

Chapter 2

Literature Review

2.1 Definition and Characteristics of SMEs

Small and Medium Enterprises or SMEs are businesses that produced goods and services, engage in retail or wholesale or any other businesses announced and are classified in three groups – medium, small and micro enterprises – based on the number of paid employees, turnover, balance sheet total, and independence. The European Commission has defined SMEs by the following criteria as in the table below :

Table 2.1 : The definition of SME according to the European Commission

(<http://europa.eu.int/ISPO/ecommerce/sme/definition.html>)

Types	Medium	Small	Micro
Maximum number of employees	250	250	10
Maximum turnover (in million ECU)	40	7	-
Maximum balance-sheet total (in million ECU)	27	5	-

According to Ministry of Industry, Thailand, the definition of small and medium enterprise (SME) is based on the number of salaried workers, and fixed capitals. An enterprise is classified as an SME when it has employees less than 200 and fixed capital less than baht 200 million, excluding land and properties. SMEs in Thailand are classified in three sections: production, service, and trading.

In business practices, the definition of SMEs can be extended including number of shares holdings by parent companies, enterprise structures and independence. The principle criterion for SME is an enterprise's independence. This characteristic indicates that not more than 25% of SME capital should be owned by one large or many large companies. At present, there are many multinational companies in the form of franchise companies and joint-venture between Thai and overseas companies. Some of these companies should not be classified as Thai SMEs.

Table 2.2 : The definition of SME according to Ministry of Industry, Thailand
(<http://www.sme.go.th>)

Type	Small		Medium	
	Employees	Capital (million baht)	Employees	Capital (million baht)
Production	Not more than 50	Not more than 50	51-200	51-200
Service	Not more than 50	Not more than 50	51-200	51-200
Wholesale	Not more than 25	Not more than 50	26-50	51-100
Retail	Not more than 15	Not more than 50	16-30	51-60

Specific SMEs characteristics studied in previous research include organization structure and culture, human resources, systems processes and procedures (Beijerse, 2000; Lim & Klobas, 2000) as follows:

1. Ownership and management structure.

Most SME owners, acting as owner-managers, have a major role as the company's strategic initiator. A flatter organizational hierarchy in SMEs leads to greater flexibility in work but with a limited or less clear vision of responsibilities.

Communication lines are shorter, which allows for easier and more thorough of information flow. This structure leads to higher levels of coordination and cooperation.

2. Systems, process and procedure.

There is simple planning and control systems, informal rules and procedures in SMEs. The operations are less complex. There is less standardization of work processes. The Processes are more fluid and are adaptable to various situations. SMEs also have a narrow scope and mostly focus on operational rather than strategic processes. Rather than creating knowledge repositories, they are more adept at sharing tacit knowledge (Nonaka & Takeuchi, 1995; Desouza & Awazu, 2006).

3. Human capital management.

Human capital development is done according to specific needs in an ad hoc manner. Employee performance evaluation is not standardized (Huin, 2004). Since SMEs have less clear employees responsibilities, a lower degree of job specification occur, leading to greater employees' versatility.

4. Culture and behavior.

There is usually an informal, organic, and unified culture in SMEs. The small size of the organization fosters recognizing the company as a whole instead of looking at single departments or functions. The behavior of employees is more easily influenced by owner-manager's philosophy and belief. An open culture that allows employee to work independently not only enables the knowledge creation process, but also allows knowledge to flow easily among participants (Supyuenyong et al, 2009).

2.2 Significant Role of SMEs

SMEs play an important role in the economy as they are the foundation for sustainable development and the main economic rehabilitation mechanism for economic progress and elimination of poverty. In the APEC region, SMEs account

for to around 90% of all businesses and employ as much as 60% of the workforce. (www.apec.org).

In 2009, there were 2,896,106 SMEs, which contributes to 99.8% of the number of all enterprises in Thailand. The total value of SMEs in Thailand was 3,418 billion baht or 37.8 of Thailand's GDP in that year. In terms of employment, Thai SMEs hired 9,701,354 workers which are 78.2 % of total employment, not including the unidentified number of unregistered labor.

Table 2.3 : The numbers of new and dissolved Thai enterprises during 2001-2009
(<http://www.sme.go.th>)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Number of New enterprises	32,003	35,699	43,996	47,652	49,602	46,895	40,750	42,745	41,220
Number of Dissolved enterprises	21,763	28,097	29,683	24,855	26,482	20,387	22,237	30,810	63,007

The figures in Table 3 show the birth and the dissolved rates of enterprises in Thailand. With the rising trend of dissolved enterprises, it can clearly be seen that SMEs accounted for 99.8% of total enterprises in the country, are not sustainable in long run. From 2001 to 2003, the number of new enterprises rose slightly but remained quite steady since then. On looking at dissolved enterprises from 2001 to 2009, there were not significant changes until 2008. In 2009, however, the increase in the dissolved rate was surprisingly high. This indicates that a majority of Thai SMEs cannot survive in long run.

SMEs are considered as economic engine of ASEAN economies. Building on the progressive work under this Blueprint, the Strategic Action Plan for ASEAN SME Development 2010-2015 covering the regional commitments on SME development was adopted in 2010 to further enhance the competitiveness and flexibility of SMEs in moving towards a single market: ASEAN Economic Community (AEC). In

particular, five major deliverables targeted for the SME section under the AEC Blue print are the establishment of the followings. (ASEAN Secretariat, 2011)

(a) Common curriculum for entrepreneurship in ASEAN, with Indonesia and Singapore as lead countries

(b) Comprehensive SME service centre with regional and sub-region linkage with Member States, with Thailand and Vietnam as lead countries.

(c) SME financial facility in each Member State, with Malaysia and Brunei Darussalam

(d) A regional program of internship scheme for staff exchanges and visits for skill training, with Myanmar and Philippines as lead countries.

(e) A regional SME development fund for use as a funding source for SMEs that are undertaking business in the ASEAN, with Lao PDR and Thailand as lead countries.

2.3 Challenges of SMEs under Globalization

A concerted push in support of SME growth and competitiveness, moreover, is no longer an option. In fact, the financial and economic crisis of 1997/98 has induced a return to “the fundamentals” among the “miracle economies” in East and South-East Asia, including a renewed focus on SMEs. This policy shift has been complemented with higher budget allocations and external aid for the SME sector, including sizable resources made available by Japan under the so-called New Mizayawa Initiative.

Such a reorientation is not just to underpin the on-going socio-economic recovery which was somewhat derailed again due to the 2001-2002 global economic slowdowns. It is also necessary to accommodate an expanding pool of millions of job seekers especially the young workers and, at the same time, to widen the available opportunities for the current as well as potential SME entrepreneurs themselves.

SMEs and, by extension, all business firms have to manage growth and change in an environment where the pace, patterns and organization of production have

evolved fundamentally since the late 1980s. Trade liberalization at the global and regional levels, and the new information and communication technologies have entwined to create rich opportunities as well as formidable challenges to all interdependent countries and enterprises.

The following notes on some of the opportunities and challenges most pertinent to SME development serve as a backdrop for a discussion on related of policy issues and suggestions in the promotion of SME growth and competitiveness in the coming decade.

a) Business Opportunities

Regionally, intra-ASEAN trade has also expanded faster than the group's total trade while the proportion of goods destined for trade within ASEAN is much higher than before the progressive and accelerated tariff reduction arrangements, starting in 1993, under the ASEAN Free Trade Area (AFTA). In addition, most wealth-creating assets such as finance and technologies can now be packaged, located and relocated with relative ease within and across economies and regions.

Furthermore, there are now greater scope and more opportunities for inter-firm linkages for enhanced collective efficiency, technological and innovation capabilities, and hence competitiveness. In particular, the proliferation of complex networks of international production and cross-border supply chains has widened and deepened the potential and avenues for SME involvement. Besides, subcontracting and outsourcing relationships now cover processing and manufacturing activities and services of high value-addition and technological sophistication – ranging from original equipment manufacturing, complete-package production, product design and engineering, research and development (R&D), to various other high-end support services. Trade via the internet has now become an intrinsic part of an increasingly large number of SMEs in the developed countries.

b) Daunting challenges

But the almost unlimited opportunities for gainful growth through trade on the demand side are countered balanced by highly formidable challenges on the supply side. Firstly, competition has become increasingly fiercer among the global and regional economies and enterprises, SMEs included. There are also many more producers competing for both existing and new markets and market segments for goods, services, finance, and other wealth-creating technologies and knowledge. The competitive strength of China is notable in the above regard, even before the country became a WTO member in December 2001. Indeed, market penetration and displacing pressures from China have been keenly felt by producers across Asia, particularly those suppliers (especially SMEs) at lower stages of technology sophistication and relying on a high import content.

Secondly, consumer preferences and market standards have become more sophisticated and exacting. Competitive advantage is now determined by several non-price parameters such as quality, health and safety, social equity in employment and production, and ecological compatibility of products and processes. Furthermore, market demand is also constantly changing -- a trend facilitated not least by the rapid advances in Information Communication and Telecommunications, bio-engineering, and new materials sciences. In consequence, there are more frequent introduction of new products and processes, faster and more innovative design changes, shorter product cycles and smaller output batches, higher quality and greater mass customization, just-in-time sourcing and more punctuality in delivery.

The new development context is likely to require a change in both perception and practices -- in other words, a new or different mindset -- in the promotion of SME development. As is apparent from the preceding discussion, competitiveness is increasingly human-made; furthermore, it can be leveraged by factors other than location and natural resource endowments.

One lever is through the maintenance of an on-going access to the available store of global information and knowledge -- including market standards, marketing opportunities and technologies. Another is embodied in the large gains in collective

efficiency and flexibility through participation (whether or not at arm's length) in clusters of firms, or in networks of inter-linkages backward with suppliers, laterally with other producers and providers, and forward with users and consumers. Yet leverage relates to the capability for on-going learning and improvement in efficiency and flexibility; indeed, business enterprises (both large and small) must become and remain a learning organization in the new development context.

The features, characteristics and situations of smaller firms have not been much taken into consideration. SMEs should not be viewed as a smaller version of big business. In general, they have a scarcity of resources i.e. of financial and human resources, which differentiate them from their large counterparts. All in all, SMEs in Thailand have faced these problems as the following (APEC Symposium on HRD Strategy for SMEs, 10-11 May 2004, Republic of Korea):

1. Technological capability

Not all of the SMEs acquire knowledge of new machinery and very up-to-date technology from within their own industry. Moreover, even less are able to apply the new technology to their business by getting information from various sources such as in-house technological expertise, customers' advice, related printouts and magazines, machinery and equipment providers, raw material and component suppliers and technology and industrial fairs, for instance.

2. Innovative capability

Most SMEs have limited ability to make innovative changes in their products or processes to meet changes in market needs. Most of them can make their products according to their customers' specification. Nonetheless, they do not have their own Research & Development (R&D). They might not aware of the external source of R&D. Even if they do, there is financial hindrance. Accordingly, they are usually unable to improve their products' quality and design to the highest level.

3. Marketing capability

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Most SMEs in Thailand do not outsource marketing and sales staff to sell their products or services. Their internal marketing department may not be efficient enough to effectively provide marketing plans, identify targets for each product, and conduct surveys to monitor customers' satisfaction.

