

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The global economy is moving from physical labour to a knowledge based economy (KBE). Knowledge provides long-term competitive advantages to countries as well as organizations. The Asia Top-3, namely, South Korea, Japan and Hong Kong (UNDP, 2007) have proven that a knowledge-based economy allows the countries to remain competitive even in uncertain situations. In today's context, knowledge is vital for most organizations and, therefore, they must make a significant effort to change. The first step to changing from a traditional company into a knowledge company is to be aware of the knowledge of the organization, known as intellectual capital (IC) (Montequin et al. 2006). Recently, the concept of intellectual capital has been identified as a key resource and driver of organizational performance and value creation (Marr et al., 2004). Most IC researchers (Stewart, 1997; Bontis, 2001; Van Buren, 1999) and Barney's resource-based view (1991, 1997, and 2002) agree that IC is a critical resource for a firm. Organizations perform well and create value when they implement strategies that respond to market opportunities by exploiting their internal resources and capabilities (Penrose, 1959; Andrews, 1971 as cited by Marr et al., 2004). In knowledge-based economy, (KBE), organizations must be knowledge oriented and rely on knowledge to create competitive advantage (Quah, 2008). As productive capabilities become more dependent on knowledge assets, and knowledge itself is being created and exchanged at an increasingly rapid rate, organizations have to

restructure themselves to exploit it to get better market leverage. Knowledge management initiatives are aimed at enhancing organizational performance through the identification, capture, validation, and transfer of knowledge. Although the basic concepts and principles of knowledge management are similar for small and large organizations, there is a difference in the value placed on systematic knowledge management practices like formalized environmental scanning and computer based knowledge sharing systems (Lim and Klobas, 2000). Choi and Lee (2003) stress that information and knowledge management should consider both human and system factors to develop individual knowledge into a collective organizational resource. The knowledge and information in the organization have to be managed, and that intellectual capital is the most appropriate theoretical lens to use (Roos, et al., 1998). The intellectual capital includes all the processes and the assets of knowledge such as human capital, which comprises employees' capabilities, skills and commitment; structural capital, which comprises organizational efficiencies and knowledge management; and relational capital, which comprises customers, suppliers and other parties' relationships to the organizations. In short, intellectual capital can be located in its people, its structures and its customers (Wiig, 1997). The intellectual capital is the answer to a very practical and widespread need to manage the whole company. While knowledge is part of intellectual capital, intellectual capital is much more than knowledge (Roos, et al., 1998). Intellectual capital is also known as the organizational resources of an organization (Egbu et al., 2000)

Small and medium-sized enterprises (SMEs) have a reputation as boosters of employment, economic growth and economic dynamics (Keizer et al., 2002). The role of SMEs in economic development has been a growing concern of economic researchers,

policy makers and numerous international agencies for many years (Ratanapornsiri, 2003). According to the 2007 Malaysian Central Bank Governor's keynote address, the SME sector has long been hailed as a key driver of the national economy; it contributes 32% to the national GDP (Low, 2007). Ninety-nine out of 100 Malaysian businesses are SMEs and almost 5.6 million Malaysians work in the SME sector (Low, 2007).

SMEs face difficult challenges compared to large enterprises when it comes to the global business and trade landscape. One of the challenges affecting SMEs ability to be competitive, efficient, and resilient is limited capacity for technology management and knowledge acquisition; therefore, SMEs will need to acquire critical knowledge and skills in order to remain competitive (SME Annual Report, 2007).

According to Quah (2008), even though knowledge management is relevant to SMEs, the implementation might take some time. Knowledge management in Malaysia remains at a very infant stage with very few Malaysian companies and industries having initiated any knowledge management programme (Tat and Hase, 2006, Quah, 2008, Ngah et al., 2008).

As SMEs are small and easy to manage, the application of knowledge management and innovation should be much easier. Knowledge sharing is the best answer for knowledge management in SMEs, as the lack of knowledge sharing systems, means that the knowledge related to the organization's core competencies is held as tacit knowledge in the mind of key employees (Keskin, 2006; Lim and Klobas, 2000). SMEs seem to be appropriate units to behave like network nodes because of their lean structure, adaptability to market evolution, active involvement of versatile human resources, ability to establish subcontracting relations and good technological level of their products (Mezgar et al. 2000). Knowledge is more than just improving organizational performance. In the era of

globalization, the rich information flows from many sources and channels without any limitation, consequently, an organization's capability to manage knowledge effectively becomes a prerequisite for success and innovativeness (Widen-Wulff and Suomi, 2007).

