CRITICAL SUCCESS FACTORS FOR E-COMMERCE IN THAILAND: A MULTIPLE CASE STUDY

ANALYSIS

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VITA

Kittipong Laosethakul, son of Samrong Laosethakul and Vimol Laosethakul, was born June 26, 1970, in Bangkok, Thailand. He graduated from Chulalongkorn University in Thailand with a Bachelor of Science degree in Mathematics in 1994. After working as a business coordinator at Thai-MC Company Limited (Mitsubishi), Bangkok, Thailand for one year and Sunny World Corporation, Bangkok, Thailand for another year, he attended University of Alabama in Huntsville in 1996 and obtained a Master degree in Management of Technology in 1998. He joined Teledyne Brown Engineering, Huntsville, Alabama in 1998 as a business analyst, and then entered Graduate School, Auburn University in the late 1999.

DISSERTATION ABSTRACT

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ANALYSIS

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Doctor of Philosophy, December 16, 2005
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The purpose of this dissertation is to study the critical success factors for e-commerce in Thailand. The dissertation addressed four research questions: (1) Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand? (2) What are key requirements that all e-commerce companies must have in order to enter the industry? (3) What is the company's e-commerce business model? (4) How is the company's business performance?

The investigation was conducted using case research study methodology. Nine e-commerce companies in Thailand were studied and analyzed. First, critical success factors for e-commerce in Thailand are identified and discussed. Second, key industry requirements for e-commerce in a particular industry are identified and discussed. Third, the best practice guideline addressing critical success factors and key industry requirement for e-commerce in a particular industry is developed. Finally, three main propositions from the study were developed. In addition, implications for practitioners and researchers are presented.

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CHAPTER ONE --- INTRODUCTION

The phenomenal growth of the Internet since the mid 1990s is fundamentally changing the economy. The Internet has become more than a simple and effective way to exchange e-mail and documents; it is emerging as a critical backbone of commerce. The growth of the Internet has been followed by the proliferation of electronic commerce or e-commerce. Based on the e-commerce and development report prepared by the United Nations Conference on Trade and Development (UNCTAD), the estimated total world e-commerce value in 2002 was about $2.3 trillion, and it is predicted to reach $12.8 trillion by 2006 ("*E-commerce and Development Report*", 2002). A number of developing countries have adopted e-commerce hoping that e-commerce would boost their economies and competitiveness to a new level. In the words of Kofi Annan, the Secretary-General of the United Nations:

> E-commerce is one of the most visible examples of the way in which information and communication technologies (ICT) can contribute to economic growth. It helps countries improve trade efficiency and facilitates the integration of developing countries into the global economy. It allows businesses and entrepreneurs to become more competitive. And it provides jobs, thereby creating wealth ("*E-commerce and Development Report*", 2002).

The United Nations Conference on Trade and Development reported the continuous growth of Internet use in developing countries. At the end of 2002, they accounted for 32 percent of the world's 591 million Internet users, up from 28 percent in 2001, and could represent 50 percent by 2008 ("*E-commerce in Developed Countries*", 2003). This represents a large future market opportunity for not only e-commerce ventures in developing countries, but also those in developed countries. In terms of total e-commerce value, UNCTAD reported that the value was around $105 billion in 2002 or 4.6 percent of total world e-commerce sales, and is predicted to reach $858 billion or 6.7 percent of total world e-commerce sales in 2006 ("*E-commerce and Development Report*", 2002). This represents a compound annual growth rate (CAGR) of 69 percent, which indicates the high potential of e-commerce to grow in the near future.

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However, the total value of e-commerce in developing countries pales in comparison to that of developed countries. North America alone accounted for 73 percent of total world e-commerce sales in 2002, but is predicted to increase to 58 percent of total world e-commerce sales in 2006. This represents a CAGR of 45.3 percent.

Possible reasons that developed countries, like the US, have created much higher e-commerce value than developing countries can be derived from the presence of affluent consumers and well-developed, convenient and inexpensive information infrastructures, transaction infrastructures, and delivery infrastructures. According to Tao Yun, managing Director of Q-east.com/Corecomm (China), e-commerce business models in western countries take advantage of well-developed infrastructures and try to manage information flow, goods flow and payment flow as much as possible with electronic solutions (YUN, 2000). On the other hand, the growth of e-commerce in developing countries has been restricted by business environments, inefficient infrastructures, and cultures that pose significant challenges to e-commerce ventures. For instance, common challenges in developing countries include the absence of affluent consumers within domestic markets, a lack of trust and confidence, the high cost of and limited Internet access, inadequate knowledge workers, inefficient transportation systems, inadequate computer access, lack of electronic means of payment and credit cards, and a limited ability to handle online security ("*E-commerce and Development Report*", 2002). Also, e-commerce business models that succeed in developing countries should be different from those in developed countries. For instance, according to Martinsons (2003), Chinese managers that attempted to apply the experiences of dot-coms and Internet-enhanced businesses from the US and other developed countries ended up being disappointed because western e-commerce business models did not work well in China. In spite of the challenges facing e-commerce ventures in developing countries, some e-commerce business ventures have been successful. The intent of this research is to understand what it takes for an e-commerce business venture to be successful in developing countries by identifying the critical factors that influence its success. The critical success factors for e-commerce can then provide a framework to guide development of e-commerce ventures in developing countries. Furthermore, such critical factors can be compared with those found in developed countries. The findings can provide guidelines for ventures in developed countries that plan to enter the markets of developing countries.