4. Financial capability

SMEs usually have limited access to sources of funds. They are mostly fully owned by entrepreneurs and find it difficult to have joint-ventures to fund the businesses. They also have difficulties in obtaining loans from commercial banks due to banks' restriction in terms of professional management and standard accounting procedures. In addition, they cannot compete with large multinational retail companies since the latter are superior to SMEs in terms of financial and marketing management.

5. Human resource capability

This appears to be a long-term problem in the development of Thai SMEs. The most serious issue lies in the shortage of technical personnel as the majority of workforce do not have sufficient education to meet the needs of the industry in creating product development. In addition, there are also problems pertaining to lacks of vision and creativity among technical personnel to meet the needs of customers. Entrepreneurs also lack qualities such as decisiveness, enthusiasm, leadership and ambition.

2.3.1 SME s and The Association of Southeast Asian Nations :ASEAN

An ASEAN Strategic Action Plan for SME Development is formulated to enhance SMEs' competitiveness and resilience. An important policy focus in the Action Plan is the need to foster private –sector engagement and partnership on SEM issues. This is to serve as a driving force in the implementation of SME development policy policies and programs including those concerned with the accelerated integration of the industry sectors at the national, sub-regional and/or regional levels.

The Plan defines the mission, objectives, guiding principles, current status, and future policies and programs for ASEAN SME development. ([http:// www.asean.org](http://www.asean.org)). The Plan aims to provide specific activities to be conducted in the short and medium term. Wider dissemination of information on regional activities to ASEAN SMEs, and implementation of national and regional SME policies and programs.

The ASEAN Charter, which came into force in December 2008, embodied the collective intent and political will of the ASEAN Member States towards achieving the vision of an ASEAN Community by 2020. The ASEAN Economic Community (AEC) Blueprint 2009-2015 is used to promote a holistic approach in achieving the ASEAN Community goals. The AEC Blueprint in particular outlines the strategic areas of cooperation and integration to establish a single market and production base, where there is free flow of goods, services, and investment and freer movement of capital and skilled labor, a highly competitive economic region, a region of equitable economic development, and a region of fully integrated into the global economy. An ASEAN Policy Blueprint for SME Development 2004-2014 aims to facilitate the emergence of a SME sector which is characteristically entrepreneurial, growth oriented, outward-looking, modern and innovative.

SMEs are the backbone of the ASEAN economies, accounting for more than 96% of all enterprises and for between 50-95% of employment in many countries in this region. In addition, the contribution of SMEs to GDP is generally significant, about 30-53%, and the contribution of SMEs to exports is between 19-31%. ([http:// www.asean.org](http://www.asean.org)). The SME sector in ASEAN however is confronted with a wide-range of structural, financial and other challenges, among which are limited access to financé, technologies an markets. There is also the question of entrepreneurial spirit and management skills among ASEAN SMEs. These problems are compounded by the lack of information, inadequate capacity for compliance with standards and certification, and the absence of a more conducive business and policy environment.

In addition, there are the new trends of conducting business utilizing information and communications technology (ICT) with on-line linkages across the

value chain as well as the outsourcing and networking strategies adopted by large enterprises and multinational companies which lack participation by SMEs. All these require SMEs and government to undertake proactive capacity building and other measures to ensure and sustain SME participation in supply networks and to sharpen SME competitiveness, flexibility and hence business sustainability.

Greater competition, rapid technological advances, more demanding and constant changes in market and consumer requirements mean that SMEs have to be innovative and forward looking in order to manage with success the challenges of the global, regional and domestic markets. The formation of SME-based clusters, and inter-firm networks and linkages within ASEAN will help leverage collaboration and collective efficiency, including scale economies across the value chain, thus creating further opportunities for business development and supply linkages for SMEs and their entrepreneurs in the region.

There is additionally a need to create and promote a more conducive business and policy environment for SME development where both Government and the private sector assume synergistic and complementary roles. The Government acts as facilitators, while SMEs themselves are the engine of growth. Indeed, collaborative SMEs development programs within a public-private partnership framework will ensure the continued economic growth and social development in the region. These programs can be achieved through structures and organized action plans and development initiatives, including though the introduction of wide-ranging capacity building and fiscal and financial incentive programs, with SMEs and their entrepreneurs as the main target beneficiaries.

Objective of ASEAN Economic Community (AEC): By 2015, ASEAN SMEs shall be world-class enterprises, capable of integration into the regional and global supply chains, able to take advantage of the benefits of ASEAN economic community building, and operating in a policy environment that is conducive to SME development, exports and innovation. To realize the objective, ASEAN needs to achieve the following goals:

- Enhancing Internationalization of SMEs and SME Marketing Capabilities
- Improving SME Access to Finance
- Strengthening SME Human Resource Development and Capacity Building
- Incubator and Local SME Development
- Establishing an SME Service Center
- Setting up an ASEAN SME Regional Development Fund

2.4 Innovation and SMEs

In the knowledge base economy, the definition and the theory of innovation though, seem to be so important. Joseph Schumpeter (Schumpeter, 1934) published for the first time “The theory of Economic Development”, in which he described the motor of the development as the innovation itself. The innovation was not well defined by that time but it was clearly described in his proceeding works in which he used the innovation term.

Management expert Peter Drucker was the first to highlight innovation in his seminal work “Innovation and Entrepreneurship” (Drucker, 1985) where he asserted that “innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different for a different business or a different service”. Innovation, according to Drucker, can be generally defined as: the process of equipping in new, improved capabilities or increase utility. It is worth saying that innovation is not a science or technology but a value which can be measured with environmental impact. Innovation has to be market oriented. (Drucker, 1974). From the business management point of view, Drucker stated that there are only two main tasks: marketing and innovation. Whereas the marketing function is to satisfy current needs of the consumers, innovation goes further to satisfy consumers future needs. Without capability for constant innovation, enterprise disappears in the moment when the customer need, technology, or competition is changed. In business sector, innovation is often as a strategic factor of the competition, under the constantly accelerating pace of changes.

The well-known definitions of innovation are described by European Commission Union (EU) and Organization for Economic Cooperation and Development (OECD). The harmonized innovation definition introduced in 2005 by OECD and EU, was included in the document called Oslo Manual: An innovation (OECD-EU) is defined as the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method business practice, workplace organization or external relations (OECD, 2005). The minimum requirement for an innovation is that the product, process, marketing method or organizational method must be new or significantly improved to the firm. This includes products, processes and methods that firms are the first to develop and those that have been adopted from other firms.

As described by OECD-EU (OECD, 2005), it is necessary for SMEs to be more specialization in their activities. This results in the increase of the importance of efficient interaction with other firms and public research institutions for R&D, exchange of knowledge and, potentially, commercialization and marketing activities. Financial factor can be a determining factor for innovation generation in SMEs. SMEs often lack internal funds to conduct innovation projects and have much more difficulty to access external funding than larger firms.

Innovation fuels organizational growth, drives future success, and is the engine that allows businesses to sustain their viability in a global economy (Gaynor, 2002). Porter and Stern (Porter & Stern, 2001) stated that companies must be able to create and commercialize a stream of new products and processes that extend the technology frontier, while at the same time keeping a step or two steps ahead their rivals. Peter Drucker succinctly stated that every organization needs on core competency: innovation (Gaynor 2002; McDemott and Sexton, 1998).

Innovation refers to a behavior of enterprises, planning and implementing changes in their practices, in order to come up with new products, processes, services or organization (Nauwelaers & Wintjes, 2002). It involves the adoption of new products and/or processes to increase the competitiveness and hence overall

profitability (Ghobadian, O'regan & Sims, 2005) Innovation results in three categories: new goods or service, new operational process, and new organizational /managerial processes. Innovation is also defined as the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures, as well as creating market driven products and services. Innovation encompasses both radical and incremental innovation.

The EKMF 2004 paper discussed how innovation as one of the most currently mentioned notions can be exploited, applied and possibly planned. A lot of important sources in literature like Hamel and Prahalad, Drucker and Nonaka explained why should be a continuous issue in all kinds of companies.

One of the strongest characteristics of the innovation show the innovation is a continuous process – innovation is often an effect of the small incremental/ marginal changes in the product or process. A long lags between innovation and invention, being an effect of lacking proper conditions for commercialization makes the difference between innovation and invention distinctive (Fagerberg, 2004).

Ghobadian, O'regan & Sims (Ghobadian et al., 2005) suggests that innovation is a key factor for sustainable growth for SMEs. It increases the firm's competitiveness since the competitors cannot easily copy the innovativeness which depends on the quality and quantity of the R&D and personnel. In addition, innovation also contributes to better performance. Hall, Rotti & Mairesse (Hall, Rotti & Mairesse 2009) find that product innovation has a positive impact on firms' labor productivity, and process innovation has a larger impact via associated investment. This results in higher overall profitability, and thus, the growth sustainability. The survival of a company largely depends on firm innovation. (Cavusgil et al, 2003) Innovation leads to sustainability and survival in large enterprises as evidenced by Royal Dutch/Shell Group in the mid-nineties through a thorough organization change based on a fundamental reorientation in its business operation and management.

Innovation capability is a challenging mission for any enterprises no matter what size of business they are. Drucker, one of the first scholars to address the importance of innovation capability for organizations, suggested that a firm has to be innovative to survive in the volatile environment (Drucker, 2006). Moreover, the innovation capability task is more difficult to build in SMEs due to their scarce resources. There still seems to be a big gap between SMEs' intention and actual innovation capability. To develop innovation capability, particularly under rigid constraints of SMEs context, substantial efforts are needed. There is constant pressure to innovate. Without the buoyancy lent by innovation, a number of companies will be drowned. The survival of a company largely depends on firm innovation. (Cavusgil et al., 2003) Changing customer preferences and extensive competitive pressure have made innovations become increasingly complex, risky and costing more to invest in. A company that has a distinctive capability for innovation is more likely to have a high innovation performance (Drucker, 2006) The speed of new product development has greatly increased; product lifecycles have been reduced by half or more in the past few years, and it is obvious that this trend will continue. To survive in dynamic and complex markets and in the uncertainty of economic circumstances, it is necessary for SMEs to create innovation capability (Assink, 2006).

Compared to larger firms, it is more difficult for SMEs to adopt innovation due to the following characteristics: a limited resource, a distinctive organizational culture linked to the proximity between ownership and management, and a lower ability to shape their external environment. Consequently, there is a need to increase the availability of external resources for SMEs and to develop their internal absorptive and learning capacities. According to a study, SMEs need five following innovation supports – finance, technology, human resources, openness and learning attitude, and strategy and organization (Nauwelaers & Wintjes, 2002).

Wolfe (Wolfe, 1994) stated that studies of innovation in organizations have addressed three broad issues, which are (1) diffusion of innovation (2) organizational innovativeness and (3) innovation process. Innovation diffusion and adoption have

traditionally been the central focus in innovations studies (Kimberly, 1981) whose subjective is to explain or predict rates and patterns of innovation of innovativeness. (Cohen, 1995) have focused on the effect of firm variables and industry/ economy variables on the organizational effectiveness. These models have been criticized to be organizational specific and static and having less impact in understanding the changing dynamics of innovation process (Wolfe, 1994). The innovation process is, however, merely addressed in terms of evolution of the innovation at the macro level. The practices that lead to the innovation, i.e. the innovation generation, have not been explored.

