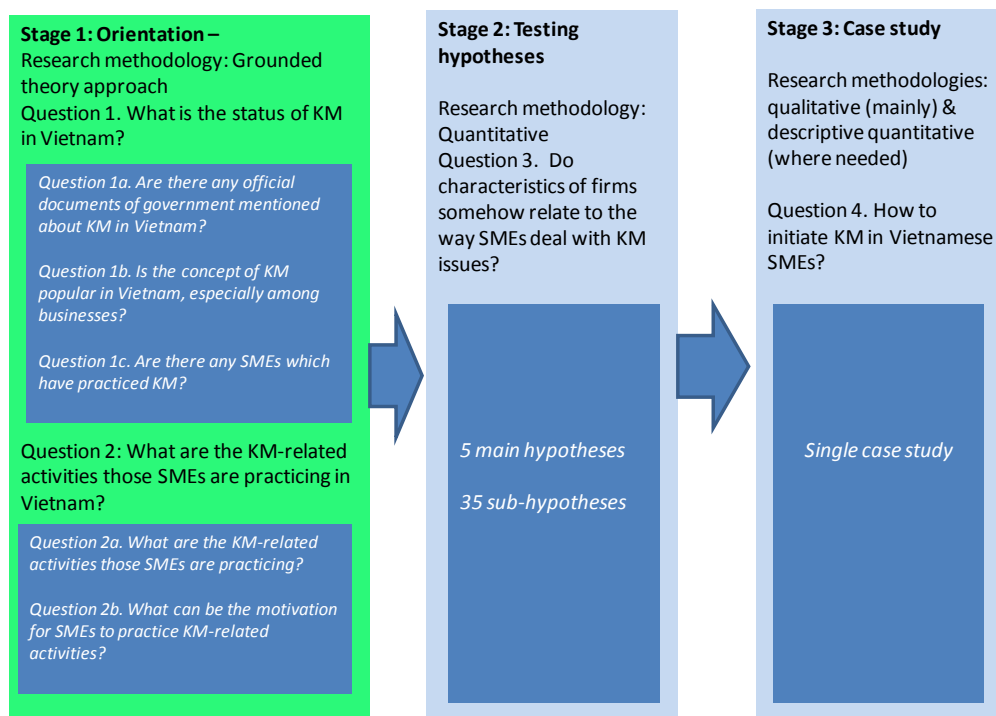


Figure 6.1. Research's questions & methods in each step of the study

The results of this stage were partly published in ECKM 2010 proceeding [47].

The objective of this survey was to obtain the first – hand information on the current status of company management practices and the general concept of KM

among SMEs in Vietnam. The results gotten from this stage were used as the orientation for the systematic research in this dissertation.

6.1. Description of samples

Fifteen face-to-face interviews were conducted in February 2010. To serve the purpose of a preliminary study with fresh insights from practitioners, the convenience sampling method was applied. To have better overview about businesses and their issues, most of interviews were conducted at the companies. Among informants, ten informants were CEOs, two were Chairmen of Shareholders Committee, and three were Vice Directors.

Table 6.1. Description of enterprises involved in the orientation survey

Industry types	Number of firms
Construction & Real Estate	02
IT	01
Trading	02
Forwarding	02
Tourist agency	01
Hotel	01
Consultancy	02
Garment & textile	01
Furniture & handicraft	01
Construction materials	01
Chemical trading & service	01
Total	15

6.2. Findings

The first two interviews were unstructured and employed the grounded theory (methodology). These interviews helped the researcher develop the scheme for the next interviews and this process was continuously on-going as suggested by Strauss (1987) – Working process of a research must include “...*thinking, going to the field, observing, interviewing, note taking, analyzing...*”[93]. Later on, a semi-structured guidance was developed to support the interview and facilitate the focus of data collected (see Appendix 2).

Average time duration for each interview was three hours. The researcher returned to some firms to clarify issues when necessary.

As mentioned in chapter 5, Research methodology, there were various research methods to collect data and analyze data used in this stage including desk survey, empirical survey, qualitative and quantitative statistics. This subsection presents some findings that will help to find the answer for the research questions. Here are some brief findings:

6.2.1. Current status of KM and interest of business

The desk survey revealed that at the time of writing, KM has not been mentioned in any official governmental policy or document. The statement of Vu (2008) in the KM country report has described this status: *“Knowledge Management (KM) is a very new concept in Vietnam in general and in the country’s firms and organizations in particular. So far, this concept has not been mentioned in any official government policy or document. It has been introduced by the Vietnam Productivity Center (VPC) in several workshops, awareness – training courses, and pilot projects conducted since the beginning of 2000. But these are only a few small beginning steps, and very limited audiences have been introduced to the concept. Some large foreign companies may be applying it, since it is already used in their parent companies abroad. Otherwise KM is still new to other kinds of organizations, including the research institutes”*[80].

The interview stated that thirteen of fifteen of interviewees (13/15) said that they had never heard of KM before, except for two consulting companies. Interestingly however, it was discovered that 10/15 companies are implementing some KM activities without being aware of it. These activities were coded and categorized into KM related issues.

6.2.2. SMEs’ management issues

Strategic plan is uncommon among SMEs. Only 3/15 companies have a clear vision of where they are going and 2/15 companies declared that they would not continue the current core businesses due to various reasons. Normally CEOs were confused between business plan and strategic plan or between their dream (what they want) with strategic plan of company.

CEOs of SMEs are managing firms merely by their practical experiences. Some are doing rather well, but many of them lack of consistencies in management. The conflicts occurred by unclear definitions of responsibilities between CEOs and other top management members have made employees confused and tired. This can be the most popular reason why SMEs is not attractive for good people as well as why it is difficult to keep the competent employees in SMEs.

Most of companies are faced with human resource problems, and indeed it is KM. 10/15 CEOs mentioned the lack of competent employees for businesses. The reason for this appears to be mainly the difference between the state-owned companies and private companies. While the human resource problem in the state-owned companies is permanent employment, the problem in the private small companies is “knowledge loss” as key people are “stolen” by competitors. This problem is more serious for manufacturing companies than for service companies. Vice director of the garment company (invested by a foreigner) revealed that his factory has reduced the capacity down to 50% for the last two year because of lacking workers. In this firm, there are permanent 300 employees (who have signed at least one year labor contract) including staff at headquarter and workers in the factory. While there was very few administrative staff left during the last two years, the staff turnover of workers has been amazingly high (about 80-90% in the factory). Both service and manufacturing firms tend to outsource the businesses for example travel agencies don’t employee experience tourist guides but just hire them when needed. Then many experienced, skillful people now are working as freelancers in service sector. The situation is a little bit different with the manufacturing sector. Business owners in manufacturing firms have invested more in the infrastructure as well as equipments, but to meet the requirements from customers, they also have to outsource some sub-lines of their businesses. These sub-contractors can be another firms or a group of workers (without any official registration to operate).

Normally, companies in Vietnam have no clear policy on staff training (or in other words, they don’t invest much in training their employees) as they don’t believe in the long-term commitment of workers. New people are normally trained by OJT (On-the-Job-Training) without a long term orientation.

Almost 100% of companies are storing documents in daily operation. It was difficult to find a company that use specific IT software to do it. More than 9/15 companies have a website, primarily as a customer information service. About 5/15 interviewees don't have good computing skills and rarely work on a computer. Most of companies are equipped with LAN and internet (12/15). They don't care much about management support software unless it is really useful for daily business. 2/15 companies have applied some modules of Total Quality Management (TQM).

13/15 companies revealed that they wish to implement KM for their business (after the discussion about KM and its benefits) as they feel it could help them solve their current problems and to be stronger and more sustainable. Five others showed some interest, but they doubted that it could be implemented in their companies. The remaining interviews said that it seemed too theoretical and they did not believe that it would work. These managers confirmed that it would be too hard for them and did not feel that it was necessary for their businesses.

6.3. Discussion & direction for main research

This mini-empirical survey is positioned as an exploratory and research orientation study. Findings from the interviews will guide the approach of a systematic research to find out the ways that may help SMEs in Vietnam, as well as in other developing countries, implement KM successfully. The result of this mini survey could provide some important points for the research design:

6.3.1. Current status of KM in the Vietnamese SME

The empirical data from the interviews has confirmed that KM has not found fertile ground in Vietnam. Advanced management tools are not popular yet in SMEs, KM is in the same situation. It has not caught the attention of business in Vietnam, and even of the policy makers or governmental authorities who are officially in-charge of supporting SMEs in the country. The interviews revealed that generally, business people don't know or know very little about KM. Take into account the limited educational background of a big percentage of business owners/CEOs of SMEs in Vietnam and this issue, future research must use the simplest possible approach and avoid using terminologies as these can cause confusion.

6.3.2.Possible reasons for KM in the Vietnamese SME

The survey revealed that KM is necessary for SMEs, as it might provide the effective tool for managers/business owners to deal with their most challenging problem – the shortage of competent employees to (1) stabilize their existing business, and then (2) develop it. This was proven by few SMEs (samples) where CEOs are struggling to apply KM unconsciously to solve the problems of “knowledge loss” and “shortage of competent employees”.

Despite the long term benefit KM may bring to the firms, it is difficult to attract business in the context of seriously scarce resources of SMEs in Vietnam unless it is considered as tool for them to solve daily operational problems first.

In the context of seriously scare resources of SMEs in Vietnam, despite the long term benefit KM may bring to the firms, it is difficult to attract business unless it is considered as tool for them to solve daily operational problems first.

6.3.3.KM related issues in the Vietnamese SME

The interviews indicated that “knowledge hoarding” is severe in Vietnam. All of the efforts toward KM (if any) focus on the issue how to convert individual knowledge into the organizational one to maintain the business. It is thus very difficult to mention about applying KM for a significant innovation, such as new product development in SMEs Being consistent with the defined concept of Knowledge and Knowledge Management, in the context of Vietnam, KM must be integrated into daily operations such as the improvement of business processes, new ways to provide a service to customers, new ways to strengthen working relations, etc.

The findings from this initial survey confirm that the key factor in this case is not lack of resources, as almost all SMEs are in the same situation (lack of time, finance, and human resources – [94]. The key to the question may lie in the vision and capability of the top management of SMEs. When looking at small businesses, the direct influence of the leader in all aspects of company is more obvious. In these firms, the executives are normally the business owners. The role of the top manager as the creator of corporate culture and standard-bearer is crucially important. But the conduct and role of leadership are the most difficult (and almost impossible) to change/ improve. This point needs to be considered thoroughly in the future research.

IT is not the ultimate solution for KM [75] and the interviews have confirmed this point. As mentioned above, most companies have implemented WebPages, but only very few of them utilize webs for their business. IT is a major weakness of SME operations in developing countries, even for managers. Most companies use LAN and the Internet solely to look for information or to collaborate at a very low level of efficiency (for business). Using management support software is either not affordable or unsuitable in the context of SMEs.

Table 6.2. KM issues in Vietnamese SMEs

	Knowledge sharing	Training effectiveness	Record system effectiveness	IT usage	Advanced management tools usage	Innovation
Firm 1	Problematic	OK	Problematic	OK	OK	Problematic
Firm 2	Problematic	Problematic	Problematic	Problematic	Problematic	Problematic
Firm 3	Problematic	Problematic	Problematic	Problematic	Problematic	Problematic
Firm 4	OK	Problematic	OK	OK	Problematic	OK
Firm 5	Problematic	Problematic	Problematic	Problematic	Problematic	Problematic
Firm 6	Problematic	Problematic	Problematic	Problematic	Problematic	Problematic
Firm 7	Problematic	Problematic	Problematic	Problematic	Problematic	Problematic
Firm 8	Problematic	Problematic	Problematic	Problematic	Problematic	OK
Firm 9	Problematic	Problematic	OK	Problematic	OK	OK
Firm 10	Problematic	Problematic	Problematic	Problematic	Problematic	Problematic
Firm 11	Problematic	Problematic	Problematic	Problematic	Problematic	Problematic
Firm 12	Problematic	Problematic	Problematic	Problematic	Problematic	Problematic
Firm 13	Problematic	Problematic	Problematic	Problematic	Problematic	Problematic
Firm 14	OK	Problematic	OK	Problematic	Problematic	Problematic
Firm 15	Problematic	OK	OK	OK	OK	Problematic

Notes: Problematic: Issue exists in the firm and needs to be assessed

OK: Firm has its effective way to solve the issue

Most workers don't have basic computer skills. In this context, if IT were considered as one of the key factors by those responsible for the success of KM implementation, it would never be done for SME's in Vietnam. Since KM is normally perceived as a huge IT system with expensive software and the exclusive preserve of large firms in advanced countries, it would need to be implemented in a very economical and effective fashion for SMEs in developing countries. The analyzed results from the mini-empirical orientation survey could be summarized and categorized in Table 6.2. The seven main KM related (potential) issues for SMEs are determined as follows:

1. IT usage

2. Advanced management tools usage
3. Knowledge sharing
4. Training effectiveness
5. Report system
6. Harmfulness caused by high staff turnover
7. Innovation

6.4. Conclusion

This mini-empirical orientation survey has provided some valuable implications for next steps of the research. For SMEs, KM can be a promising solution to improve their performance and competitiveness, but we need to find a feasible implementation approach. KM for SMEs must be integrated into daily operations, and begin as a problem-solving tool. This means that even if KM is a long-term strategy in large enterprises, for SMEs in developing countries, faced with a scarcity of resources, it must start with activities which directly enhance daily business operations and whose results are easy to see and be quantified. This will be the basic leitmotif for the next stages of the research.

The results of this stage have oriented the hypotheses development for the main research as described in Chapter 4 and Chapter 5.

CHAPTER 7. CHARACTERISTICS OF FIRMS AND KM-RELATED ISSUES IN VIETNAMESE SMEs

This chapter describes the details of research methods used in the stage 2 of the study and presents the results of data analysis for testing hypotheses with the discussion.

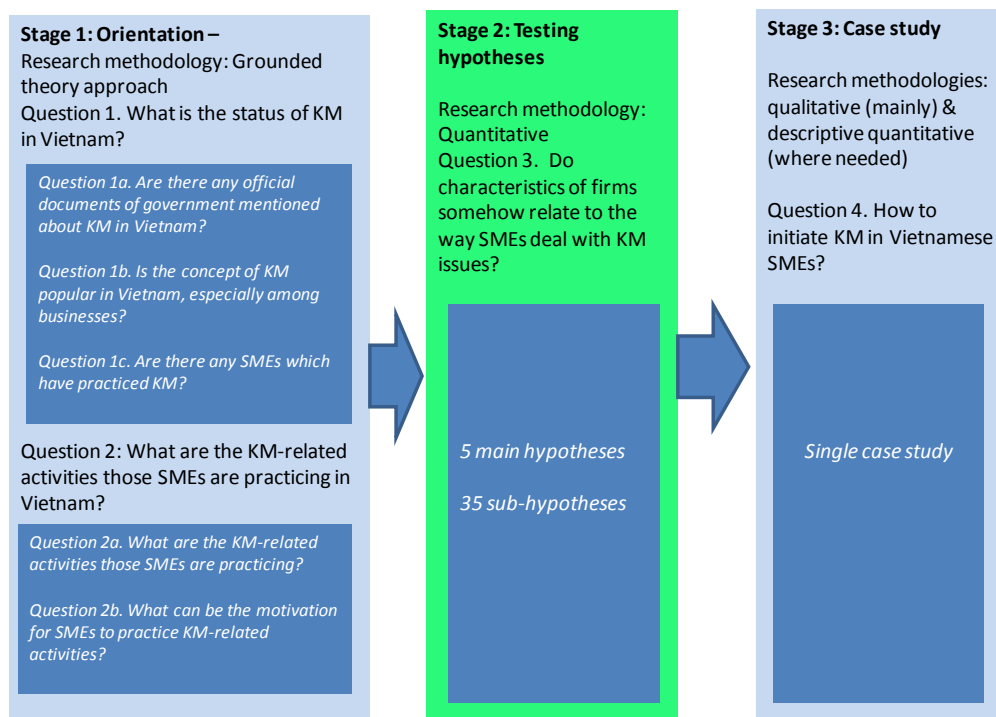


Figure 6.1. Research's questions & methods in each stages of the study

7.1. Characteristics of respondents

As explained in Chapter 5, even though the population in this research is not purely random in the methodological sense, it is random “in practice” because the researcher could not influence the selection of samples. Thus there is the possibility of unknown influences biasing the sample - as is the case anyway even with true random sampling because the designer of the experiment or of statistical inference always acts with imperfect knowledge of the population, so that the randomness is procedural. After the failure of the first round, in the second round, the researcher had to rely on the available networks of her own network. 380 questionnaires and requests were reported to spread around. Among 145 sets of data received during the following four weeks, only 110 sets were valid (after bias checking) achieved 28,9%. Among these 110 firms, the number of state-owned firms was limited to four SMEs as it is hardly to find out

the real state-owned SMEs. There are some so-called state-own SMEs but in fact they are affiliated to larger state-own corporations and are usually financially dependent. Thus, these firms were excluded from the population.

The description of the sample structure relating to industries and size of firms is presented in the figure 7.1.

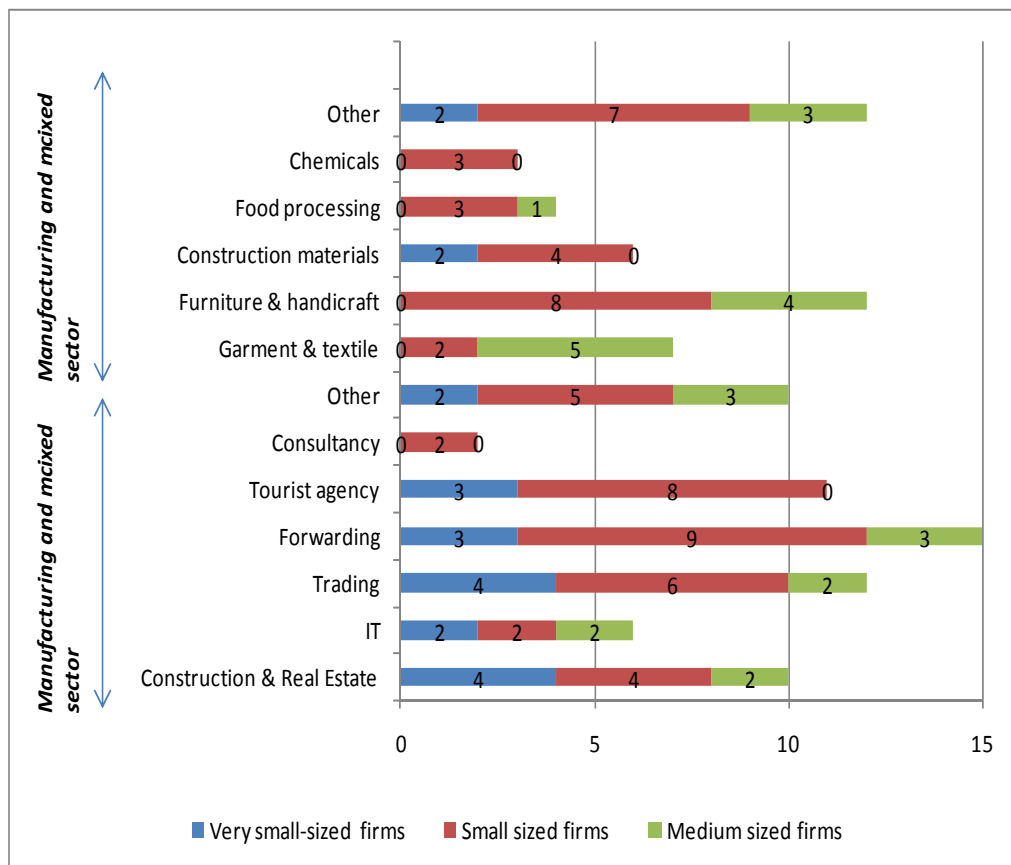


Figure 7.1. Industries and sizes of SMEs from the sample

Among the study population for this stage, there were 66 (60%) service firms, and 44 (40%) were in manufacturing or mixed sector. There were 22 very small-sized, 65 small-sized, and 23 medium-sized firms.

Age structure of population is described in the figure 7.2. The average age of firm is 7.3. The young average age of SMEs in Vietnam is caused by the fact that SMEs has just been legally recognized since 1986 (Chapter 3) with restrictive conditions. Number of SMEs has significant increasing since the business environment becomes more open in last decade, but we can see that most of SMEs are still very young with a big proportion of firms under 2 years

old. The evaluation of SCCI Vietnam, during 2010 there were 544,000 new established firms, but only about 50% of this number could really operate [95].

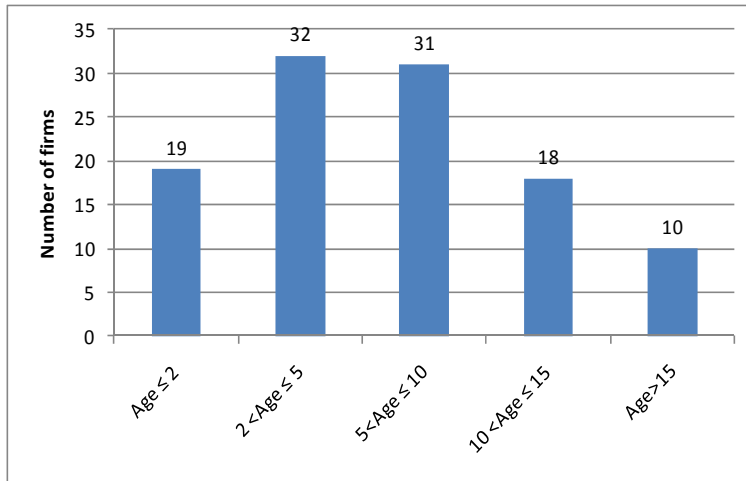


Figure 7.2. Age structure of the sample

7.2. Data analysis & discussion

Hypotheses in this step were tested using a chi-square test with the objective to check whether characteristics of firms and the way firms deal with KM issues somehow relate with each other. Previous studies in literature have stated various series of KM success factors or enablers including IT infrastructure, leadership, organizational culture, etc. (see Chapter 3). In the context of Vietnam, for SMEs, those prerequisites seem over demanding. It suggests the endless falsely speculative argument “the chicken or the egg”. Vietnamese SMEs need more specific guidance how to implement KM in their own context – the tailor-made solutions. However, this study is just the first scientific effort towards this demand. The author has been trying to identify if there is any feasible way for Vietnamese SMEs to practice KM effectively. In this attempt, the researcher would like to examine if there are any “hard” and “soft” factors, those require attention when initiating KM in small and mid-sized firms.