E-Commerce in Developing Countries: The Case of Thailand

In this study, the researcher has selected Thailand as the representative developing country in which to study e-commerce development. The choice of Thailand is based on three reasons. One reason is that the Thai government views e-commerce as a key to gaining a competitive edge in the regional and global marketplace. According to Keretho and Limstit (2002), the Thai government wants to use e-commerce in "strengthening competitive advantage of Thai entrepreneurs, especially SMEs [small-to-medium size enterprises] by using e-commerce as an opportunity for exporting goods and services and for domestic consumption (p.3)." After the Asian financial crisis during 1997-1999, Thailand was left with massive debt, high bankruptcy rates, and devaluation of the Baht currency. Realizing that e-commerce could boost sales and cut costs, and in return support an economic turnaround from the Asian financial crisis, the Thai government has prioritized national IT development and has taken measures to promote e-commerce.

A second reason for choosing Thailand is that the development of e-commerce in Thailand is growing. Asia and the Pacific countries have created $87.6 billion or 83.5 percent of total e-commerce sales from developing countries in 2002 and it is expected to reach $660 billion or 77 percent of total e-commerce sales from developing countries in 2006 ("*E-commerce and Development Report*", 2002). Clearly, developing countries in Asia and Pacific region has the highest sales growth of e-commerce compared to developing countries in other world regions. The Economist Intelligence Unit (EIU), working in association with IBM's Institute for Business Value, assesses e-readiness of the world's 60 largest markets using more than 100 qualitative and quantitative variables including: (1) business environment, (2) consumer and business adoption, (3) social and cultural infrastructure, (4) legal and policy environment, and (5) supporting e-businesses ("*The 2003 E-Readiness*", 2003). Table 1.1 shows e-readiness rankings of developing countries in Asia and the Pacific region. Amongst 60 ranked countries, Thailand was ranked at 42 in 2003, up from 46 in 2002, while the majority of developing countries' e-readiness from the same region has not improved. Thailand's e-readiness is among the top three developing countries in Asia and the Pacific region, after South Korea at 16 and Malaysia at 33 ("*The 2003 E-Readiness*", 2003). In addition,

Internet-World-Stats reported that in 2003, 4.8 million of 63.4 million Thais were actually online[1]. It was ranked 20th among the top twenty five countries in number of Internet users ("*The Top 25 Countries*", 2003). The number of Internet users in 2003 was up 108 percent from the year 2002, and it is expected to reach 6.7 million in 2004 ("*The Top 25 Countries*", 2003). These statistics indicate that Thailand's e-commerce development is moving in the right direction and has a high potential for growth in the near future.

Table 1.1: E-Readiness Scores and Ranks of Developing Countries in Asia and the Pacific in 2002 and 2003 (of 60 countries)

2003 E-readiness Ranking (of 60)	2002 Ranking	Country	2003 E-readiness Score (of 10)	2002 Score
16	21	South Korea	7.80	7.11
33	32	Malaysia	5.50	5.50
42	46	Thailand	4.22	3.86
44	42	Sri Lanka	4.13	4.05
46	43	India	3.95	4.02
47	49	Philippine	3.93	3.72
50	51	China	3.75	3.64
53	52	Indonesia	3.31	3.29
56	56	Vietnam	2.91	2.96
57	57	Pakistan	2.74	2.78

(Source: "*The 2003 E-Readiness*", 2003)

The third reason for choosing Thailand is that many e-commerce ventures in Thailand have been very successful. Among them, Thaigems.com has become the world's leading online seller of gems and jewelry. It controls 90% of the online market for color gemstones. Its sales have surpassed $1 million per month to retail and trade customers all over the globe. Another example is Siam Cement, one of the leading companies in the cement and building material industry in Thailand. Of 70 companies covering 11 Asian countries, Siam Cement received a bronze medal from the Internet World Asian Industry, as a company with impressive e-commerce strategies in the year 2000 ("*The Asiaweek 1000*", 2000). In spite of the challenges posed by Thailand's underdeveloped infrastructure, culture, and business environment, these organizations have successfully developed strategies that allow them to overcome those challenges. If

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[1] The Internet-World-Stats adopts the term Internet user based on International Telecommunication Union (ITU), which subscribes the Internet user as someone who went online in the past 30 days.

critical success factors of successful e-commerce ventures in Thailand can be identified, those factors can provide a framework for other e-commerce ventures in developing countries to follow.

Critical Success Factors for E-commerce

In order for e-commerce ventures to succeed, they must meet the key requirements of businesses, as well as successfully compete against their competitors in meeting the needs of their customers. The concept of critical success factors was originally developed by Rockart (1979) to identify the real information needs of the top executives in making decisions. According to Rockart (1979), critical success factors (CSFs) are defined as the areas or functions in which things must go right to ensure successful competitive performance for an organization. For the purpose of this research, CSFs for e-commerce refer to the limited number of specific elements of commerce implemented or enhanced by the Internet that must go right for the e-commerce to flourish.