Over the years, because of globalization and global corporations, Asia has risen as an important location for "innovation offshoring" (Ernst, 2006). In addition, Asian governments and firms are playing an increasingly active role as promoters and new sources of innovation. Although China and India are at the forefront, South Korea, Taiwan, Singapore and Malaysia are equally well developed. Studies have evidenced that small companies seem to have a shorter development cycle and a higher proximity to the market (Birchall et al., 1996 as quoted in Ussman et al., 1997) which allow SMEs to be fast and flexible (Zanjani et al. 2009). This is one of SMEs' capability that to realize innovation (Keizer et al., 2002).

Most of the researches done on knowledge management, particularly knowledge sharing (Huysman et al., 2002) and innovation are on large organizations as they are seen more structured and financially strong. According to Ghobadian and Gallear (1997), SMEs are more likely to be people oriented than system oriented. For this, SMEs need to weigh up their basic lack of people resources against their increased flexibility and responses. Previous researches have found out that SMEs are eager to adapt and adopt knowledge sharing practices, (Mc Adam and Mc Creedy, 1993) and interested in innovation (Motwani et al., 1999). Therefore, in assisting SMEs to be successful, there should be a model to suit SMEs based on their scarce resources, skills, expertise, practices, culture and environment.

1.2 Problem Statement

As previous studies have revealed, intellectual capital (IC) components are intertwined, and they act as integral knowledge assets in an organization. However, even though a few authors mentioned that IC components are closely related, most intellectual capital studies concentrate on identifying the impact of its components as a separate entity rather than regarding it as a bundle of resources. It has to be measured as one rather than separately as is generally the case. As some authors regard intellectual capital as static knowledge, the model of intellectual capital with a process link should be considered. In particular, human capital, structural capital and relational capital are heavily involved in the knowledge conversion, i.e. tacit knowledge, explicit knowledge and their transformation from one to the other (Hsu, 2006), which is also a knowledge sharing process. While there is no clear division between knowledge sharing and intellectual capital, there is an intuitive link between them. Numerous researchers have investigated knowledge components and the knowledge management (KM) process, especially knowledge creation, innovation and success achievement in organizations, however, none has been identified to include knowledge sharing and innovation components in an integrated research framework of intellectual capital. Few researchers have identified the role of knowledge management in improving intellectual capital. Besides, innovation is also regarded as another capital in intellectual capital studies (Chen et al. 2004). However, recently, more researchers are treating innovation as an outcome, as innovation will prevail when there is a generation of ideas that is heavily dependent on knowledge. This study presents a framework that integrates the input-process-output model of intellectual capital.

Ultimately, an organization should target to achieve better organizational performance. Therefore, this study presents a model with “process” and “content” perspectives instead of just the IC effects that have been focused upon in the earlier IC initiatives.

Although intellectual capital maybe a source of competitive advantage, generally, most organizations do not understand its nature and value (Collis, 1996). Facing intense globalized competition, there is a widespread recognition that intellectual capital is a critical force that drives economic growth (Huang and Liu, 2005). Nowadays, companies are competing on creativity and innovation, which are dependent on the information and knowledge captured, acquired, utilized, stored and accumulated. Hashim (2007) identifies the business characteristics of successful SMEs as sufficient capital, economies of scale, flexibility in costing, pricing latitude, ability to meet typical operating profit margin of the industry, costs variability at various production levels, ability to achieve greater efficiency, use of marketing in generating additional sales and the ability to be innovative. Basically, entrepreneurs have the ability to recognize a business opportunity, which is fundamental to the entrepreneurial process as well as growing a business (Hisrich and Peters, 2008). This business opportunity results from the knowledge and experience of the individual entrepreneurs. Knowledge is a combination of experience and education, and relevant experience could be work related or a variety of personal experience (Hisrich and Peters, 2008). Today, companies have two basic kinds of expenditure for a long run investment: capital equipment, and research and development. Knowledge is said to be the main source of competitive advantage for companies, therefore, more and more companies are investing in knowledge and information, making them knowledge-intensive companies (Stewart,

2000). The best part is that knowledge and information can be detached from the physical movement of goods and services.