7.2.1. General analysis

The results revealed some useful general information about the Vietnamese SMEs, especially of KM- related issues. The results are presented in Figure 7.3. According to the results, among the studies issues, IT application, advanced management tools application, and record system’s effectiveness of most of SMEs are at a low level. Less than 12% of the samples applied IT tools at high level; and the percentages of management tools and record system’s

effectiveness at this level are 16.36% and 14.54% respectively. 34.54% of the sample was confident that their businesses are not much affected by the staff turnover, while nearly 50% complained that the staff turnover seriously harmed their business.

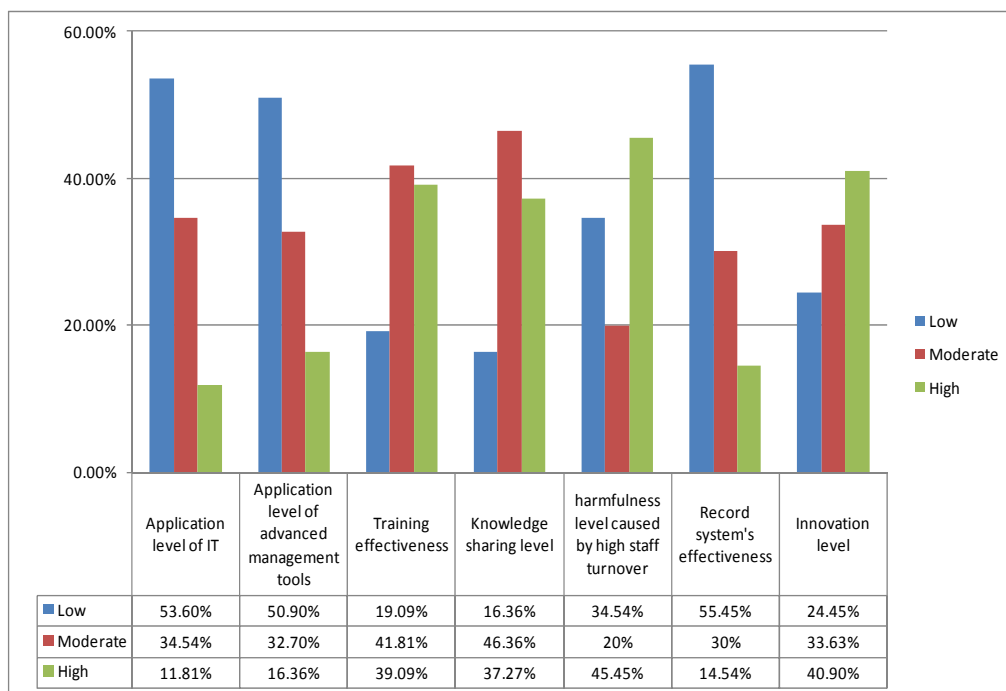


Figure 7.3. Descriptive results – KM-related issues practices in SMEs

CEOs of Vietnamese SMEs positively evaluated the training effectiveness, knowledge sharing level of their working environment and innovation level of their firms.

To response for the question which type of knowledge/information the firms capture and store, 100% of the sample stated knowledge/information about customer. Knowledge/information about suppliers was paid moderate attention in 40% of the sample while very few firms (<16%) had the effort in capturing and storing knowledge/information about competitor and market. In many cases of 25 interviews, CEOs were confused between these two concepts.

72 per 110 SMEs (65.5%) in the current study revealed that they do not have the specific training policy for employees. Normally they have to learn by themselves when working in firms. To answer the question what can be the reason for them do not train their staff, CEOs stated lack of long-term commitment of employees as the main reason. The second popular reason is ‘jobs are simple, and then training is not necessary’. ‘Lack of time’ was one of

the main reasons while ‘lack of money’ seems not to be a reason for this issue (Figure 7.4).

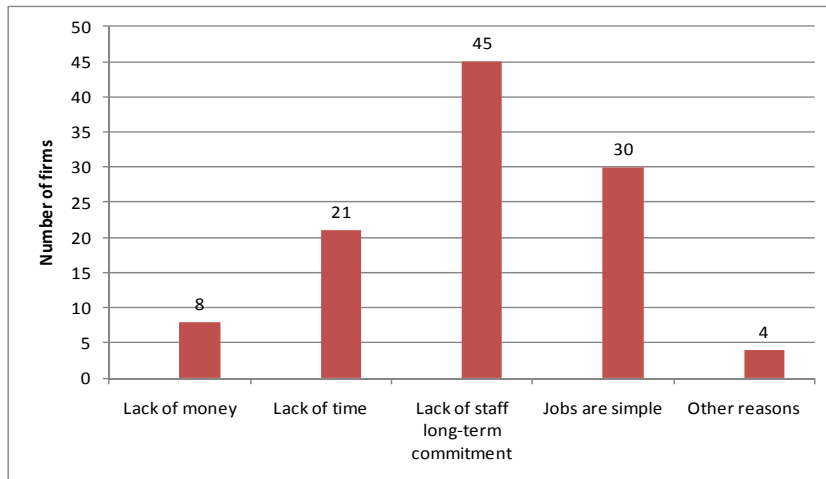


Figure 7.4. Reasons for not training employees at SMEs

The statistical results also showed that 30% of the sample has long-term strategy (specified by written form), i.e. other 70% has no long-term strategy or any clear plans for their businesses.

54.5% (65 SMEs) of the sample admitted that they don’t know the KM concept yet, while other 18% showed that they have the right perception on KM. Only 22.7% confirmed that they are practicing some KM activities but under the different titles.

7.2.2. Hypotheses testing

There are six (5) main hypotheses tested and presented in this section. Each main hypothesis includes seven (7) sub-tests, and the conclusion can be made only for separated sub-hypothesis. The summary of data analysis of thirty five sub-tests is in Table 7.1a and 7.1b.

Hypotheses were tested by using Pearson Chi-square technique as it is recommended for independence tests of non-parametric measurements [96]. With the data set of 110 samples, SPSS (Statistical Package for the Social Sciences) version 16.0 was employed to analyze collected data. The predetermined significant level was set at 0.05. During processing, some tests could not meet the assumption about the minimum expected count in cell, i.e. the test results were not reliable [96-97]. In this study, the criteria “at least 80

percent of cells should have expected frequencies of 5 or more” was applied [98-99]. For the tests in which this assumption was violated, Monte Carlo algorithms were employed to cross-check. The result was also integrated in Table 7.1b and in Appendix 11.

Hypothesis 1: There is an association between business sector and the way firm deals with KM issues

As mentioned above, there are seven (7) sub-hypotheses tested in each main hypothesis. In this study, business sector is divided into two basic ones namely service and manufacturing and mixed. In the reality, most of manufacturing firms is supplying services, too. For example, a furniture maker produces furniture as the main product line, but it provides interior design and project management services. Or a garment company normally can be a sub-contractor in providing some services for a bigger corporation. However, even there is the overlap in classification of business sector for firms those solely manufacture and those who are doing both manufacturing and service; they can be assigned in the same group because normally the manufacturing occupies the majority of business in most of these cases. The seven sub-hypotheses were listed as follows:

Sub-hypothesis 1.1. There is a relationship between the sector of business and the application level of IT of the firm.

Sub-hypothesis 1.2. There is a relationship between the sector of business and the application level of advanced management tools in SMEs.

Sub-hypothesis 1.3. There is a relationship between the sector of business and the training effectiveness.

Sub-hypothesis 1.4. There is a relationship between the sector of business and the knowledge sharing level of working environment in the SMEs.

Sub-hypothesis 1.5. There is a relationship between the sector of business and the record system effectiveness of the firm.

Sub-hypothesis 1.6. There is a relationship between the sector of business and the level of harmfulness to business caused by high staff turnover in SMEs.

Sub-hypothesis 1.7. There is a relationship between the sector of business and the innovation level of the firm.

According to the results (see Appendix 6), sub-hypotheses 1.1, 1.3, 1.4, 1.5, 1.6, 1.7 were rejected. Only in sub-hypothesis 1.2, the result is significant with chi-square value of 14.225 with associate significant level of 0.000 (< 0.05). It means generally firms in service sector and firms in manufacturing sector are different in the way they apply advanced management tools. The results also showed that SMEs in manufacturing sector (and mixed sector) seem more advanced than firms in service sector. Only 6% of service firms declared that they are applying some advanced management tools while this number in manufacturing firms is almost 32%. The detail is described by Figure 7.3.

Table 7.1a. Summary of statistical results – Pearson Chi – square test

	Application level of information technology	Application level of management tools	Training effectiveness	Sharing knowledge level of working environment	Record system effectiveness	Staff turnover harm business level	Innovation level
Sector of business H1	$\chi^2 = 1.224$ $df = 2$ P-value = 0.542	$\chi^2 = 14.225$ $df = 2$ P-value = 0.001	$\chi^2 = 1.917$ $df = 2$ P-value = 0.383	$\chi^2 = 1.167$ $df = 2$ P-value = 0.558	$\chi^2 = 3.950$ $df = 2$ P-value = 0.139	$\chi^2 = 3.423$ $df = 2$ P-value = 0.181	$\chi^2 = 5.012$ $df = 2$ P-value = 0.082
Age H2	$\chi^2 = 0.000$ $df = 2$ P-value = 1.000	$\chi^2 = 2.960$ $df = 2$ P-value = 0.228	$\chi^2 = 3.336$ $df = 2$ P-value = 0.189	$\chi^2 = 9.453$ $df = 2$ P-value = 0.009	$\chi^2 = 5.373$ $df = 2$ P-value = 0.068 *	$\chi^2 = 0.377$ $df = 2$ P-value = 0.828	$\chi^2 = 4.517$ $df = 2$ P-value = 0.105
Size H3 *	$\chi^2 = 13.710$ $df = 4$ P-value = 0.008 *	$\chi^2 = 26.394$ $df = 4$ P-value = 0.000 *	$\chi^2 = 19.195$ $df = 4$ P-value = 0.001 *	$\chi^2 = 3.167$ $df = 4$ P-value = 0.530 *	$\chi^2 = 8.442$ $df = 4$ P-value = 0.077 *	$\chi^2 = 1.748$ $df = 4$ P-value = 0.782 *	$\chi^2 = 6.640$ $df = 4$ P-value = 0.156 *
Ownership H4	$\chi^2 = 0.900$ $df = 2$ P-value = 0.638	$\chi^2 = 31.294$ $df = 2$ P-value = 0.000	$\chi^2 = 0.379$ $df = 2$ P-value = 0.827	$\chi^2 = 3.148$ $df = 2$ P-value = 0.207	$\chi^2 = 2.781$ $df = 2$ P-value = 0.249 *	$\chi^2 = 0.660$ $df = 2$ P-value = 0.719	$\chi^2 = 0.527$ $df = 2$ P-value = 0.768
Management vision H5	$\chi^2 = 7.999$ $df = 2$ P-value = 0.018	$\chi^2 = 21.243$ $df = 2$ P-value = 0.000	$\chi^2 = 15.883$ $df = 2$ P-value = 0.000	$\chi^2 = 5.686$ $df = 2$ P-value = 0.058	$\chi^2 = 20.985$ $df = 2$ P-value = 0.000	$\chi^2 = 1.437$ $df = 2$ P-value = 0.487	$\chi^2 = 13.761$ $df = 2$ P-value = 0.001

█ p-value is lower than 0,05, we can reject H0, variables are dependent.

Chi-square value

α Predetermined alpha level of significance – Asymmetric significant

(=0.05)

L. Ratio

df

*

Likelihood ratio

Degree of freedom

Assumption about minimum expected count was abused. Needs to double check by Monte Carlo simulation.

Table 7.1b. Summary of statistical results – Contingency Coefficient of significant tests

	Applied information technology	Applied management tools	Training effectiveness	Sharing knowledge level of working	Record system effectiveness	Staff turnover harm business level	Innovation level
Sector of business H1		P-value = 0.000 Cp = 0.477					
Age H2				P-value = 0.009 Cp = 0.380			
Size H3	Pearson P-value	P-value = 0.008 Cp = 0.333 ★	P-value = 0.001 Cp = 0.385 ★				
	Monte Carlo P-value	P-value = 0.006	P-value = 0.001				
Ownership H4		P-value = 0.000 Cp = 0.477					
		P-value = 0.000 Cp = 0.404	P-value = 0.000 Cp = 0.357		P-value = 0.000 Cp = 0.402		P-value = 0.001 Cp = 0.335
Management vision H5		P-value = 0.018 Cp = 0.261					

■ p-value is lower than 0,05, we can reject H0, variables are dependent. Cp Pearson Contingency Coefficient

★ Predetermined alpha level of significance – Asymmetric significant Needs to check by Monte Carlo P-value (=0.05)

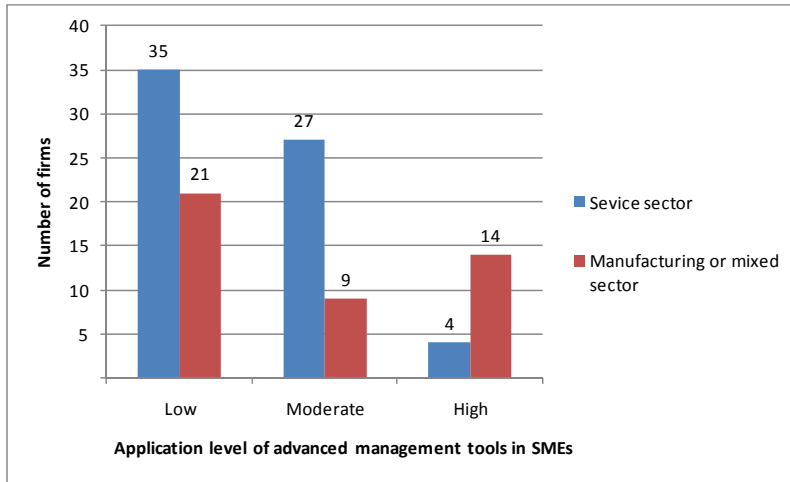


Figure 7.5. Sector of business vs. application level of advanced management tools in SMEs

Hypothesis 2: There is an association between age of firms and the way they deal with KM issues

This hypothesis examines whether there is a relationship between age of business and the way firm deals with KM related issues. In order to examine a clearer difference among firms with different ages, the sample was split into quartiles based on the ages. Lower and upper quartiles of firms were selected as the analyzed samples. The lower quartile consists of 28 young firms with the age up to four years old while the upper quartile includes 28 firms from 10 years old to 22 years old. Seven sub-hypotheses can be listed as follows:

Sub-hypothesis 2.1. There is a relationship between the age of firms and the application level of IT.

Sub-hypothesis 2.2. There is a relationship between the age of firms and the application level of advanced management tools.

Sub-hypothesis 2.3. There is a relationship between the age of firms and the training effectiveness in SMEs.

Sub-hypothesis 2.4. There is a relationship between the age of firms and the sharing knowledge level of working environment in SMEs.

Sub-hypothesis 2.5. There is a relationship between the age of firms and the record system’s effectiveness of SMEs.

Sub-hypothesis 2.6. There is a relationship between the age of firms and the level of harmfulness caused by high staff turnover to business in SMEs.

Sub-hypothesis 2.7. There is a relationship between the age of firms and the innovation level of SMEs.

The results of seven chi-square tests revealed that only sub-hypothesis 2.4 was confirmed (with associated significant level of 0.009) (see Appendix 6). In tests 2.2, 2.5, 2.6, the data violated the assumption for minimum expected count in cell (more than 20% expected count less than 5), hence the Monte Carlo tests was run to crosscheck. The final result also confirmed that only test of sub – hypothesis 2.4 was significant. It means that ‘age of firm’ has a relationship with the ‘knowledge sharing level of working environment’ in firms. The details are presented in Figure 7.6.

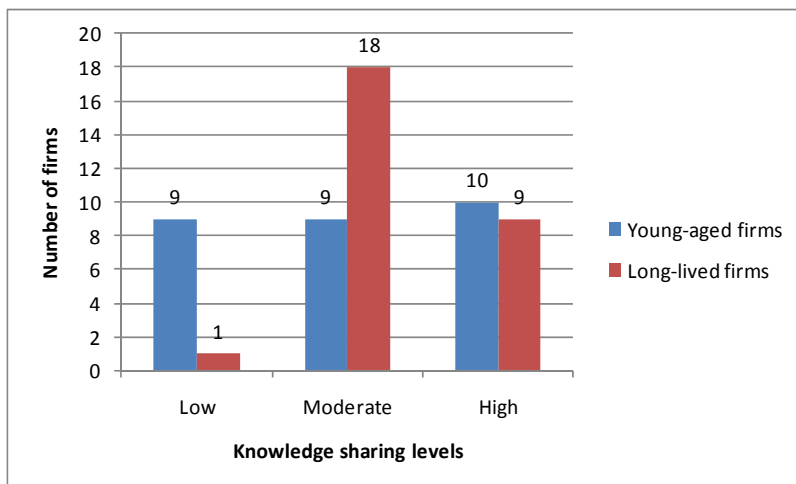


Figure 7.6. Age of firms and knowledge sharing level of working environment in SMEs

Most of firms in the long-lived group were ranked at moderate and high level in term of knowledge sharing level (64.3% and 35.7%) while firms in the young – aged group were equally spread over the three levels (low: 32.1%, moderate: 32.1%, high: 35.8%).

Hypothesis 3: There is an association between size of firms and the way they deal with KM issues

Sizes of SMEs in Vietnam are classified according the Decree No. 56/2009/ND-CP of Vietnamese government (see Appendix 1) into three different groups: very small enterprises, small-sized enterprises, and medium-sized enterprises. This hypothesis examines the association between size of firms and the way they deal with KM issues. Seven sub-hypotheses are stated as follows:

Sub-hypothesis 3.1. There is a relationship between the size of firms and the application level of IT.

Sub-hypothesis 3.2. There is a relationship between the size of firms and the application level of advanced management tools.

Sub-hypothesis 3.3. There is a relationship between the size of firms and the training effectiveness in SMEs.

Sub-hypothesis 3.4. There is a relationship between the size of firms and the sharing knowledge level of working environment in SMEs.

Sub-hypothesis 3.5. There is a relationship between the size of firms and the record system's effectiveness of SMEs.

Sub-hypothesis 3.6. There is a relationship between the size of firms and the level of harmfulness caused by high staff turnover to business in SMEs.

Sub-hypothesis 3.7. There is a relationship between the size of firms and the innovation level of SMEs.

In these tests, the assumption about expected minimum count in cell was violated (See Appendix 7); Monte Carlo P-values (99% of confidence) were calculated to make sure the reliability. The statistical results showed that size of firms significantly relates to the application level of IT (sub-hypothesis 3.1), advanced management tools (sub-hypothesis 3.2) and the training effectiveness of SMEs (sub-hypothesis 3.3). We can conclude that:

- Firms with different sizes are different in applying IT tools. This test has Monte Carlo P-value of 0.006.
- Very small firms, small firms and middle – sized firms are different in applying advanced management tools. The Monte Carlo P-value is 0.000.
- Size of firm somehow influences on the training effectiveness of SMEs.
- Size of firm has no relationship with sharing knowledge level of the firm.
- Size of firm has no relationship with record system's effectiveness of the firm.
- Size of firm has no relationship with the harmfulness to business caused by high staff turnover.
- Size of firm has no relationship with innovation level of the firm.

Three significant test results are presented in the details as follows:

Relationship between size of firm and the IT application level:

The collected data is presented in Figure 7.7. The result showed that IT application is limited in very small firms. 81% of very small firms are equipped with computers and internet, but they are used at very basic level. The percentages at this level of application of small-sized firms and medium-sized firms are 9.2 and 26.1. Most of small – sized firms were ranked at low level (47.7%) and moderate level (43.1%). Even though the IT application of medium – sized firms is much better than other two groups but the number of medium-sized firms at low level still occupied 43.5%.

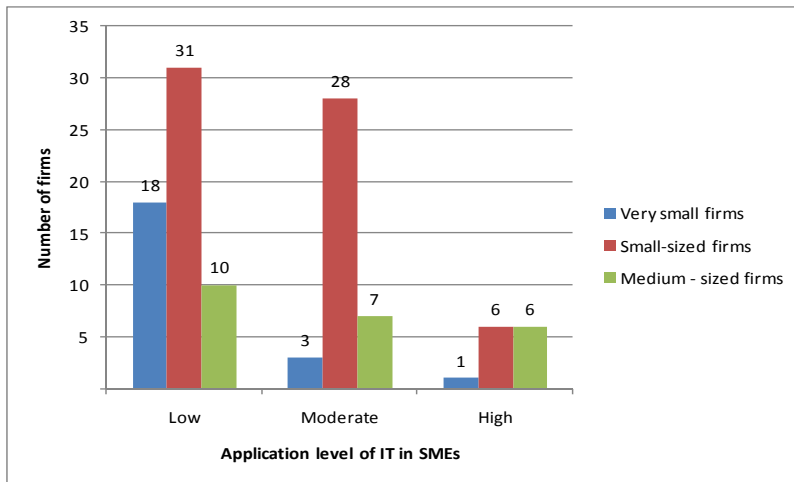


Figure 7.7. Size of firm vs. IT application level

Relationship between size of firm and the application level of advanced management tools: The results are described in Figure 7.8.

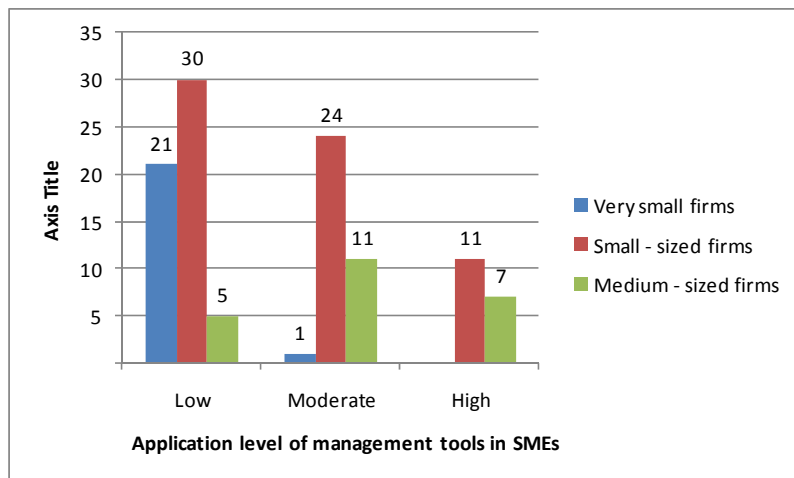


Figure 7.8. Sizes of firms and the advanced management tools applied

It showed that very small firms (have up to 10 employees) have not applied any management tools yet, while this percentage is 16.9 and 30.4 with small and medium sized firms groups. 95.5% of the sample in very small – sized group has the application level of management tools at low level, i.e. they simply don't have any specific management procedures yet. The situation of small – sized group was a little more advanced with 46.2% of the sample in the group at low level, and 36.9% at the moderate level.