Research has shown a wide range of CSFs for e-commerce. However, these factors are based on studies of e-commerce in developed countries, where infrastructures that support the development of e-commerce are fully developed. Developing countries, on the other hand, have underdeveloped infrastructures, different culture and business practice, which might not support the development of e-commerce in the same degree or the same ways as those in developed countries. This raises the question of whether factors that influence the success of e-commerce in developing countries are different from those in developed countries. To make this determination, CSFs for e-commerce in developed countries need to be investigated. A survey of the literature about CSFs for e-commerce in Chapter 2 will provide the basis for such analysis.

The CSFs found in the literature are relevant to all e-commerce companies regardless of what industries they belong to or what goals, capabilities, and competitive strategies they use. Rockart (1979), however, explained that CSFs are also influenced by industry requirements. The CSFs relevant to all companies in a particular industry sector include the elements required by any companies operating within the same industry, but typically these differ between industries. This research tries to identify (1) CSFs for e-commerce regardless of industry, and (2) CSFs for e-commerce within a particular industry or key industry requirements for e-commerce.

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E-commerce Business Model

For the purpose of this research, a framework of an e-commerce business model will be used to systematically capture how an e-commerce venture operates, and at the same time verify the roles of CSFs for e-commerce within the overall scheme of e-commerce activities. In other words, the framework is used to capture key elements that address CSFs and key industry requirements for e-commerce in Thailand. The literature provides a variety of definitions of a business model. For example, Timmer (1998) defined an e-commerce business model as an architecture for the product, service and information flows, including a description of the various business actors and their roles; and a description of the potential benefits for the various business actors; a description of the sources of revenue. Afuah and Tucci (2001) stated that an Internet business model explains how a firm uses a set of Internet and non-Internet-related activities to make money long-term on the Internet medium. For this research, an e-commerce business model is defined as a value creation template of how a company puts pieces of businesses together to make money through the Internet channel. An e-commerce business model covers a broad spectrum of business activities encompassing not only Internet-related activities, but also non-Internet related activities that a firm requires to conduct its business. Research has identified eight prime components of an e-commerce business model including market segmentation and targeting, a value proposition, resources, capabilities, activity configuration, a partner network, revenue sources, and a competitive strategy.

Research Needs

Despite the proliferation of e-commerce research during the last 5 years, researchers are just beginning to understand what makes e-commerce in developed countries successful. Little is known, however, about e-commerce in developing countries. One possible reason for this lack of research is that e-commerce in developing countries is still at an early stage of development. However, the continual growth of e-commerce raises the need to understand more about e-commerce in developing countries, especially identifying factors that affect their success. As such, the purpose of this research is to examine the critical success factors for e-commerce in developing countries. Thailand is chosen as a representative of developing countries to conduct case studies due to the continual growth and development of e-commerce there. Such research would be beneficial in that identifying critical success factors for e-commerce may

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guide e-commerce ventures in developing countries to conduct successful e-commerce, as well as helping

those in developed countries that plan to expand into developing countries' markets. Therefore, the general

research questions for this study are:

1. Regardless of industry, what are the critical success factors relevant to all companies engaged

   in e-commerce in Thailand?

2. What are key requirements that all e-commerce companies must have in order to enter the

   industry?

3. What is the company's e-commerce business model?

4. How is the company's business performance?

CHAPTER TWO – LITERATURE REVIEW

This chapter provides a discussion of critical success factors (CSFs) for e-commerce and Thailand. First, in order to understand the difference of environment of e-commerce business in Thailand from ones in developed countries, the snapshot of e-commerce development in Thailand will be described. Second, definitions and classifications of e-commerce used in this study will be discussed. Third, the definition of CSFs is described, and the literature of CSFs for e-commerce in developed countries will be reviewed. Next, the framework for capturing CSFs for e-commerce in a particular industry or key industry requirements for e-commerce in Thailand will be discussed. Then, in order to understand how an e-commerce venture addresses those CSFs and key industry requirements for e-commerce in Thailand, the Internet business model framework used to identify the overall e-commerce activities of an e-commerce venture will be discussed. Last, to assess the success of the e-commerce ventures in Thailand, the criteria for measuring the performance of the e-commerce ventures in Thailand will be explained.

Introduction to E-commerce Development in Thailand

While the number of Thai Internet users has been increasing and the e-commerce readiness of Thailand has been improving during the last few years showing that it has been moving toward a right direction of e-commerce development, e-commerce development in Thailand is still in early stage compared to ones in developed countries like the US. The underdeveloped e-commerce infrastructure, culture, business practices, and economics in Thailand creates different e-commerce business environment from those in developed countries. For example, the number of Internet users in the US was around 160 million in 2002 ("*USA is #1*", 2002) with 73 million or about 46 percent of users having made an online purchase of product/service ("*Growing Number*", Feb 20, 2003). In comparison, Thailand had only 4.8 million of Internet users ("*The Top 25 Countries*", 2003) of which only 20 percent had made online purchases ("*Internet User Profile*", 2003). Researchers found several reasons why Thai people hesitate to shop online. Muthitacharoen and Palvia (2002) conducted a comparative investigation of business to

