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E-Business in SMEs of Thailand: A Descriptive Survey

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ABSTRACT

Small to Medium Enterprises (SMEs) constitute the major contributors to the economic production, distribution and service sectors of Thailand providing employment opportunities and production of goods and services for both domestic and international markets. Many Thai SMEs acknowledge the potential benefits of adopting e-business and Limthongchai et al. (2003) suggests that adoption of e-business practices and processes by SMEs is increasing at a remarkable rate. An apparent outcome of this rapid escalation in the adoption of e-business is that it has led to high competition in the market, with companies providing many special services to attract customers. Many Thai SMEs perceive that the implementation of e-business ensures a competitive advantage. In contrast, there are issues and constraints which need to be overcome before such opportunities can be fully exploited. This paper offers a descriptive survey of the e-business characteristics of SMEs in Thailand. The paper also highlights the status of e-business in Thai SMEs and identifies issues considered important to the SMEs and the perceived barriers to the adoption of e-business. Conclusions are drawn premised on the results of data analysis from the survey conducted amongst the owners and managers of eighty-three SMEs in Thailand from January to April 2004.

PREAMBLE

Small to medium enterprises (SMEs) are considered key contributors to the economic development of many, if not most countries and are a prime determinant of employment outcomes. SMEs comprise of the majority of companies worldwide and the workforce they employ accounts for the majority of the global workforce. In the 2002 report by the Small Business Service it was noted that within the European Union (EU), there are approximately 20 million small to medium enterprises (SMEs) providing employment for 65 million people (Small Business Service 2002).

The importance of SMEs as a prime generator of economic activity and employment is also confirmed in the statistics provided by the Organization for Economic Cooperation and Development (OECD) and Graduate Prospects.

According to the OECD (2002), SMEs within the EU account for 99% of all businesses and provide 53% of the total number of jobs. In addition, publications such as Graduate Prospects (2004) report that within the 30 nations comprising the OECD, SMEs account for 96% and 99% of the total number of enterprises and provide more than 50% of the private sector employment within the region.

A similar picture also emerges in other regions and of interest in the context of this study are the Asian and South-East Asian regions. In the nations comprising the Asia Pacific Economic Cooperation (APEC), SMEs comprise approximately 95% of the total number of enterprises and employ between 40% and 80% of the workforce. Furthermore, according to Hall (1995) SMEs accounted for 35% of direct exports and contributed between 30% to 60% of the national gross domestic product (GDP) in these countries.

As indicated, Asian and South-East Asia are of particular interest and further within this region is Thailand which provides a specific point of reference in this study. In Thailand, SMEs similarly play an important role in its economy. According to OSMEP (2002), there are over 1.6 million SMEs in Thailand with an average growth rate of 10.23% per year. These account for more than 95% of all the enterprises in Thailand and of the 7,234,022 people employed within all types of enterprises in Thailand, 4,990,217 (that is 68.98%) are employed by SMEs.

Clearly, the role of SMEs is crucial to the economic development and performance of any country. A review of the critical literature reveals that, for the past decade, many SMEs around the world are turning to e-business technology for solutions to increase their competitiveness and chances of survival. For at least the past decade, organizations have added electronic forms of business (e-business) to their traditional business model. As noted by USHER (2004) in the "Unified Support and Help for e-Commerce Enterprises through assisting RDAs" e-business can provide SMEs with a gateway to conducting global business. Most importantly from a developing country's perspective, such as that of Thailand, the adoption of e-business for SMEs offers the potential of advancing directly to being globally competitive. While e-business technologies may offer many and diverse opportunities to strengthen these businesses, many issues and constraints need to be overcome before such opportunities can be fully exploited.

E-BUSINESS DEFINITION

For the purpose of this study, e-business is defined as any form of commercial transaction involving goods and services conducted over a digital medium. Acknowledging the many forms of suppliers and customers, e-business can be classified as business-to-business (B2B), business-to-consumer (B2C) and consumer-to-consumer (C2C). Thus in this study, e-business is defined in the broadest sense of e-commerce covering the buying and selling of products and services over the internet, including those that facilitate online transactions and those enabling the dissemination of information over the internet. It encompasses all online interactions that occurs between buyers and sellers.