While knowledge management and intellectual capital were developed around large organizations that were mainly related to the financial sector, nowadays, efforts are addressed to transfer these concepts to SMEs (Montequin et al. 2006). Operating within a KBE, knowledge drives profit for the organizations for capital gain and sustaining competitive advantage (Wickramansinghe, 2005). Knowledge management is a competitive advantage for an organization but for SMEs, knowledge management only covers knowledge creation and knowledge acquisition and it stops there (Wong and Radcliffe, 2000). The intellectual capital (comprising employees, their knowledge of products and services, and their creativity and innovation abilities) is a crucial source of knowledge assets (Wickramansinghe, 2005) for organizations.

Furthermore, compounded by an informal and oral culture of communication within SMEs, the tacit nature of knowledge will give rise to the knowledge retention problem, therefore, sharing needs to be adopted immediately (Thorpe et al., 2005). Entrepreneurs that are able to act on business opportunities would be in a strategic position to develop innovation – new products/services. Entrepreneurs shift resources from areas of low productivity and low yield to areas of higher productivity and higher yield (Drucker, 1986). The strength of SMEs lies in motivation, good network, tacit knowledge in unique skills, shorter informal communication, less bureaucracy, greater proximity to market and internally closely related, which is important for innovation (Nooteboom, 1993). This gives SMEs flexibility in innovation, especially its close proximity to market information and customer information. The great diversity of

SMEs generates a variety of innovative ventures (Nooteboom, 1993). Most literature reviews highlight the SMEs lack of tangible resources, physical and financial capital, but the challenges for these SMEs is being able to demonstrate the intangible resources embedded in the organization such as entrepreneurial capital, which is an extension of human capital (Erikson, 2002). Furthermore, the new economy is built on information technology and the sharing of knowledge and innovation (Wickramansinghe, 2005). The fact that most of the knowledge shared by SMEs is explicit suggests that some management of the sharing process is in the hands of the SMEs (Levy et al., 2003). Many researchers suggest that using the findings of innovation studies in advanced countries to explain innovative behaviour in less developed countries is likely to be inappropriate. SMEs differ from large organizations in their stages of development because they are successful, associated with a clear focus and strong values like independence, flexibility, entrepreneurship and innovation as well as their close contact with customers and suppliers through personal forms of control and a long-term view of business relations. However, they suffer from an informal structure, insufficient resources, erratic decision making and poor administrative and accounting procedures (Heildenberg, 2006 as cited in Montequin et al. 2006). Therefore, this new finding will help SMEs to adapt to a KBE, thereby capitalizing their internal resources in maximizing their performance via innovation and knowledge sharing. Quoted by Kaplan and Norton (2004, p. 4 as in Chen at. 2005) “...*some countries such as Venezuela and Saudi Arabia have high natural resource endowments but have made poor investments in their people and systems. As a consequence, they produce far less output per person and experience much slower growth rates, than countries like*

Singapore and Taiwan that have few natural resources but invest heavily in human and information capital and effective internal systems’.

Considering the current context, where markets are becoming more competitive, forcing companies to be consistently innovating, management of intellectual capital seems to be the most valuable assets, as the main driver of innovation. Intellectual capital in SMEs appears more complex because normally it is difficult to introduce and to manage intangible assets, which, combined with the scarcity of resources, undermine competitiveness. Practitioners, managers and policy makers that are oriented to the promotion of the endogenous growth of SMEs, are taking consideration the importance of developing intellectual capital in order to foster the entrepreneurial performance of SMEs which are intended as the most innovative entrepreneurial units.