consumer (B2C) Internet shopping in the U.S. and Thailand. They noted that it is not only the characteristics of the Internet stores but also the relative advantages that an Internet store offers to consumers that cause an individual to accept or reject online transactions. The study revealed that Thai people find that traditional stores are easier to access than online stores. The authors explained that people can find various kinds of stores like restaurants and shopping malls that conduct their business at night, and some are open all night. Therefore, the convenience aspects of the Internet stores are overshadowed by the prevailing business practices and people's adaptation to these practices (Muthitacharoen and Palvia, 2002). This explanation is also supported by the National Electronic and Computer Technology Center (NECTEC)'s 2003 Internet user profile, which revealed that the main perceived problems concerning the Internet are slow speed, network unreliability, high expenses (service fees), language, and difficulty in searching web sites ("*Internet User Profile*", 2003). All these problems could lead to a perception of inconvenience of Internet stores. The same study by Muthitacharoen and Palvia (2002) also revealed that Thai people feel that they can get a "better deal" or lower prices from conventional stores than from online stores. The explanation lies in common practice for Thai customers to bargain/negotiate prices. The value of "good deals" obtained in this manner dominates consumers' perceptions of price advantage. NECTEC also reported that the lack of confidence in online payment and security system is one of the main reasons for Thai people being reluctant to make online purchases sites ("*Internet User Profile*", 2003). In developed countries like the US, most of the e-commerce payments are made with credit cards because of affluent credit card holders, and the fact that online payment and security systems have been well developed and supported by banking systems. Thailand, on the other hands, still has a low number of credit card holders, numbering only 1.95 million out of 60 million in 1999 ("*Thailand Starts*", 1999). Thai web sites have only recently been able to connect their payment modules with that of Thai banks to verify the buyer's credit card online and obtain the approval code instantaneously. International credit cards, such as Visa and MasterCard, are the preferred cards (Leemakdej, 2002), but only about 46 percent of Thai web sites accept foreign credit cards, and only about 19 percent accept credit cards issued in Thailand ("*E-commerce Thailand*", 2002).

In the US, consumers are enjoying the quality and affordable prices that Internet connectivity offered through Internet Service Providers (ISPs). Some ISPs even provided free services. In Thailand, all

long distance telephone and Internet connections pass through the Communication Authority of Thailand (CAT) which offers limited choices, charges high fees, and historically provided poor service. For instance, one consumer Internet connectivity package cost about $20 USD for 20 hours (Sophastienphong, 2001). For business customers, Thailand had one of the most expensive leased lines for businessmen who wanted to sell their goods on-line. The price was five times as expensive as in Hong Kong, four times as in Japan, and three times as in Singapore. For instance, the retail price for a 50 KM 2 Mpbs leased line was about US$1,875 per month for Bangkok and nearby provinces (Sophastienphong, 2001). High Internet costs meant that few businesses offered extranets to their business partners ("*Thailand Starts*", 1999), and less than 15 percent of small-to-medium-sized enterprises (SMEs), which constitute 90 percent of Thailand's industrial capacity, took their businesses on-line (Crispin, 2000). Even though CAT was slated for privatization for the control of domestic leased line in late 2000, CAT still controls international connections until 2006 (Crispin, 2001). CAT requires all ISPs to turnover a 35 percent stake in their companies in exchange for access to its international Internet Gateway (Crispin, 2000). This extra cost thereby affects ISPs' service prices and quality to customers. E-commerce laws and regulation in Thailand is also slow in development and implementation. The e-commerce laws and regulations are important, not only to build a foundation for the e-commerce infrastructure, but also to boost public confidence in electronic transactions. However, Thailand's government passed the Electronic Transaction Acts, a combined electronic commerce and digital signature measure, in early 2000 (Haijing, 2000) which took effect early in 2002 (Leemakdej, 2002). Other e-commerce-related laws, including the EDI Law, Privacy Data Protection Law, Computer Crime Law, Electronic Fund Transfer Law and Universal Access Law, had not yet been approved by the Thai Government.

This snapshot of the current stage of e-commerce development in Thailand shows several aspects of the e-commerce environment in Thailand that are distinct from those in developed countries like the US. While e-commerce in developed countries can take advantage of their well-developed infrastructure, regulatory environment, and abundant Internet buyers, e-commerce ventures in Thailand have to find ways to overcome the many challenges found in their environment. This challenging environment might explain why many argued that e-commerce business models from developed countries did not seem to work well in developing countries (e.g. Erickson, 2000; Martinsons, 2001). Despite this fact, many e-commerce ventures

in Thailand have successfully developed e-commerce business strategies that fit their existing infrastructure, culture, business practices, resources, and rules and regulation. This raises an important question, "What made e-commerce ventures successful in Thailand?" As the growth of e-commerce in developing countries continues to rise every year, while the growth of e-commerce in developed countries begins to saturate, the answers to these questions are even more important for not only e-commerce ventures in developing countries, but ones in developed countries that plan to expand market to foreign countries in the future. The intent of this dissertation is to identify factors that are critical to the success of e-commerce in Thailand.

Defining E-commerce

There are number of e-commerce definitions purposed by both academics and practitioners. To most people, the term e-commerce simply implies shopping on the Internet. To others, e-commerce encompasses not only the buying and selling of goods, but also various processes such as advertising and brand building, delivery of information and products/services, providing customer service before and after the sale, collaborating with business partners, and enhancing productivity within organizations, to support the goal of buying and selling (Daniel and Myers, 2000; Applegate et al., 1996; Timmer, 1998; Zwass, 1996). Applegate et al. (1996) summed these e-commerce-related processes as a wide range of activities up and down the value-added chain both within and outside the organization.