SMEs need to innovate to survive and create advantages in today's fiercely competitive environment. Globalization exposes SMEs to new competitors from distance parts of the world, making it more difficult to defend their position in the value chain. Rapidly changing markets require adaptive businesses processes. Standing still is no longer an option. SMEs can remain competitive with successful innovation management. (European Commission, 2011)

“Innovation is a key to the future of our organization” – it is essential that leaders mean this when they say it. They need to believe in their hearts, not only their heads, and they need to live this conviction through deeds, not word. Therefore emphasizing the importance of innovation in presentations and putting it into corporate communication is not enough. Staffs in organization will observe closely what leaders are doing. Are leader truly serious about supporting innovation? Are leader actions matching the words? Successful innovation relies on supportive values and behaviors, and it is about these values and behaviors being consistent over time. (Stamm, 2009).

Asian Productivity Organization (2008) stated the importance of innovation related to SMEs as follows. The European Union launched the Lisbon Strategy in 2000 with the goal to “make the European Union the world's most competitive and dynamic economy by 2010.” In a subsequent review in 2003, the concept of a multidimensional nature of the innovation phenomenon was introduced. These

include organizational innovation, business model innovation, and presentational innovation covering design and marketing). The Entrepreneurship and Innovation Program was implemented for the period 2007-2013 and advocated the following:

- (a) Access to finance for SMEs through EU financial instruments
- (b) A network of business and innovation service centers
- (c) Support for initiatives to foster entrepreneurship and innovation
- (d) Eco-innovation – making sustainable development become a business reality
- (e) Support for policy-making

So far, most of the Asian countries have declared specific national innovation strategies. For example, the National Innovation Agency was established in Thailand as the core organization to coordinate, foster, and partner academia, research organizations, private enterprises, investors, and financiers. Malaysia has factored in an innovation, and a multidisciplinary approach is taken that encompasses technology innovation, business innovation, demand innovation and socio-organizational innovation.

2.4.1 SME Innovation Policy in Asia Pacific Economic Cooperation (APEC)

APEC Leaders and Ministers set the Bogor goals in 1994, “ free and open trade and investment in the Asia-pacific by 2010 for developed economies and 2020 for developing economies,” and recognized that innovation is the driving force of economic growth to meet the goals (<http://www.apec-smeic.org>). APEC Leaders and Ministers recommend innovation policies for start-ups to have access to a variety of financing resources, research and development, commercialization, and marketing tools. They subsequently emphasized co-operations in building appropriate environments for SMEs in APEC. As part of follow-up actions, the 2005 APEC agreed upon the Daegu Initiative that member economies should voluntarily review Individual Actions Plan about their economies and policy environments for SME innovation, both individually and collectively. Another follow-up action initiated

establishments of the APEC SME Innovation Center which serves as the foundation for sharing policy experiences to effectively enhance the innovation capacity of SMEs in APEC.

For APEC member economies to facilitate SME innovation, the following three approaches are proposed and their respective actions are individually suggested as below:

To explore ways to share innovation policies, best practices and outcomes in APEC: APEC wide benchmarking should be provided with reference to exemplar cases in APEC. It is suggested that funding for the benchmarking should be made available to effectively facilitate the undertaking of industry-specific collaborations among governments, industries, academia and research institutes in the APEC region. To cooperate in developing policies for technology and management innovation, and human capacity building: It is suggested to draw a general framework for designing, deploying and assessing SME innovation policies in APEC. The framework particularly needs to focus on commercializing innovation in products and processes. Templates for human capacity building are also suggested to be included in the framework to cultivate innovation specialists.

To build a network of SME innovation policy experts and to support their continued cooperation: All the participants in forums or workshops associated with SME innovation in APEC are suggested to be developed into the APEC SME Innovation Leaders Club, a community of SME innovation leaders. The APEC SME Innovation Leaders Club should polish the network further.

Trend and directions of SME innovation activities in each of APEC member economies should be understood ahead of the developing as APEC-wide cooperation framework. For the sake of this, holding forums or workshops on SME innovation in APEC are highly important to enhance awareness of stakeholders including governments, intermediaries, and SMEs. It is strongly recommended that the stakeholders should be encouraged to raise their capabilities to become successful

entrepreneurs as well. Then member can make joint efforts to substantiate progress in management at individual, organization, member economy, and APEC levels.

2.4.2 Innovation and Role of APEC

Innovation is the main driving force of economic development for developing as well as developed economies. With their flexibility and responsiveness, SMEs play a vital role in innovation. SMEs have to innovate to fill the opportunities created by the changing and globalizing marketplace. However, in order to facilitate the innovative activities of SMEs, appropriate economic and policy environments are necessary. The Daegu Initiative on SME Innovation Action Plan is an opportunity for each economy to establish appropriate economic and policy environments, so that innovative SMEs can realize their potential, and increase the innovative capacity of the individual and regional economy.

While SME innovation drives economic growth, SME innovation depends on the economic and policy environments. Depending on the individual economy, there may be areas for improvements, to facilitate innovation. APEC can play a crucial role in helping economies identify the areas and elements which could be addressed, and thus make positive contributions to improving the environment for innovation. APEC is in a unique position in that APEC includes a diverse group of member economies with different strengths and weaknesses. Thus, APEC can recognize the diversity of difficulties that economies face, and share the wide-ranging experiences and abilities of its members in suggesting possible approaches and alternatives.

The Daegu Initiative seeks to improve the economic and policy environments of all member economies, to make them more conducive to SME innovation. The objective of the Daegu Initiative is to help each APEC member economy identify those factors which can be improved to accelerate innovation. The Daegu Initiative is based on the spirit of voluntarism, consensus-building, combination of individual and collective actions, flexibility, comprehensiveness and open regionalism. The Daegu

Initiative also complements "The APEC Integrated Action Plan for SME Development" by encouraging the member economies to take a more active and focused role in making their economies more friendly to innovative SMEs. The member economies will, through the Daegu Initiative, identify cooperative and efficient measures to facilitate SME innovation through preparing voluntary reviews, information sharing, and robust discussion among peers.

The Daegu Initiative will ask all members to consider submitting an Innovation Action Plan, based on a common Template. The Innovation Action Plan will be a set of activities which lists how the members will improve their environments for SME innovation by 2020. Member economies will maintain discussions on specific areas of importance for innovation and on each member's progress, and in 2010, the members will carry out self-assessment on their progress. In 2010, the members may decide to proceed with the second five-year cycle of the Daegu Initiative, which would last until 2015. The members may then decide to proceed with the third cycle, where the final self assessments would take place in 2020.

The Modality of Daegu Initiative: The Daegu Initiative is intended as a long-term measure which will run in five year cycles. For each cycle, the SME Working Group will develop a common Template for "SME Innovation Action Plan" which each member economy will utilize. The Innovation Action Plan will ask each member to review its domestic economy and policies to examine specific elements deemed important for fostering SME innovation. For the first cycle of the Daegu Initiative, the SME Working Group will determine, based on previous APEC-related research and discussions, what elements in the following areas are crucial for establishing an innovation-friendly economic environment, and list those elements in a common Template. These areas were identified as important for innovation by the SME Working Group and member economies:

a) Developing Human resources and technology through linkage between industry and educational and research institutions: Human resources and technology development are the raw material for innovation. Since educational institutions are

responsible for human resource development, and research institutions are responsible for research and development of science and technology, it is important to facilitate cooperation between industry and educational and research institutions.

b) Accessing to specialist assistance and advice: SMEs face barriers in fully exploiting innovative opportunities due to size and capability constraints. Allowing them to gain easy and inexpensive access to specialist technical and managerial expertise should help them in getting their innovative products and services to market more quickly.

c) Enhancing availability of capital to innovative SMEs: Capital is the fuel for SMEs engaged in innovation. Thus, healthy SME innovation requires adequate availability of capital, both debt and equity, for credit-worthy enterprises.

d) Networking and clustering for innovative SMEs: Networking and clustering have been shown to have positive externalities. Further, networking and clustering accelerate innovation by gathering resources, for example, specialists and experts, and allowing them to share knowledge.

e) Establishing appropriate legal and regulatory structures: Robust legal and regulatory structures designed to establish and enforce intellectual property rights, competition policy, and facilitate the quick and inexpensive establishment of firms are vital to all SMEs and especially important in encouraging innovation among SMEs. The absence of such structures can stifle innovation while undermining the ability of SMEs to compete.

f) Establishing a market consistent economic environment: Under a market consistent economic environment, innovative, efficient SMEs will have the greatest opportunities to access the resources they merit and require while facilitating firms to freely enter and exit the market.

g) Developing methodologies for effectively measuring progress in the implementation of innovation programs for SMEs: The development of statistics and other methodologies for measuring progress concerning SMEs and innovation is required if further and more in-depth analyses of SMEs and innovation are to be made on a factual and scientific basis. In order to establish such statistics and measurements, APEC member economies may choose to develop mutually compatible definitions, so that data can be compared across members.

The development of statistics and other methodologies for measuring progress concerning SMEs and innovation is required if further and more in-depth analyses of SMEs and innovation are to be made on a factual and scientific basis. In order to establish such statistics and measurements, APEC member economies may choose to develop mutually compatible definitions, so that data can be compared across members. Members agree to implement a process for reporting progress, sharing best practices and knowledge of measures to enhance the environment for innovative SMEs that incorporate the following principles.

- A common template for designing Innovation Action Plan will be drafted; agreed and distributed to all member economies.

- Economies that wish to participate in this initiative will prepare, before the 2006 Ministerial meeting, an Innovation Action Plan setting out past achievements, short term plans and long term plans, for addressing each of the areas set out above. Long term plans should list plans to up to 2020, the target date for all members to achieve the Bogor Goal.

- Each year, for the first five years, at least one of the seven areas, in turn, will be a theme for reporting and in-depth discussion at the Working Group meetings.

- The areas should be used as a means for prioritizing SME Working Group projects.

- In 2010, member economies may submit a self-assessment report on the progress of the Innovation Action Plan. The self-assessment reports will examine whether and how much the member economies implemented the measures which they had reported in their SME Innovation Action Plan, and how successful those measures have been in dealing with those elements.

- Based on the self-assessments and the discussions in the SME Working Group, the Working Group may submit a report to the SME Ministers. This report will include the following: Guidelines for facilitating SME innovation in APEC member economies, the best practices of member economies, the possible collective actions that the members can take.

- In 2010, the members will decide whether to proceed with the second round of the Daegu Initiative, and how that will be put into effect. Reviews based on the revised Innovation Action Plans will take place in 2015. If the members agree to proceed with the third cycle, the process will be repeated again with the final review to take place in 2020.

2.4.2 SME Innovation in Thailand

According to a number of literature and evidence, the main reason for the 1997 economic crisis in Thailand is likely to result from the fragmented economic structure we overwhelmed with huge foreign debts and high non-performing loans (NPLs) of large enterprises (LEs). (<http://www.apec-smeic.org>).