DEFINING SMES

Identifying and distinguishing SMEs is not an easy matter and Grillet (2003) notes that there is no single definition of an SME. Definitions of SMEs vary across countries and according to Toktarova (2004), such definitions depend on the selected parameters and the extent of economic contribution. In contrast, Rigby et al.(2004) suggest that

Table 1. Definition of SMEs in the EU (European Commission, 1996)

Size	Employment
Micro	Not more than 10
Small	Between 10 - 50
Medium	Between 50 - 250

Table 2. Definition of SMEs in the selected OECD countries (Sevilla & Soonthornthada, 2000)

Country	Sector	Employment
Australia	Manufacturing	Less than 100 employees
	Services	Less than 20 employees
Canada	Manufacturing	Less than 500 employees
	Services	Less than 50 employees
Japan	Manufacturing	Less than 300 employees
	Wholesale	Less than 100 employees
	Retail	Less than 50 employees
	Service	Less than 50 employees
Korea	Manufacturing	Less than 300 employees
	Services	Less than 20 employees
USA	Any	Less than 500 employees

SMEs can be defined statistically using three definable measurements, namely, (1) the number of employees, (2) turnover and (3) the size of the balance sheet.

Clearly, definitions of SMEs vary. However, a number of definitions have been proposed and are used by several institutions such as the European Union (EU) and the OECD and each of these is considered in sections that follow.

DEFINING THAI SMEs

Similar to the findings on the definitions of SMEs within a Western framework, Sevilla et al. (2000) note there is no single definition of Thai SMEs and various criteria, such as sales per annum, net fixed assets, number of employees and registered capital, have been used to define them.

SMEs in Thailand may be defined according to the regulations (11th September 2002) in the white paper on SMEs dealing with the Small and Medium Enterprises Promotion Act B.E. 2543 produced by the Office of Small and Medium Enterprise Promotion (OSMEP). Under these regulations, SMEs may be defined, (see Table 3), as either small or medium using (a) the size of SMEs based on the number of employees and (b) the value of total fixed assets not including the value of the land. Furthermore, in terms of the business activities in Thailand, SMEs can be further grouped into four categories based on the business sector. These business sectors are (a) the manufacturing sector, (b) the wholesale sector, (c) the retail sector and (d) the service sector, and, different criteria are used in each sector to distinguish between small and medium enterprises.

Clearly, there are many definitions and classification systems that could be used when determining whether an enterprise is an SME. Common to all the classifications systems, Thai, EU or OECD, is the use of a measure premised on the number of employees. The use of the number of employees as a distinguishing factor has the advantage of invariance, unlike the use of criteria based on financial measures expressed in a local currency. For this reason, this study adopts the simplified working definition of a Thai SME as an enterprise in (a) the manufacturing sector, (b) the wholesale sector, (c) the retail sector or (d) the service sector, which employs less than 250 people.

Whilst technology is undoubtedly an important element, it plays only a small part in relationship to the adoption of e-business by SMEs. There is still a range of non-technical associated issues such as complexity, trust, confidentiality, human resources, supporting infrastructure, management and finance.

METHODOLOGICAL PREMISE

A survey approach was used which involved the design of a questionnaire (an instrument). This instrument was then used in interviews with SMEs in Thailand. A large scale, stratified random sample of Thai SMEs was taken. In total, eighty three in-depth interviews were conducted during January to April 2004. The data derived from these interviews was then collated and subjected to a number of forms of statistical analysis.

Table 3. Definition of SMEs in Thailand by the number of employees

Sector	Medium	Small
Manufacturing	Not more than 200	Not more than 50
Wholesale	Between 26 - 50	Not more than 25
Retail	Between 16 - 30	Not more than 15
Service	Between 51 - 200	Not more than 15

RESEARCH FOCUS

There are two foci of the research presented in this study. The first (A), is to provide a descriptive status of e-business in SMEs in Thailand. The second (B), is to identify issues that were considered by the SMEs to be important and the perceived barriers to the adoption of e-business.