Relationship between size of firm and the training effectiveness:

According to this result, most of very small – sized firms did not satisfy with their training effectiveness with 45.5% of the sample in the group ranked at low level, 50% ranked at moderate level, and only 4.5% ranked at high level. Contrary to this result, CEOs of two other groups were more optimistic when assessing their firms’ training activities and effectiveness: Only 12.3% of the sample in the small – sized firms group was at low level, and this percentage of the medium-sized firms group was 13%. 46,2% of small-sized firms confirmed that their training effectiveness was at high level, while this percentage of medium-sized firms was 52.2.

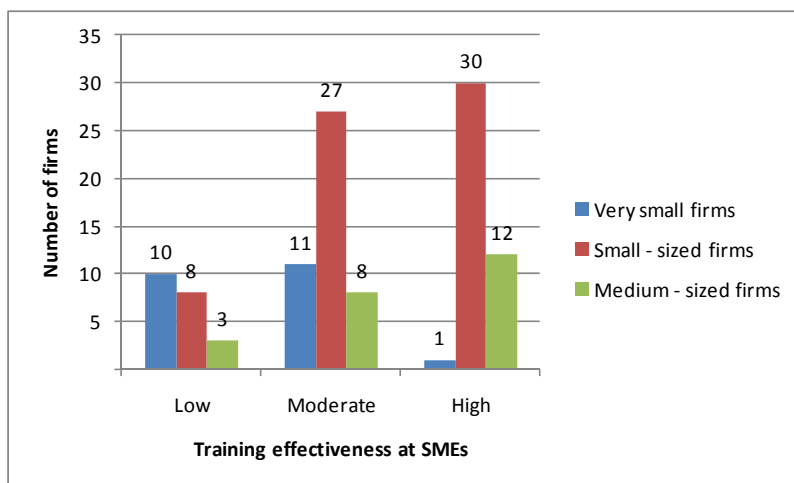


Figure 7.9. Sizes of firms and the training effectiveness in SMEs

Hypothesis 4: There is an association between ownership and the way they deal with KM issues

As explained in the characteristics of population, in the final data for analysis, the number of state-owned SMEs was too small (only four firms), the research decided to excluded these firms from the sample. Thus, in this study there are only two groups of firms according to (the majority of) ownership – local private SMEs and foreign SMEs. Seven sub-hypotheses are listed as follows:

Sub-hypothesis 4.1. There is a relationship between the ownership of firms and the application level of IT in SMEs.

Sub-hypothesis 4.2. There is a relationship between the ownership of firms and the application level of advance management tools in SMEs.

Sub-hypothesis 4.3. There is a relationship between the ownership of firms and the training effectiveness in SMEs.

Sub-hypothesis 4.4. There is a relationship between the ownership of firms and the sharing knowledge level of working environment in SMEs.

Sub-hypothesis 4.5. There is a relationship between the ownership of firms and the effectiveness of record system in SMEs.

Sub-hypothesis 4.6. There is a relationship between the ownership of firms and the level of harmfulness caused by high staff turnover to business in SMEs.

Sub-hypothesis 4.7. There is a relationship between the ownership of firms and the innovation level of working environment in SMEs.

The data analysis showed that in Vietnamese economy, the ownership is not a strong impact factor to the SMEs' performance (see Appendix 8). It has related only to the application level of advanced management tools (sub-hypothesis 4.2) with P-value of 0.000 and contingency coefficient of 0.477. We can conclude that:

- There is no relationship between ownership of firm and IT application level of SMEs.
- There is a relationship between ownership of firm and advanced management application level of SMEs.
- There is no relationship between ownership of firm and training effectiveness in firms.
- There is no relationship between ownership of firm and knowledge sharing level in firms.
- There is no relationship between ownership of firm and the firm's record system's effectiveness.
- There is no relationship between ownership of firm and the harmfulness caused by high staff turnover to business in SMEs.
- There is no relationship between ownership of firm and the innovation level of firms.

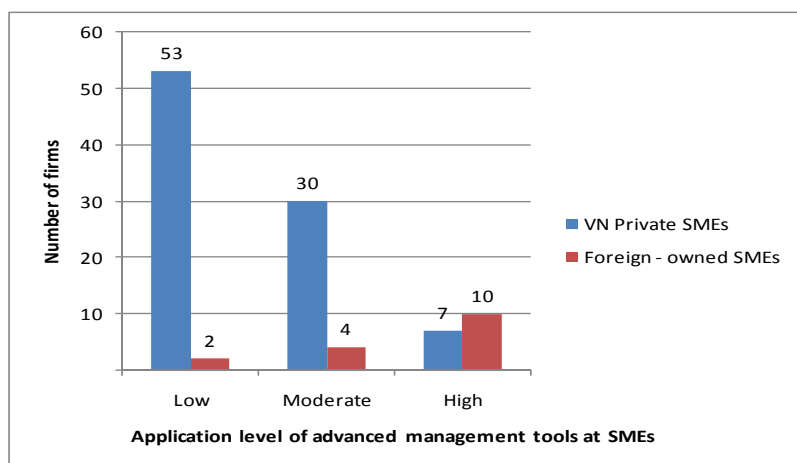


Figure 7.10. Ownership of firm and the application level of advance management tools in SMEs

The statistical result of the significant test (sub-hypothesis 4.2) is prescribed in Figure 7.10.

Foreign-owned firms seem to be superior to the local private firms in using advanced management tools: 58.9% of local private firms revealed that they don't apply any IT tools or just very basic technology for their business (i.e. low level), 33.3 % of the sample in the group was at the moderate level, and only 7.8% was at the high level. This percentage is 12.5, 25, and 62.5 for the group of foreign-owned firms.

Hypothesis 5: There is an association between management vision and the way firms deal with KM issues

In this study, the researcher determined “management vision” based on the fact whether the firm has the strategic plan for long-term development or not. The sample is divided into two different groups – the group that has the long-term vision and the group that doesn't have the long-term vision (firms in this group don't have any plan for long-term development, or just have annual business plan only). Hereunder is the list of seven sub-hypotheses:

Sub-hypothesis 5.1. There is a relationship between the management vision and the application level of IT in SMEs.

Sub-hypothesis 5.2. There is a relationship between the management vision and the application level of advanced management tools in SMEs.

Sub-hypothesis 5.3. There is a relationship between the management vision and the training effectiveness in SMEs.

Sub-hypothesis 5.4. There is a relationship between the management vision and the sharing knowledge level of working environment in SMEs.

Sub-hypothesis 5.5. There is a relationship between the management vision and the effectiveness of record system in SMEs.

Sub-hypothesis 5.6. There is a relationship between the management vision and the level of harmfulness caused by high staff turnover to business in SMEs.

Sub-hypothesis 5.7. There is a relationship between the management vision and the innovation level of working environment in SMEs.

The statistical results showed that management vision significantly related to the application level of IT (sub-hypothesis 5.1), application level of advanced management tools (sub-hypothesis 5.2), training effectiveness (sub-hypothesis 5.3), the effectiveness of the record system in SMEs (sub-hypothesis 5.5), and the innovation level of firms (sub-hypothesis 5.7) (see Appendix 9). It can be interpreted that:

- There is a relationship between management vision and the IT application level of firm.
- There is a relationship between management vision and the management tools application level of firm.
- There is a relationship between management vision and the training effectiveness of firm.
- There is no relationship between management vision and the knowledge sharing in firm.
- There is a relationship between management vision and the firm's record system's effectiveness.
- There is a no relationship between management vision and the harmfulness caused by high staff turnover to business in SMEs.
- There is a relationship between management vision and the innovation level of firms.

The statistical results were presented in Table 7.1a and 7.1b. The details were in Appendix 10. Management vision has quite strong relationships with 'IT application level' and 'record system's effectiveness' with contingency coefficient of 0.404 and 0.402. This relationship is rather loose with 'IT application level' (contingency coefficient = 0.261). Other two relationships were moderate.

Relationship between management vision and the IT application level

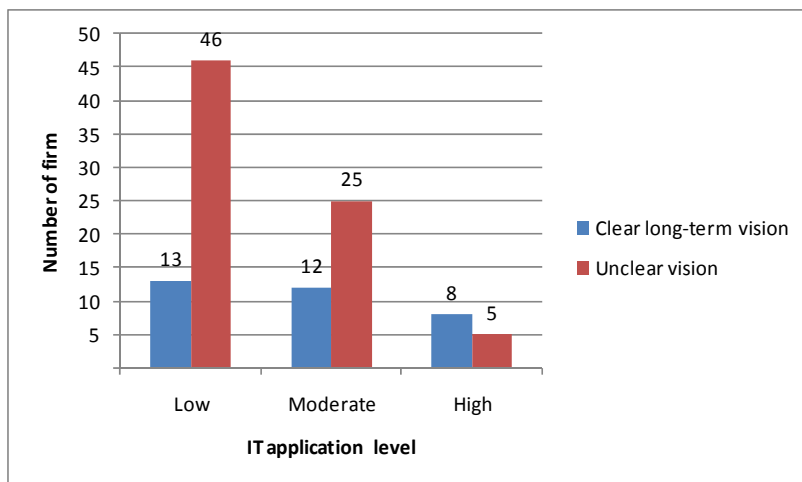


Figure 7.11. Management vision and IT application in SMEs

The group of SMEs with clear long-term vision was superior to another group in using IT tools with 39.4% of the sample in the group at low level, and 24.2%

at the high level while most of the firms with unclear management vision were at low level (60.5%) or moderate level (32.9%), and only 6.6% at the high level.

Relationship between management vision and the advanced management tools application level

The proportions of the first group of firms (with clear long-term vision) and the second groups of firms (with no clear vision yet) who have applied the advanced management tools at high level were 36.4% (from 30.3% of the sample) and 7.9% (from the 69.7% of the sample); and the percentages of these two groups at the low level were 21.2% and 64.5%. The details are presented in Figure 7.12.

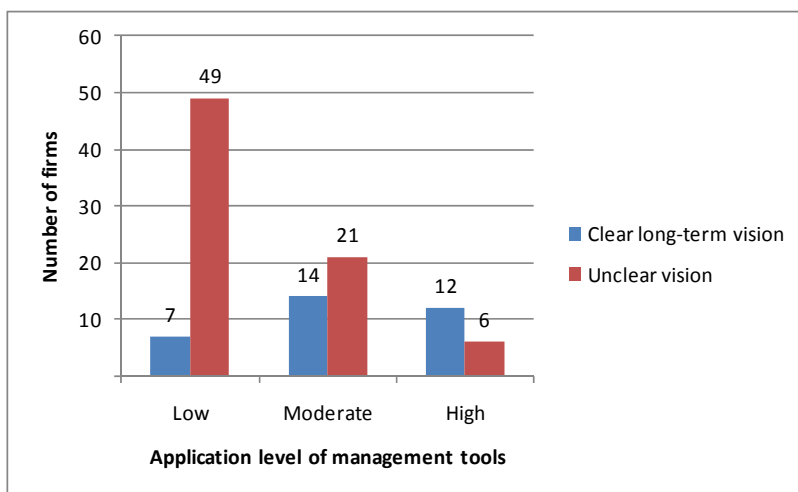


Figure 7.12. Management vision and application level of advanced management tools in SMEs

Relationship between management vision and training effectiveness of firms

The statistical result is presented in Figure 7.13. It showed that while only 9.1% of the sample in the group of SMEs with long-term management vision evaluated their training activities and effectiveness at low level, this number in the second group was 23.7%. And these figures at the high level were 66.7% for the first group and 26.3% for the second one.

Relationship between management vision and firm’s record system’s effectiveness

The group of SMEs with clear long-term vision was superior to the group with no clear management vision in setting up the effective record system for their

companies. The percentages of firms in the first group at three different levels were quite equal (30.3% at low level, 33.3% at moderate level, and 36.4% at high level) while they had changed sharply in the group of SMEs with unclear management vision with 67.1% at the low level of effectiveness, 27.6% at the moderate level, and only 5.3% at the high level (Figure 7.14).

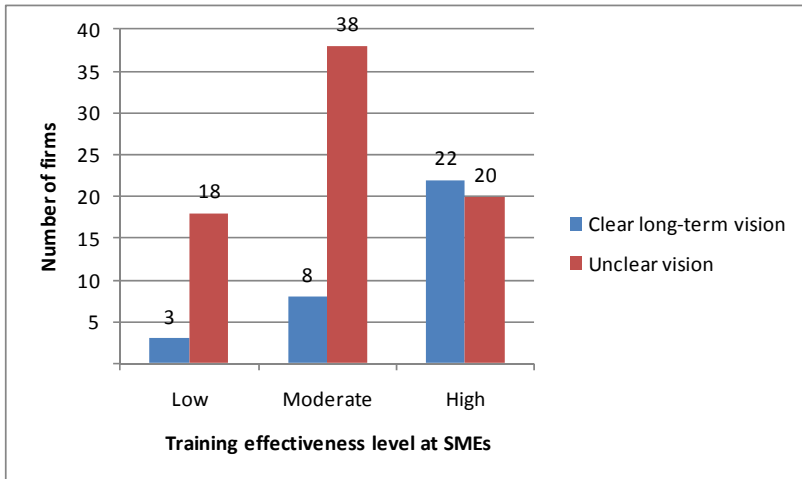


Figure 7.13. Management vision and training effectiveness in SMEs

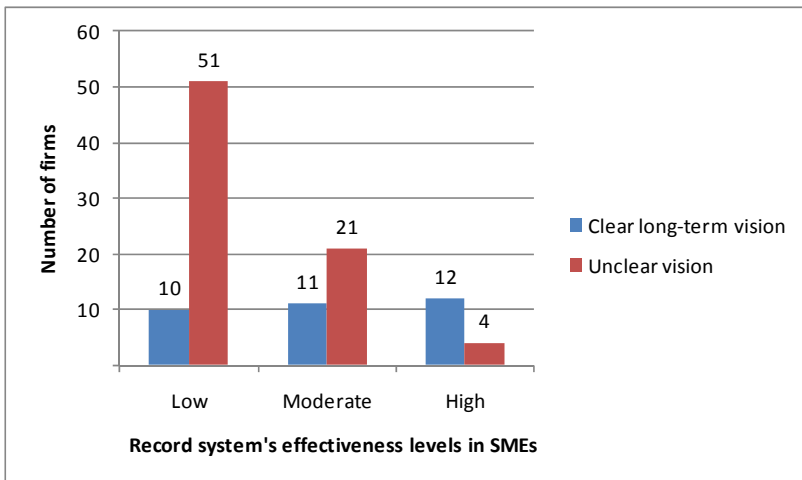


Figure 7.14. Management vision and firm's record system's effectiveness

Relationship between management vision and firm's innovation level

The statistical result is presented in Figure 7.15. It showed that while only 12.1% of the sample in the group of SMEs with long-term management vision

evaluated their innovation at low level, this number in the second group was 31.6%. And these figures at the high level were 66.7% for the first group and 28.9% for the second one. The SMEs with long-term management vision were much more advanced than the SMEs with unclear management vision in innovation.

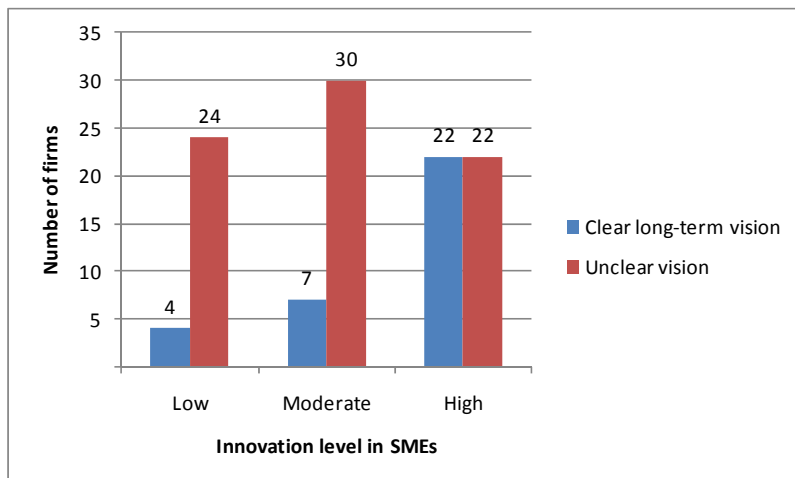


Figure 7.15. Management vision and innovation level of SMEs

7.2.3. Discussions & implications

After analyzing data by running 35 chi-square tests, 11 out of 42 tests returned significant results. The results can be summarized and discussed as follows:

- **Sector of business:** From the data analysis, we can see that ‘sector of business’ significantly relates to only ‘application level of management tools’ in Vietnamese SMEs. This relationship is quite powerful as the contingency coefficient is 0.477 (the highest value among contingency coefficients in this study). According to the statistical results in this study, the manufacturing (and mixed) sector seems to be superior to the service sector in term of applying advanced management tools. This fact can be explained that in Vietnam, it is much easier to set up a service company than a manufacturing one. For establishing a manufacturing firm, the initial investment capital must be significant enough (at least for buying equipments, building up the factories, the workshops, etc.), then the investors need to plan well and be more committed to the businesses. It is more demanding to manage manufacturing activities than service activities. From the demand of the business, top management in manufacturing sector had to pay more attention on applying advanced management tools. This fact has also reflected the under-estimation of

Vietnamese business on the service supplying. It confirmed the proposition of Porter about the low quality of services in Vietnam [100].

- **Age of business:** The data analyzed result showed that age of business relates to knowledge sharing level in working environment of firms (with contingency coefficient = 0.380). This relationship was just at the moderate level. The differences between two groups was that firms in long-lived group rarely had low level in knowledge sharing when it was not obvious in the young – aged group. The results showed that age of business was not a strong factor that could impact on the activities of firms.

- **Size of business:** Statistical results show that ‘size of business’ related somehow with three KM-related issues namely (1) IT application level, (2) application level of advanced management tools, and (2) training effectiveness. Among firms’ characteristics, size of firm and its affect on company management has been paid a lot of attentions in the literature [101-103]. Classical business administration theory states that the increase in number of employees (it means size of firms) would lead to many changes in the structure as well as management of firm. It was caused by the need to maintain optimal spans of control. However, related to KM, Moffett (2006), Corso et al. (2003), by their empirical studies, found that size of firms is not a strong impact factor to the implementation of KM [103-104]. The finding of this study once more time confirms the prepositions from previous ones. Size of firm moderately influences the way firms apply IT and deal with training activities (with contingency coefficients of 0.333 and 0.385). The relationship with ‘the application level of management tools’ was a stronger with contingency coefficient value of 0.440. This survey has not surprisingly indentified that most of very small and small firms has not adopted any advanced management tools in their businesses. When the firm is still small, there is no demand of establishing a formal management system as the CEO (in most of the cases, also the business owner) involves in all daily activities of the firm. However, this fact includes the latent danger for business development when companies are managed unsystematically. Arbitrary management is the biggest barrier for SMEs as it can make employees confused, tired and lack of long-term commitment to the firm. It also creates the bad habit for remaining employees. Then when the firm would like to launch an innovation program (or change program), it would be impossible or would requires big efforts.

Training is considered the most effective way to share knowledge inside the organization and to maintain existing organizational knowledge. In this

study, CEOs of SMEs were asked to evaluate their training effectiveness and to list down the most popular in-house training activities. They are also asked about whether their firms have the specific training policy for employees or not. More than 70% of the sample revealed that they don't have specific training policy or program for employees and normally they offer on the job training (OJT) for them instead. Some SMEs' CEOs confirmed that they only hire experienced staff for their businesses, and others considered job is simple, thus does not require any training. Surprisingly, 42% of the sample ranked their training at "high level of effectiveness". There are some possibilities here: (1) or CEOs did not perceive well enough the necessity of the training and they over-evaluated the training effectiveness in their firms (2) or they did not admit the true, (3) or for SMEs in Vietnam, unofficial/personal learning is quite effective, then employees could find ways to learn by themselves without any supports from firms' management. This issue needs to take into account for the further study.

- **Ownership of business:** Due to the limitation in sampling, there are only two types of ownership in this study – Vietnamese private firms and foreign-owned firms. In the original research design, we are eager to identify the differences in the management manner of firms from three groups – state-owned firms, local private firms, and foreign-owned ones. After collecting data, we found out that there were just very few state-owned firms who responded, and among them, some were not considered as "real" enterprises as they are finance-dependant entities (to father state-owned corporations). The finding from the study, however, shows that in Vietnamese SMEs, ownership does not much relate to KM practices. It only relates to the way firms apply the advanced management tools. And this relationship is very strong with Pearson contingency coefficient value of 0.477.

The statistical analysis also confirmed the reality of Vietnamese business when showing that the application of advanced management tools in local private firms is very limited compared with the foreign-owned firms.

- **Management vision:** Management vision relates to most of KM related issues in this study: (1) application level of IT, (2) application level of advanced management tool, (3) training effectiveness, (4) record system effectiveness, and (5) innovation level of firms. The relationship between management vision and training effectiveness is strongest while it is rather weak with IT application level and innovation level. The finding from this study is supported by previous studies in the KM field. The important role of top management in implementing KM as a demanding strategic

management tool in firms has been emphasized in the literature, and it is even more crucial for SMEs [75, 105]. This finding and related figures presented in sub-section 7.2.1. *General analysis* have implicated that management vision would decide the successful implementation of SMEs despite other characteristics. Thus, the governmental and non-governmental development programs for SMEs should focus on improving the business management capability of top managers/business owners instead of other supports. With 43% of managers/owners of business has not yet graduate from the high school, those capability improvement projects need to be very carefully designed, the coaching projects would be preferred than the theoretical training courses. Training top managers/business owners to help them recognize business issues by themselves, understand their own demands, and plan their own activities must be on the first priority of any support programs for SMEs including national KM programs in the future.

- **KM-related issues:** In this study, from the result of the preliminary study, seven KM-related issues are categorized (see Chapter 6) and examined in the main research to identify their relationships with firms' characteristics. Among these seven KM-related issues, we can see that 'application level of advanced management tool' was most sensitive as it related with all characteristics of firms. In addition, 'IT application level' and 'training effectiveness' of firms were affected by size of firms and management vision of firms. The practical implication from this finding was that in order to expand the size of firms, IT application and training is crucial. The site observations at a part of the sample in this study showed that the amount of money invested on IT system was not ensuring the rank of 'IT application level'. It was decided by the educational background of the top manager as well as the objective of managers/business owners. Training for employees was more paid attention from the larger firms, i.e. training cannot be ignored if one aims at the development. These issues will be explored more specifically in Chapter 8.