Thus the Thai government has emphasized the innovation of SMEs as an alternative engine for economic recovery and sustainable economic development. As one of ways in which enhance SMEs' innovative activities, the Thai government enacted the Small and Medium Enterprises Promotion Act in 2000, and established the Office of SMEs Promotion (OSMEP). OSMEP works an independent government agency, acting as a central planning office, coordinating the strategic plan and works of all relevant agencies related to SME development

In addition to the establishment of OSMEP, the government proposed the Promotion Plan of Small and Medium Enterprises of Thailand (2002-2006) in line with the Social and Economic Development Plan, to emphasize the importance of SME development. What is more, the SME bank was established in 2002, as a specialized financial institution, providing financial support to SMEs and promoting new SMEs.

There are three committees in charge of SME promotion; the Competitiveness Development Committee of the National Economic and Social Development Board, the One Tambon One Product (OTOP) Committee and the SMEs Promotion Committee of the OSMEP. The above committees draw funding from the same SME promotion fund. Although they have different origins, their main strategic priority is placed on the development of the technologic facilities and the innovative development of SMEs.

In terms of government procurement in Thailand, the government has not initiated it for SMEs, although it has idea and concepts to contribute the government bidding to promoting the marketing activities of SMEs in the near future. Instead of it, the government has made an effort to promote SME marketing by integrating SMEs into the global supply chain of MNCs or LEs. It has been implemented through the *National Supplier Development Program* (NSDP) and the Board of Investment (*BOI Unit for Industrial Linkage Development* (BUILD)).

The NSDP is a kind of subcontracting development programs to foster linkage with large enterprises, while the BUILD is (1) to stimulate more consumption of local parts and components, (2) to provide chances for the parts' manufacturers to enter new assembly markets, (3) to help parts' manufacturers understand related businesses and (4) to encourage more investment in parts and components' manufacturing in Thailand. Thus, they provide opportunity for SMEs to promote domestic and international marketing by integrating into the global supply chain of MNCs or LEs. In addition, substantial assistance for SMEs in exports is to be offered by establishing

ISO Certification Program. This program is to control the quality of products by setting up the standard towards enhancing SME innovation

In order to solve the skill gap faced by all industries and enhance the awareness of entrepreneurial culture, the Thai government has paid attention to the investment in training. In particular, the training program had been activated through the New Entrepreneurs Creation (NEC) program. The Department of Industrial Promotion (DIP) hired consultants from central and local educational organizations, financial institutions, associations and independent organizations for training operation with short-term and long-term periods.

The short-term course was set up for people with basic knowledge and experience in business operation. It is composed of knowledge about establishing business, related laws, business investment analysis, marketing strategy, manufacturing management, accounting system, conducting investment and business plans, and proposing business plans to financial institutions.

The long-term course (training 138 hours and provide advisory services in creating a business 60 hours) was set up for people without basic knowledge and experiences in business operation. This focuses on preparing readiness in business operation, providing knowledge of establishing business and related laws, business investment analysis, marketing strategy, manufacturing management, organization and human resource management, accounting system, conducting investment and business plans, and proposing business plans to financial institutions.

The Department of Industrial Promotion (DIP) is promoting linkages between local SMEs and foreign firms. However, because of inadequate technology, outmoded production processes and low management capabilities, local SMEs are not able to take full advantages of the linkage with foreign firms. It resulted from governmental protection and promotion without strengthening the absorptive capability of Thai suppliers. Therefore, the Thai government has focused upon the promotion of the

technological collaboration by increasing consultancy, advice and technology transfer service, and creating new spin-offs.

One of the main policies which promote technology-based SMEs' R&D in Thailand is placed on the increase in public R&D fund emerged by the Board of Investment (BOI). In practice the *Vendors Meets Clients (VMC) program* within BOI is the only scheme with a specific focus on technology development or transfer. The main aim of VMC is to match vendors/manufacturers with customers/assemblers. It would involve parts' manufacturers in assembly plants. This linkage opportunity assists the manufacturers to initiate business deals to supply parts and components for their plants. As a result, the parts' manufacturers learn what assemblers want, while assemblers learn more about the firms who can supply parts they require.

In addition to this, the National Science and Technology Development Agency (NSTDA) launched the *Industrial Technology Assistance Program (ITAP)*. The main contents of the program are composed of industrial consultancy and technology acquisition services for SMEs. Firstly, industrial consultancy is served through the diagnosis of preliminary technical problems by both local and overseas experts to solve technical problems as well as assist in production R&D which may include technology management. Secondly, ITAP facilitates the process of searching for and acquiring appropriate technology.

ITAP provides Thai SMEs with the opportunity to obtain first-hand information on technological advancements and innovation. It also provides them with visions of tomorrow for their future technological and business development. This is done by arranging overseas technology trips and organizing in-bound and out-bound matchmaking events. These activities offer SMEs the opportunity to find new and appropriate technology and to establish technological and business partnerships with foreign companies. The trips normally involve visiting sources of technology in particular fields such as research organizations, companies and production plants, meeting with potential partners according to pre-arranged schedules, and visiting industrial trade fairs to obtain the latest technology information and market trends.

On financing policy, Small Industry Credit Guarantee Corporation (SICGC), state-owned specialized financial institution, is the only financial institution that engaged in loan guarantee for SMEs. There are three kinds of *loan guarantee programs* for the whole loan which has no collateral evidence. The first guarantee does not exceed 50% of total amount of the loan and the maximum value for the guarantee is not over THB 40 million. The second is also not over 50% of the total amount of the loan and maximum value for the guarantee is not more than THB 3 million³¹. The final is the guarantee of the risk participation. The SICGC guarantees a new loan which has no collateral and the guarantee does also not exceed 50% of the total amount of the loan.

Concerning equity financing policies, two main initiatives are the establishments of *Venture Capital Funds* (VCFs) in 2003 and the stock exchange for SMEs called *Market for Alternative Investment* (MAI). VCFs were raised to enhance the competitiveness of Thai businesses. Target groups are fashion & design-based, software and IT, food & herbs, automotive parts, tourism, export-oriented business, and supporting industry. There are two main objectives of VCFs.

Firstly, it is to raise capital fund for SMEs who have high business potential and belong to the selected business categories. Additionally, it is to promote SMEs in accordance with SMEs' Strategic Promotion Policies in order to elevate Thai business potential. Secondly, it is to reduce debt to equity of SMEs and offer support to SMEs in management, marketing, accounting, etc until they are able to raise their own equity financing from the Stock Exchange of Thailand (SET) or Marketable Alternative Investment (MAI). As for the MAI, it has started its operation since 1999 with the objectives to provide an alternative funding channel for SMEs as well as offer a greater range of investment alternatives for investors.

Concerning both loan and equity sides, the government initiatives are more successful on the debt financing rather than the equity side. Bank loans to SMEs exceeded the target by 38.7% in 2003, whereas the VCFs and MAI have fared much less satisfactory. The total value of the three existing VCFs is far below the

government's initial targets. By 2004, only 97 SMEs have found their counterpart investors. In addition to this, the goal of the MAI was set at having 500 listed SMEs in the market, but there were only 27 firms with listed stocks in this stock exchange. The most important factor limiting the number of firms entering this market is their obligations to reveal financial information to the public (Poonpapibul and Limthammahisorn, 2005) It is costly for SMEs outside the MAI to upgrade their accounting practice to meet the required standard.

To make management innovation come true, in the macro perspective, the government has introduced the private sector's management style to improve the efficiency and effectiveness of bureaucratic system. Chief Executive Officer (CEO) style is now being implemented both at central and local government levels in order to integrate related government policies under clear leadership as follows:

1. Consulting :OSMEP has the in house consultancy service such as the coordination & service center for SMEs that include the facilities and the general consultancy service and business matching both domestic and international fields.
2. Promotion of awareness of SME innovation: This is undertaken by OSMEP propagates research works in universities through activities and seminars to build recognition and awareness on SME innovation. Also, the National Innovation Agency (NIA) launched knowledgeable innovation projects for the public and SMEs to stimulate the recognition and awareness of the SMEs on the innovation based economy.
3. Information provision system: It is to improve the innovation management technique by giving specific tools like value analysis, benchmarking, technology watch and business matching with international organizations. It is also to deliver a government program to make innovation be effective and raise their competitiveness through increasing the capabilities of the domestic and grass-root economies by implementing the Village Fund.

In Thailand, the cluster concept has been used as a means to rectify weakness and fragmentation of innovation systems. It has been resulted from predecessors who pay most attention to macroeconomic stability. Therefore, the Thai government has placed emphasis on enhancing meso and micro-level foundations for international competitiveness. The high priority of competitiveness is the establishment of the *National Competitiveness Committee* chaired by the Prime Minister. The main strategic direction has been 'selective' policies addressing specific sectors and cluster. Its outcome is the pursuance of five strategic clusters in automotive, food, tourism, fashion and software sectors.

What is more, the network brokers or intermediary organizations in Thailand have played an important role in elaborating networks among innovative actors such as SMEs, LEs, MNCs, PRIs, universities, professional service providers in clusters to promote and support the R&D and technology transfer. They perform functions of stimulating information and knowledge sharing, and building trust among participating firms in clusters. Thus, the Thai clustering and networking policies have intended to work closely with intermediaries and strengthen their institutional capabilities especially in linking a number of firms to other actors in clusters. However, as this kind of mechanism for stimulating clusters has launched since a few years ago, the clear performance has not appeared yet.

In addition, the Thai government has policies for business incubation to encourage start-up SMEs. The main government policies or programs for business incubating have been governed and coordinated by the Department of Industrial Promotion (DIP), the Institute of SME Development (ISMED), OSMEP and National Science and Technology Development Agency (NSTDA).

The first government incubation program was created under the Thai national master plan for the development of SMEs in Southern Thailand. With funding and technical supports from the EU, the first incubation center was established in 1999 by the DIP, and the ISMED. The pilot center was set up on the grounds of the Regional Industrial Promotion Center in Hat Yai, Songkhla (www.ismed.or.th). Significant

business incubators emerged in 2002 using a new budget from the New Entrepreneurs Creation (NEC) program which aims to promote entrepreneurship development throughout Thailand³⁴. The incubation center was one of the major activities under the NEC program.

The representative business incubation programs under the NEC program are '*Young SMEs entrepreneurship project*,' '*Creative Technician transform to SMEs Business Project*,' and '*Technopreneur training project*.' 'Young SMEs entrepreneurship project' and 'Creative Technician transform to SMEs Business Project' are the projects to endorse SMEs undertaken by the incubation center of OSMEP. The technopreneur training project is to reinforce innovative entrepreneurs undertaken by the incubation center of NSTDA.

The 1997 economic crisis which resulted from huge foreign debts and high non-performing loans of LEs in Thailand has led the government to make great efforts to promote the innovation of SMEs. In particular, the government has focused on the development of indigenous technology capability of SMEs by increasing technology collaboration, expanding market opportunity, establishing BIs and enhancing financial funding measures related to the banking sector and the capital market.

Nonetheless, some problems with the promotion of SME innovation could be found in the lack of institutional and provisional infrastructures in marketing, entrepreneurship and access to finance. First of all, there is no real marketing policy for SMEs. Although SME marketing has been supported by SMEs and MNCs / LEs linkage development programs, they are mainly focused on training level to enable SMEs to integrate the supply chain of MNCs or LEs by improving their technological capabilities.