SAMPLING FRAMEWORK

The sampling frame used in this study was developed based on a white paper on "Small and Medium Enterprises in Thailand 2002" (OSMEP 2002) published by the "Office of Small and Medium Enterprises Promotion" (OSMEP) of Thailand. The paper publishes the Thai data on the number of SMEs, their percentage within each business sector, and their regional distributions.

As indicated, there are, in general four business sectors; manufacturing sector, wholesale sector, retail sector, and service sector. There are six regional areas in Thailand; north-eastern, the Bangkok Metropolitan, north, south, central and eastern region.

SAMPLING METHOD

A stratified random sampling method was employed in this study. Participants are randomly selected using the sampling frames as stated in the previous section. There are two steps involved in the selection process. Step 1, the target population is divided into 4 groups: manufacturing sector, wholesale sector, retail sector, and service sector. The next step is to select participants by a simple random sample method (using a random numbers table) within each group.

FINDINGS

Characteristics of the Participants

In the sample of eighty-three SMEs, 65 were small sized companies and 18 medium sized companies. Ratio between all the employees in the small size companies and those in the medium sized companies was 78:22.

The largest proportion of SMEs surveyed were found in the retail sector (37%), next were in the service sector (29%), the remaining were in the manufacturing factor (28%) and the whole sale sector (6%).

The responses regarding years of establishment indicated that 53% of the SMEs were less than 10 years old, 14.5% between 11 to 20 years, and 32.5% were 20 years or older.

86.9% of the participants were focused on targeting domestic markets, selling on average 66.5% of their products and services to a local market (that is within the same region). The majority of the participants (53%) had more than 40 regular customers over the last 12 months.

Over 89% of the participants sourced their suppliers from companies in Thailand with the majority of the suppliers (40.9%) located in the same province. 41% of the participants had between 1 to 5 regular suppliers over the last 12 months.

USAGE OF COMPUTERS BY THAI SMES

Nearly half of the participants (48.2%) used computers on daily basis.

82.5% had used computers over a year and 80% had computerised systems to assist them in running their businesses. For those who had

Figure 1. SMEs surveyed sectors

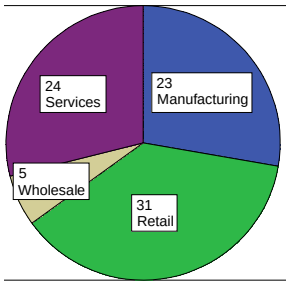

Figure 2. Person with special responsibilities for handling the SME's computer issues

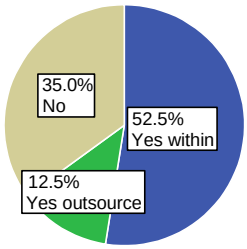

Table 4. Ranking of information on Thai SMEs homepages

Ranking	Information	Percent
1	Information about the company	**100**
2	Information about the products /catalogue	**65**
3	After sale support	**35**
4	Sales: online ordering	**35**
5	Sales: online transaction	**25**
6	Sales: order process tracking	**25**

Table 5. Ranking of Internet usages by Thai SMEs

Ranking	Usages	Percent
1	Send/retrieve e-mail	100
2	General information research	82.8
3	Search information about suppliers	79.3
4	Search information about competitors	62.1
5	Search information about customers	57.1
6	Order products/services	44.8
7	Banking transactions/pay bills electronically	41.4
8	Download digital products	17.2
9	Videoconferencing	3.4

Table 6. Reasons for not taking up e-business by Thai SMEs

Rank		MEAN	MODE
1	It does not fit well with the way that your company operate	3.09	1
2	It does not fit well with your products/services	4.07	3
3	It does not fit well with your customers' way of working	4.36	2
4	The amount for investment is too high	5.06	1
5	too complicated, too technical	5.43	5
6	Do not know much about it	5.63	8
7	Have not had time	6.86	6
8	It is hard to know what to choose/too many standards/ too confusing	6.86	7
9	Do not find any advantages	7.17	10
10	The security seems doubtful	7.31	9