Other issues such as 'Knowledge sharing', 'harmfulness level caused by high staff turnover to business' were quite independent as they did not related with any firms' characteristics. 'Knowledge sharing' is considered as the main process of KM in the literature. It is believed that 'knowledge sharing' is mainly impacted by top management (vision and style) and IT system [53, 75], but the findings in this study revealed the opposite proposition – In specific context of Vietnamese SMEs, 'knowledge sharing' is not affected by the fact management vision and the support of IT system. It may be influenced by other factors. And it is important to be

further studied as finding the real impact factors to ‘knowledge sharing’ practices would be much useful for practitioners in Vietnam.

7.3. Chapter conclusion

Data analysis in this stage of the research has brought up rich information and insights about the operations and issued of SMEs in Vietnam. The interpretation from the database still limited because of the time constraints of a PhD dissertation. The result in this stage has given the confirmation that KM is not yet a popular concept in Vietnam, especially for SMEs (Research question 1). However, some firms are trying to practice many management activities that can be categorized as KM-related activities (Research question 2).

For testing the hypotheses to find the answer for the research question 3 (Figure 6.1), chi-square test for independences between categorical variables and Monte Carlo arithmetic were adopted when necessary to support the chi-square tests’ results. 35 chi – square tests were conducted to help the researcher indentify which characteristics of firms relates to the way SMEs deal with KM issues. The results have revealed some main findings and implications as follows:

- Size and management vision are the most important characteristics of firms that should be paid attention when launching a KM program. Generally evaluating, firms with bigger size and clear – long term management vision are superior in practicing KM-related issues than smaller ones or ones without any management visions.
- The way firms are managed is influenced by various factors including the sector of business, age of business, size of business, ownership of business, and management vision. This relationship of Vietnamese SMEs needs to be examined further as the results of data analysis showed that they are quite strong with high contingency coefficients.
- Knowledge sharing does not relate to any characteristics of firms. Then it may be influenced by other factors. As KS is considered as the key process of KM, it needs to be studied further to find out how KS is working in Vietnamese SMEs and which factors could affect KM in this context. These issues will be focus in the next stage of the study.
- Training effectiveness of firms strongly relates to the size of firms and the management vision. Training is more focused and effective in the bigger sized firms or in the firms with the clear long-term management vision. 65.5% of the sample revealed that they have no specific training policy for their employees. This figure showed that while training seems to actively contribute to the stable development of firms, it is not paid enough attention by managers/owners of SMEs in Vietnam. Training is considered expensive and risky because of the ‘lack of commitment from

employees' (see Sub-section 7.2.1). How training should be perceived and should be practiced in a SME will be examined in the next stage of the research.

- Firm's record system is not paid enough attention in Vietnamese SMEs and the effectiveness is very low. It relates only to management vision of the firm. Record system is considered the important tool to captured and stored knowledge in firms. It is normally facilitated by ITS. The exploratory case study in Chapter 8 will present how it is practiced in the most suitable way for a SME in Vietnam.

Although the execution of this stage was necessarily limited in many ways by the constraints of the PhD program (such as the time limits for submitting the description of the completed research project), this stage has contributed some fresh insights to the thorough understanding the SMEs' operations for academics and practitioners who are interested in looking effective solutions for improving the performance of Vietnamese SMEs. The findings from this stage also directed the researcher in the next stage of the research.

CHAPTER 8. HOW TO INITIATE KM IN SMEs

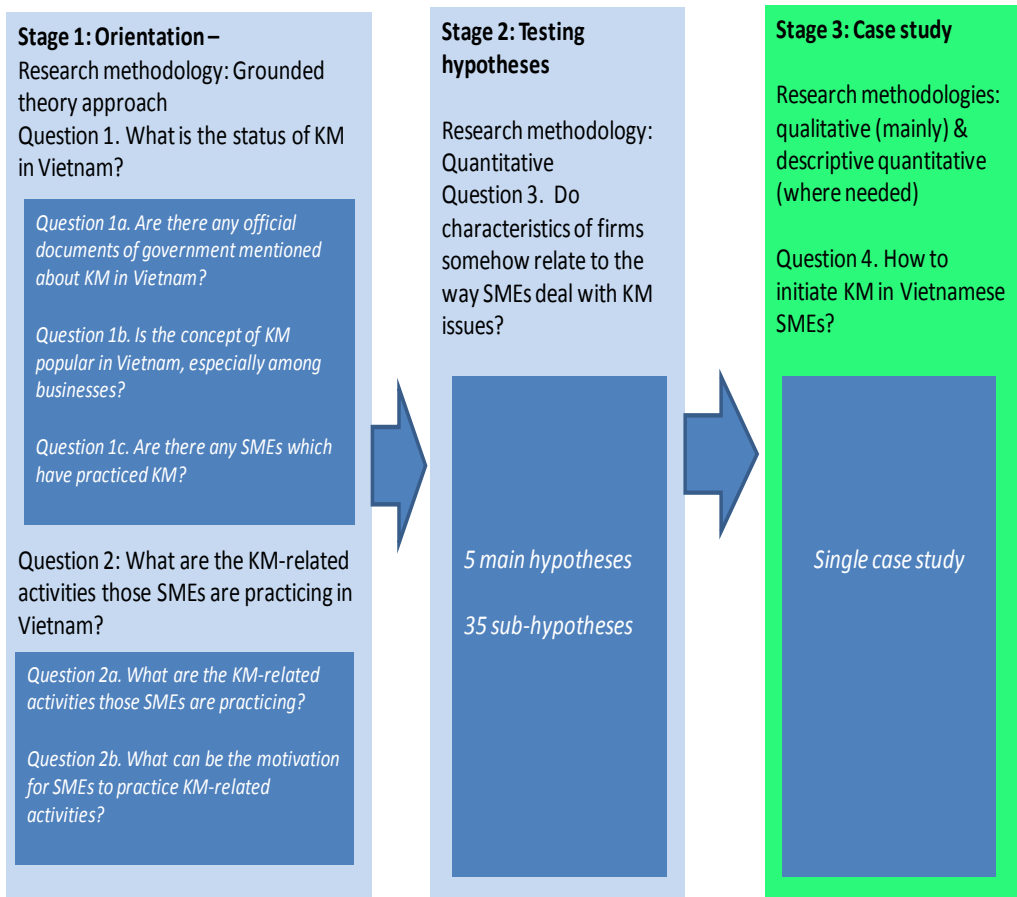


Figure 6.1. Research's questions & methods in each stages of the study

The main question addressed in this research is how to initiate KM for SMEs in a developing country, and this is the question this last stage of the research seeks to answer. According to Yin (2003), the case study is the preferred method for research that focuses on dealing with the “how” question. The case study is a research methodology that is quite popular as it allows the researcher to explore and explain a phenomenon in a real life context[92].

In this stage, a single case was selected. The choice of number of cases in a research depends on the objectives of the research and the availability of the resources, and both options have their own advantages as well as disadvantages. These characteristics are presented in Table 8.1.

Table 8.1. Choice of number of cases for the study [106]

Choice	Advantages	Disadvantages
Single case	Greater depth	- Limitation of generalization of conclusion drawn. - Bias such as misjudgment the representativeness and exaggeration available data.
Multiple cases	Augment external validity	Less depth per case

8.1. Selection of the case study & survey method

LTV was selected from the sample of the second stage of the research (see chapter 7) as it can be considered as a typical case of Vietnamese SMEs as postulated for case selection rationales by Yin (2003):

- Being a local small firm (with more than 70% of total registered Vietnamese SMEs are located in Ho Chi Minh City)
- Being managed by the business owner
- Having no special business privileges (by having personal relationship with authorized people)
- Having a typical development history from a very small firm and limited investment at the beginning.
- Established a good position in the market
- Having a good potential development
- Being rated as one of the best practices in the sample of this study.

The case study of a small UK firm that had successfully initiated KM was taken as the comparative analysis. That case study (“company A”) was carried out by Wong and Aspinwall (2006) [107].

This step is in line with an exploratory as well as an explanatory study. The current stage of the study uses mainly primary data, drawing upon secondary data such as company profiles or related documents as necessary. Primary data were collected by face-to-face interview using a semi-structured questionnaire. Interviews intentionally were conducted at each company to provide the researcher with opportunities to observe the daily operations of the companies, with several visits were made during the first half of 2010. Interviews with the CEO were the principle data source, although interviews were made with executive management, with the boards of the company and with employees as needed for confirmation about some facts. The analysis also employed the

statistical results from the first step of the second stage for further clarifying related issues on more generalized context of the country.

The case study protocol was developed to maintain the focus of interviews. The overall study is about the general management of the firm, issues relating to KM, and the ways they were handled in the firm. As the related concepts were not yet known in LTV, questions were formulated to avoid mention of KM concepts and technical jargon and to focus on discovering facts and understanding working environments as well as employees' attitudes towards what really were KM activities.

8.2. Description of the case study

LTV is one of very few firms that have actively practiced KM in Vietnam. The most interesting thing is that the owner and top executive does not know the KM concept, yet instinctively pursued certain paths to manage KM issues, overcome difficulties and developed steadily.

LTV was established in 2002. This company is specialized in supplying chemicals, equipment and service for water treatment and for cleaning & maintaining cooling towers & chillers for factories, buildings, hotels, etc (see <http://www.longtruongvu.com/en/>). Currently, LTV has 35 permanent employees. Two-thirds of these are technicians. Other relatively unskilled workers are employed temporarily as needed. The main business line of LTV is manufacturing and supplying chemicals. Services are added business lines and used as the strategic marketing tool of LTV.

LTV has its headquarters in Hochiminh city and two other branches in Hanoi and Danang (the largest cities of Vietnam in southern, northern and middle regions of the country). Existing customers of LTV are five-star hotels, resorts, modern buildings, factories such as Hyatt, Searefico, Central point, etc.

As announced in its mission statement, LTV aims at becoming the top professional supplier of environment and water treatment technology in Vietnam, establishing a friendly working environment where talent and creativities are respected, healthy competition is guaranteed. Further, LTV also emphasizes the goal of creating an enterprise culture base on human value and long-term commitment (see <http://www.longtruongvu.com/gioi-thieu.aspx>).

8.3. Management issues at LTV

LTV is a limited company owned by the CEO, 35 year old Vu. He established his own firm after long years working for a foreign chemical corporation as a

sales executive. He thus had little background in management, and tried to compensate for this by taking a two-year Master in Management program. Furthermore, he is not a chemical engineer. This is one of his big disadvantages, and the reason that many people believed Vu would not be successful running the company: a technical background is the core knowledge for this kind of business. Despite these two shortcomings, with great entrepreneurship and nevertheless confident of his management abilities, his sound understanding of the market and counting on his key people, Vu committed himself to developing the business. The first six years were very challenging for him; however, the business has been growing well as there were not many competitors in this field. Since 2008, customers were becoming more and more demanding as the number of competitors increased and LTV has accumulated sufficient resources and knowledge to move to a higher development stage. The CEO started planning to become a 'top professional supplier' in the field.

Vu faced many challenges as the executive director of the company. The greatest was the shortage of competent people who could carry out their job according to specific standards. Skilled workers rarely shared their knowledge with others. When the company invested in job training, the recipient would become a 'star' and begin demanding more money, which the company couldn't afford. Often, such an employee would seek out more remunerative employment elsewhere, normally in a bigger company. When a skilled worker leaves the company, he removes the knowledge that he has acquired there unless he has transmitted it to someone else. This phenomenon occurred repeatedly for several years and became more serious.

The volume of business increased in spite of this problem, and Vu tried hard to find effective ways to deal with it and to inculcate a more professional behavior among his employees. He signed a two-year contract with a management consultant firm in March 2009 to set up a management system and train key personnel. The training focused on quality perception, teamwork, and management skills. As high-skilled workers are expensive, Vu decided use company profits to fund this new approach. First, Vu built up a reward policy in which the team's success is highly recognized in term of money and official praise. Second, skilled workers were required to deal with the most challenging problems and everything done by these people was recorded on video, including re-demonstrations for the purpose of analysis and reports. Vu himself took care of every step of the process of capturing and storing all key knowledge from high-skilled workers. After one year, an impressive bank of knowledge that can be used for training new employees had been built. In addition, various management tools were applied to set up work procedures, to define responsibility clearly, and to encourage people to improve communications within the company. The local area network (LAN) is used effectively in LTV

Company. The Quality Team concept is implemented well there with 5S & Kaizen programs.

The site survey revealed that the following activities are practicing at LTV for the last two years:

1. Setting rules for activities:
 - Reporting policy when a team completes its project: Demonstrating about how to proceed the project, evaluating the quality of the project, drawing the experiences learnt from the project, giving the suggestions
 - Before commencement of any projects, the in-charge team has to prepare the detailed action plan and upload it on the internal website for all people review. This document can be used for new staff training.
 - Regular meeting and evaluating implemented jobs of each team.
 - Rewarding policies for people who supported colleagues and proposed some valuable ideas for business
2. Setting up the working standards for all the jobs (by related experts) and standard requirements for every working processes. This is used as the tool for quality assurance when outsources are needed. Operational manuals are developed in hardcopies and softcopies (video clips) and published on the internal network.
3. Applying VPN technology (Virtual Private Network) for sharing information and knowledge among branches.
4. Training:
 - Building up the training manuals for all positions and using them for training. All staff has right to access these documents and share it with colleagues.
 - Training basic IT skill for all employees so that they can create their own database, sharing it, and use shared knowledge from other colleagues.
 - Training basic reporting skill for all employees.
 - Training searching skills for all employees.
 - Training managing skill for supervisors/team leaders.
 - Assigning specific training tasks for trainers and trainees and evaluating it periodically.
5. Team building activities
6. Communicating with employees about the benefit of sharing knowledge and encouraging staff of doing so.

8.4. Discussion

The remarkable point in this case study was that neither CEO had ever heard of Knowledge Management nor had any employee (verified by interview). This supports the conclusion from the report of the APO survey on the status of

knowledge management in member countries (Vu, 2008). But the management of LTV nonetheless has been actively practicing some activities those can be classified as “KM activities”.

8.4.1. Motivation towards KM implementation

In reply to the question of why he proceeded with KM activities and focused so much on KS issues, Vu said: *“I have this feeling of terrible pressure to run after my business. I hunger for competent employees as I have no chemical technology background. Some key workers abused that and put me in a very difficult situation by unreasonable requests. I have come to the decision that either I had to find out the way to deal with this issue, or give up”*.

Sparrow (2001) concluded that the adoption of knowledge technology in small business seems to be led by clients, especially large customers and suppliers[7]. In the case of LTV, the CEO himself led the adoption while seeking solutions for daily operations. While most studies in the KM field reveal that firms who have adopt KM normally aim at innovation for development [108-109], small businesses in Vietnam need KM just to survive first.

Wong and Aspinwall (2006) also indentified the effort of seeking the solutions for daily business difficulties as the motivation of company A when it initiated KM: *“... Consultants had difficulty in finding the necessary information, they were unsure of how up to date and relevant the knowledge was in the repository... Hence, the main stimulus for the company to implement KM was to improve this situation so that the consulting team could work smarter and more intelligently”*.

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Thus, the finding from LTV case study just confirmed that, in contrast to large corporations that normally aim at innovation and long-term improvement of competitiveness, SMEs normally adopt KM or practicing KM-related activities only if it provides solution for day-to-day operations. Sparrow (1999) identified the same issue when he/she suggested that ‘a specific pressing business situation might constitute the most appropriate opportunity for a small business to initiate a knowledge project’[110].

8.4.2. *KM strategy for SMEs*

Strategy is still a dreamland concept for SMEs in Vietnam. The survey in this research revealed that only 33% of SMEs having a long-term strategy for their firms. It was identified that there is permanent confusion between either annual business plans or else business owners' dreams (what they want) with the strategy. LTV is one of the few firms who confirmed that they have designed a long-term strategy. But as KM is an unknown concept at LTV, KM-related activities are practiced without being aware of any technical terms.

Hansen et al. (1999) defined two different strategies for KM in the firm, namely codification and personalization. With the codification strategy, firms focus on codifying knowledge and storing it in databases, where it can be easily accessed and used. Firms with a personalization strategy give the first priority to help people communicate knowledge, not to store it. "...*Emphasizing the wrong strategy or trying to pursue both at the same time can, as some consulting firms have found, quickly undermine a business*", as he suggested in the same study [111]. He further explained that companies should use knowledge effectively pursue one strategy predominantly and use the second strategy to support the first; and the principle of 80-20 was indicated: 80% of the knowledge sharing follows one strategy, 20% the other.

There are two questions relating to this issue: (1) does an SME need KM strategy? (2) If yes, then which strategy is appropriate for an SME in developing country? The earlier analyzed results in chapter VII confirmed that firms with clear long-term strategy are superior to firms with no clear strategy. Also management vision of SMEs is strongly related to the way firms deal with KM-related issues (see Chapter VII). A clear KM strategy or simply a specific approach is always needed for the success of any plans; especially of a strategic plan like KM. For example, knowledge sharing is one of the main processes of KM and previous studies have shown that an informal climate is propitious for KS, especially in small firm. But the CEO of LTV suspected the effectiveness of KS in an informal climate (this issue is discussed further in the following subsection) and emphasized that the company needs to set up an official mechanism for the actual KS in company. Hence, in order to design an effective official mechanism, firm needs to clarify its own strategy.

Examining the practiced activities of LTV and taking into account the firm's motivation (as stated in 8.3), we can see that it leans towards the personalization strategy with the "80-20 principle" as suggested by Hansen et al. (1999). For a small business in Vietnam, the budget for ICT is limited and the IT usage capability of employees is limited, too. LTV with more than 60% of staff is

workers or technicians are not an exception. LTV invests moderately in IT. A minimum IT investment is sufficient for facilitating communications and the exchange of knowledge. LAN was developed and exploited to the maximum for sharing information and knowledge in the firm. The cheapest package of VNT was bought to facilitate management and the exchange among branches of the firm. The CEOs of LTV revealed that in 2010, the firm paid not more than 10,000 USD for ICT. Knowledge was captured by very simple and cheap technology: Video recording, modeling and reporting system. *“Our company is still small; we prefer face-to-face communication and training. I do believe that they are effective and efficient enough for us. Capturing and storing knowledge by technologies are important as it helps us to have more systematic way, but the ultimate objective is working people. We also use our ‘library’ (i.e. knowledge bank) as the back-up option”* – Vu shared.

LTV’s selection is also popular among SMEs. Desouze and Awazu (2006) assert: *“SMEs knowingly or unknowingly, manage knowledge the right way – the humanistic way”*[53] and in SMEs, people are the center of knowledge management while technology is in the background.

8.4.3. Roles and responsibilities

Decisive role of the owner – manager

With regard to sharing knowledge, LTV’s CEO says that it is difficult to make people really share knowledge (in the full meaning of this concept). Vu strongly believes that normally only owners of business really desire knowledge sharing for the success of company. Most of other employees prefer to keep the knowledge/skills/expertise for themselves and use it for the bargaining power with the business owners. Consequently, if the owners of a business don’t have a sound background in the core knowledge of company, and are unable to act as exemplars, it will be hard to encourage or make employees share knowledge. Vu learned this during the first years of his business, and he was eager to find a solution to overcome this situation. Vu has turned his disadvantage (ignorance of chemical technology) into an advantage when he captured key knowledge from knowledge workers and transformed it into organizational knowledge (The details will be discussed in Sub-section 8.4.4).

Vu has also shared his view that in small companies like LTV, KS can happen only if the business owner is highly committed and has good management skills. Implementation can face much opposition from knowledge workers, including their departure. In 2009, Vu lost one third of his employees. Some of them could not meet the requirements of the company and others did not accept the company’s new policy. Therefore, the company should be prepared for opposition. Sacrificing short-term profits for the gain of long-term benefits is a

must for successful implementation of KS in small company. The importance of upper management in implementing such kinds of activities has been highlighted in various studies, but the role of the owner-manager is even more critical for small businesses.

This proposition was proposed by in Wong and Aspinwall (2006) study after examining the small British firm (company A) but there are some differences between two cases. For company A., the presence of a KM champion (in this case i.e. the Delivery Manager as an individual who understands the KM concept) is emphasized while for LTV, the CEO himself must act as the key person to set the rules and to coordinate related activities. Responding to the question why he doesn't authorize the deputy director to take care of this task, the CEO shared that because this task was very sensitive and related directly to employees, he had to take of it by himself to ensure success. The deputy director partly took care of other aspects of LTV's business during these two years. Discussions with CEOs of other SMEs in Vietnam revealed that authority is a real challenge in small businesses as workers normally don't respect the authority of managers who are not the business owners. This 'symptom' exists in silence but neutralizes any management efforts in SMEs. Thus, as the LTV's CEO argued, while the company is still small and characterized by the typical working culture of a Southeast Asian developing country, the chief executive/business owner has to be the key facilitator in most critical strategic plans.

Knowledge team

Company A (the British small firm) assigned a team of the most competent employees of each key knowledge areas for KM program. Together, these people represented a robust team that plan, coordinate, and implement the initiative; and they were called the Knowledge Managers. In LTV, as there is no official KM program yet, this structure does not exist. When we discussed about the possibility to set up the official KM program in LTV and formulate a knowledge team in the firm, the CEO agreed with the first idea but mentioned that it should be communicated properly and carefully because it could frighten employees. They may be afraid that the company intends to 'steal' what they have and thus undermine their power. With regard to the official knowledge team, he said that it would better if he assigned more tasks for heads of teams, but not much emphasize the role of someone as a knowledge champion. He revealed the lesson he learnt in the pass that whenever someone became 'a star' in the company, he would think that he might deserve more, and finally he would depart from the firm to a bigger one. The tasks description of 'knowledge manager' taken from the study of Wong and Aspinwall (2006) was reviewed by the LTV's CEO and presented in Table 8.2.