Davidson and Griffin (2003) pointed out small businesses have contributed many innovative ideas and technological breakthroughs to the society. In order to maintain and develop further their innovative skills SMEs need to develop their understanding of knowledge management (KM), as a key business driver rather than as a resource-intensive additional initiative (Zanjani et al., 2008). However, despite this pressing need, it is widely accepted that small companies – even the most knowledge-intensive ones – are characterized by a lack of uptake of KM initiatives (Nunes et al., 2006). Perhaps due to the reason that KM systems are expensive to purchase, use and maintain. However, it is recognised that the peculiarities of SMEs mean that they ‘do’ KM differently from large companies (eg McAdam and Reid, 2001; Desouza and Awazu, 2006; Basly, 2007; Supyuenyong et al, 2009 as cited in Staplehurst and Ragsdell , 2010) because of their characteristics. .

Some important characteristics of SMEs include:

- Ø The company is characterized by the entrepreneur who very often also is the owner of the company.
- Ø The entrepreneur normally is the “general manager”, thus he acts on his own risk.
- Ø The entrepreneur has a network of personal contacts to customers, suppliers and the relevant public sector. So the contact is close and rather informal.
- Ø The company usually acts very local.
- Ø The products offered can be very individual to the customer’s needs.
- Ø The form of organization is rather informal and flat.
- Ø The company can react quickly to changes in the environment.
- Ø The company is not dominated or ruled by another company, e.g. part of big business concern.
- Ø The market share is normally small.
- Ø The products are little diversified.

SMEs make substantial contributions to national economies and are estimated to account for 80 percent of global economic growth (Pavic et al, 2007).

SMEs are a vital part of any national economies because Zanjani et al. 2009):

1. They are a source of innovation in new products, services, processes and work practices
2. They are specialist suppliers of parts, components and subassemblies for large companies
3. They are fast and flexible and close to their customers
4. They can perform an import substitution role

5. They can be a more human environment; on human scale.

Many researchers agree that for SMEs, developing channels for effective knowledge sharing is crucial. With SMEs under constant pressure to keep costs low, the opportunities for cost savings from knowledge sharing and pooling resources cannot be overlooked. One area in which SMEs can clearly benefit from knowledge sharing is good practice. SMEs have advantages about flexibility, reaction time and innovation capacity that make them central actors in the new economy (Raymond and Croteau, 2006 as cited in Ibrahim et al. 2010). Against this background, it is important to propose an alternative approach to suit SMEs in utilizing and capitalizing their internal and external knowledge as well as be competitive in knowledge-based economy. This approach is unique as SMEs' strengths and weakness have been taken into consideration.

Mosey et al (2002) found that low innovative SMEs which they called "low growth incremental improvers" made poor use of knowledge and information of their customers and market information compared to innovative high growth SMEs. Apparently, SMEs should know on how to capitalize external knowledge (customer and market) by sharing the knowledge internally lead to rapid innovative decision making. This study will focus on SMEs in the manufacturing and service sector as they are considered as being highly tacit knowledge intensive in nature (Lowendahl, 2000). This study will identify other implications where intellectual capital is being increasingly recognized as the major driver of corporate and national growth (Chen et al., 2005).

In short, being in dynamic environments, SMEs is a choice to explore the role of intellectual capital, knowledge sharing and innovation based on these justifications:

1. SMEs maybe small in size, but they are large in numbers in most economies' firm populations (Maes et al., 2005)
2. Most of research and theory building on intellectual capital and knowledge sharing in particularly largely ignored SMEs as a research population (Zahra et al. 2006). This is surprising given that SMEs need unique, dynamic capabilities to survive and be able to exploit their innovative position (Sapienza et al., 2006).
3. Combining SMEs' urgent need for intellectual capital and knowledge sharing with their more transparent nature (Cohen and Kaimnekis, 2007), makes them an ideal research population to advance current knowledge of how intellectual capital and knowledge sharing can be developed, improved and enhanced.