Secondly, institutional environment for enhancing entrepreneurship is insufficient in Thailand. Although there are a number of programs for reinforcing innovative entrepreneurship of SMEs in the name of business incubator programs, there is no real system to connect the SME sectors with educational institutions and

government agencies. For example, as the government prohibits professor from holding an additional position in an industrial firm, it is difficult to generate real linkage and coordination between academy and industry sectors.

Finally, the access to equity financing sources of SMEs is poor because of the complexity of borrowing procedure and lack of information and advice from financial institutions in the side of SMEs, and the inadequacy of loan collateral and below standard accounting in the side of financial institutions. In particular, there remain a great number of SMEs with access to bank credit due to insufficient collateral and lack of ability to demonstrate feasible and viable business plans. Most SMEs do not possess enough information and qualification to participate in the sophisticated scheme of equity financing. In other words, traditional collateral-based lending program and low experience and financial literacy are likely to be the main impediments to the innovation of financing system for SMEs.

Therefore, the Thai government needs to make more efforts to develop practical sales channels for products produced by SMEs and to promote real industrial linkages between SMEs and MNCs/ LEs in the perspective of SME marketing. It is also required to make an effort to upgrade institutional infrastructure related to the entrepreneurship of SMEs by building an innovative system, which manages to promote research outputs generated by collaboration between academia and industrial sectors. What is more, loan programs to SMEs need to transit the direction from collateral based to more credit based lending by promoting an increase in credit assessment capability of financial institutions.

The SME innovation policy in Thailand is the reflection of economic structure problems resulted from the string reliance on foreign capital not involved in indigenous technology development during the last three decades. In addition, huge foreign debt and high non-performing loans (NPLs) of large enterprises were one of the main reasons for the 1997 economic crisis in Thailand. Therefore the government has emphasized the innovation of SMEs as an alternative engine for economic recovery and sustainable economic development.

As a way of innovating SMEs, the government has focused on the indigenous technology capability development of SMEs in specific sectors such as automotive , food, tourism and software sectors. In terms of building indigenous technology capability, one of the main policies is the Industrial Technology Assistance Program (ITAP) launched by the National Science and Technology Development. The main contents of the program are composed of industrial consultancy and technology acquisition service by linking technology experts and SMEs, and providing SMEs with the opportunity to obtain first-hand information on technology advancements and innovations through arranging overseas technology trips. The main SME innovation policy in Thailand shows that the indigenous technology development has been mainly based on the paradigm shift of role of government research institutes from a knowledge intermediary by providing SMEs with direct services that enable them to enhance technology capability.

Most entrepreneurial activities in Thailand do not focus on innovation. Finding from the GEM 2007 global research indicate that both early stage entrepreneurs and established business owners operate in markets with high levels of competitors. In high-income and middle- and low-income countries between 50-60 percent of early stage entrepreneurs operate their business in markets crowded with competitors. This figure increases to between 62-72 percent of established business owners in both high-income and middle- and low-income countries. This implies that entrepreneurs (both early-stage and established) face much competition to survive. This is exacerbated when entrepreneurs offer non-innovative products and services.

In such a situation, entrepreneurs will have difficulty differentiating their products and services to their customers. In such environments, entrepreneurs have little choice of their competitive strategies. If they choose to compete on price, the existence of many competitors will likely lead to depressed profits for all businesses in the market and businesses who are less efficient at managing their production costs will cease to exist. If the entrepreneurs choose to compete with service quality (e.g. customer convenience, personalized service, speedy delivery) the existence of many competitors will likely lead to the closure of those businesses who are less efficient at

delivering services that meet customers' quality expectations. In markets where many competing firms offer non-innovative products and services consumers can be more selective. This is likely to restrict business profitability all around. In such environments, the challenge for businesses is to identify and design ways of competing which the customer finds attractive and which competitors cannot easily replicate.

In the GEM 2007 data, one important feature of entrepreneurial activity is the level to which entrepreneurs use new technologies. The GEM 2007 research revealed similar levels from each of the three categories of the participating countries. That is, entrepreneurs (whether early-stage or established) use comparable levels of technology whether they operate in high-income countries (such as Austria, Finland, or Japan), middle- and low- income countries in Eastern Europe and Central Asia (such as Hungary, Kazakhstan, or Thailand) or middle- and low- income countries in Latin America and the Caribbean (such as Chile or the Dominican Republic). The level of technology use is similar in the countries in each of these locations and for entrepreneurs at different stages in developing their own business enterprises. Where new technologies are used, this is most likely to be in middle- and low- income countries than in high-income countries. The rationale is that the middle- and low- countries begin from a lower baseline of technology. In the high-income countries similar (or more advanced) technology may be already in use.

Some 70 percent of early-stage entrepreneurs in each of the locations use no new technology in producing their products. This figures increase to over 80 percent for established business owners. This means that the vast majority of entrepreneurs do not use new technology as part of their business operation (India, China and Thailand were not included in this part of the research study). Table 6 shows the novelty of products and services and entrepreneurs' use of new technologies in early-stage entrepreneurial activity in Thailand and other countries.

Apart from the collective perception of entrepreneurs at a national level, it is also helpful to consider entrepreneurs' individual perceptions of themselves and their

innate skills and levels of confidence. Although useful, it is not altogether necessary for someone to have the complete range of business skills to be a successful entrepreneur. An entrepreneur can buy in business skills such as expertise in accounting, book-keeping, sales and marketing. However, it is helpful if an entrepreneurially-inclined individual perceives that they have the requisite skills as self-confidence and a will to succeed are key attributed of any entrepreneur.

The 2007 GEM data gathered in Thailand indicate significant increases in total early-stage entrepreneurial activity (TEA). Data gathered in 2006 suggested that 15.2 percent of adults (aged 18-64) were engaged in some form of early stage of entrepreneurial activity. More recent data (gathered in 2007) suggest that this has increased to 26.9 percent of adults; the highest rate of Thailand since 2002. This is also the highest rate of activity amongst the 42 countries participating in the 2007 GEM study. Figure 2 shows that prevalence rates of activity at different stages of the entrepreneurial process. Included in this figure are the data for entrepreneurial activity in Thailand for the three years 2005-2007.

A later stage of entrepreneurship is ownership of an established business. In Thailand, business ownership in this phase has continuously increased over the past three-year period: from 14.1 percent (2005), to 17.4 percent (2006) and to 21.3 percent (2007).

Each country has its own environment for entrepreneurship. This environment will be shaped by a nation's history, the political and economic environments of the society, and also by socio-demographic features (such as age and education), as well as attributes of the national character. A key feature of this environment is the prevailing national perceptions towards entrepreneurship. Of importance here will be issues such as the recognized status of entrepreneurs, whether someone starting their own business is a common or rare occurrence, and whether national media take a positive or negative approach to entrepreneurs. In essence, the issue is whether a society regards entrepreneurs as heroes or villains. Apart from the factors given

above, this environment (and whether it supports or hinders entrepreneurship) is influenced by the social mores prevailing at a given time.

In combination, these various factors will encourage budding entrepreneurs to consider their own business venture as a suitable and attractive choice of career or dissuade them for doing so. A potential entrepreneur's perception of the environment will share that person's ambitions and desires to contemplate and possibly start their own business venture.

Similar to the 2005 and 2006 results, the results from the GEM 2007 research confirm that participation in entrepreneurial activity by adults in Thailand is more driven by necessity than by opportunity. This feature is emphasized when comparing the data from Thailand to other participating GEM countries. In Thailand, the perception of the adult population towards entrepreneurial activity is both strong and positive.

However, for the most part, the ventures of the majority of Thai entrepreneurs are small (both in scale and scope) and are mainly in the economy's consumer service sector such as retailing, restaurant ownership and personal services such as health and beauty services. Participation in this sector has significantly increased from 69 percent in 2006 to 75 percent in 2007. The data show Thailand making steady progress toward a wholly service economy. Examples of entrepreneurial activity in the consumer services sector include: small retail outlets, outlets for food and other consumables and personal health and beauty services such as spas, hairdressers, and health-care specialists. There also seems to be extensive activity in self-employment on 'commission only' contract terms, for example: direct selling of consumer household products, insurance services and similar network marketing ventures. However, although the vast majority of the adult labor force (87.5) expresses a willingness to start new business, only half of this number is confident that they have the requisite skills and capability to do so.

In the data collected for GEM in 2007, there was a noticeable increase in early-stage entrepreneurial activity. Early-stage entrepreneurial activity is entrepreneurship that has been operational for longer than three months (and has paid salaries during that time) and is fewer than 42 months old. In the 2007 data, this form of entrepreneurship is largely attributable to two increased trends: an increase in new business ownership and the participation of female entrepreneurs.

Thailand has a high incidence of business activity by both male and female entrepreneurs. Over the past three years, there has been a continued narrowing of the gender gap of Thai entrepreneurs. In 2007, the prevalence of entrepreneurial activity by male is slightly less than that of females. In 2007, entrepreneurial activity by males was 27.8 percent (an increase from 16.3 percent in 2006) while entrepreneurial activity by females increased from 14.2 percent to 26 percent.

According to data from the GEM global research, male entrepreneurs are more prevalent in high-income countries. In these countries, men are ‘twice as likely as women to be involved in early stage entrepreneurial activity. (Hunt & Virasa, 2008]. Even though the GEM study classifies Thailand as a low- and middle-income country, data from Thailand suggest that the level of entrepreneurship far outstrips these high-income countries. However, it is advisable to treat these figures with some caution, as definitions of entrepreneurship tend to differ from country to country. For example, in some countries, self-employed people may be categorized as entrepreneurs, whereas other countries may not accept such a loose definition.

2.5 Theory of Industry Competition

The Five Forces That Shape Industry Competition

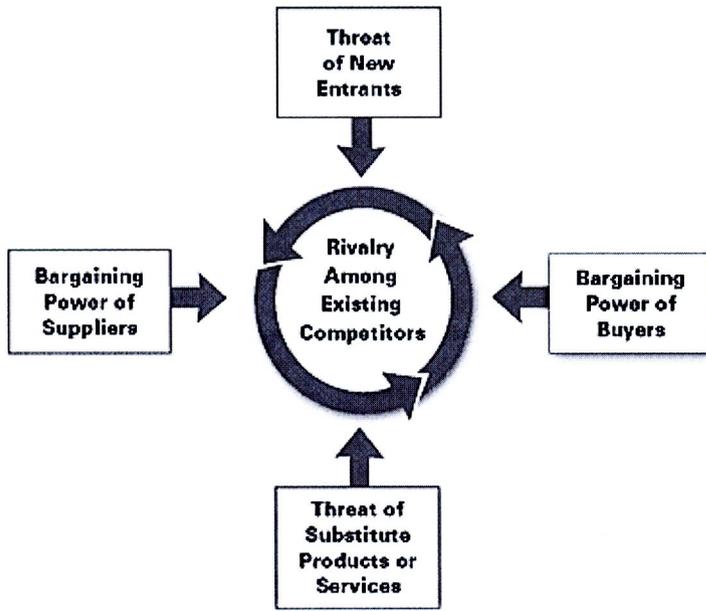


Figure2.1: Five Forces Model (Porter, 1979)

The dominant paradigm in strategy at least during the 1980s was the competitive forces approach. Pioneered by Porter (1979), the competitive forces approach views the essence of competitive strategy formulation as relating a company to its environments. The key aspect of the firm's environment is the industry or industries in which it competes. Industry structure strongly influences the competitive rules of the game as well as the strategies potentially available to the firms.