Table 8.2. Vu's appraisal of the Wong and Aspinwall (2006) - Tasks description of Knowledge Manager

	Task description	Possibility to apply in VNSMEs
1	Collect documentation/literature in their knowledge area and to do this consistently.	Compatible
2	Keep up to date in their area.	Compatible
3	Look after the technical development of their area in the company.	Compatible
4	Provide a 'front-desk' point of contact for staff with queries regarding their area.	Compatible
5	Ensure the availability of documentation/literature and direct staff to relevant sources and/or Subject matter Experts where appropriate.	Compatible
6	Ensure that relevant information is available to interested parties, subject to security and commercial constraints.	Over-estimated
7	Determine if staff has any knowledge requirement.	Compatible
8	Actively seek lessons learnt /project close-out information.	Compatible
9	Brief the sales and marketing team on new developments/thoughts/techniques.	Compatible
10	Bring interesting material to the attention of those who may find it useful (either the whole company or specific project teams).	Compatible
11	Develop, write and promote best practices.	Compatible
12	Give guidance on task metrics (e.g. duration estimation to accomplish certain tasks)	Compatible
13	Where possible, identify areas where additional information is required.	Compatible
14	Be prepared to act as Subject Matter Experts who can participate in internal problem solving regarding their knowledge domain.	Compatible
15	Write articles for journals, papers and relevant publications.	Over-estimated
16	Go to and present at relevant seminars and conferences.	Over-estimated

Source: Interview with LTV's CEO

8.4.4. KM basic processes

Knowledge capturing & storing

LTV has not officially adopted KMP, but practiced various KM activities. These activities were analyzed under the framework of the current study (based on the KM theory) and compared with published best practice in a developed country (Company A in the study of Wong and Aspinwall, 2006).

Responding to the question how LTV identified and captured key knowledge, the CEO shared that the customers' complaints and reasons for them to come

back/to buy the chemicals and services from the firm were carefully analyzed. The analyzed information helped LTV identify which kinds of knowledge are critical for customers and decided firstly to focus on improving them.

To capture the existing knowledge in LTV was not as easy as generally described in the literature. It was a strategic management decision as discussed in 8.4.3 – *Decisive role of the manager/owner*. The CEO of LTV confirmed that to ensure the success of these activities, he had to give the highest priority for extensive capturing knowledge during first six months. He then proceeded as follows:

1. The workload of experts/knowledge workers in the firm was reduced significantly
2. They were requested to re-demonstrate what they did in different cases. The experts were requested to build up the mock-ups if necessary.
3. All demonstrations were video recorded and edited by Vu himself with in-depth analysis by experts for every single case. LTV has spent a lot of money for this activity.

To the question about the willingness of the related experts when they were asked to perform this task, Vu replied that it was very sensitive issue: “... *I had to tell them that it was requested from the customers. I pay high salary for the experts and include these tasks in their job descriptions*”. At the same time, Vu set up the reporting rule for all employees. Whenever a project starts, the team leader needs to prepare the proposal with detailed plan, and publish it in the internal portal of company. When the project is completed, the team leader must present the results and evaluate the team’s performance during this project. Whenever some incidents happened, all related people have to write a report including their own judgments. These reports then are classified and stored in a folder for various business purposes. The incidents are taken as case studies for seminars or in-house trainings. With two third of employees workers and technicians, this activity was almost impossible at the beginning. It took time and money to train employees the basic IT skills and encourage them to do it. The official management decision was published focusing on this issue to make it become a compulsory task of all employees. Vu shared: “*I had to convince myself that it is a right decision for our long-term business, otherwise I could not pursue it*”. By this method, Vu himself learned key technical knowledge while establishing an impressive and practical “library” of key knowledge in the field. Vu spares a space in the office for self-study activity by employees. Everyone can access to stored documents and video for their learning purpose.

Even though the library is expanding daily, there is no established method to organize it properly. Vu recognized the messy situation and has planned to solve

it. Reference to the method applied in company A would be useful for LTV and other small firms in Vietnam. Company A has developed a knowledge base or repository using an intranet. Information in the repository is arranged and grouped according the defined key knowledge areas: project proposals, descriptions and summaries, presentations, progress reports, best practices, conceptual models, etc. “Domain guide” was developed to help administrators/knowledge managers structure and organize each knowledge area, and facilitate the access of users. The content of a suggested “domain guide’ is described in Table 8.3. A predefined domain guide template was created to maintain the consistency of the entire domain guides (see Appendix 10 - Domain guide template).

Table 8.3. Suggested contents for domain guide

	Contents
i.	Introduction or overview of a knowledge area.
ii.	Summary of a scheme that organizes the folders and their contents.
iii.	A list of essential reading.
iv.	A list of supplementary reading.
v.	A set of keywords for internal searches (those that have been used to classify documents held internally in the knowledge base)
vi.	A set of keywords for external web searches (those that have been found to return fruitful results on web search engines)

Source: Wong and Aspinwall, 2006

LTV needs to have well-defined and systematic method to re-organize its knowledge bank so that employees are able to easily to retrieve what they need. If it is not well organized, users would tire and hesitate to access the sources, and then the firm’s efforts in capturing knowledge and maintained it will be neutralized. Employing more powerful technology is also necessary for LTV in this period.

Knowledge sharing & usage

Several authors proposed various cultural factors that can facilitate KS such as trust, commitment, collaboration, working-social relationship, etc [112-114]; It was also proved that an informal climate is propitious for KS [61], especially in

small companies [60]. The CEO in our study manifested a contrary opinion. He suspected the effectiveness of KS in the informal climate: although people chat more in informal social events, the conversations do not constitute knowledge sharing as most conversations are not about job-related matters. However, he agreed that these events would strengthen the relationship among members in company, and this means that they would somehow indirectly support KS. LTV still tries to organize socialized activities regularly in order to build up a close relationship among employees as well as between employees and the management team. But these are just add-on activities to encourage KS in LTV. The CEO emphasized that the firm needs to set up an official mechanism for the actual KS, and make KS one of the main responsibilities for knowledge employees with the appropriate awards/recognitions: *“We have to make it become important and official. If our employees realized that we can compromise or lack commitment, they would try to find a way not to implement the company’s policy”*. The compulsory daily briefing meeting for all managers and supervisors in company, the compulsory case-report from the site, the open impartial bonus policy for team performance, etc. are effective tools to promote KS for the small company. Although the prerequisites predicated by the literature are ideal for KS, they prove elusive for firms in developing countries, especially for small businesses. Fostering KS in a highly competitive employment market (that induces employees to compete with each other even within the same firm) is a tough task requiring strong operational management skills.

In LTV, in-house training is the most effective method for KS. Employees at LTV were trained according to the training policy of the company. Every of them are assigned to a team, where he or she gets support and on the job training from the team leader as well as from others in the team. In LTV, the ‘firm’s library’ is the first choice of most of employees when they need to find a solution for their work. These facts reflect the KS strategy of the business owners-managers in each company discussed earlier. In British company A, training was not paid any attention while in LTV, it is the most important method. The low educational background of workers in a developing country was the main reason for this difference. Company A is a consulting firm with a ‘well educated and experienced workforce’[107], hence the training activities had a lower priority in comparison with LTV, where two third of employees are workers or technicians. They needed to be trained from basic IT skills to other working skills. Training in SMEs is one of the hottest issues not only in Vietnamese context but also in other countries. Sparrow (2005) mentioned: *“Owner-Managers attempt other means to limit the diffusion of their expertise. They may deliberately avoid training and development opportunities for others with regards to certain aspects of their own personal expertise”*[7]. The training policy of small companies often reflects the paradox: on the one hand, they need competent employees, thus they need to train them; on the other, many employees leave small companies as they advance.

Queried as to the solution for this paradox, the LTV's CEO confirmed his concern with this issue, but also asserted that he accepts it as part of doing business – *“We believe that knowledge limited to managers is insufficient for operating the business, hence we are willing to share knowledge with our employees in order to make them more competent. We need them for our current business. Moreover, if they are keen to learn, and our company supports them, they still can learn via different sources... And if they can learn while being with us, they may satisfy their need for personal development, allowing us to retain them”*.

8.5. Chapter conclusion

This chapter has presented the findings of a case study conducted in Vietnam to explore how KM should initiate form SMEs in the same context. LTV has not yet explicitly launched a KM project or KM program, but many of the management techniques it has been practicing can be classified as initiatives towards KM. LTV has been struggling for a long time to pursue the objective of becoming a professional firm. In order to achieve this long-term objective, LTV has adopted KM without being aware of the concept. The case study has showed KM is a must of good management, and it can be achievable if SMEs' managers/owners strongly commit to its implementation. Some suggestions drawn from the comparison between LTV's practices and a KM successful initiative in Britain were proposed. The main findings from this case study can be summarized as follows:

- Contributing solutions for daily operations/better performance would become the main motivations for SMEs initiate KM.
- The personalization strategy is the appropriate KM strategy for Vietnamese SMEs as it focuses more on the direct interaction between people and does not require a huge investment in IT infrastructure.
- The involvement of CEOs or business owners in implementing KM is crucial for Vietnamese SMEs. In addition, the official establishment of knowledge team or knowledge managers would be considered and the responsibilities of these people should be clear to follow and to be evaluated.
- KM implementation is sensitive to most of employees as it changes their behavior and belief about individual power, so top managers/owners need to be dedicated to make employees understand their own benefits. The supportive policies in firms to facilitate the involvements of employees are needed in all cases.

- Knowledge capturing needs to integrate into the daily activities of employees. It should become an official task in job description of all positions in the firms.
- Knowledge storing should also become an official part of daily activities of related employees. The technique to store knowledge/information is a periodic investment decision of CEOs/owners. A huge investment on IT is impossible for SMEs, and moreover, it will not work in the context of most of Vietnamese SMEs. Techniques/methods for storing knowledge should be selected on the real usage ability/accessing ability of employees. There are several ways to do it and need not be expensive.
- In Vietnamese SMEs, training and coaching are considered the main means for knowledge sharing in firms. These activities play a very important for the long-term development of firms. Hence, CEOs/owners should give them high priority and make them important, official in daily operations.

With a single case study, it is difficult to claim that these lessons would work for all the firms, but it does give some meaningful insights and directions for the future KM initiatives not only in Vietnam, but also in other developing countries.

CHAPTER 9. CONCLUSION

This research is the first and thus exploratory attempt to scientifically and empirically investigate the perception, practices, and utilities of KM among Vietnamese SMEs. The multi-staged study was designed based on a review of the literature (Chapter II), an overview of Vietnamese SMEs and the specific institutional context of Vietnam (Chapter III), and the orientation from the preliminary survey (Chapter VI). Combined research methodologies (quantitative and qualitative) were adopted in the study to find out the answers to the research questions (Chapter IV and V). The results were analyzed and presented in two chapters – Chapter VII and Chapter VIII.

The present concluding chapter provides an assessment of research achievements (gains for science and practice), limitations of the research and the recommendations for future studies.

9.1. Gains for science and practice

The objectives of this study are (1) to empirically identify the current status of KM in the country, how it is perceived and how it is practiced, (2) to determine which factors could affect these practices, and (3) to find out how KM should be initiated in Vietnamese SMEs. This is a practice-grounded study, rooted from what is happening in businesses to identify their problems/issues, and systemize lessons learnt from them to propose practical solutions for businesses in implementing KM for the stable development of SMEs in Vietnam.

The study was developed systematically with three different stages and used both qualitative and quantitative methods. Empirical data were collected by various methods including desk-survey, interview, questionnaire, site observation, and case study with the effort to have fresh insights from businesses. The findings from this study resonate with some previous studies in the field and as well as identified the typical issues of SMEs in the context of Vietnam.

Hereunder are some main academic contributions of this study:

Firstly, the research results have proven that KM is a must of good management. KM-related issues were focused and practiced in firms where the KM concept even is not known yet. It can also be said that KM plays very important role for the stable development of SMEs. In previous studies, KM was often connected with ‘innovation’, but in the context of SMEs, it is important as a solution for day-to-day business. This finding coincides with studies about KM for small business by Sparrow (1999)[110] and Braganza et al. (1999) [115].

Secondly, the research examined whether there is any relationships between the ‘hard characteristics’ of SMEs (such as sector, age, size, ownership) and the way firms deal with KM-issues. This is the first effort towards identifying the factors that can influence the KM practices in Vietnamese SMEs. The findings have confirmed that these firms’ characteristics have relationships with some of the KM practices. Within the framework of the current research, the nature of these relationships was not studied yet. However, the findings should facilitate future studies in the KM field, especially in the context of Vietnamese SMEs. The approach of this research is also an attempt to remedy the paucity of the modern research on the organization characteristics and performance, which flourished in 60s – 70s.

Thirdly, business reality in Vietnam demands solutions to sustainable development. The mission of business schools is to study and find out feasible solutions to help firms achieve their objectives. The results of this study proved the existence of the need related to understanding and practicing KM in Vietnamese SMEs, whereas there was no scientific study about it yet. This research aims at to raise awareness on KM among the country’s academics. It would set up the basic foundation to facilitate the future research on KM or KM for SMEs in the country.

Practically, the researcher has been trying to bridge the gap between KM theory and business practice in Vietnam. Practical findings were identified and presented in the conclusions of Chapter 7 and Chapter 8. The important contribution of this study is the proposal of a feasible approach to how KM should be initiated in a Vietnamese SMEs, taking into account all the typical aspects of small firms. The findings from this research will be used to develop an operational guidance for Vietnamese SMEs.

The study also contributes to the database of SMEs in particularly and Vietnamese enterprises in general. The world scholars or the researchers of the international donor organizations would refer to the rich data pool in this dissertation or get some useful insights on businesses and their issues when dealing with related projects as scientific empirical works about Vietnam economy and enterprises are still very rare.

9.2. Limitations of the study

Due to the constraints of the framework of a PhD program and subjective obstacles during conducting the surveys, this work could not avoid some limitations.

In the second stage, a major part of data was collected by designed questionnaire sent to CEOs via email or published online (by free survey tool on Google documents), only 25 firms were visited. Many questions were about the self evaluation of CEOs, thus answering on the questionnaire might not avoid some bias. Even received responses were checked to eliminate the obvious bias; it still could affect the results.

Another limitation was the sample size. With 110 data sets, the sample size was sufficient to analyze, but the result would be better if the sample size could be larger. However, as the sampling unit was company and the correspondent was CEOs or business owners, it was unrealistic to increase the size of sample, especially due to the time and resource available.

Firms involved in this study are mainly located in Hochiminh city. If it could be conducted in other parts (provinces, cities) of the country, the results could be more representative.

9.3. Recommendations

The findings from this systematic research have given some useful recommendations for authorities as well as for practitioners in the country.

9.3.1. For authorities

KM has proved to be an effective strategic management tool for enterprises to improve their competitive advantages. Many neighborhood countries have the national KM program in order to promote KM for businesses while Vietnamese government has not yet paid attention on it [80]. Vietnamese business has shown the real need to adopt KM for their sustainable development. A national KM practical program should be designed and launched soon to meet the requirements of reality in the short – term and for the competitive advantage of the country's economy for the long-term. The national KM program should focus on the following issues:

To have the active involvement and commitment of enterprises, a KM project/program must start with identifying firms' problems and integrate solutions for it. It should provide a 'tailor-made' program/project for each SME and should take into account the distinguishing characteristics of firms that can affect KM implementation.

Training and coaching management skills and perceptions for managers/owners must have the highest priority in the governmental and non-governmental supportive programs for SMEs. Improving management

background for managers/owners of SMEs is the core task in enhancing the competitive competence for enterprises.

The program/project for SMEs should not focus too much on the IT system as KM for small business at the beginning can be done with very basic IT requirements. Supportive KM software can be introduced to selective SMEs at a more mature level.

9.3.2. For practitioners

KM was perceived as an ‘expensive’ management tool as it was rooted in big firms with rich resources. However, there are several ways to implement it depending to firms’ available resources and purposes. KM can help firms to identify, capture and store the most valuable existing knowledge, then to facilitate employees to apply it for daily business activities. At the higher level of KM, basing on this firm foundation, companies will be able to quickly learn new knowledge from other sources and adapt to the changes in business environment. By this way, KM would bring the solutions for SMEs in both the short-term and the long – term. To initiate KM in a small business (as opposed to doing it in a big corporation), the requirements of the IT system or other technical systems are not the priorities. A SME should start with personalization strategy and follow the ‘80-20’ principle (see 8.3).

To ensure the success of a KM program/project in an SME, the direct involvement of Director/owner with absolute commitment to change are crucial in Vietnamese SMEs, because delegated authority has limited effect and because of a lack of professional working attitude. While KM aims at consolidating the organizational knowledge as the core value of firms, it seems to be risky for employees in ‘losing their bargaining power’ in front of managers/owners. Thus, supportive policies to show the long-term commitment of firms with employees as well as to show the adequate recognition to contributors are necessary.

KM in SMEs is about changing the working and sharing attitudes/behaviors. Managers/owners of SMEs need to understand clearly its benefits and prepare to accept the short term trade-offs. Training working attitude and skills for employees is compulsory to ensure that KM’s benefits can be effectively harnessed. Employees must play the role of subjects in KM processes via daily activities.

9.4. Suggestions for future research

This study is just a very first attempt to systematically understand the SMEs businesses in the country and find out the answer for the question how to initiate

KM in Vietnamese SMEs with the strong belief in the great benefit KM could bring to firms and the national economy. It will be a catalyst for future research in Vietnam and in other developing country.

More systematic and larger research works conducted all over the country are the expectation of the researcher. It would establish a better theoretical foundation for KM in the specific context of Vietnam and would effectively direct businesses in applying KM into their businesses.

This study was limited in identifying whether the relationships between characteristics of firms and KM-related issues exists or not, and could not explain probably the nature of these relationship, how those factors would influence the firms' practices in certain context. This could be a direction for further study. Previous studies have examined other 'soft characteristics' of firms such as organizational culture, management styles, etc. and their impacts to KM's success. Although the researcher did not follow this approach for this research, but during conducting the surveys, it was noticed the necessity to examine these factors to find out how it would impact KM – related issues/practices in the specific context of Vietnam.

The replication of the current research in other developing country with the improvements in measurements and other aspects would be also a great contribution to the development of KM theory as well as for the businesses in related countries where KM is still not paid sufficient attention.

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APPENDICES

Appendix 01. Decree 56/2009

THE GOVERNMENT

No: 56/2009/ND-CP

SOCIALIST REPUBLIC OF VIET NAM

Independence - Freedom - Happiness

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Ha Noi , 30 June 2009

DECREE

ON ASSISTANCE TO THE DEVELOPMENT OF SMALL AND MEDIUM – SIZED ENTERPRISES

Pursuant to the December 25, 2001 Law on Government Organization ;

Pursuant to the Enterprise Law and Investment Law of November 29, 2005;

At the proposal of the Minister of Planning and Investment,

DECREES:

Chapter 1. GENERAL PROVISIONS

Article 1. Governing scope

This Decree provides for policies on, and the state management of assistance to the development of small - and medium – sized enterprises.

Article 2. Subjects of application

This Decree applies to small and medium - sized enterprises, organizations providing assistance to the development of small and medium - sized enterprises and agencies performing the state management of assistance to the development of small and medium - sized enterprises.

Article 3. Definition of small and medium – sized enterprises

1. Small and medium – sized enterprises are business establishments that have registered their business according to law and are divided into three levels: very small, small and medium according to the sizes of their total capital (equivalent to the total assets identified in an enterprise's accounting balance sheet) or the average annual number of laborers (total capital is the priority criterion), concretely as follows:

Size Sector	Very small enterprises	Small-sized enterprises		Medium-sized enterprises	
	Number of laborers	Total capital	Number of laborers	Total capital	Number of laborers
I. Agriculture, forestry and fishery	10 persons or fewer	VND 20 billion or less	Between over 10 persons and 200 persons	Between over VND 20 billion and VND 100 billion	Between over 200 persons and 300 persons
II. Industry and construction	10 persons or fewer	VND 20 billion or less	Between over 10 persons and 200 persons	Between over VND 20 billion and VND 100 billion	Between over 200 persons and 300 persons
III. Trade and service	10 persons or fewer	VND 10 billion or less	Between over 10 persons and 50 persons	Between over VND 20 billion and VND 50 billion	Between over 50 persons and 100 persons

2. Depending on the nature and objectives of each assistance policy or program, the sponsoring agencies may concretize the above criteria as appropriate.

3. The Ministry of Planning and Investment (The General Statistics Office) shall assume the prime responsibility for, and coordinate with ministries, branches and concerned agencies in

investigating, summing up and publicizing annual statistical data on small and medium – sized enterprises according to the definitions in this Decree.

Article 4. Plans on assistance to the development of small- and medium-sized enterprises, which cover the solutions and funds for implementation, must be incorporated into annual and five-year plans of ministries, branches, localities and the national economy.

Article 5. Assistance programs

1. The state’s programs on assistance to small – and medium – sized enterprises (called assistance programs for short) means the target programs reserved for small – and medium – sized enterprises, which are formulated on the basis of orientations for socio – economic development, branch and local development and are included in annual and five – year plans. Priority will be given to programs on assistance to small – and medium – sized enterprises owned by women and small – and medium – sized enterprises employing a larger number of female laborers.

2. Before being submitted to competent authorities for approval, programs on assistance to small – and medium – sized enterprises must be commented by the central state management agency for assistance to the development of small – and medium – sized enterprises, defined in Article 15 of this Decree, with a view to ensuring consistency and integration with other state programs on assistance to small – and medium – sized enterprises.

3. Ministries, branches and localities formulate, and organize the implementation of, assistance programs in the domain or localities under their respective management. The Ministry of Planning and Investment shall act as the key body summing up reports on the implementation of assistance programs and on matters to be settled, for submission to the Prime Minister.

4. Depending on the nature and scope of each assistance program, state-run non-business organizations and capable service providers may participate in the implementation of programs via bidding as prescribed by law.

Article 6. Promulgation of regulations related to small – and medium – sized enterprises

Agencies taking charge of drafting legal documents related to small and medium enterprises shall coordinate with the central state management agency for assistance to the development of small – and medium – sized enterprises, defined in Article 15 of this Decree, in order to ensure that those legal documents will facilitate the development of small – and medium – sized enterprises.

Chapter II.

ASSISTANCE POLICIES

Article 7. Financial Assistance

1. The State encourages the establishment of credit guarantee funds for small – and medium – sized enterprises. The Ministry of Finance shall assume the prime responsibility for, and coordinate with concerned agencies in, formulating a mechanism for establishment and operation of credit guarantee funds and submit it to the Prime

Minister for decision, and shall guide the operation of credit guarantee for small – and medium – sized enterprises.