1.3 Aim of study

A number of IC studies have conceptually established different dimensions of intellectual capital. Most IC studies examined intellectual capital components independently (Bontis, 1998, 2000; Chen et al., 2000; Cohen and Kaimenakis, 2007) rather than examining the effect of intellectual capital as a bundle of effects. Most of either KM or IC research utilized interpretive case studies (Massey et al., 2002, Davenport et al., 1997, 1998, 2000), or positivist quality research, (e.g. classification or frameworks establishment; (Teece, 1998; Bontis, 2002a and 2002b, Pike et al., 2002). However, there are almost no empirical studies examining the relationship between IC and knowledge sharing, innovation and the links between knowledge sharing, innovation and organizational performance into one

model. Even though this model is similar to Lee and Choi (2003) model using input-process-output, however their model is complicated (Papoutsakis, 2006). In this study, knowledge sharing is included as knowledge sharing is regarded as key for growth for SMEs. Many SMEs may therefore see knowledge sharing as a low cost solution that could “increase innovation and customer satisfaction, while improving the retention of expertise and strengthening a sense of community” (Love *et al.* 2005, p.16 as cited in Staplehurst and Ragsdell, 2010). Furthermore, knowledge sharing culture is already well-developed in SMEs (Davison and Ou, 2007). Therefore, this study is to develop an alternative model for SMEs to set their strategies in competing in knowledge-based economy. In addition, this model also to explicate the framework of how organizational performance can be improved through intellectual capital, knowledge sharing and innovation. It is important to align and choose knowledge management activities with targeted intellectual capital results. To further strengthen the model, innovation is included as an intermediate outcome as SMEs is regarded as source of innovation (Zanjani et al., 2009). As well as from the practioners’ point of view, interconnecting variables may provide a clue as to how firms enhance their strengths to improve their performance (Liau and Chung, 2001).

By having this alternative approach, SMEs would be able to understand, re-examine and re-organized its intellectual capital and its practices towards being more innovative and competitive.

1.4 Research Objectives

- To investigate the relationship between intellectual capital and organizational performance in SMEs
- To investigate the mediating effects of knowledge sharing on intellectual capital and organizational performance.
- To investigate the mediating effects of innovation on intellectual capital and organizational performance
- To identify the mediating effect of knowledge sharing and innovation on intellectual capital and organizational performance.

1.5 Research Questions

RQ1: What is the impact of SMEs' intellectual capital on organizational performance?

RQ2: Does knowledge sharing mediate the relationship of intellectual capital and organizational performance?

RQ3: Does innovation mediate the relationship of intellectual capital and organizational performance?

RQ4: Do knowledge sharing and innovation mediate the relationship between intellectual capital and organizational performance?

1.6 Significance of the Study

This study focuses on intellectual capital as a bundle of assets. Intellectual capital is also known as an organizational knowledge that needs to be regulated in order to make sure that the knowledge in the organization is not only valuable but can be turned into profit, either in the form of innovation or organizational performance. Most of the researches pertaining to intellectual capital look at knowledge management relationship rather than focusing on intellectual capital itself – the internal resources. It is important to focus on the internal resources of the organization in assessing its capabilities to be competitive. The recent work by Bontis et al. (2000) suggests the existence of a significant positive relationship between intellectual capital and organizational performance in large organizations that have a proper system and structure compared to small and medium enterprises. However, as SMEs are rich in knowledge, it is important to carry out a study of intellectual capital in SMEs to identify the strengths of their internal resources.

However, SMEs are known for lacking knowledge management practices even though they have strong communication links and social networks in the organization. It is said that knowledge sharing, especially tacit knowledge, is highly and actively interacted in SMEs. As more and more researchers are interested in exploring this tacit knowledge sharing, which is very valuable and difficult to codify, SMEs could benefit from this advantage compared to bigger organizations.

One of the elements of intellectual capital is innovation capital, which is seldom highlighted. In fact, knowledge is closely related to innovation, which is an outcome of knowledge management. When knowledge is wisely utilized and capitalized, innovation will be produced. Innovation is found to be very active in small-scale business. It is one of

the Government's objectives to promote innovation among Malaysian entrepreneurs. Furthermore, it is included in Malaysia's Third Industrial Master Plan (IMP3) for Manufacturing.

This study will develop a framework of intellectual capital, knowledge sharing, innovation and organizational performance, which will assist SMEs fit into a knowledge-based economy (Wickramasinghe, 2005). This new comprehensive model of intellectual capital for SMEs is a new approach for SMEs to further develop and excel in their business performance. In this study, Structural Equation Modelling (SEM) using AMOS 16 is utilized. This will provide new insights to IC researchers in testing their data using SEM Amos. In addition, most previous research concerning IC focused on the impact of IC elements on performance. This research will put the elements of IC together and test them as second order latent variables against other variables.