As for this study, the researcher adopts the definition of e-commerce defined by Schneider and Perry (2001, p.10) as "the use of electronic data transmission to implement or enhance business processes." The term "business processes" was specifically described as "the activities in which businesses engage as they accomplish specific elements of commerce" (Schneider and Perry, 2003, p. 9). According to Schneider and Perry (2003, p.8), specific elements of commerce on the seller's side include identifying customers' needs, creating products/services, promoting products/services to customers, engaging in transaction processes, delivering products/services, processing payment, and providing after-sales services (Table 2.1). Schneider and Perry (2003) add that not all of these elements or activities of commerce benefit or can be accomplished effectively by using electronic commerce technologies. Some activities of commerce use traditional commerce activities more effectively. This depends on the current state of available technologies and the way business organizations are structured (Schneider and Perry, 2003).

Table 2.1: Element of Traditional Commerce

On Seller's side	On Buyer's side
1. Conduct market research to identify customer needs	1. Identify specific need
2. Create product or service that will meet customers' needs	
3. Advertise and promote product or service	2. Search for products and services that will satisfy the specific need
	3. Select a vendor
4. Negotiate a sale transaction, including: • Delivery logistics • Inspection, testing, and acceptance	4. Negotiate a purchase transaction, including: • Delivery logistics • Inspection, testing, and acceptance
5. Ship goods and invoice customer	
6. Receive and process customer payments	5. Make payment
7. Provide after-sale support, maintenance, and warranty services	6. Perform regular maintenance and make warranty claims

(Source: Schneider and Perry, 2003, p.6, 8)

Many e-commerce definitions use the term computer mediated network or telecommunication network as the electronic data transmission medium, while others use the Internet or the Web as the data transmission medium (e.g. Daniel and Mayers, 2000). This research, however, focuses on companies that mainly conduct e-commerce over the Internet or the Web.

Classification of E-commerce

For the purpose of this research, e-commerce is classified according to business focus and business format. As for a business focus, the type of buyer (end customers or business customers) is used to identify a type of business focus (Turban et al., 1999). If a buyer is an end consumer, it is called business-to-consumer (B2C) e-commerce (Applegate et al., 1996; Riggins and Rhee, 1998; Plant, 2000; Fruhling and Digman, 2002; Afuah and Tucci, 2001). Examples of B2C models are Amazon.com and Barnesandnoble.com. When a buyer is an organization or a business customer, it is called business-to-business (B2B) e-commerce (Applegate et al., 1996; Riggins and Rhee, 1998; Plant, 2000; Fruhling and Digman, 2002; Trepper, 2000; Afuah and Tucci, 2001). The B2B model takes a variety of forms. There are basic B2B storefronts and B2B e-marketplaces, or web-based platforms that bring multiple buyers and sellers together in a virtual marketplace (Napier et al., 2001). Alan Amling, director of electronic commerce for UPS, described some of the key difference between B2B and B2C as follow (Wan, 2002):

- B2B purchase quantities are larger.

- B2B payment method is typically by purchase order, while B2C is by credit card.

- Negotiations are more common in B2B and reporting needs are more advanced.

- Relationships are much more important in a B2B environment.

- Switching costs are typically higher in B2B.

Examples of B2B include Dell.com and PaperExchange.com. Even though Dell.com also sells its products and services to consumers (B2C), its main transaction value is created from business customers. To determine a business focus of an e-commerce company, this study looks at the main source of its sale revenues. If its main sale revenue comes from end-customers/consumers, it will be considered as a B2C e-commerce. If its main sale revenue comes from business customers, it will be considered as a B2B e-commerce.

Another classification of e-commerce is based on its business format, whether it uses a traditional-dominated channel format or an online-dominated channel format. To determine a business format of an e-commerce company, this study looks at the main source of its sale revenues. If its main revenue comes from an online channel, it will be considered as an online-dominated channel e-commerce. If its main revenue comes from a non-Internet channel, it will be considered as a traditional-dominated channel e-commerce. Based on these business focus and business format, the 2X2 matrix, figure 2.1, is used to categorize each type of e-commerce venture.

Figure 2.1: 2X2 Matrix

Defining Critical Success Factors (CSFs)

The use of the critical success factor (CSF) concept as an information systems methodology was first introduced by John F. Rockart of MIT (Martin, 1982; Boynton and Zmud, 1984; Munro and Wheeler, 1980). The concept of CSFs was originally developed as an approach for defining the key information needs for top level management. Overwhelmed by reams of reports, executives tried to determine the most critical pieces of information contained in the reports so they could take the necessary actions and correct any problems that had arisen (Rockart, 1979). Rockart (1979, p.85) provides the meaning of CSFs as follow:

> Critical success factors… are… the limited number of areas in which results, if they are satisfactory, will insure successful competitive performance for the organization. They are the few key areas where "things must go right" for the business to flourish. If results in these areas are not adequate, the organization's efforts for the period will be less than desired.