2. The State Bank shall assume the prime responsibility for and coordinate with concerned agencies in proposing the Prime Minister to promulgate incentive mechanisms and reserve a number of technical – assistance projects to enhance the capacity of appropriate financial organizations to expand credits to small – and medium – sized enterprises; to diversify products and services suitable to small – and medium – sized enterprises and provide financial consultancy and investment management assistance services and other services to small – and medium – sized enterprises.
3. Via training assistance programs, the State shall assist small – and medium – sized enterprises in raising their capacity to formulate business projects and schemes to meet the requirements of credit institutions when appraising capital-borrowing dossiers of these enterprises.
4. Establishment of the Fund for development of small – and medium – sized enterprises
 - a) Operation purposes: To finance assistance programs to raise the competitiveness of small – and medium – sized enterprises, attaching importance to supporting activities of renewing and developing products which are highly competitive and environment-friendly; to invest in the renewal of technical equipment and in advanced technologies; to develop support industries; and to raise business administration capability.
 - b) Capital sources of the Fund for development small – and medium – sized enterprises (called the Fund for short): State budget allocations; capital contributed by domestic organizations; aid and funds provided by foreign organizations, international organizations; profits from the Fund’s operations and other lawful sources.
 - c) Main activities:
 - To receive, manage and use domestic and foreign financings for carrying out activities to assist the development of small – and medium – sized enterprises in accordance with law.
 - To provide funds for assistance programs and projects on raising the competitiveness, technical and technological capability and business administration capability for small – and medium – sized enterprises, to be implemented by ministries, branches, localities or business associations after they are approved by competent authorities.
 - To entrust credit institutions to provide preferential loans to small – and medium – sized enterprises with feasible investment projects in domains prioritized and encouraged by the State, which are conformable to the purpose of the Fund’s operations.
 - d) The Ministry of Planning and Investment shall assume the prime responsibility for, and coordinate with the Ministry of Finance, the State bank and concerned bodies in, formulating a scheme on establishment of the Fund and submit it to the Prime Minister for consideration and approval; and shall ensure that the Fund operates for right purposes.
 - e) The Ministry of Finance shall promulgate the Regulation on financial management, inspection and supervision of financial activities of the Fund.

Article 8. Production grounds

Based on their respective publicized socioeconomic development master plans and land use planning and plans already approved by the Prime Minister, the People's Committees of provinces and centrally run cities shall reserve land funds and apply measures to encourage the construction of industrial parks and complexes for lease to small – and medium – sized enterprises as business and production grounds or the relocation thereof from inner – city areas to ensure urban beauty and environment.

Article 9. Renewal and raising of technological capability and technical level

1. Through various assistance program, the Government shall apply assistance policies suitable to the strategies and domains prioritized for economic development in each period as follows:
 - a. To encourage investment in the renewal of technologies and technical equipment according to the development strategies and to expand production of small – and medium – sized enterprises with regard to exports and support – industrial products.
 - b. To raise the technological capability of small – and medium – sized enterprises via assistance programs on technical research and development for production of new products, technological transfer and scientific – technical application to production.
 - c. To introduction, or supply information on, technologies, equipment to small – and medium – sized enterprises, assisting them in appraising and selecting technologies.
2. The National Fund for Scientific and Technological Development shall annually set aside an amount to support small – and medium – sized enterprises in technological renewal, raising them technological capability.
3. The Ministry of Science and Technology and provincial – level People's Committees shall formulate plans and allocate funds to assist small – and medium – sized enterprises in intellectual property registration, protection and transfer with regard to their products and services, applying the quality management system under ISO standards and other international standards.

Article 10. Market expansion promotion

1. Annually, ministries, branches and localities shall formulate plans and allocate funds for market expansion – promoting activities for small- and medium-sized enterprises.
2. The state management agency for national trade promotion shall annually reserve a part of the national fund for trade promotion for small- and medium-sized enterprises.

Article 11. Participate in plans on procurement and provision of public services

1. The Government and provincial – level People's Committees shall set aside certain funding proportions for small- and medium-sized enterprises to perform contracts or orders for a number of commodities or public services.
2. The Prime Minister shall promulgate mechanisms to encourage small- and medium-sized enterprises to participate in the supply of products and public services at the proposal of the Ministry of Finance.

Article 12. Information and consultancy

1. The Government, ministries, branches and provincial-level People's Committees shall supply via their portals information on legal documents governing activities of small- and medium-sized enterprises; policies and programs on assistance to their development and other information in support of their business activities.
2. Within 30 working days before materializing policies and programs on assistance to the development of small- and medium-sized enterprises, the sponsoring agencies shall post up information on such policies and programs on the enterprises information portal of the state management agency for assistance to the development of small- and medium-sized enterprises defined in Article 15 of this Decree for public information.
3. The Ministry of Planning and Investment shall mobilize domestic and foreign resources for upgrading the enterprise information portal, aiming to supply and connect information on assistance to the development of small- and medium-sized enterprises.
4. The Government encourages domestic and foreign organizations to provide consulting services for small and medium enterprises.

Article 13. Assistance in human resource development

1. The Ministry of Planning and Investment shall assume the prime responsibility for, and coordinate with concerned bodies in. guiding the formulation of plans on assistance in human resource development for small- and medium-sized enterprises, focusing mainly on business administration.
2. Plans on assistance in human resources training for small and medium enterprises of the ministries, branches and localities will be incorporated into their annual and five-year socio-economic development plans.
3. The Ministry of Planning and Investment shall assume the prime responsibility for summing up the demands for training assistance to small- and medium-sized enterprises, serving as a basis for the Ministry of Finance to balance and arrange support funds in the annual budget plans of ministries, branches and localities.

Article 14. Enterprises nursery

1. The State encourages the establishment of enterprise nurseries to provide definite supports for enterprises in their initial period according to a prescribed process and in a systematic way through providing nursed enterprises with space, business support services and necessary human resources in order to help them materialize and commercialize their business and technological ideas.
2. The Ministry of Science and Technology shall assume the prime responsibility for, and coordinate with concerned agencies in. formulating incentive policies for small- and medium-sized enterprises to participate in "technological nurseries" and "technological enterprises nurseries".

Chapter III.

STATE MANAGEMENT OF ASSISTANCE TO DEVELOPMENT OF SMALL – AND MEDIUM-SIZED ENTERPRISES

Article 15. The central state management agency for assistance to the development of small- and medium-sized enterprises

1. The Government shall perform the unified state management of the small- and medium-sized enterprises development promotion. The Ministry of Planning and Investment shall act as the body assisting the Government in performing the unified stage management of assistance to the development of small- and medium-sized enterprises.
2. The Enterprise Development Department of the Ministry of Planning and Investment shall assist the Minister of Planning and Investment in performing the state management of development of small- and medium-sized enterprises in the following aspects:
 - a) Formulating, or participating in the formulation of, policies, legal documents on development of small- and medium-sized enterprises for submission to competent authorities for promulgation; synthesizing assistance plans and programs, orientating the assistance objectives and defining criteria and domains of assistance to small- and medium-sized enterprises.
 - b) Organizing training courses to raise the capabilities of officials in charge of assisting small- and medium-sized enterprises, to foster the skills of assistance to the development of small- and medium-sized enterprises and to guide the establishment and raise the capability of the small- and medium-sized enterprises development-assisting system.
 - c) Acting as a coordinator for international cooperation on development of small- and medium-sized enterprises, calling for resources from outside to assist small- and medium-sized enterprises.
 - d) Coordinating with concerned agencies and organizations in supplying necessary information for small- and medium-sized enterprises; making annual reports on small- and medium-sized enterprises; summing up reports on the development of small- and medium-sized enterprises and matters to be tackled for the Minister of Planning and Investment to submit them to the Prime Minister for consideration and handling; organizing pilot models, programs and projects on assistance to the development of small- and medium-sized enterprises.
 - e) Acting as the permanent secretary of the Council for Encouragement of Development of small- and medium-sized enterprises.

Article 16. Council for Encouragement of Development of Small- and Medium-Sized Enterprises

1. The Council for Encouragement of Development of small- and medium-sized enterprises (referred to as the Council) shall perform the tasks of advising the Prime Minister on incentive mechanisms and policies on development small- and medium-sized enterprises. Its members work as part-timers. The Prime Minister shall decide on its task at the proposal of its President.
2. The Council shall be composed of:
 - The President being the Minister of Planning and Investment.
 - The permanent secretary being the Director of the Enterprise Development Department.
 - Representatives of the leaderships of the Ministry of Planning and Investment, Industry and Trade; Finance; Justice; Agriculture and Rural Development; Construction; Transport; Science and Technology; Natural Resources and Environment; Education and Training and Labor. War Invalids and Social Affairs, and Steering Committee for Enterprise Renewal and Development.
 - Representative of the leadership of provincial-level People's Committee of Hanoi, Ho Chi Minh City, Hai Phong, Da Nang and Can Tho.

- Representative of the leaderships of Vietnam Chamber of Commerce and Industry, Vietnam Union of Cooperatives, Vietnam Association of Small- and Medium-sized Enterprises and other enterprises associations.
- 3. The list of the Council's members will be decided by the Council's President at the proposal of managing agencies.
- 4. According to practical requirements of the assistance to the development of small- and medium-sized enterprises and proposals of members, the Council President may set up a number of full-time sub-committees attached to the Council to provide advice on areas of assistance to small- and medium-sized enterprises. The composition and working regulations of such sub-committees will be decided by the Council President.
- 5. The working regulations of the Council will be decided by its President.
- 6. The operation fund of the Council will be included in the fund of the Enterprise Development Department.

Article 17. Center for promotion of small- and medium-sized enterprises development

The Ministry of Planning and Investment shall set up the Center for Promotion of small- and medium-sized enterprises Development (under the Enterprise Development Department) to materialize assistance policies and programs, which shall act as the focal point to provide consultancy and to experiment technical assistance models for small- and medium-sized enterprises.

Article 18. Local state management agencies for assistance to the development of small- and medium-sized enterprises

1. Provincial-level People's Committees shall assist the development of small- and medium-sized enterprises in their respective localities, concretely as follows:

- a) To orientate the development of small- and medium-sized enterprises; to formulate or participate in formulating documents guiding the implementation of state regulations on assistance to the development of local small- and medium-sized enterprises; to sum up the formulated programs on assistance to small- and medium-sized enterprises; to coordinate, guide and inspect the implementation of assistance programs after they are approved.
- b) To organize dialogues between local administrations and enterprises, aiming to exchange information, remove obstacles and difficulties in business activities of small- and medium-sized enterprises; to praise and commend artisans, entrepreneurs and small- and medium-sized enterprises that have recorded outstanding achievements in business activities and have been creative in product designing or job teaching.
- c) To annually report to the Ministry of Planning and Investment on the assistance to the development of small- and medium-sized enterprises and matters to be settled for sum-up and formulation of annual reports on small- and medium-sized enterprises.
- d) To coordinate with concerned ministries, branches and organizations in assisting the development of local small- and medium-sized enterprises according to current regulations.

2. Provincial-level People's Committees shall assign their Planning and Investment Departments to act as focal point and coordinate with other Departments and branches in formulating programs and plans on development of local small- and medium-sized enterprises and submit them to the provincial-level Committees for approval, promulgation and implementation direction. Localities with more than 3.000 small- and medium-sized enterprises (excluding cooperatives and household business) may set up a unit attached to their Planning and Investment Department to perform the functions and tasks of assisting the development of small- and medium-sized enterprises in localities.

Article 19. Small- and medium-sized enterprises assisting organizations

The Government encourages associations, economic organizations, socio-political and professional organizations and social organizations to set up and consolidate organizations assisting the development of small- and medium-sized enterprises; to participate in the formulation and materialization of programs on assistance to small- and medium-sized enterprises; and to develop business development services (BDS).

Chapter IV.

IMPLEMENTATION PROVISIONS

Article 20. Effect

1. This Decree takes effect on August 20, 2009 and replaces the Government's Decree No. 90/2001/ND-CP of November 23, 2001, on assistance to the development of small- and medium-sized enterprises.
2. To annul previous regulations which are contrary to this Decree.

Article 21. Implementation responsibilities

1. The Ministry of Planning and Investment shall coordinate other ministries, branches and provincial-level People's Committees in implementing this Decree, and report to the Prime Minister on the implementation situation and arising matters which need to be dealt with.
2. Ministers, heads of ministerial-level agencies, heads of government-attached agencies and Chairmen of provincial-level People's Committee shall implement this Decree.

**ON BEHALF OF THE GOVERNMENT
PRIME MINISTER**

Nguyen Tan Dung

Appendix 02. Interview Guide for Semi-Structured Orientation Survey

Type: Face – to – face interview

Goal: Orientation for the main research

Major objectives:

- Identify the current status of knowledge management of a SME
- Study what organization’s concept about knowledge management
- Identify the existing issues of SMEs to find out KM-related issues (if any)

Sample: Apply convenience sampling method. At least 10 interviews will be conducted.

Interviewee must meet the criteria:

- middle or high management position (head of department or member of management board)
- university background
- at least 2 working year experience in the company
- The size of company in the range of SME for this research (number of employees from 10 to under 100/annual)
- Company is located in Hochiminh City where most of SMEs registered.

Introduction: The interview should not start with any specific introduction about KM to avoid the bias of interviewees. The interview should start in the natural way to introduce briefly about the interviewer and the purpose of interview as follows:

“... I would like to learn how you manage your company and what kind of problems you have when dealing with your business...”

General information:

- Name of Interviewee:
- Name of Company:
- Position in company:
- How long have you been working for this company?
- Mobil phone:
- Email:

Section 1. Information about company

1. What are the main businesses of your company?
2. How many workers/staff are there in your company?
3. When did it establish?

Section 2. Company’s management issues

This session is very important. List down carefully all mentioned issues as it can help the researcher to develop the following communication during the interview.

4. How do you manage your company?
5. What make you most stressful in dealing with your business?
6. What do you do to deal with it?
7. Do you have any plan to solve this problem?

Section 3. Technical infrastructure of company

Some of questions can be ignored if the researcher can assess the technical situation of company

1. Does your company currently use an Intranet/Extranet/Video conferencing?

2. Does your company use any specific decision support systems?
3. Does your company have your own website? If yes, what is the main purpose when you log-in the website?
4. Does your company currently use Groupware or collaborative platforms such as Lotus Notes?
5. Does your company network support remote access?
6. Does your company currently deploy something like a skills database? If so, are your employees satisfied with it?
7. Does your company currently use document management solutions? If yes, can you list the primary reason why?
8. How does your company train new staff?
9. How does your company store staff's profile? Does your company use any HR software?
10. Can you retrieve the information you need from company's system? Is it paper-based or computer-based?
11. Does your company store customer's profile? Do your staffs use it to deal with customer daily?
12. Does your company have any policy to encourage people sharing information, knowledge?

Section 4. Examining KM activities in company

1. Are there any of these problems existing in your company?
 - a. Lack of Information []
 - b. Information overload []
 - c. Reinventing the wheel []
 - d. Loss of crucial knowledge due to a key employee leaving the company. []
 - e. Poor sharing of knowledge in the company. []
 - f. If any other, please specify _____ []
2. What types of knowledge do you think are critical to your business competitiveness? What would you rate as the top three in the above list?
(Or another approach: Who are the key people in your company? What they are doing?)
3. What is your company's long term goal? Has your company indentified the processes that are needed to achieve long-term business objectives?
4. What benefits do you think your company could realize if it improves the ways it organizes and reuses existing skills and experience?
5. Capturing knowledge process:
 - a. Do you think that there is a lot of different knowledge existing in your company, those are very valuable for your company's business?
 - b. Do you have idea how to capture this valuable knowledge/skill/experience?
 - c. What do you need to do that?
 - d. Which are the external resources that can learn how to do your business better in your case?
6. Storing knowledge process:
 - a. What does your company do to store existing knowledge/skills/experiences for re-use in your company?
 - b. How would you do it in the more effective way?
7. Sharing knowledge process:

- a. Do you often share your ideas, your information with your employees or other managers? Where do you do that?
 - b. Do your employees often share their ideas or help others in doing some tasks?
 - c. If no, why? What makes them not share their ideas, information to other or help others?
 - d. If yes? Could you give some examples? Do you think that this can be improved? What do you/your employees need to improve it?
8. Applying knowledge:
- a. Do your employees have any problem in applying existing knowledge/skills/experiences that the company has stored in its system?
 - b. What do you do to improve it?
9. Creating new knowledge:
- a. Do your employees have any chances to be creative in doing their works?
 - b. What do they need to create any new ideas/new operational methods or even new product/services?

Section 5. KM perception

1. Have you ever hear about knowledge management? If yes, what is your opinion about it? Do you think it's good for your company?
2. If you were to state 3 reasons why knowledge management could never work in your company, what would that be? Could you explain why for each reason?
3. If I would like to convince you to initiate KM, what should I say?

Appendix 03a. Questionnaire for Managers

Name:

Designation:

Company:

Working experience:

Working experience in the company:

Please put a tick mark in the appropriate box wherever required.

1. How old is the company? _____

2. In which sector is your company?

Service Manufacturing Combined

3. Number of workers/staff in the company:

Up to 10 employees 50-100 employees
 Between 11 and 49 employees More than 100 employees

4. Your company is:

State-owned Cooperatives Private Vietnamese limited companies
 Private VN share holding (joint stock) Private Vietnamese individual enterprises (sole proprietorships) Privately-owned
 Foreign invested joint ventures Companies with 100% foreign capital Other

5. Which technologies has your company implemented?

Internet Data warehousing
 Intranet Knowledge management software
 Extranet Decision support system
 Groupware Data management system
 E-commerce Automated manufacturing

If any other, please specify:

6. Does your company have any management certification /system (or TQM, etc)? If yes, which one?

7. How does your company store information about CUSTOMERS:

Storage method	Percent (can total over 100% for overlap)
Memory of the manager	
Memory of the CEO	
Hand-written document	
Printed document	
Electronic file	
Specialized software	

8. How does your company store information about SUPPLIERS:

Storage method	Percent (can total over 100% for overlap)
Memory of the manager	
Memory of the CEO	
Hand-written document	
Printed document	
Electronic file	
Specialized software	

9. How does your company store information about the MARKET:

Storage method	Percent (can total over 100% for overlap)
Memory of the manager	
Memory of the CEO	
Hand-written document	
Printed document	
Electronic file	
Specialized software	

10. How does your company store information about COMPETITORS:

Storage method	Percent (can total over 100% for overlap)
Memory of the manager	
Memory of the CEO	
Hand-written document	
Printed document	
Electronic file	
Specialized software	

11. We have enough good people for business for daily operations.

1 2 3 4 5
Strongly Disagree Disagree Moderate Agree Strongly Agree

12. The following statements describe your company operation in experience/skill/know how... sharing. Please use the following scale in your ratings to indicate how much do you agree/disagree with the following statements

- | | 1 | 2 | 3 | 4 | 5 |
|---|--------------------------|-----------------|-----------------|--------------|-----------------------|
| | <i>Strongly Disagree</i> | <i>Disagree</i> | <i>Moderate</i> | <i>Agree</i> | <i>Strongly Agree</i> |
| 1. You have satisfied with the willingness of your middle managers to deliver knowledge which they acquire to other staff | 1 | 2 | 3 | 4 | 5 |
| 2. In your company, all employees can make recommendations for greater effectiveness of routines | 1 | 2 | 3 | 4 | 5 |
| 3. You feel free to share past working failures with your colleagues | 1 | 2 | 3 | 4 | 5 |
| 4. You feel free to share your success with your colleagues | 1 | 2 | 3 | 4 | 5 |
| 5. You feel free to share difficulties with your colleagues | 1 | 2 | 3 | 4 | 5 |
| 6. When employees complete the training sessions, they are always asked to review and update the routines | 1 | 2 | 3 | 4 | 5 |
| 7. You learn a lot from other staff in this company | 1 | 2 | 3 | 4 | 5 |
| 8. In this company, information sharing has increased company's effectiveness | 1 | 2 | 3 | 4 | 5 |
| 9. In this company, combining the knowledge amongst staff has resulted in many new ideas and solutions for the company. | 1 | 2 | 3 | 4 | 5 |

13. If your people were ever not willing to share knowledge with each other, the reasons may be: (You can select more than 1 options)

- They don't want others do things better than them because they want to be the 'star' in the company.
- They don't do that because it's waste of their time and they would not get benefit personally by doing that.
- They believe that others would be to lazy to learn on their own if they provide too much support.
- They don't do that because they don't like each other.
- They don't do that because it isn't their mandate.
- Other reasons: _____

14. Spending time to show others how to do a part of their job

- Waste of time, there is no gain in productivity.
- Often a waste of time but sometimes it's useful.
- Useful, as long as it's infrequent
- Always useful even if it takes time.

15. People in our company blame each other when there is trouble.

- | 1 | 2 | 3 | 4 | 5 |
|--------------------------|-----------------|-----------------|--------------|-----------------------|
| <i>Strongly Disagree</i> | <i>Disagree</i> | <i>Moderate</i> | <i>Agree</i> | <i>Strongly Agree</i> |

16. If some people keep their knowledge or experience for themselves...

- There is no problem with that. It's normal that people want to keep knowledge for themselves.
- There is a serious problem for our business because our less knowledgeable employees won't learn. As a consequence, we won't have enough good people
- There is a problem, but people who really want to learn have to find their way themselves.

17. In your company, what are you doing for encouraging people to share their information, working skills, working experience?

18. Staff turnover during last year

18.1. How many people left your company during the last 1 year?

18.2. In which positions were these people?

19. High staff turnover harms our business.

1 2 3 4 5
Strongly Disagree Disagree Moderate Agree Strongly Agree

20. How does your company train new staff?

- Training through doing the job.
- It depends. We don't have training policy yet.
- We have clear training policy for all positions in the company.

21. The following statements describe your company's training activities. Please use the scale in your ratings to indicate how much do you agree/disagree with the following statements

- | | | | | | |
|--|---|---|---|---|---|
| 1. Generally, Your employees are learning how to do their jobs effectively at work | 1 | 2 | 3 | 4 | 5 |
| 2. Training employees improves their work | 1 | 2 | 3 | 4 | 5 |
| 3. Training employees helps our company | 1 | 2 | 3 | 4 | 5 |
| 4. Our company regularly organizes some professional demonstrations in which employees or external experts present their best practices or failures. | 1 | 2 | 3 | 4 | 5 |
| 5. Our company/department often have meetings to discuss about how to do things better. | 1 | 2 | 3 | 4 | 5 |

22. If your company ever decided not to train people, the reason might be:

- Lack of commitment from employees (who may leave shortly after training)
- Lack of money
- Staff shortage means no time is available for training
- Jobs are simple, so training is not needed

23. How do you use the job-related reports? (You can select more than 1 option)

- a. We use them for follow-up when needed
- b. We use them for training purposes
- c. We use them to gather information about customers
- d. We don't have the job-related report system

24. At times you may consult other sources to get your job done. Which sources in the following list are you most likely to consult? You can select more than 1 option.