1.7 Theoretical Contributions

Most of the intellectual capital studies focussed on the individual effect of intellectual capital construct on organizational performance; this study will investigate the effect of intellectual capital as one construct. Meanwhile, in KM studies, knowledge creation, which is regarded as the source of competitive advantage and innovation for long-term survival, has received tremendous attention. However, some authors agreed that the SECI model is a knowledge sharing process rather than a knowledge creation process and that, therefore, knowledge sharing should be given more attention in order for it to create knowledge. Knowledge creation is the outcome of knowledge sharing (Nonaka and Konno, 1998). Furthermore, most intellectual capital studies focused on large organizations rather

than SMEs. The lack of intellectual capital studies on SMEs could be due to the lack of a formal structure and systems. The relationship of intellectual capital and organizational performance is known to be positive (Bontis, 1998, Cohen and Kaimenakis, 2007, Wang and Chang, 2005). Intellectual capital is static and is a bundle of knowledge that needs another mechanism to influence organizational performance (Stewart, 2006). Knowledge sharing exists significantly in informal face-to-face social interaction settings, which suit SMEs. Even though knowledge sharing is still in its infancy level for both large and small organizations (Pathirage and Amaratunga, 2007), it is the most effective technique used in the sharing of knowledge in SMEs and, according to Egbu (2005), knowledge in SMEs is tacit in nature. Furthermore, SMEs need to be motivated in knowledge sharing arrangements to recognize that knowledge has value and that the value added is derived from the knowledge exchange (Egbu, 2005). In addition, innovation is a key survival tool for SMEs to survive in business. Innovation is resource dependent, and much research has been done on SME innovation.

This study will contribute to the existing theory by integrating intellectual capital, knowledge sharing and innovation on organizational performance, which is yet to be explored.

1.8 Practical Contributions

The study focuses on the inner resources of SMEs, which should be regarded as their competitive advantage. In so doing, SMEs are capable of emerging as key players in the industry rather than dwelling on their incapacity, especially regarding physical and financial capital (Man et al. 2002). However, tacit knowledge sharing is prevalent in small

organizations rather than large organizations, which prevent the smooth flow of knowledge. Tacit knowledge sharing is ubiquitous, informal and without bureaucracy. The combination of tacit and explicit knowledge would make knowledge sharing more effective and valuable. Knowledge sharing has not been extensively explored, especially from an SME perspective. Even though innovation has been proven to exist within SMEs it was researched from the perspective of market orientation, customer orientation and entrepreneurial orientation but not intellectual capital. Intellectual capital, which provides structure, system, strategy and culture, is an antecedent of innovation (Afuah, 2003). Therefore, this study looks at SMEs' intellectual capital and innovation, which influence organizational performance. The integration of intellectual capital, knowledge sharing and innovation on organizational performance has not been explored to date.

This framework can be applied in the SMEs scenario for their long-term competitive advantage. This framework can also assist SMEs in finding ways to improve their internal resources, capitalizing their strengths and capturing opportunities. The results of this study will provide insights into what needs to be done to increase an organization's level of intellectual capital, what business consequences are expected from increasing the level of intellectual capital, and how knowledge sharing and innovation influence the relationship between intellectual capital and organizational performance.

1.9 Definition of variables

1.9.1 Intellectual capital

Stewart (2000) defined intellectual capital as intellectual material – knowledge, information, intellectual property, experience – that can be put to use to create wealth. It is collective brainpower. Edvinson (1997) defined intellectual capital as the possession of knowledge, applied experience, organizational technology, customer relationships and professional skills that provide Skandia with a competitive edge in the market. Roos and Roos (1997) define intellectual capital as the sum of the hidden assets of the company not fully captured on the balance sheet and, thus, it includes both what is in the heads of organizational members and what is left in the company when they leave. Bontis (1998) defines intellectual capital as the pursuit of the effective use of knowledge (the finished product) as opposed to information (the raw material). Intellectual capital consists of three types of capital – human capital, structural capital and customer capital – which are defined differently by different authors as shown in Table 1.1.