As a result, the CSFs are areas of activity that should receive constant and careful attention from management.

The concept of CSFs has been applied in several areas beyond the original purpose. Monro and Wheeler (1980) suggested that CSFs can be used to direct an organization's efforts in developing strategic plans. Dickinson et al. (1985) suggested that CSFs can be used to establish guideline for monitoring a corporation's activities. For example, managers can use CSFs to help ensure that resources under their authority are directed toward important areas. Boynton and Zmud (1984) suggested that CSFs can also be used to identify critical issues associated with implementing a strategic plan. Anderson (1984) observed that CSFs can be used by manager and organizations to help achieve high performance (Boynton and Zmud, 1984). Feindt et al (2002) used the concept of CSFs to identify factors that are critical to the success of e-commerce.

CSFs for E-commerce

For this study, e-commerce refers the use of the Internet to implement or enhance business processes in which a company engages as it accomplishes specific elements of commerce. CSFs for e-

commerce, thus, refer to the limited number of e-commerce business processes, in which results, if they are satisfactory, will insure successful competitive performance for an e-commerce firm.

<center>CSFs for E-commerce in Developed Countries</center>

Due to the lack of research of CSFs for e-commerce in developing countries, the main substitute is research of CSFs for e-commerce in developed countries even though CSFs for e-commerce in developed countries, as previously discussed, might not be totally the same as ones from developing countries. The CSFs for e-commerce in developed countries can be served as a tentative roadmap for the researcher to understand the CSFs for e-commerce in Thailand. The intent of this section is to review literatures of factors that influence the success of e-commerce in developed countries. Compared to other fields of study such as management and marketing, the study of e-commerce is still in its infancy. Researches on CSFs for e-commerce by themselves are also relatively limited in number. Using terms like critical success factors, key success factors or simply success factors, the majority of researches in this area identified factors that influences the success of e-commerce based on researchers' own holistic view and experience. For example, Duffy and Dale (2002) explained key activities that are critical to the success of e-commerce. Rogers (2001) and Keh and Shieh (2001) described the CSFs for e-commerce in online car insurance industry and online grocery retailing industries respectively. Phan (2003) and Phan and Stata (2002) identified the CSFs of e-commerce of Intel. Under the auspices of the Consulate General of Finland and the Finland Technology Center in Los Angeles, Godenhielm (1999) conducted interviews with experts in e-commerce fields in the US to identify CSFs for e-commerce. The purpose of the report is to provide insights into e-commerce business for European and Finnish companies. Huff et al. (1999) provided an insight of emerging trends of CSFs for e-commerce based on their past experience and researches involving e-commerce companies. Several studies focus on the success factors for B2B e-marketplaces (e.g. Kearney, 2000, Brunn et al., 2002, "*Coming in to Focus*", 2000, and Cronin, 2001). The researcher noticed that there are limited numbers of studies that use quantitative or qualitative research methodologies to identify CSFs for e-commerce. Eid et al. (2002), for example, reviewed existing literatures to identify factors that influence the success of implementing B2B e-commerce marketing. Thornton and Marche (2003) reviewed the success and failure factors of traditional retail businesses as the basis for analyzing the failure of five high profile dot.com companies. Mahajan et al. (2002) tried to identify factors and/or characteristics of

<center>15</center>

public e-tailers, which were profitable in their businesses. Chen et al. (2003) identified CSFs for e-commerce based on the case of the traditional retail company, Getz, which has successfully conducted e-commerce as another business channel. Fiendt et al. (2002) and Chappell et al. (1999) conducted phone interviewed with number of e-tailers to identify CSFs of their e-commerce, and suggested best practices in each factors based on different competitive strategies of e-commerce.

Nonetheless, where no confirmatory research exists, the result of exploratory research can be better than no information regarding a phenomenon of interest. Where no confirmatory or exploratory research exists, descriptive suggestions from the experiences of experts can be viewed as better than no information regarding a phenomenon of interest. Clearly identifying CSFs for e-commerce in developed countries herein represents the latter situation. Table 2.2 presents the snap-shot of selected studies. Some studies' main focus is to identify CSFs for e-commerce. Others identify CSFs for e-commerce as a part of their studies. Table 2.2 also shows business focus (B2C or B2B) and business format (online-dominated channel and traditional-dominated channel). The researcher noticed that these CSFs fall into certain areas of e-commerce business activities. To systematically view CSFs across studies, these CSFs are categorized under different areas of e-commerce business activities (Table 2.3). Each factor is discussed as follow:

Table 2.2: Literature on Critical Success Factors for E-commerce

Authors	Critical Success Factors
1. Huff et al. (1999)	1. Add value (convenience, information value, disintermediation, reintermediation, price, choice) 2. Focus on a niche, and expand later 3. Maintain flexibility 4. Segment geographically 5. Get the technical right (rent versus own, security management, scalability) 6. Provide exceptional customers service 7. Create effective connectedness 8. Understand Internet culture
2. Eid et al. (2002)	1. Marketing strategy related factors (Top management support and commitment, setting strategic goals, integrating the Internet with marketing, collaboration, selecting potential audiences) 2. Website related factors (Web site design, effective marketing of the site) 3. Global related factors (Understanding foreign marketing environment, resources required for working globally, Multilanguage website, culture consideration, international delivery availability) 4. Internal related factors (Technological infrastructure, internal culture, sales force role, training program) 5. External related factors (Trust, security, successful relationship, Internet affordable access, customer acceptance)
3. Chen et al. (2003)	1. Incremental e-commerce involvement (not all at one time) 2. Allocate resource wisely 3. Outsource the development 4. Change business practices (Ex. Finding the right product mix, streamline the orders) 5. Study the customer 6. Revise and evaluate results
4. Thornton and Marche (2003)	1. Industry experience of management 2. Planning/strategy 3. Capital 4. Record-keeping financial control 5. Expansion growth 6. Inventory/channel management 7. Advertising/marketing strategies 8. Market position 9. Target market 10. Customer service/experience 11. Clear value proposition
5. Brunn, Jessen, and Skovgaard (2002)	1. Building liquidity (Creating critical mass) 2. Crating value (Market efficiency, supply chain efficiency, and new value creation) 3. Partnerships 4. Technology 5. Functionality (Commerce, Content, Collaboration/Connection) 6. Governance (Establishing trade rules and regulations on an e-marketplace) 7. Focus (Choosing right targets/market segments)
6. A.T. Kearney (2000)	1. Commerce (Choosing right type of E-marketplace model) 2. Content (value content) 3. Connection (Intra-organizations, Inter-organizations)

Authors	Critical Success Factors
7. Mahajan et al. (2002)	1. Offline experience (domain knowledge) 2. Do not rely on alliances' domain knowledge 3. Integrated multiple channel approach (offline and online)
8. Keh and Shieh (2001)	1. First mover advantage 2. Access to capital 3. Strategic alliance 4. The right website 5. Superior service 6. Value-added information 7. Warehouse/logistic structure 8. Differentiation through niche
9. Feindt et al. (2002) and Chappell et al. (1999).	1. Content 2. Convenience 3. Control 4. Interaction (Individual relationship building) 5. Community (Group relationship building) 6. Price sensitivity 7. Brand image 8. Commitment (Commitment and support from top management in term of strategy, plan and implementation) 9. Partnership 10. Process improvement 11. Integration
10. Godenhielm (1999)	1. Create a smart strategy 2. Testing your strategy 3. First mover advantage 4. Brand promotion 5. Partnership 6. Capital investment 7. Human resources 8. Outsourcing 9. Customer focus
11. Rogers (2001)	1. Strategic goals assessment/customer needs assessment 2. Create a usable, targeted and sticky web site 3. Integration 4. Innovate with web application and real-time transactions 5. Partnerships 6. Put tools in place to keep learning
12. Duffy and Dale (2002) (Key processes in e-commerce)	1. Order fulfillment 2. Revenue generation/collection 3. Financial control 4. IT/Web changes 5. Business processes 6. E-integration 7. Order generation 8. Call center integration 9. 24/7 operation 10. Consumer behavior
13. Cronin (2001)	1. Providing values for all parties involved 2. Protecting proprietary information 3. Optimizing existing relationships 4. Generating real return on investment 5. Support complex business transactions and financial management

Authors	Critical Success Factors
	requirements
14. McKinsey & Company, CAPS Research (2000)	1. Value creation 2. Delivering lasting impact (through improving supply chain) 3. Differentiating through knowledge (value content based on unique management knowledge)
15. Phan, D.D. (2003), and Phan and Stata (2002)	1. Further strengthened its existing strategic position with value chain partners 2. Use e-business to complement its competitive strategy 3. Support from top management 4. Focusing on quality of (Internet) connections 5. Providing worldwide support and customer training 6. Deploying the best security protections 7. Building and maintaining solid e-business architecture 8. Tailor to customer's needs 9. Avoid unfamiliar market and risks 10. Follow conservative and traditional management principles 11. Deliver personalized web content

Table 2.3: Categories of Critical Success Factors for E-commerce

CSFs	Huff et al. (1999)	Chen et al. (2003)	Keh & Shieh (2001)	Feindt et al. (2002); Chappell et al. (1999)	Godenhielm (1999)	Rogers (2001)	Mahajan et al. (2002)	Duffy & Dale (2002)	Eid et al. (2002)	Cronin (2001)	Brunn et al. (2002)	Kearney (2000)	McKensey & Company, CAPS Research (2000)	Thornton and Marche (2003)	Phan (2003) and Phan and Stata (2002)
Strategic Business Planning	✔	✔			✔	✔		✔	✔	✔	✔	✔	✔	✔	✔
Constant Reevaluation of Strategies/Business Models/Websites	✔	✔		✔	✔			✔				✔		✔	
Target Market															
Geographic market segmentation	✔								✔		✔				✔
Niche focusing	✔		✔								✔				✔
Convenient Website	✔		✔	✔		✔		✔	✔	✔	✔				
Value-added content	✔		✔	✔				✔	✔		✔	✔	✔		✔
Technology-related factors															
Speed									✔						
Flexibility and scalability	✔								✔	✔	✔				✔
Security	✔		✔						✔	✔					✔
Marketing and Sales															
Product	✔														
Sales force role									✔						
Price competition	✔			✔											
Brand name/website promotion	✔			✔	✔			✔	✔					✔	
Customer/Vendor Relationship Management	✔	✔	✔	✔	✔	✔		✔	✔	✔				✔	✔
Order Fulfillment			✔	✔				✔	✔					✔	
Resources-management-related factors															
Qualified human resources		✔			✔					✔					
Financial control		✔	✔		✔			✔						✔	
Outsourcing/Partnership/ Alliance		✔	✔	✔	✔	✔	✔					✔			
Information/products/service-flow improvement-related factors															
Inter-organization flow	✔			✔						✔		✔			