- Internal publication (such as guidelines or "How-to" documents) produced by your company or organization including company's website or database.
- External publications, such as books, manuals, journals, or magazines.
- The Internet.
- Co-workers within my immediate team or organization.
- Courses, either classroom or online.

25. The following statements describe innovation activities in your company. Please use the scale in your ratings to indicate how much do you agree/disagree with the following statements

- | | | | | | |
|--|---|---|---|---|---|
| 1. Your company has diversified products/services actively | 1 | 2 | 3 | 4 | 5 |
| 2. Your company has improved working processes actively | 1 | 2 | 3 | 4 | 5 |
| 3. Your company has encouraged staff to launch new ideas | 1 | 2 | 3 | 4 | 5 |
| 4. Your company has updated new technology | 1 | 2 | 3 | 4 | 5 |

26. What do you think of Knowledge Management (KM)?

- Never heard of it.
- Something our company is already doing but not under the same name
- Jargon. It is just a management fad.
- It is strategic part of the business.
- Something that could be beneficial for the organization.

27. Do you have the annual business plan in written form?

- Yes No

28. Can you imagine what your company will be in 3 years/5 years?

- Yes No

29. Do you have the long term strategic development plan in the written form?

- Yes No

30. What is the main reason for you to set up this business?

31. What is your growth rate in revenue in 2009? Estimated revenue growth rate in 2010?

Appendix 03b. Electronic Version Of Questionnaire

BẢNG CÂU HỎI DÀNH CHO QUẢN LÝ

Kính gửi: Quý Anh/Chị

Tôi tên là Nguyễn Hải Hằng – Hiện đang làm Nghiên cứu sinh bậc tiến sĩ ngành kinh tế và quản trị tại trường Đại học Tomas Bata – Cộng Hòa Séc trong khuôn khổ dự án tài trợ của Cộng đồng Châu Âu. Đề tài nghiên cứu của tôi là "Quản trị tri thức cho doanh nghiệp vừa và nhỏ tại Việt Nam". Để hoàn thành nghiên cứu của mình, tôi đang tiến hành thu thập các thông tin về tình hình quản trị của các doanh nghiệp, các khó khăn của doanh nghiệp và các giải pháp mà doanh nghiệp đang thực hiện để khắc phục các khó khăn này... Đây là một đề tài nghiên cứu khoa học nhằm đúc kết thực tế để xây dựng nền tảng lý thuyết cho việc ứng dụng Quản trị tri thức vào hoạt động của doanh nghiệp Việt Nam, hầu mong giúp các doanh nghiệp Việt Nam có thêm một công cụ quản lý hữu hiệu để nâng cao năng lực hoạt động sản xuất kinh doanh và thông qua đó, nâng cao vị thế cạnh tranh của đơn vị mình.

Tôi xin cam kết mọi thông tin cung cấp bởi Quý vị sẽ được giữ name danh, chỉ được sử dụng cho mục đích nghiên cứu này. Tôi rất mong nhận được sự ủng hộ của Quý vị. Xin chân thành cảm ơn Quý vị đã dành thời gian để hoàn thành bản câu hỏi này.

* Required

1. Công ty anh/chị thành lập năm nào? *
(Xin trả lời bằng cách gõ vào ô text)

Appendix 04. Code Book

Full variable name	Abb. variable name	Coding instructions	Notes
Age of firms	Ag	1 = $ag \leq 3$ years 2 = 3 years < $ag \leq 8$ years 3 = 8 years < $ag \leq 15$ years 4 = 15 years < ag	
Sector of firms	Se	1 = Service 2 = Manufacturing 3 = Mixed	
Manufacturing Sector		1 – Wooden & furniture 2 – Handicraft 3 – Food processing 4 – Construction materials 5 – Garments & textiles 6 - Other	
Service sector		11 – Trading 12 – Consultant 13 – Real estates 14 – ICT 15 – Forwarding 16 – Construction 17 – Tourist agency 18 – Other	
Size of firms	si	1 = $Siz \leq 10$ employees 2 = 11 emp $\leq Siz \leq 49$ emp 3 = 50 emp $\leq Siz \leq 100$ emp 4 = 110 emp $\leq Siz \leq 300$ emp	For service sector: 4 is inapplicable according Decree 59/2009
Ownership of firms	ow	1 = State – own 2 = Vietnamese private – own 3 = Foreign – own	Classified by the majority ownership
Level of IT application in firms	It	1 = Very low level, 5 = Very high level	
Level of management tools application in firms	Mt	1 = Low, 2 = Middle, 3 = High	
Level of memorizing knowledge about CUSTOMERs	Cus	1 = Very low level, 5 = Very high level	
Level of memorizing knowledge about SUPPLIERs	Sup	1 = Very low level, 5 = Very high level	
Level of memorizing knowledge about MARKETs	Mar	1 = Very low level, 5 = Very high level	
Level of memorizing knowledge about COMPETITORs	Com	1 = Very low level, 5 = Very high level	
Knowledge sharing level of working environment	ks ks1 to ks 9	1= strongly disagree, 5= strongly agree	
Training effectiveness level	te te1 to te3 te4 to te5	1= strongly disagree, 5= strongly agree 1 = very often, 5 = never	
Innovation level	in in 1 – in 4	1= strongly disagree, 5= strongly agree	
Use of job-related reports	Jo	1 = Not effective, 2 = Moderate, 3 = Effective	Q23
Use of consulted sources	Co	1 = Not effective, 2 = Moderate, 3 = Effective	Q24
Perception about KM	Pe	1 = group of people who reject	Q26

Full variable name	Abb. variable name	Coding instructions	Notes
		KM 2 = group of ppl who are not familiar with the concept 3 = group of ppl who have the right concept 4 = group of ppl who are practicing KM	
Long-term vision of top management	Vi	1 = have a long-term vision 2, 3 = don't have long-term vision	Q29

Appendix 05. Testing Hypothesis 1

Hypothesis 2: There is an association between sector of business and the way SMEs deal with KM issues

Sub-hypothesis 1.1

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q2.se * Q5.it	110	100.0%		.0%	110	100.0%

Q2.se * Q5.it Crosstabulation

			Q5.it			
			1	2	3	Total
Q2.se	1	Count	37	23	6	66
		Expected Count	35.4	22.8	7.8	66.0
		% within Q5.it	62.7%	60.5%	46.2%	60.0%
	2	Count	22	15	7	44
		Expected Count	23.6	15.2	5.2	44.0
		% within Q5.it	37.3%	39.5%	53.8%	40.0%
	Total	Count	59	38	13	110
		Expected Count	59.0	38.0	13.0	110.0
		% within Q5.it	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.224 ^a	2	.542
Likelihood Ratio	1.200	2	.549
Linear-by-Linear Association	.905	1	.342
N of Valid Cases	110		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.20.

Sub-hypothesis 1.2

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q2.se * Q6.mt	110	100.0%		.0%	110	100.0%

Q2.se * Q6.mt Crosstabulation

			Q6.mt			
			1	2	3	Total
Q2.se	1	Count	35	27	4	66
		Expected Count	33.6	21.6	10.8	66.0
		% within Q6.mt	62.5%	75.0%	22.2%	60.0%
	2	Count	21	9	14	44
		Expected Count	22.4	14.4	7.2	44.0
		% within Q6.mt	37.5%	25.0%	77.8%	40.0%
	Total	Count	56	36	18	110
		Expected Count	56.0	36.0	18.0	110.0
		% within Q6.mt	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.225 ^a	2	.001
Likelihood Ratio	14.410	2	.001
Linear-by-Linear Association	4.561	1	.033
N of Valid Cases	110		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.20.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.360	.001
	Cramer's V	.360	.001
	Contingency Coefficient	.338	.001
	N of Valid Cases	110	

Sub-hypothesis 1.3

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q2.se * Q21.te	110	100.0%		.0%	110	100.0%

Q2.se * Q21.te Crosstabulation

			Q21.te			
			1	2	3	Total
Q2.se	1	Count	15	28	23	66
		Expected Count	12.6	27.6	25.8	66.0
		% within Q21.te	71.4%	60.9%	53.5%	60.0%
	2	Count	6	18	20	44
		Expected Count	8.4	18.4	17.2	44.0
		% within Q21.te	28.6%	39.1%	46.5%	40.0%
	Total	Count	21	46	43	110
		Expected Count	21.0	46.0	43.0	110.0
		% within Q21.te	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.917 ^a	2	.383
Likelihood Ratio	1.956	2	.376
Linear-by-Linear Association	1.873	1	.171
N of Valid Cases	110		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.40.

Sub-hypothesis 1.4

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q2.se * Q12.ks	110	100.0%		.0%	110	100.0%

Q2.se * Q12.ks Crosstabulation

			Q12.ks			
			1	2	3	Total
Q2.se	1	Count	11	33	22	66
		Expected Count	10.8	30.6	24.6	66.0
		% within Q12.ks	61.1%	64.7%	53.7%	60.0%
	2	Count	7	18	19	44
		Expected Count	7.2	20.4	16.4	44.0
		% within Q12.ks	38.9%	35.3%	46.3%	40.0%
Total	Count	18	51	41	110	
	Expected Count	18.0	51.0	41.0	110.0	
	% within Q12.ks	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.167 ^a	2	.558
Likelihood Ratio	1.164	2	.559
Linear-by-Linear Association	.597	1	.440
N of Valid Cases	110		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.20.

Sub-hypothesis 1.5

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q2.se * Q23.re	110	100.0%		.0%	110	100.0%

Q2.se * Q23.re Crosstabulation

			Q23.re			
			1	2	3	Total
Q2.se	1	Count	39	21	6	66
		Expected Count	36.6	19.8	9.6	66.0
		% within Q23.re	63.9%	63.6%	37.5%	60.0%
	2	Count	22	12	10	44
		Expected Count	24.4	13.2	6.4	44.0
		% within Q23.re	36.1%	36.4%	62.5%	40.0%
	Total	Count	61	33	16	110
		Expected Count	61.0	33.0	16.0	110.0
		% within Q23.re	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.950 ^a	2	.139
Likelihood Ratio	3.868	2	.145
Linear-by-Linear Association	2.537	1	.111
N of Valid Cases	110		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.40.

Sub-hypothesis 1.6

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q2.se * Q19.ha	110	100.0%		.0%	110	100.0%

Q2.se * Q19.ha Crosstabulation

			Q19.ha			
			1	2	3	Total
Q2.se	1	Count	21	17	28	66
		Expected Count	22.8	13.2	30.0	66.0
		% within Q19.ha	55.3%	77.3%	56.0%	60.0%
	2	Count	17	5	22	44
		Expected Count	15.2	8.8	20.0	44.0
		% within Q19.ha	44.7%	22.7%	44.0%	40.0%
	Total	Count	38	22	50	110
		Expected Count	38.0	22.0	50.0	110.0
		% within Q19.ha	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.423 ^a	2	.181
Likelihood Ratio	3.630	2	.163
Linear-by-Linear Association	.002	1	.965
N of Valid Cases	110		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.80.

Sub - hypothesis 1.7

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q2.se * Q25.in	110	100.0%		.0%	110	100.0%

Q2.se * Q25.in Crosstabulation

			Q25.in			
			1	2	3	Total
Q2.se	1	Count	21	23	22	66
		Expected Count	16.8	22.2	27.0	66.0
		% within Q25.in	75.0%	62.2%	48.9%	60.0%
	2	Count	7	14	23	44
		Expected Count	11.2	14.8	18.0	44.0
		% within Q25.in	25.0%	37.8%	51.1%	40.0%
	Total	Count	28	37	45	110
		Expected Count	28.0	37.0	45.0	110.0
		% within Q25.in	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.012 ^a	2	.082
Likelihood Ratio	5.129	2	.077
Linear-by-Linear Association	4.966	1	.026
N of Valid Cases	110		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.20.

Appendix 06. Testing Hypothesis 2

Hypothesis 2: There is an association between age of firms and the way they deal with KM issues

Sub-hypothesis 2.1.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q1.1 * 5. it	56	100.0%	0	0.0%	56	100.0%

Q1.1 * 5. it Crosstabulation

			5. it			Total
			1	2	3	
Q1.1	1	Count	16	9	3	28
		Expected Count	16.0	9.0	3.0	28.0
		% within 5. it	50.0%	50.0%	50.0%	50.0%
	2	Count	16	9	3	28
		Expected Count	16.0	9.0	3.0	28.0
		% within 5. it	50.0%	50.0%	50.0%	50.0%
Total		Count	32	18	6	56
		Expected Count	32.0	18.0	6.0	56.0
		% within 5. it	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	0.000	2	1.000	1.000	1.000	1.000
Likelihood Ratio	0.000	2	1.000	1.000	1.000	1.000
Linear-by-Linear Association	0.000	1	1.000	1.000	1.000	1.000
N of Valid Cases	56					

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.00.

b. Based on 10000 sampled tables with starting seed 2000000.

c. The standardized statistic is .000.

Sub-hypothesis 2.2.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q1.1 * 6. mt	56	100.0%	0	0.0%	56	100.0%

Q1.1 * 6. mt Crosstabulation

			6. mt			Total
			1	2	3	
Q1.1	1	Count	14	10	4	28
		Expected Count	13.5	8.0	6.5	28.0
		% within 6. mt	51.9%	62.5%	30.8%	50.0%
	2	Count	13	6	9	28
		Expected Count	13.5	8.0	6.5	28.0
		% within 6. mt	48.1%	37.5%	69.2%	50.0%
Total		Count	27	16	13	56
		Expected Count	27.0	16.0	13.0	56.0
		% within 6. mt	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	2.960	2	0.228	0.255	0.244	0.266
Likelihood Ratio	3.021	2	0.221	0.255	0.244	0.266
Linear-by-Linear Association	0.969	1	0.325	0.414	0.402	0.427
N of Valid Cases	56					

- a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.50.
- b. Based on 10000 sampled tables with starting seed 1502173562.
- c. The standardized statistic is .984.

Sub-hypothesis 2.3.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q1.1 * 21.te	56	100.0%	0	0.0%	56	100.0%

Q1.1 * 21.te Crosstabulation

			21.te			Total
			1	2	3	
Q1.1	1	Count	7	11	10	28
		Expected Count	4.5	12.0	11.5	28.0
		% within 21.te	77.8%	45.8%	43.5%	50.0%
	2	Count	2	13	13	28
		Expected Count	4.5	12.0	11.5	28.0
		% within 21.te	22.2%	54.2%	56.5%	50.0%
Total		Count	9	24	23	56
		Expected Count	9.0	24.0	23.0	56.0
		% within 21.te	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	3.336	2	0.189	0.244	0.233	0.255
Likelihood Ratio	3.501	2	0.174	0.244	0.233	0.255
Linear-by-Linear Association	2.206	1	0.138	0.195	0.184	0.205
N of Valid Cases	56					

- a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 4.50.
- b. Based on 10000 sampled tables with starting seed 92208573.
- c. The standardized statistic is 1.485.

Sub-hypothesis 2.4.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q1.1 * 12.ks	56	100.0%	0	0.0%	56	100.0%

Q1.1 * 12.ks Crosstabulation

			12.ks			Total
			1	2	3	
Q1.1	1	Count	9	9	10	28
		Expected Count	5.0	13.5	9.5	28.0
		% within 12.ks	90.0%	33.3%	52.6%	50.0%
	2	Count	1	18	9	28
		Expected Count	5.0	13.5	9.5	28.0
		% within 12.ks	10.0%	66.7%	47.4%	50.0%
Total		Count	10	27	19	56
		Expected Count	10.0	27.0	19.0	56.0
		% within 12.ks	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	9.453	2	0.009	0.007	0.005	0.010
Likelihood Ratio	10.472	2	0.005	0.005	0.003	0.007
Linear-by-Linear Association	1.747	1	0.186	0.256	0.244	0.267
N of Valid Cases	56					

- a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.00.
- b. Based on 10000 sampled tables with starting seed 562334227.
- c. The standardized statistic is 1.322.

Symmetric Measures

		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.	Monte Carlo Sig.
						Sig.
Nominal by Nominal	Phi	0.411			0.009	0.007
	Cramer's V	0.411			0.009	0.007
	Contingency Coefficient	0.380			0.009	0.007
N of Valid Cases		56				

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on 10000 sampled tables with starting seed 562334227.

Sub-hypothesis 2.5.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q1.1 * 23.re	56	100.0%	0	0.0%	56	100.0%

Q1.1 * 23.re Crosstabulation

			23.re			Total
			1	2	3	
Q1.1	1	Count	18	9	1	28
		Expected Count	16.5	7.5	4.0	28.0
		% within 23.re	54.5%	60.0%	12.5%	50.0%
	2	Count	15	6	7	28
		Expected Count	16.5	7.5	4.0	28.0
		% within 23.re	45.5%	40.0%	87.5%	50.0%
Total		Count	33	15	8	56
		Expected Count	33.0	15.0	8.0	56.0
		% within 23.re	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	5.373	2	0.068	0.078	0.071	0.085
Likelihood Ratio	5.939	2	0.051	0.069	0.062	0.075
Linear-by-Linear Association	2.666	1	0.103	0.148	0.139	0.157
N of Valid Cases		56				

- a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 4.00.
- b. Based on 10000 sampled tables with starting seed 475497203.
- c. The standardized statistic is 1.633.

Sub-hypothesis 2.6.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q1.1 * 19.ha	56	100.0%	0	0.0%	56	100.0%

Q1.1 * 19.ha Crosstabulation

			19.ha			Total
			1	2	3	
Q1.1	1	Count	11	3	14	28
		Expected Count	10.0	3.5	14.5	28.0
		% within 19.ha	55.0%	42.9%	48.3%	50.0%
	2	Count	9	4	15	28
		Expected Count	10.0	3.5	14.5	28.0
		% within 19.ha	45.0%	57.1%	51.7%	50.0%
Total		Count	20	7	29	56
		Expected Count	20.0	7.0	29.0	56.0
		% within 19.ha	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	99% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	0.377	2	0.828	0.866	0.857	0.875
Likelihood Ratio	0.378	2	0.828	0.866	0.857	0.875
Linear-by-Linear Association	0.186	1	0.666	0.770	0.759	0.781
N of Valid Cases	56					

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.50.

b. Based on 10000 sampled tables with starting seed 1585587178. c. The standardized statistic is .431.

Sub-hypothesis 2.7.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q1.1 * 25.in	56	100.0%	0	0.0%	56	100.0%

Q1.1 * 25.in Crosstabulation

			25.in			Total	
			1	2	3		
Q1.1	1	Count	11	7	10	28	
		Expected Count	7.5	8.0	12.5	28.0	
		% within 25.in	73.3%	43.8%	40.0%	50.0%	
	2	Count	4	9	15	28	
		Expected Count	7.5	8.0	12.5	28.0	
		% within 25.in	26.7%	56.3%	60.0%	50.0%	
	Total		Count	15	16	25	56
			Expected Count	15.0	16.0	25.0	56.0
			% within 25.in	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.517	2	0.105
Likelihood Ratio	4.654	2	0.098
Linear-by-Linear Association	3.701	1	0.054
N of Valid Cases	56		

- a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.50.
- b. Based on 10000 sampled tables with starting seed 1487459085.
- c. The standardized statistic is 1.924.

Appendix 07. Testing hypothesis 3

Hypothesis 3: There is an association between size of firms and the way they deal with KM issues

Sub - hypothesis 3.1.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q3.si * Q5.it	110	100.0%		.0%	110	100.0%

Q3.si * Q5.it Crosstabulation

			Q5.it			
			1	2	3	Total
Q3.si	1	Count	18	3	1	22
		Expected Count	11.8	7.6	2.6	22.0
		% within Q5.it	30.5%	7.9%	7.7%	20.0%
	2	Count	31	28	6	65
		Expected Count	34.9	22.5	7.7	65.0
		% within Q5.it	52.5%	73.7%	46.2%	59.1%
	3	Count	10	7	6	23
		Expected Count	12.3	7.9	2.7	23.0
		% within Q5.it	16.9%	18.4%	46.2%	20.9%
Total	Count	59	38	13	110	
	Expected Count	59.0	38.0	13.0	110.0	
	% within Q5.it	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.710 ^a	4	.008
Likelihood Ratio	13.354	4	.010
Linear-by-Linear Association	8.267	1	.004
N of Valid Cases	110		

a. 2 cells (22.2%) have expected count less than 5. The minimum expected count is 2.60.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.353	.008
	Cramer's V	.250	.008
	Contingency Coefficient	.333	.008
	N of Valid Cases	110	

Sub-hypothesis 3.2.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q3.si * Q6.mt	110	100.0%		.0%	110	100.0%

Q3.si * Q6.mt Crosstabulation

			Q6.mt			
			1	2	3	Total
Q3.si	1	Count	21	1		22
		Expected Count	11.2	7.2	3.6	22.0
		% within Q6.mt	37.5%	2.8%	.0%	20.0%
	2	Count	30	24	11	65
		Expected Count	33.1	21.3	10.6	65.0
		% within Q6.mt	53.6%	66.7%	61.1%	59.1%
	3	Count	5	11	7	23
		Expected Count	11.7	7.5	3.8	23.0
		% within Q6.mt	8.9%	30.6%	38.9%	20.9%
Total	Count	56	36	18	110	
	Expected Count	56.0	36.0	18.0	110.0	
	% within Q6.mt	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.394 ^a	4	.000
Likelihood Ratio	31.623	4	.000
Linear-by-Linear Association	21.691	1	.000
N of Valid Cases	110		

a. 2 cells (22.2%) have expected count less than 5. The minimum expected count is 3.60.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.490	.000
	Cramer's V	.346	.000
	Contingency Coefficient	.440	.000
	N of Valid Cases	110	

Sub-hypothesis 3.3.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q3.si * Q21.te	110	100.0%		.0%	110	100.0%

Q3.si * Q21.te Crosstabulation

			Q21.te			
			1	2	3	Total
Q3.si	1	Count	10	11	1	22
		Expected Count	4.2	9.2	8.6	22.0
		% within Q21.te	47.6%	23.9%	2.3%	20.0%
	2	Count	8	27	30	65
		Expected Count	12.4	27.2	25.4	65.0
		% within Q21.te	38.1%	58.7%	69.8%	59.1%
	3	Count	3	8	12	23
		Expected Count	4.4	9.6	9.0	23.0
		% within Q21.te	14.3%	17.4%	27.9%	20.9%
	Total	Count	21	46	43	110
		Expected Count	21.0	46.0	43.0	110.0
		% within Q21.te	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.195 ^a	4	.001
Likelihood Ratio	21.253	4	.000
Linear-by-Linear Association	12.879	1	.000
N of Valid Cases	110		

a. 2 cells (22.2%) have expected count less than 5. The minimum expected count is 4.20.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.418	.001
	Cramer's V	.295	.001
	Contingency Coefficient	.385	.001
	N of Valid Cases	110	

Sub-hypothesis 3.4

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q3.si * Q12.ks	110	100.0%		.0%	110	100.0%

Q3.si * Q12.ks Crosstabulation

			Q12.ks			
			1	2	3	Total
Q3.si	1	Count	6	10	6	22
		Expected Count	3.6	10.2	8.2	22.0
		% within Q12.ks	33.3%	19.6%	14.6%	20.0%
	2	Count	9	29	27	65
		Expected Count	10.6	30.1	24.2	65.0
		% within Q12.ks	50.0%	56.9%	65.9%	59.1%
	3	Count	3	12	8	23
		Expected Count	3.8	10.7	8.6	23.0
		% within Q12.ks	16.7%	23.5%	19.5%	20.9%
Total	Count	18	51	41	110	
	Expected Count	18.0	51.0	41.0	110.0	
	% within Q12.ks	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.167 ^a	4	.530
Likelihood Ratio	2.967	4	.563
Linear-by-Linear Association	1.026	1	.311
N of Valid Cases	110		

2 cells (22.2%) have expected count less than 5. The minimum expected count is 3.60.