1.9.2 Knowledge sharing

Tacit knowledge is a tremendous resource for all activities, especially for innovation (Leonard and Sensiper, 1998). Tacit knowledge is what is embedded in the mind (Choi and Lee, 2003), can be expressed through ability applications and is transferred in the form of learning by doing and learning by watching. Knowledge sharing is basically the act of making knowledge available to others within the organization (Ipe, 2003). Knowledge sharing can also be explained as a set of behaviours that involve the exchange of information or assistance to others and is separate from information sharing (Connelly and

Kelloway, 2003). Knowledge sharing enables managers to keep individual learning flowing throughout the company and integrate it for practical applications.

Table 1.1 Summary of intellectual capital

Authors	Human Capital	Structural Capital	Relational Capital
Bontis, Nick (1998)	Tacit knowledge, sheer intelligence of member Network of node <ul style="list-style-type: none"> • Generic inheritance • Education • Experience • Attitude of life and business (Hudson, 1993) 	Systems Procedures structures	Customer capital: <ul style="list-style-type: none"> • Marketing channel • Customer r/ship • Government • Suppliers • Industry associations
Brooking, Anne (1996)	Skills, abilities and expertise, problem-solving abilities and leadership style	All the technologies processes and methodologies that enable a company to function	Brands, customers, customer loyalty and distribution channels
Roos , Goran (1997)	Competence, attitude and intellectual agility	All organizational innovation, processes, intellectual property and cultural assets	Relationship includes internal and external stakeholders
Stewart , Thomas (1997)	Employees are an organization's most important asset	Knowledge embedded in information technology	Market information used to capture and retain customers
Cohen and Kaimenakis (2007)	Employees' capabilities, skills, knowledge, technical expertise, etc.	organizational capital: databases, charts, manuals	Knowledge embedded in customers, suppliers, government and related-industries

1.9.3 Innovation

Peter Drucker (1986) refers to innovation as “the purposeful and organized search for changes and the systematic analysis of the opportunities such changes might offer for economic or social innovation”. He also highlighted that innovation is “the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth”. Based on Nonaka and Takeuchi (1995), “ *to explain innovation, we need a new theory of organizational knowledge creation....The cornerstone of our epistemology is the distinction between tacit and explicit knowledge...the key to knowledge creation lies in the mobilization and conversion of tacit knowledge.*” Innovation is also defined as “the adoption of an idea or behavior, whether a system, policy, program, device, process, product or service, that is new to the adopting organization” (Damanpour, 1991). Innovation is the process of creating a commercial product from an invention (Hitt et al., 2005).

1.9.4 Organizational Performance

The goal of improving organizational performance is to ensure that the organization resources and system designs processes well and systematically improve its performance to incur higher productivity and better financial outcome. Measuring organizational performance is comparing the expected results to actual results, investigating deviations from plans, assessing individual performance and examining the progress being made towards meeting the targeted objectives (Hashim, 2007).

1.10 Summary

This chapter highlights the direction of the study. It started with an introduction of intellectual capital and its importance. Next, the problem statement was elaborated upon to address the issues of an intellectual capital model as well as the importance of knowledge sharing and innovation. The significance of the study from the practical and theoretical perspectives was discussed. The aim of the study as well as the research questions and research objectives were presented. Finally, the definition of variables was provided. The next chapter will discuss the literature review concerning the variables in this study.

1.11 Organization of the thesis

The thesis will be presented in seven chapters, including Chapter One, the introduction chapter. Figure 1.1 shows the flow of the chapters.

Chapter One: INTRODUCTION

This chapter starts with the background of intellectual capital and its challenges. The researcher defines the terminology and describes the problem statement in the field of intellectual capital, knowledge sharing, innovation and organizational performance. Research questions and research objectives are presented in this chapter as well as the definition of each variable.

Chapter Two: LITERATURE REVIEW

Chapter Two provides a deeper understanding of the literature concerning intellectual capital, knowledge sharing, innovation and organizational performance. The chapter also

discusses the theoretical foundation, the resource-based view. It then introduces the independent variable – Intellectual Capital –and provides a definition and outlines the importance of intellectual capital in this study. This is followed by the mediating variables, knowledge sharing and innovation. The dependent variable, organizational performance is elaborated upon. The concepts derived from this section are discussed at length.