The Five Forces Model provided a systematic way of thinking about how competitive forces work at the industry level and how these forces determine the profitability of different industries and industry segments. In the competitive forces model, five industry-level forces – entry barriers, threat of substitution, bargaining power of buyers, bargaining power of suppliers, and rivalry among industry incumbents – determine the inherent profit potential of an industry or sub-segment of an industry. This approach can be used to help the firm find a position in an industry.

from which it can best defined itself against competitive forces or influence them in its favor.

Buyers and sellers were considered as entities to optimize. Now that we've reached a point of increasing saturation and commoditization in so many areas, firms must differentiate by improving customer experience - designing and innovating the customer interaction and experience rather than simply optimizing it. In an age of product and service abundance, customers want individual service and attention, and have high expectations for the goods and services they buy and the partners they interact with.

On the whole, Porter's Five Forces holds up well in light of an increased strategic focus on innovation, although it never explicitly calls out innovation as a "force". Innovation can easily be discovered in several, if not all, of Porter's Five Forces, and its impact can be obviously recognized. His Five-Forces model implies the possibility of cross-sector competition. In other words, there is no boundary for business competition. For example, typewriters have been substituted by computers. Innovation can lead to product and service substitution. That is, innovation can break the boundaries among different types of business.

According to Porter's model, there is no obvious awareness about the effect of size of the firms on competitiveness among those firms. It implies that the smaller forms can compete with larger firms. At the same time it can mean that larger firms have higher competitiveness ability over smaller firms. The latter issue is widely well-known. What makes smaller firms viable against higher competitive large firms is an important issue. According to Hernándeiz-Espallardo & Delgado-Ballester [2009], it is found that SMEs must invest in innovation when the competition is very intense.

The term "competitive advantage" is widely used in the literature despite the fact that ,in practice, such advantages are achieved very rarely in practice. Competitive advantage is a factor or a combination of factors that make an

organization more successful than other organizations in a competitive environment due to a superior position in the market place, such as being able to provide higher value in the minds of customers and/or to have relatively lower costs (Kuratko et al., 2001; Voola et al., 2004).

Such an advantage is at the heart of a firm's performance and cannot easily be emulated (Hill & Jones, 1998; Klein, 2002). It has to be valuable, rare, costly to imitate and non-substitutable to be named as such (Hitt et al., 2007). It becomes even more valuable when it is sustainable (Porter, 2005). There are various premises in terms of sustaining a strategic competence or even advantage.

If a competitive advantage is to be sustainable, a key determinant is how well the knowledge at the heart of the competitive position is protected. It is critical how easily rivals can imitate, substitute or erode competitive strategies and the capabilities that are at their foundation. Products or services in developed countries are usually protected by intellectual property laws e.g. patents, trademarks, trade secrets and copyright, to sustain an advantage (Clarke & Turner, 2004; Teece, 1998). It is also vital that the advantage is not made redundant by developments in the environment (De Wit & Meyer, 2004; Voola et al., 2004).

Nowadays, depending on the industry and competitive environment, the ability to create, share and leverage knowledge replaces the ownership and/or control of assets as a primary source of competitive advantage (Ireland & Hitt, 1999). Superior products or services are based on superior knowledge (Davenport & Prusak, 1998). Internal process innovations are a good foundation for core competence and, eventually, a competitive advantage (Hill & Jones, 1998; Hitt et al., 2007; Kuratko et al., 2001).

It is important to make sure that an organization's conduct is sustainable (Epstein, 2001). According to Post (2003), strategic decisions ought to be based upon three dimensions: economic (is it profitable and/or feasible?), legal (is it legal and/or politically enforceable?) and ethical (is it right and/or ecological/socially acceptable?). Thus, apart from economic and legal issues, strategies can become more sustainable if

they are based on ethical practices (Hill & Jones, 1998; Hitt et al., 2007).

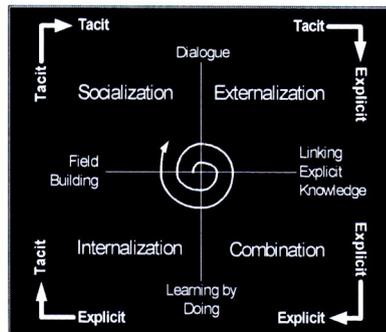
2.6 Theory of Knowledge Management

2.6.1 Knowledge Creating Company

A comprehensive process, by the name of SECI process, was developed by Nonaka and Takeuchi, to be the heart of the knowledge creation. It is through the continuous interaction of tacit and explicit knowledge that knowledge creation occurs (Wong, 2005).

The Nonaka and Takeuchi's SECI Model (Nonaka and Takeuchi, 1995) of innovation and knowledge creation (in Figure 2) has emerged as one of the most simple and elegant description, driving and linking the basic concepts of knowledge from the realm of philosophy to observation in business practice.

Figure 2.2 : SECI Model
(Nonaka & Takeuchi, 2000)



The model elaborates a process view of product development studied in the context of Japanese firms. It conceptualizes knowledge as created from the conversion of epistemological dimensions – tacit and explicit – through organizational interaction across ontological levels of the individual and the organization. Tacit knowledge is the knowledge that is created inside one's mind and is difficult to transfer by writing it down or verbalizing it. Defining knowledge creation as 'the dynamic human process of justifying personal belief towards truth' [Nonaka and

Takeuchi, 1995], the model links individual learning and knowing to firm level learning and innovation. The process elements of knowledge conversion have been termed as socialization, externalization, combination and internalization, which are modeled as growing through an expanding spiral from lower to higher ontological levels.

Socialization: sharing experiences and thereby creating tacit knowledge such as shared mental models and technical skills. Sharing and creating tacit knowledge through direct experience.

Externalization: articulating tacit knowledge into explicit knowledge through dialogue and reflection. This often takes place in the form of metaphors, analogies, concepts, hypotheses and models.

Combination: systematizing and applying explicit knowledge and information by combing different bodies of explicit knowledge. Reconfiguration of explicit information through sorting, combining, categorizing of explicit knowledge can lead to new knowledge.

Internalization: embodying explicit knowledge into tacit knowledge. Learning and acquiring new tacit knowledge in practice. For explicit knowledge to become tacit knowledge, it helps if the knowledge is verbalized pr diagrammed into documents, manuals, or oral stories. Documentation helps individuals internalize their experiences, thus enriching their tacit knowledge.

Knowledge is amplified and moves to higher levels in knowledge spiral. The spiral is also amplified as it moves up to the ontological levels, from the individual to the group and then to the organization. Each mode of the SECI process involves a different combination of the knowledge creation entities as shown below:

Socialization : individual to individual

Externalization: individual to group

Combination : group to organization

Internalization : organization to individual

Middle-up-down Management process: The process put the middle manager at the very center of knowledge-creation management, positioning them at the intersection of the vertical and horizontal flows of information in the organization. The middle-up-down is by far the most comprehensive compared with top-down and bottom-up, in terms of who gets involved; what kinds of knowledge is created; where knowledge is stored; and how knowledge is created. In the process, middle management role is team leader, top management role is catalyst and agent of knowledge creation – team (with middle managers as knowledge engineers). This management process is the most appropriated to facilitate the knowledge creation.

Enabling conditions for Organizational Knowledge Creation : Nonaka also suggested that the knowledge spiral is driven by the enabling conditions as follows: organizational intention (aspiration to its goals), autonomy (freedom and openness) fluctuation and creative chaos (stimulating the interaction between organization and external environment), redundancy (intentional overlapping of information about business activities, management responsibilities), requisite variety (combining information differently, flexibility, and quickly and by providing equal excess to information throughout organizations).

2.6.2 Double-Loop Learning

Most people in organizations do not know how to learn. In the new economy, rapid and aggressive change is constant. The new economy brings to the world many new changes: new rules of competition, new challenge of management. A final thing we do not know is where or how the revolution will end.

Knowledge is becoming a key asset and a source of competitive intelligence. People accomplish their work through what scholars call “routines,” commonly accepted practices and procedures that are uniform, unvarying, and performed without

thinking. (Garvin, 2000) “Learning” is a crucial activity to drive Knowledge Management theories into practice. To fully realize the potential benefits of globalization, “knowing how to learn” is a must.

To become a learning organization, company’s success heavily depends on people’s learning. However people’s behavior patterns usually block learning. Most people are defensive by putting the “blame” on someone else. Aiming for effective learning, people must reason about their own behavior. On this matter, Chris Argyris, 1991 suggests “Double-Loop Learning” theory. Companies need to make the ways people in organization reason about their behavior a key focus of organizational learning and continuous improvement programs.

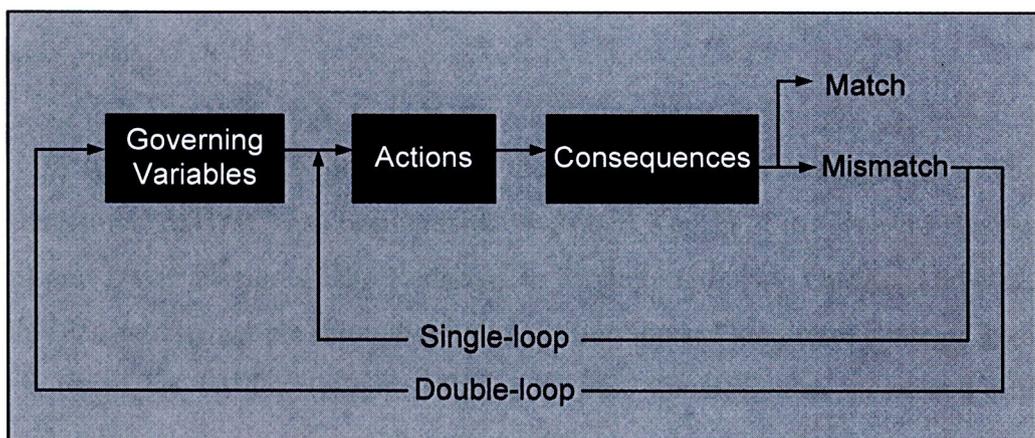


Figure2.3: Learning in Action

Argyris classified knowledge into two categories: “Know-How” and “Know-Why”. Based on his observation on people’s behavior, he defined Know-How as theory-in-action and Know-Why as theory-in-use.

Definition: (by European KM Forum)

Know-How	Capabilities and skills that are informal and hard to describe precisely.
Know-Why	Deep knowledge of cause-and-effect relationships

Agyris described learning behavior of people in organization by two organization models two organization models, single-loop learning and double-loop learning. Single-Loop Learning focuses narrowly on problem solving with know-how. This model concerns on identifying and correcting errors in the external environments.

Double-Loop Learning focuses on explanation with know-why. People in organization must learn by looking inward and reflecting critically on their own behavior towards organizational problems. This organization model reflects how people think – the rule of reasoning they use to design and implement their actions. By this, people think of the rule and store in the brain that govern all behavior (refer to “governing variables” in the diagram). These productive reasons create learning in organization and enable continuous improvement, which will lead to long-lasting learning.