Sub-hypothesis 3.5.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q3.si * Q23.re	110	100.0%		.0%	110	100.0%

Q3.si * Q23.re Crosstabulation

			Q23.re			
			1	2	3	Total
Q3.si	1	Count	17	5	3	22
		Expected Count	12.2	6.6	3.2	22.0
		% within Q23.re	27.9%	15.2%	.0%	20.0%
	2	Count	34	21	10	65
		Expected Count	36.0	19.5	9.5	65.0
		% within Q23.re	55.7%	63.6%	62.5%	59.1%
	3	Count	10	7	6	23
		Expected Count	12.8	6.9	3.3	23.0
		% within Q23.re	16.4%	21.2%	37.5%	20.9%

Total	Count	61	33	16	110
	Expected Count	61.0	33.0	16.0	110.0
	% within Q23.re	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.442 ^a	4	.077
Likelihood Ratio	11.111	4	.025
Linear-by-Linear Association	7.435	1	.006
N of Valid Cases	110		

a. 2 cells (22.2%) have expected count less than 5. The minimum expected count is 3.20.

Sub-hypothesis 3.6.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q3.si * Q19.ha	110	100.0%		.0%	110	100.0%

Q3.si * Q19.ha Crosstabulation

			Q19.ha			
			1	2	3	Total
Q3.si	1	Count	8	4	10	22
		Expected Count	7.6	4.4	10.0	22.0
		% within Q19.ha	21.1%	18.2%	20.0%	20.0%
	2	Count	20	15	30	65
		Expected Count	22.5	13.0	29.5	65.0
		% within Q19.ha	52.6%	68.2%	60.0%	59.1%
	3	Count	10	3	10	23
		Expected Count	7.9	4.6	10.5	23.0
		% within Q19.ha	26.3%	13.6%	20.0%	20.9%
	Total	Count	38	22	50	110
		Expected Count	38.0	22.0	50.0	110.0
		% within Q19.ha	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.748 ^a	4	.782
Likelihood Ratio	1.783	4	.776
Linear-by-Linear Association	.124	1	.724
N of Valid Cases	110		

a. 2 cells (22.2%) have expected count less than 5. The minimum expected count is 4.40.

Sub-hypothesis 3.7.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q3.si * Q25.in	110	100.0%		.0%	110	100.0%

Q3.si * Q25.in Crosstabulation

			Q25.in			
			1	2	3	Total
Q3.si	1	Count	9	9	4	22
		Expected Count	5.6	7.4	9.0	22.0
		% within Q25.in	32.1%	24.3%	8.9%	20.0%
	2	Count	14	20	31	65
		Expected Count	16.5	21.9	26.6	65.0
		% within Q25.in	50.0%	54.1%	68.9%	59.1%
	3	Count	5	8	10	23
		Expected Count	5.9	7.7	9.4	23.0
		% within Q25.in	17.9%	21.6%	22.2%	20.9%
Total	Count	28	37	45	110	
	Expected Count	28.0	37.0	45.0	110.0	
	% within Q25.in	100.0%	100.0%	100.0%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.640 ^a	4	.156
Likelihood Ratio	7.023	4	.135
Linear-by-Linear Association	3.337	1	.068
N of Valid Cases	110		

0 cells (.0%) have expected count less than 5. The minimum expected count is 5.60

Appendix 08. Testing Hypothesis 4

Hypothesis 4: There is an association between ownership and the way they deal with KM issues

Sub-hypothesis 4.1.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q4.ow * Q5.it	106	100.0%		.0%	106	100.0%

Q4.ow * Q5.it Crosstabulation

			Q5.it			
			1	2	3	Total
Q4.ow	2	Count	49	30	11	90
		Expected Count	48.4	31.4	10.2	90.0
		% within Q5.it	86.0%	81.1%	91.7%	84.9%
	3	Count	8	7	1	16
		Expected Count	8.6	5.6	1.8	16.0
		% within Q5.it	14.0%	18.9%	8.3%	15.1%
	Total	Count	57	37	12	106
		Expected Count	57.0	37.0	12.0	106.0
		% within Q5.it	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.900 ^a	2	.638
Likelihood Ratio	.945	2	.624
Linear-by-Linear Association	.007	1	.935
N of Valid Cases	106		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 1.81.

Sub-hypothesis 4.2.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q4.ow * Q6.mt	106	100.0%		.0%	106	100.0%

Q4.ow * Q6.mt Crosstabulation

			Q6.mt			
			1	2	3	Total
Q4.ow	2	Count	53	30	7	90
		Expected Count	46.7	28.9	14.4	90.0
		% within Q6.mt	96.4%	88.2%	41.2%	84.9%
	3	Count	2	4	10	16
		Expected Count	8.3	5.1	2.6	16.0
		% within Q6.mt	3.6%	11.8%	58.8%	15.1%
	Total	Count	55	34	17	106
		Expected Count	55.0	34.0	17.0	106.0
		% within Q6.mt	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.294 ^a	2	.000
Likelihood Ratio	25.112	2	.000
Linear-by-Linear Association	24.980	1	.000
N of Valid Cases	106		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 2.57.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.543	.000
	Cramer's V	.543	.000
	Contingency Coefficient	.477	.000
	N of Valid Cases	106	

Sub-hypothesis 4.3.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q4.ow * Q21.te	106	100.0%		.0%	106	100.0%

Q4.ow * Q21.te Crosstabulation

			Q21.te			
			1	2	3	Total
Q4.ow	2	Count	17	37	36	90
		Expected Count	16.1	37.4	36.5	90.0
		% within Q21.te	89.5%	84.1%	83.7%	84.9%
	3	Count	2	7	7	16
		Expected Count	2.9	6.6	6.5	16.0
		% within Q21.te	10.5%	15.9%	16.3%	15.1%
	Total	Count	19	44	43	106
		Expected Count	19.0	44.0	43.0	106.0
		% within Q21.te	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.379 ^a	2	.827
Likelihood Ratio	.409	2	.815
Linear-by-Linear Association	.259	1	.611
N of Valid Cases	106		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 2.87.

Sub-hypothesis 4.4.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q4.ow * Q12.ks	106	100.0%		.0%	106	100.0%

Q4.ow * Q12.ks Crosstabulation

			Q12.ks			
			1	2	3	Total
Q4.ow	2	Count	16	43	31	90
		Expected Count	14.4	41.6	34.0	90.0
		% within Q12.ks	94.1%	87.8%	77.5%	84.9%
	3	Count	1	6	9	16
		Expected Count	2.6	7.4	6.0	16.0
		% within Q12.ks	5.9%	12.2%	22.5%	15.1%
	Total	Count	17	49	40	106
		Expected Count	17.0	49.0	40.0	106.0
		% within Q12.ks	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.148 ^a	2	.207
Likelihood Ratio	3.267	2	.195
Linear-by-Linear Association	3.047	1	.081
N of Valid Cases	106		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 2.57.

Sub-hypothesis 4.5.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q4.ow * Q23.re	106	100.0%		.0%	106	100.0%

Q4.ow * Q23.re Crosstabulation

			Q23.re			
			1	2	3	Total
Q4.ow	2	Count	53	25	12	90
		Expected Count	50.1	26.3	13.6	90.0
		% within Q23.re	89.8%	80.6%	75.0%	84.9%
	3	Count	6	6	4	16
		Expected Count	8.9	4.7	2.4	16.0
		% within Q23.re	10.2%	19.4%	25.0%	15.1%
	Total	Count	59	31	16	106
		Expected Count	59.0	31.0	16.0	106.0
		% within Q23.re	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.781 ^a	2	.249
Likelihood Ratio	2.706	2	.258
Linear-by-Linear Association	2.708	1	.100
N of Valid Cases	106		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 2.42.

Sub-hypothesis 4.6.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q4.ow * Q19.ha	106	100.0%		.0%	106	100.0%

Q4.ow * Q19.ha Crosstabulation

			Q19.ha			
			1	2	3	Total
Q4.ow	2	Count	30	19	41	90
		Expected Count	28.9	18.7	42.5	90.0
		% within Q19.ha	88.2%	86.4%	82.0%	84.9%
	3	Count	4	3	9	16
		Expected Count	5.1	3.3	7.5	16.0
		% within Q19.ha	11.8%	13.6%	18.0%	15.1%
	Total	Count	34	22	50	106
		Expected Count	34.0	22.0	50.0	106.0
		% within Q19.ha	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.660 ^a	2	.719
Likelihood Ratio	.665	2	.717
Linear-by-Linear Association	.633	1	.426
N of Valid Cases	106		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.32.

Sub-hypothesis 4.7.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q4.ow * Q25.in	106	100.0%		.0%	106	100.0%

Q4.ow * Q25.in Crosstabulation

			Q25.in			
			1	2	3	Total
Q4.ow	2	Count	23	30	37	90
		Expected Count	22.1	29.7	38.2	90.0
		% within Q25.in	88.5%	85.7%	82.2%	84.9%
	3	Count	3	5	8	16
		Expected Count	3.9	5.3	6.8	16.0
		% within Q25.in	11.5%	14.3%	17.8%	15.1%
	Total	Count	26	35	45	106
		Expected Count	26.0	35.0	45.0	106.0
		% within Q25.in	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.527 ^a	2	.768
Likelihood Ratio	.535	2	.765
Linear-by-Linear Association	.520	1	.471
N of Valid Cases	106		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.92.

Appendix 09. Testing Hypothesis 5

Hypothesis 5: There is an association between management vision and the way firms deal with KM issues

Sub-hypothesis 5.1.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q29.vi * Q5.it	109	99.1%	1	.9%	110	100.0%

Q29.vi * Q5.it Crosstabulation

			Q5.it			
			1	2	3	Total
Q29.vi	1	Count	13	12	8	33
		Expected Count	17.9	11.2	3.9	33.0
		% within Q5.it	22.0%	32.4%	61.5%	30.3%
	2	Count	46	25	5	76
		Expected Count	41.1	25.8	9.1	76.0
		% within Q5.it	78.0%	67.6%	38.5%	69.7%
	Total	Count	59	37	13	109
		Expected Count	59.0	37.0	13.0	109.0
		% within Q5.it	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.999 ^a	2	.018
Likelihood Ratio	7.498	2	.024
Linear-by-Linear Association	7.112	1	.008
N of Valid Cases	109		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.94.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.271	.018
	Cramer's V	.271	.018
	Contingency Coefficient	.261	.018
	N of Valid Cases	109	

Sub-hypothesis 5.2.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q29.vi * Q6.mt	109	99.1%	1	.9%	110	100.0%

Q29.vi * Q6.mt Crosstabulation

			Q6.mt			
			1	2	3	Total
Q29.vi	1	Count	7	14	12	33
		Expected Count	17.0	10.6	5.4	33.0
		% within Q6.mt	12.5%	40.0%	66.7%	30.3%
	2	Count	49	21	6	76
		Expected Count	39.0	24.4	12.6	76.0
		% within Q6.mt	87.5%	60.0%	33.3%	69.7%
	Total	Count	56	35	18	109
		Expected Count	56.0	35.0	18.0	109.0
		% within Q6.mt	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.243 ^a	2	.000
Likelihood Ratio	21.449	2	.000
Linear-by-Linear Association	21.046	1	.000
N of Valid Cases	109		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.45.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.441	.000
	Cramer's V	.441	.000
	Contingency Coefficient	.404	.000
	N of Valid Cases	109	

Sub-hypothesis 5.3.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q29.vi * Q21.te	109	99.1%	1	.9%	110	100.0%

Q29.vi * Q21.te Crosstabulation

			Q21.te			
			1	2	3	Total
Q29.vi	1	Count	3	8	22	33
		Expected Count	6.4	13.9	12.7	33.0
		% within Q21.te	14.3%	17.4%	52.4%	30.3%
	2	Count	18	38	20	76
		Expected Count	14.6	32.1	29.3	76.0
		% within Q21.te	85.7%	82.6%	47.6%	69.7%
	Total	Count	21	46	42	109
		Expected Count	21.0	46.0	42.0	109.0
		% within Q21.te	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.883 ^a	2	.000
Likelihood Ratio	15.812	2	.000
Linear-by-Linear Association	12.725	1	.000
N of Valid Cases	109		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.36.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.382	.000
	Cramer's V	.382	.000
	Contingency Coefficient	.357	.000
	N of Valid Cases	109	

Sub-hypothesis 5.4.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q29.vi * Q12.ks	109	99.1%	1	.9%	110	100.0%

Q29.vi * Q12.ks Crosstabulation

			Q12.ks			
			1	2	3	Total
Q29.vi	1	Count	2	14	17	33
		Expected Count	5.4	15.1	12.4	33.0
		% within Q12.ks	11.1%	28.0%	41.5%	30.3%
	2	Count	16	36	24	76
		Expected Count	12.6	34.9	28.6	76.0
		% within Q12.ks	88.9%	72.0%	58.5%	69.7%
	Total	Count	18	50	41	109
		Expected Count	18.0	50.0	41.0	109.0
		% within Q12.ks	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.686 ^a	2	.058
Likelihood Ratio	6.183	2	.045
Linear-by-Linear Association	5.599	1	.018
N of Valid Cases	109		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.45.

Sub-hypothesis 5.5.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q29.vi * Q23.re	109	99.1%	1	.9%	110	100.0%

Q29.vi * Q23.re Crosstabulation

			Q23.re			
			1	2	3	Total
Q29.vi	1	Count	10	11	12	33
		Expected Count	18.5	9.7	4.8	33.0
		% within Q23.re	16.4%	34.4%	75.0%	30.3%
	2	Count	51	21	4	76
		Expected Count	42.5	22.3	11.2	76.0
		% within Q23.re	83.6%	65.6%	25.0%	69.7%
	Total	Count	61	32	16	109
		Expected Count	61.0	32.0	16.0	109.0
		% within Q23.re	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.985 ^a	2	.000
Likelihood Ratio	20.066	2	.000
Linear-by-Linear Association	19.612	1	.000
N of Valid Cases	109		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.84.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.439	.000
	Cramer's V	.439	.000
	Contingency Coefficient	.402	.000
	N of Valid Cases	109	

Sub-hypothesis 5.6.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q29.vi * Q19.ha	109	99.1%	1	.9%	110	100.0%

Q29.vi * Q19.ha Crosstabulation

			Q19.ha			
			1	2	3	Total
Q29.vi	1	Count	14	5	14	33
		Expected Count	11.5	6.7	14.8	33.0
		% within Q19.ha	36.8%	22.7%	28.6%	30.3%
	2	Count	24	17	35	76
		Expected Count	26.5	15.3	34.2	76.0
		% within Q19.ha	63.2%	77.3%	71.4%	69.7%
	Total	Count	38	22	49	109
		Expected Count	38.0	22.0	49.0	109.0
		% within Q19.ha	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.437 ^a	2	.487
Likelihood Ratio	1.444	2	.486
Linear-by-Linear Association	.606	1	.436
N of Valid Cases	109		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.66.

Sub-hypothesis 5.7.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q29.vi * Q25.in	109	99.1%	1	.9%	110	100.0%

Q29.vi * Q25.in Crosstabulation

			Q25.in			
			1	2	3	Total
Q29.vi	1	Count	4	7	22	33
		Expected Count	8.5	11.2	13.3	33.0
		% within Q25.in	14.3%	18.9%	50.0%	30.3%
	2	Count	24	30	22	76
		Expected Count	19.5	25.8	30.7	76.0
		% within Q25.in	85.7%	81.1%	50.0%	69.7%
	Total	Count	28	37	44	109
		Expected Count	28.0	37.0	44.0	109.0
		% within Q25.in	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.761 ^a	2	.001
Likelihood Ratio	13.816	2	.001
Linear-by-Linear Association	11.664	1	.001
N of Valid Cases	109		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.48.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.355	.001
	Cramer's V	.355	.001
	Contingency Coefficient	.335	.001
	N of Valid Cases	109	

Appendix 10. Domain guide template

Source: Wong and Aspinwall, 2006

Knowledge area X		
Introduction		
<i>[A written overview of the subject area X, including among others, its underlying concepts and tenets] [About 1 or 2 pages exposition of the knowledge area]</i>		
Folders organization		
<i>[A scheme in which materials addressing the unique aspects of the subject area X are organized and classified properly. The documents contained in the folders could encompass a body of knowledge that includes best practices, lessons learnt, models, methodologies, etc.]</i>		
Folders/Directories	Contents	
<Classification/Category>	<Explanation here>	
<Classification/Category>	<Explanation here>	
<i>[Express LH column as links straight to the folders] [There may be lower level sub-folders]</i>		
Essential Reading		
The following documents will provide you with a solid understanding of the development of this knowledge area, its tenets, and		
Documents	Authors	Endorsement
<Document title>	<Name(s)>	<Endorsement here>
<Document title>	<Name(s)>	<Endorsement here>
<i>[Express document titles as links]</i>		
Supplementary Reading		
The following documents will provide you with a deeper understanding of the different aspects of this knowledge area. <i>[Table in the same format as above]</i>		
Internal keywords		
Internally held documents have been classified using one or more keywords selected from the following set. <i>[Keywords labeled with (y)* are shared with knowledge area Y (and so forth, as necessary)] [Table> List of keywords + Optional explanatory note]</i>		
External keywords		
The following keywords have been found to return fruitful results on web search engines such as Google <i>[Table> List of keywords + Optional explanatory note]</i>		

LIST OF PUBLICATIONS

- [1] NGUYEN, T.H.H, MACDONALD J.R., MOLNAR, Z., Knowledge sharing in small business – From theory to reality. Submitted to International Journal of Emerging Market – Emerald (<http://www.emeraldinsight.com/products/journals/journals.htm?id=IJOEM>) in September 2010. Conditionally accepted in April 2011 and under the final revision.
- [2] NGUYEN, T.H.H., HOMOLKA, L., MOLNAR, Z., MACDONALD J.R., KM as a solution for the shortage of competent employees in SMEs at the developing country (Case study: Vietnam). Accepted at Journal of System Integration (<http://www.si-journal.org/index.php/JSI>).
- [3] NGUYEN, T.H.H., HOMOLKA, L., MOLNAR, Z., MACDONALD J.R., KM as a solution for the shortage of competent employees in SMEs at the developing country (Case study: Vietnam). Accepted at *Conference proceedings. The 12th European Conference of Knowledge Management (ECKM 2011)*. Passau, Germany, 2nd – 3rd, Sept. 2011.
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- [6] NGUYEN, T.H.H. Challenges in applying knowledge management in developing countries – case of Vietnam (Southeast Asia). *Conference*

proceedings. Silesian University in Opava, School of Business Administration in Karvina, 2nd International scientific conference for Ph.D. students and young scientists, 6th November 2009.

[7] NGUYEN, T.H.H. Knowledge management – From a “fashionable phenomenon” Towards a human system management. *Conference proceedings. Technical University of Liberec, the 9th International Conference “Liberec Economic Forum”, 15th – 16th September 2009.*

[8] NGUYEN, T.H.H. Quality management in tailor-made courses at Vietnam Aviation Academy (2006). *Journal of Educational Sciences*. Vol.18, pp.35-42. Vietnam Education Ministry.

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EDUCATION

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October 2001 - **Master of Management**, Liberty University of Bruxelles
October 2003 (U.L.B), (Solvey Business School), Belgium and The Open
University of Hochiminh, Vietnam.

September 1994 - **Bachelor of Business Administration**. The Open
April 1997 University of Hochiminh, Vietnam

September 1988 - **Bachelor in Linguistic** (Russian Language), Hue
June 1993 University, Vietnam.

Many short term courses concerning Aviation Skills,
Management and other working skills

WORK HISTORY

October 2007 **Act. Dean** of General Education Faculty – Vietnam Aviation
Academy

Director of Languages & Informatics Centre – Vietnam

	Aviation Academy
February 2007	Act. Dean of General Education Faculty – Vietnam Aviation Academy
January 2001	Head of In-Service Training Department – The Civil Aviation Training Centre of Vietnam
July 1999	Head of Project Office - The Civil Aviation Training Centre of Vietnam
July 1995	Investment Specialist – The Planning and Investment Department, Civil Aviation Administration of Vietnam

PROFESSIONAL EXPERIENCES

2001-Present	<ul style="list-style-type: none"> ▪ Instructor - Courses “Aircraft Weight and Balance” ▪ Lecturer - “Airport Management”, “Project Management”, “Teamwork” for students, Vietnam Aviation Academy, Vietnam. ▪ Head of CDU (Curriculum Development Unit) according to the ICAO standard – Worked as a Course Developer and Project Coordinator for the project “Improving the training standards of CATC of Vietnam – TRAINAIR (ICAO)” ▪ Project Coordinator, Project “Technical Assistance for Aviation Sector of Vietnam” funded by The Dutch Government (up to 2002) (3,000,000,000 USD) ▪ Management work as the head of department (faculty) at VAA
1999-2000	<ul style="list-style-type: none"> ▪ Chief of Project Management Team - project “Setting up the Ab-initial Pilot Training Centre in Vietnam” using ODA of France (46,000,000 FR) ▪ Chief of Project team – construction project “Building up new premises for CATC of Vietnam – 18A Cong Hoa street, Tan Binh Dist, Hochiminh City” (5,000,000,000

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1995 -1999

- Member of the Vietnam civil aviation procurement team (dealing with facility investment projects for airlines, airports, and air management services companies)
- Participating in some of development projects in Aviation sector of Vietnam