Chapter Three: INDUSTRY ANALYSIS: SMALL AND MEDIUM ENTERPRISES IN MALAYSIA

This chapter describes the Malaysian small and medium enterprises and further elaborates upon the manufacturing and services industries. The importance and contribution of SMEs are discussed at length.

Chapter Four: RESEARCH DESIGN AND METHODOLOGY

This chapter describes the research objectives and questions posed in the study. A research model is developed along with the hypotheses that are guided by the research questions. The chapter elaborates in detail the research design, methodology and sampling used in this study.

Chapter Five: DATA ANALYSIS AND FINDINGS

This chapter synthesizes the data produced from the survey in which the preliminary model is developed. The data analysis process is done thoroughly using SPSS and SEM, including univariate and multivariate analysis. The proposed model is presented. The findings of the hypotheses testing are presented.

Chapter Six: DISCUSSION AND FINDINGS

This chapter discusses the findings of the survey, literature review as well as the findings from the fieldwork. The findings of the hypotheses are discussed. The Research Questions will be addressed to serve the aim of the study.

Chapter Seven: CONCLUSIONS AND RECOMMENDATIONS

This chapter concludes the findings from the previous chapters. Limitations and future research are discussed. The implications are highlighted and the recommendations for practitioners and academics are included. Finally, the chapter summarizes the research contribution.

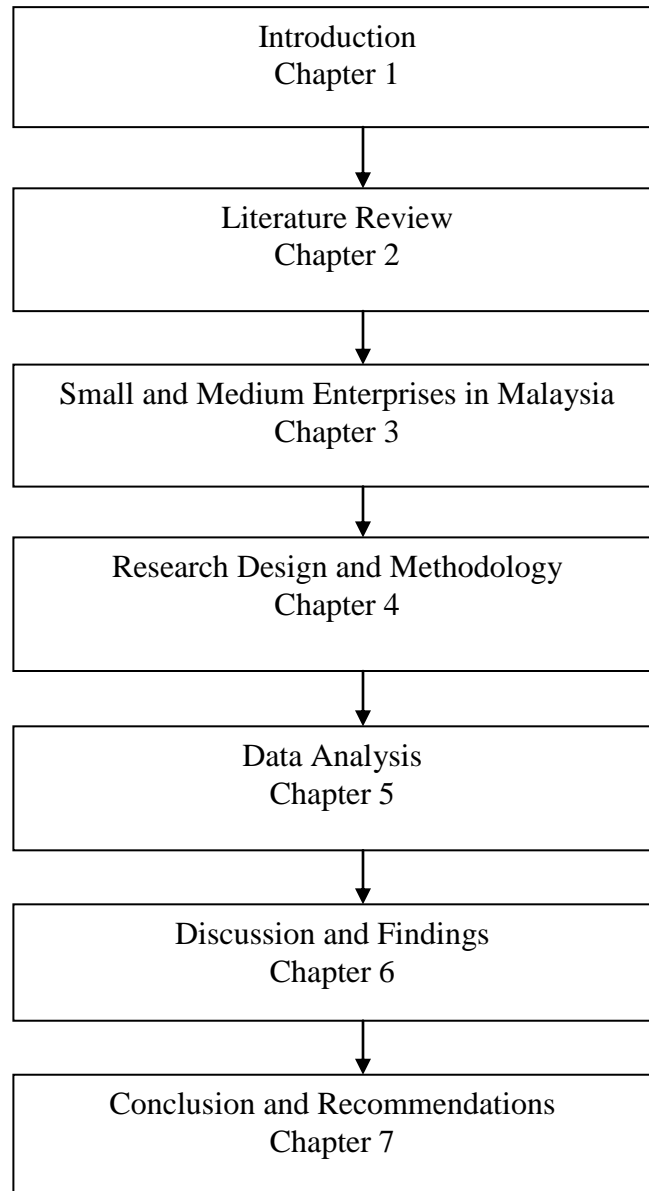


Figure 1.1
Illustration of the overview of the organization of the thesis.