Table 7. Reasons for taking up e-business by Thai SMEs

Rank		MEAN	MODE
1	If it will improve marketing opportunity	**5.10**	**1**
2	If it will fit way of working in the company	**6.20**	**1**
3	If it will bring new customers/suppliers	**6.31**	**4**
4	If customers demand it	**6.97**	**2**
5	If sales will improve	**7.10**	**2**
6	If internal efficiency could be higher	**7.37**	**3**
7	If competitors started using e-business	**8.13**	**6**
8	If it will improve competitiveness	**9.00**	**12**
9	If get education support during the development	**9.37**	**14**
10	If it will lead to improve customer service	**9.57**	**14**
11	If it will improve communications with customers/suppliers	**9.59**	**11**
12	If it will give better opportunities to do controls and follow-ups	**9.66**	**9**
13	If get financial support	**9.93**	**17**
14	If operational costs will be reduced	**10.49**	**15**
15	If lead time could be shortened (If it reduces time between order and delivery/ outlay of capital and receipt of product/service)	**11.44**	**14**
16	If stocks will be smaller	**13.01**	**16**
17	If suppliers offered a better business deal	**13.16**	**17**

computerised systems, over half (52.2%) had internal IT support, and 12.5% of them outsourced their technical support (See Figure 2).

For those participants who were using computers on a daily basis, 72% had access to the Internet. They used Internet for e-mail and sourcing information purpose.

69% of the participants who had Internet access also had their own websites. These participants claimed that they used their websites as a point of information. Some, however had their websites provide other services: 35% of participants had online ordering services provided on the websites, and 25% of participants had online transactions and online process tracking facilities respectively (See Table 4).

The participants offered various explanations for their use of the Internet. The top three uses for the Internet were; e-mail, search for general information and search for information about suppliers (See Table 5).

The remainder indicated that they were considering using computers in their business within the next two years.

EXPERIENCE WITH E-BUSINESS BY THAI SMES

The collected responses indicated that when considering the length of time using e-business, 56.3% of the participants had been engaged in e-business for more than 5 years, 37.5% between 6 to10 years, and 6.3% were for more than 10 years.

The results also indicated that 86.7% of the participants had a sales system for their customers via homepages or Internet.

Recurring responses regarding the reluctance to adopt e-business practices included: "e-business does not fit with our way of working", "e-business won't work for our products and services", and "e-business is not relevant to our customer" (See Table 6).

From the survey, three forces emerge which assist in encouraging the adoption of e-business: "improve market opportunity", "relevance to their business", and "access to new customers" (See Table 7).

When questioned about their perception of the impact of the Internet and e-business, over 84% of the participants believed that the Internet and e-business would change the ways in which they conduct business within the next few years. Moreover, 98% of the participants believed that the Internet would impact positively on the business landscape in Thailand. 49% of them believed that the impact would be huge in its scope and scale.

ISSUES ASSOCIATED WITH E-BUSINESS

From the data gathered during the extensive interviews with SMEs in Thailand it is clear that technological issues were neither the sole nor

Table 8. Issues associated with e-business

Rank		MEAN	MODE
2	Issue of confidence and trust	2.87	2
4	Issue of financial motivation	3.46	4
5	Issue of human resource	3.23	3
1	Issue of standard of operations	2.48	1
3	Issue of technology	2.99	1

most important contributing factor in the issues surrounding their adoption of e-business.

The SMEs considered; standard of operations, confidence and trust, and technology to be the top three groups of issues associated with e-business (See Table 8). Thus whilst technology is an important factor in the adoption of e-business for SMEs, it was not considered by the participants to be the most significant factor.

CONCLUSION

Clearly, e-business has emerged as an important strategic tool that can assist in lowering operational costs and open up new business opportunities for SMEs in Thailand.

The results indicated that focusing on the technological aspects alone as has been the *modus operandi* for many companies, may not be an appropriate approach in building e-business for SMEs in Thailand. This indicates the need for an holistic approach incorporating less tangible factors such as trust, confidence and motivation, in assisting Thai SMEs in the adoption of e-business, rather than purely technologically-based considerations.

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