In line with double-loop learning theory, an effective management system, Balance Scorecard (BSC) has been created by Robert Kaplan of the Harvard Business School and David Norton of the Renaissance Strategy Group to channel knowledge and abilities held by people throughout organization toward long-term strategic goals. BSC is based on the double-loop learning because the BSC uses cause-and-effect relationship which derived from the strategy. BSC translates strategy into action.

Kaplan and Norton suggested on creating a scorecard looking at financial, customer, internal process and growth measures, to keep a good balance between present and future, and internal and external perspectives.

2.6.3 The Fifth Discipline

To practice a discipline is to be a lifelong learner. Senge defined “Discipline” as a developmental path for acquiring certain skills or competencies, not an enforced order or means of punishment. Through learning, we become able to do something we never were able to do. Learning organization is an organization that is continually expanding its capacity to create its future. Importantly, for a learning organization,

adaptive learning (feedback) must be joined by generative learning (feed forward); learning that enhances our capacity to create. Senge's five disciplines differ from other management disciplines in that they are "personal discipline. Each has to do with how we think, what we truly want, and how we interact and learn with one another. Under globalization, it is no longer sufficient to have one person learning the organization. Learning organizations are possible because we are all learners.

Senge's The Fifth Discipline focused on the relationships and processes that make up complex systems e.g. organizations, rather than the separate entities. By identifying the true causes of problems within systems, we can then figure out how to address them. This approach is helpful in avoiding symptomatic solutions. Symptomatic solution typically fail to address fundamental issues and result in cycles of recurring interventions. There are five disciplines:

1. Personal mastery is the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively. It involves a personal basis, working on developing one's vision, one's capability. It is an inner drive to pursue mastery, to be the best that one can be. Personal mastery fosters the personal motivation to continually learn how our actions affect our organization. People with a high level of personal mastery are able to consistently realize the results that matter most deeply to them. They do their job by becoming committed to their own lifelong learning.
2. Mental model focuses on the openness needed to dig up shortcomings in our present ways of seeing the world. It is an ability of identifying hidden mental models or assumptions, bringing them out in the open system, and working with them.
3. Building shared vision fosters genuine commitment to the long term . When there is a genuine vision, members of a group excel and learn, not because they are told to, but because they want to due to their participation in the

vision. However leaders have personal visions that never get translated into shared visions.

4. Team learning develops the skills of groups of people to look for the larger picture that lies beyond individual perspectives. It is the capability of member of a team to suspend their assumptions and freely think together. The discipline of team learning starts with dialogue presenting ideas beyond personal defensiveness.
5. System thinking is the fifth discipline, integrates the other disciplines, melting together into a coherent body of theory and practice. System thinking needs the disciplines of personal mastery, mental models, building shared vision, and team learning to realize its potential. System thinking makes “learning organization” aspect understandable.

At the heart of learning organization is a shift of mind – from seeing ourselves as a separate from the organization, to connected to the organization and beyond, from seeing problems as caused by someone or something to seeing how our own actions create the problems we experience. We exist in many different contexts and many different systems. Knowledge of system is a path to a better understanding of how businesses and human nature work.

Delays can have a massive influence on a system’s effectiveness. Delays in dynamically complex systems can make us badly overshoot your goals or they can have positive effect if we recognize them and work with them.

Delays are usually taken for granted, often ignored altogether, and almost always underestimated. In reinforcing loops, delays affect customer’s confidence because action doesn’t come as quickly as expected. In balancing loops, when delays occurred, people tend to react impatiently, usually redoubling their efforts to get what they want. This results in unnecessary volatile pendulum swings (oscillation) from

one extreme to another –“Snowballing”. Delays are typically a source of waste, removing delays is a key method for speeding up cycle time.

This pendulum will keep swinging from one extreme to another because of the delays between action and observed change and the tendency to overcompensate. The less intuitive solution would be to make no adjustment at all and wait for the system to normalize. This lack of response will usually result in obtaining the goal faster.

2.6.4 Intellectual Capital

Intellectual Capital (IC) is concerned with how to better manage and measure knowledge and other intangibles in the company. The IC is invisible value which can be seen both as a form of value creation and as an asset. The goal of IC is to visualize and measure the hidden value of a company in order to leverage it and create new value. The IC will include all the processes and the assets which are not normally shown on the balance sheet, as well as all the intangible assets which modern accounting method consider e.g. trademarks, patents and brands.

The basis for the measurement and evaluation of knowledge is originated by Leif Edvinsson at Skandia – Skandia Model (Edvinsson & Malone, 1997). The Skandia Model divides market value into financial capital (physical capital and monetary capital) and intellectual capital.

Intellectual capital is then divided into structural capital (which includes brands trademarks, written procedures for process, intellectual property, corporate know-how etc) and human capital (which are the thinking part of organization).

Structural capital includes customer and organizational capital, representing the external and internal focus. Organizational capital consists of innovation and process capital. Innovation capital is what creates the success of tomorrow (source of renewal for the whole company) and it includes intellectual property and intangible

assets. Process capital is the sum of know-how that is formalized inside the company (e.g. manuals, intranet resources, best practices).

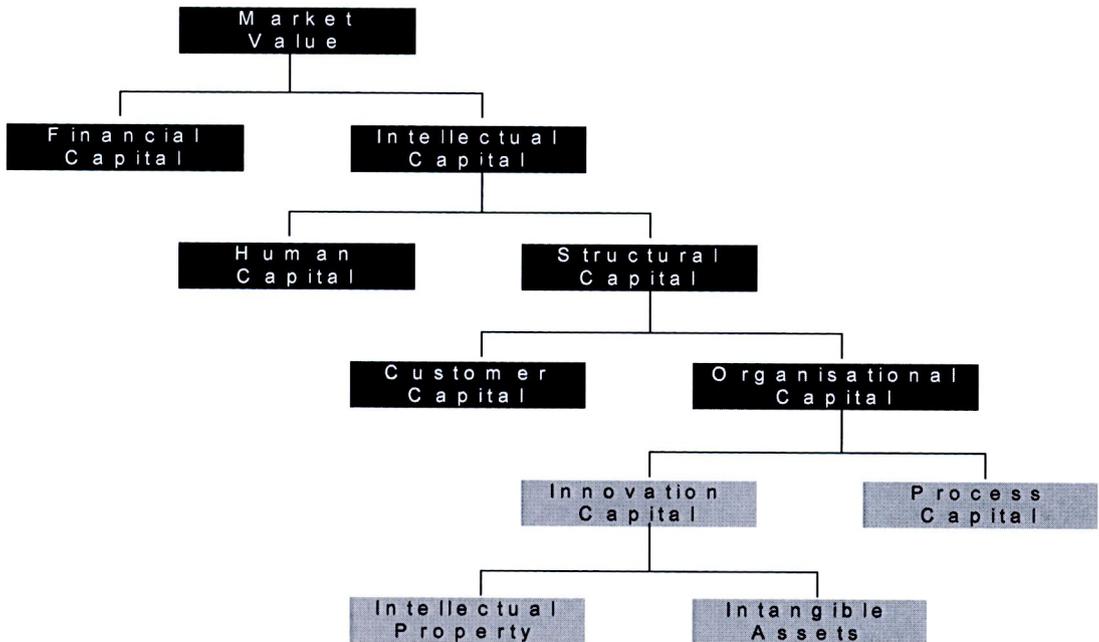


Figure 2.4: Skandia Model

2.6.5 Learning in Action

The most difficult challenge of learning in action is to develop a culture that values learning. Learning is not desired for learning's sake. Learning is to leverage knowledge, from individual to organizational learning, and make it a key corporate asset (Gavin, 2000).

It is in a learning organization that learning in action takes place. A learning organization is skilled at creating, acquiring, interpreting, transferring, retaining knowledge, and purposefully modifying its behavior to reflect new knowledge and insights. An organization can not become a learning organization without first becoming a teaching organization. Effective learning organization demands clear signals and minimal noise, as well as the ability to share critical insights so that they do not remain isolated or unacknowledged.

Garvin introduced three modes of learning – intelligent learning, experiential learning and experimentation learning and showed how each mode can be most effectively deployed.

1. Intelligence learning aims at the present. It ensures that organization can gather currently available information in three ways, through search, inquiry and observation.
 - Search: Main skills needed for search are analysis and research for data and information from documents and public sources.
 - Inquiry: Main skills needed for inquiry are framing and asking insightful questions through the interviews or surveys
 - Observation: Main skills needed are attentive looking and listening through direct contacts with users
2. Experiential learning is aimed at the past, on what take place after the fact. It ensures the organization draw lessons from activities that have already taken. Experiential learning concentrates on problems which may be real or simulated. There are different pros and cons to using each type problem.
3. Experimentation learning is test and try, based on activities specifically designed to generate knowledge and through systematic trials and comparisons. The activity deliberately manipulates the conditions, mostly in a controlled environment. It ensures that, by trying out new theories and a design, doing pilot test as such, organization is on a look ahead for opportunity and to ensure success.

2.7 Knowledge Management in SMEs

Knowledge Management is not simply a modern term for information management. It requires the pursuit if different types of objectives and the development of different types of resource strengths, process capabilities and organizational structures. Researching the new knowledge-based understanding requires a focus upon the development of new organizational advantages (Moran and Ghoshal, 1996) to create and sustain a competitive performance in the modern global



economy (Gee, 1996). These advantages are derived from the superior capabilities in the management of the organizational process. The development of organizational advantages represents a move away from the traditional emphasis upon market imperfections and positioning. The “knowledge-based understandings” emphasize to answer these following questions (Little et al, 2002). Question a): Why do organizations exist? Answer: To create and exploit knowledge. Question b): How do we understand human nature? Answer: People are creative, visionary and collectively ambitious. Question c): What is the basis for human relationships in and between organizations? Answer: Commitment based upon shared vision, meanings and identities.

Davenport and Prusak (1998), Nonaka and Takeuchi (1995), and Sveiby (2001) also refer to the understanding that it is impossible to separate knowledge from action. From a strategic point of view knowledge is seen as a source of value creation and realization (Earl, 2001). From an individual point of view it can be argued that knowledge resides in the head of a person (Assudani, 2005). However, Nonaka and Toyama (2003) state that it cannot be created in a vacuum. Clarke and Turner (2004) and Despres and Chauvel (2000) also argue that knowledge is generally context specific and depends on a multitude of factors such as time and space or social, socio-economic, psychological, inter-personal, cultural, linguistic or historical variables as the basis for creating meaning.

In this new economy knowledge is regarded as one of the few, if not the only, key source for innovation and an essential preeminent cornerstone for companies to generate ongoing rents and develop sustainable competitive advantages (Drucker, 2006; Hitt et al., 2007; Ireland & Hitt, 1999; Nonaka & Toyama, 2003).

Nonaka and Takeuchi (1995) argue that tacit knowledge is a key source of innovation. In this respect, it was found that businesses which utilize innovation to differentiate their products or services are, on average, twice as profitable as other businesses (McAdam & Reid, 2001). Hence, of managerial importance are not only the intangible resources, but also how the organization leverages these resources:

what it knows - how it uses what it knows – and how fast it can know something new (Goh, 2002).

There is relatively little information available on knowledge management in SMEs. This finding is similar to that of the historical development of most emergent management philosophies of recent times, which have started in large organizations; for example, total quality management (TQM) (Wikinson and Willmott, 1994; Kanji and Asher, 1993), reengineering (McAdam and Donaghy, 1999), balance scorecards, etc.

Most researches on knowledge management fall short of studying the critical success factors and identifying them from the SMEs perspectives. The features, characteristics and situations of smaller firms have not been much taken into consideration. SMEs should not be viewed as a smaller version of big business. In general, they have a scarcity of resources i.e. of financial and human resources, which differentiate them from their large counterparts. Resources are inevitably an important factor to be considered when implementing KM in the SME sector. This is an aspect which has been overlooked by most of the studies reviewed.

Creating and acquiring knowledge presents a daunting challenge and perpetual difficulty for SMEs. Wong and Aspinwall [2004] mentioned that, in order to improve its competitive advantage, an organization would need processes to acquire new knowledge to add to its viability. Most SMEs tend to have severe limitations when it comes to establishing such processes. Oftentimes, their organization features no such thing as a research and development department, nor dedicated research personnel. Besides, most small firms will rely more on informal rather than formal learning programs due to their resource shortage. If organizations have neither the ability nor the capacity to develop knowledge themselves, an alternative is to acquire it from external sources. It is unlikely for SMEs to purchase knowledge assets such as patents, research documents or other intelligence due to high cost factor. Most owners or managers are likely to search for knowledge only when the need arises.

Socialization enables tacit to be transferred to one another. On the other hand, explicit knowledge can be articulated. Organizational knowledge creation process involves a continual interplay between tacit and explicit knowledge. (Handzic,2004). Creativity and knowledge creation are important factors to the success of organizations where tacit knowledge is largely featured in the creative process [Nonaka, I and H. Takeushi,1995.] Despite their endeavors, SMEs could not find successfully convert tacit knowledge into explicit knowledge. Collective consciousness and shared experience have an impact on organizational learning, and thus, on competitive advantage SMEs. However, only a small portion of all SMEs are capable of managing knowledge strategically to enhance their competitiveness [Furu, Salojärvi & Sveiby, 2007].

Aspinwall and Wong (2005) state reasons why SMEs need knowledge management. Knowledge management enables small firms to face complexities and changes in the knowledge-based economy. Knowledge, viewed as a key resource and a strategic asset, can improve the performance of an organization. It enhances competency, decision making, innovation, responsiveness to customers and knowledge sharing. Moreover, as SMEs are increasingly forced to in a highly competitive market, knowledge is a survival weapon for SMEs since it is valuable but non-substitutable and inimitable by competitors, giving competitive advantage. The study of Furu, Salojärvi & Sveiby [2007] concludes that growth of an organization is clearly positively related with knowledge management.

Not only is knowledge management vital for SMEs because of the significance of the concept itself and the fact that it does work for them but also due to the importance of SMEs. First, SMEs are indispensable to economic development e.g. 37.8% of Thailand's GDP in 2009 (Office of SME Promotion Thailand, 2010). Secondly, SMEs are both vulnerable and unstable because they act under difficult conditions and usually have resource constraints and various competitive forces. External pressures like globalization, the shift in the nature and pace of competition, the compression of product life cycles, rising customer expectations, the proliferation

and availability of information as well as internal pressures like the change of workforce dynamics, have prompted SMEs to look for new ways of how to adapt.

Furthermore, it needs to be made clear that SMEs, which generally feel the competitive challenges more strongly than large firms, have various possibilities to respond in this respect. The universal objective of all companies, irrespective of their size, is to build up sustainable strategic competencies, in rare cases even competitive advantages, and the ability to exploit them because they are the source of value creation (De Wit & Meyer, 2004; Kuratko et al., 2001). All the possibilities of creating sustainable competitiveness are based on one main factor: knowledge, and all the benefits derived from KM tend to point into the same direction, towards improvement and value creation.

Consequently, the majority of scholars agree that knowledge is essential to any kind of organization, including SMEs, because it is at the core of value creation and is a critical strategic corporate resource and key asset for success in the 21st century (Assudani, 2005; Bontis & Fitz-enz, 2002; Ireland & Hitt, 1999; Zack, 1999).

SMEs particularly need to rely on knowledge as a foundation for sustainable strategic competencies in an environment where the ground rules of economic competition have shifted in important ways. From the literature reviewed above, only the importance of KM in facilitating innovation was mentioned. However, the best practices in generating innovation in SMEs using KM have not been addressed at all.

2.8 SME Management

Regarding the management in SMEs, resource-based perspective is considered as an important concept in developing strategies of a firm. The resource-based approach sees SMEs with superior systems and strictures being profitable not because they engage in strategic investments that may deter entry and raise prices above long-run costs, but because they have markedly lower costs or offer markedly high quality or product performance. This approach focuses on the rents accruing to the owners of

scarce firm-specific resources rather than the economic profits from product markets positioning. Learned et al, (1969) noted that the capability of an organization is demonstrated and potential ability to accomplish against the opposition of circumstance or competition, whatever its sets out to do. Every organization has actual and potential strengths and weaknesses; it is important to try to determine what they are and to distinguish one from the other. Hsu what a firm can do is not just function of the opportunities it confronts; it also depends on what resources the organization can muster. It was proposed that the real key to a company's success or even to its future development lies in its ability to find or create "a competence that is truly distinctive".

The resources-based theory, by contrast with strategic management, is an inside-out process of strategy formulation. This theory starts by looking at what resources the firm possesses, then assessing their potential for value generation, and end up by defining a strategy that will be able to capture the maximum of value in a sustainable way. This concept initiated by Penrose (1959) and later expanded by others (Wernerfelt 1984).

The strategic management concept attempted to explain why some firms persistently outperform others. Porter's strategic development process starts by looking at the relative position of a firm in a specific industry. Then start by considering the firm's environment and then try to assess what strategy is the one that may maximize the firm's performance (Porter, 1985).

The resource-based view has emerged as one of several essential explanations of persistent firm performance differences in the field of strategic management. It suggests that valuable, rare and costly-to-imitate resources can be sources of sustained competitive advantages. Therefore, many researches attempted to examine a variety of different resources that have these attributes to varying degrees, and study their impact on performance.

The resource-based view relies on two fundamental assumptions, that of

resource heterogeneity (resources and capabilities possessed by firms may differ), and of resource immobility (these differences may be long lasting) (Barney, 1991). The concept proposes that firms will use their resources and capabilities in such a way as to create sustainable competitive advantage based on distinctive competencies. (Penrose, 1959; Wernerfelt, 1984; Barney 1986, 1991). Resources may include both tangible and intangible assets (Wernerfelt, 1984), tradable and non-tradable (Dierickx & Cool, 1989), or “all assets, capabilities, organizational processes, firm attributes, information, knowledge” (Barney, 1991). A firm resource is an asset, competency, process, skill or knowledge is controlled by the organization. IA resource is considered as strength if it provides a SME with competitive advantage. (Analoui & Karami, 2003) .

The resources-based view of the firm recognizes the transferability of a firm’s resources and capabilities as a critical determinant of their capacity to confer sustainable competitive advantage (Barney, 1986). With regard to knowledge, the issue of transferability is important, not only between firms, but even more critically, within the firm. The management literature has clearly recognized the epistemological distinction between “knowing how” and “knowing about” which is captured by the distinction subjective vs. objective knowledge, implicit or tacit vs. explicit knowledge, personal vs. propositional knowledge, and procedural vs. declarative knowledge. The “knowing how” with tacit knowledge and “knowing about” facts and theories with explicit knowledge is identified.

The critical distinction between the two lies in transferability and the mechanisms for transfer across individuals, across space, and across time. Explicit knowledge is revealed by its communication. This ease of communication is its fundamental property. Indeed information has traditionally been viewed by economists as being a public goods – once created it can be consumed by additional users at close to zero marginal cost. Tacit knowledge is revealed through its application. If tacit knowledge cannot be codified and can only be observed through its application and acquired through practice, its transfer between people is slow, costly and uncertain (Kogut and Zander, 1992)

Until now, the application of the resource-based view to small firms has been relatively limited but a number of papers using the approach are now appearing, and so it is important to understand the nature of the approach. Like many strategic management theories, the resource-based view of the firm applies to SMEs as well as to large organizations. In recent years there has been much concern for the resource-based view of the firm and strategy implication in SMEs (Analoui, and Karami, 2002). Most SMEs have focused on developing strategies which might be different from large organizations. Several researchers have adopted a resource-based concept to address the area of SMEs by investigating the most empirical test of resource-based logic in SMEs.

The conclusion regarding SMEs are as follows: a) the firm effects should be more important than industry effects in determining firm performance; b) the valuable rare, and costly-to-imitate resources should have a positive impact on firm performance (Analoui & Karami, 2003). Brush & Chaganti (1999) found that in small service and retail business resource or in particular human and organizational resource, may play a greater role in explaining performance than strategy. Owner commitment, planning systems, and staff skills) had positive effect on cash flow.

Borch, Huse, & Senneseth (1999) stated that firm-specific in small and entrepreneurial firms are human resources (experience, education), governance structure, network social resources, and technology (proxy for non-imitable resources, operationalized as patents). Firms that have a formal structure and use social network pursue market and product strategies. Borch, Huse, & Senneseth (1999) stated that firm-specific in small and entrepreneurial firms are human resources (experience, education), governance structure, network social resources, and technology (proxy for non-imitable resources, operationalized as patents). Firms that have a formal structure and use social network pursue market and product strategies.

Brush & Chaganti (1999) reported that the impact of resources on performance of small service and retail firms was examined. Small service and retail business resource or in particular human and organizational resource, may play a

greater role in explaining performance than strategy. Owner commitment, planning systems, and staff skills) had positive effect on cash flow. Choi & Shepherd (2004) found that entrepreneurs were more likely to exploit opportunities when they perceived more knowledge of customer demand for the product, more fully developed enabling technologies, greater managerial capability, and greater stakeholder support. This is consistent with resource-based view. Based on the study of Runyan, Huddleston & Swinney (2007), it is founded that in small retailers in USA, both community brand identity and social capital were articulated by focus group participants as resources which helped them to be successful. Brand identity was seen as important regardless of environment, while social capital emerged as a resource used more in hostile environment.

Resource-based view makes the distinction that strategic resources are different from other resources. Strategic resources are termed as “advantage-generating resources” in resource-based view, and as such must be difficult to duplicate, and must create value that can be appropriated. The resource-based view of the firm argues that competitive advantage comes about through strategic use of advantage-generating resources that comprise assets and capabilities residing within the firm. A firm employs both assets (Wernerfelt, 1984; Barney, 1986) and capabilities (Hamel & Prahalad, 1989; Teece, Pisano & Shuen, 1997) to realize its objectives through adopting a strategy that is more effective than that of rival firms.

The “knowledge based view of the firm” is a theoretical perspective which has grown out of the “resource-based view” in the strategy literature. It focuses on perspective on organizations which has emerged in the strategy literature to propose as alternative primary reason for organizing (Little et al, 2002) From this perspective, firms exists to facilitate the acquisition, creation, exploitation and transfer of useful knowledge. This alternative response to the question, “why organize?” is reflected in Kogut and Zander’s definition of the firm as “a social community specializing in the speed and efficiency of the creation and transfer of knowledge” (Kogut and Zander, 1996).