CSFs	Huff et al. (1999)	Chen et al. (2003)	Keh & Shieh (2001)	Feindt et al. (2002); Chappell et al. (1999)	Godenhielm (1999)	Rogers (2001)	Mahajan et al. (2002)	Duffy & Dale (2002)	Eid et al. (2002)	Cronin (2001)	Brunn et al. (2002)	Kearney (2000)	McKensey & Company, CAPS Research (2000)	Thornton and Marche (2003)	Phan (2003) and Phan and Stata (2002)
Intra-organization flow		✔		✔		✔		✔							
Management-related factors															
Domain knowledge							✔		✔					✔	
Commitment		✔		✔			✔		✔						✔
Trust	✔								✔						
First Mover Advantage			✔		✔						✔				

Strategic Business Planning

Under this category, a CSF for e-commerce involves key processes in which a company chooses a business idea, forms strategies, and conducts business plan. Usually these processes are conducted before conducting business activities. Researches suggested that e-commerce companies that spend time and effort focusing on these processes early on are more likely to succeed. According to Godenhielm (1999), selecting viable e-commerce business idea is critical to the success of e-commerce. Godenhielm (1999) suggested that it is important for a company to do a thorough analysis of the market, competition, supply chain, operations and end user behavior to make sure that the idea is viable. Similar to Godenhielm's, Eid et al. (2002) suggested that for an e-commerce firm that plans to expand into foreign markets, a firm needs to thoroughly understand each country's business environment such as the political climate, the level of economic development, the legal system, trade regulation and package delivery options, and culture. Choosing the right e-commerce business idea also encompasses choosing Internet business model, which is critical to the success of e-commerce (Kearney, 2000; Brunn et al., 2002). According to Kearney (2000),

before choosing a business model, a company needs to understand the different types of Internet business models and how well they apply to specific industries.

After having a thorough analysis of the market, researches suggested that a company should also define a clear goal of what it wants to accomplish and a desired position in its industry. First, having a clear strategic goal is important to the success of a business, as Boulton (2002, p.5) pointed out that "a firm's strategic goals drive business strategy and address the key success factors of the industry." In online insurance business environment, Rogers (2001) noted that it is important for a company to assess its strategic goals before launching an Internet initiative and align Internet and business strategies to make sure that there is a connection. Eid et al. (2002) also added that the success of B2B Internet marketing depends on how clearly defined an organization's strategic goals are, and how consistent Internet marketing is with business objectives. Second, choosing a market position is also a primary task for most business (Thornton and Marche, 2003). A market position is about choosing where its products/services stand compared to rivals' (Porter, 1996). According to Huff et al. (1999), in the online world, where thousands of competitors chase similar markets, it is the challenge for any e-commerce venture to retain competitive advantages because business models or even strategies can be copied easily. The lack of distinction between competitor's positions contributes to the failure of the e-commerce firms. Pets.com, for example, tried to combine the convenience of running to the local supermarket to purchase pet products with the knowledge and advice offered by a visit to the local vet. However, since other online pet retailers offered similar products, similar services, and similar sounding names (e.g. petstore.com, petsmart.com), consumers had difficulty telling competitors apart. Customers simply searched for the better price, or stayed with a familiar, trusted retailer like PetsMart. Thus, Pets.com did not develop customer loyalty, failing to differentiate itself from the other online pet retailers. Thornton and Marche (2003) found that choosing market positions encompassed a value proposition, and having a value proposition in place is essential for any businesses. Researches also pointed out that an e-commerce venture must add value to its products or services in order to succeed (Huff et al., 1999; Brunn et al., 2002; Kearney, 2000; Mckensey, 2000). According to Stevenson, Shlesinger and Pearces (1999), the most successful businesses were "characterized by having consumers who understood the reasons why they wanted to shop there, whether price, convenience, experience or product selection" (Thornton and Marche, 2003, p.129). Similar to

Stevenson et al., Huff et al. (1999) also suggested several ways to create value to online offerings including convenience, information value, disintermediation, reintermediation, price, and product choice. In addition, Brunn et al. (2002) considered that value capturing is one of the critical elements that influence the success of e-marketplaces. According to Brunn et al. (2002), values provided by an e-marketplace must be high enough to retain sellers and buyers on its website in order to create enough critical mass or liquidity. An e-marketplace should put together a value proposition that is compelling to its targeted customers, both buyers and sellers. Brunn et al. (2002) suggested that e-marketplaces can create value for their participants through (1) increased market efficiency, (2) increased supply chain efficiency, and (3) the creation of new value. Kearney (2000) and McKensey (2000) emphasized that value-added content is one of the CSFs for e-marketplaces.

After a business idea is created, strategic goals are formed, a market position is selected, and product/service value is defined, a business plan is needed to be conducted. According to Thornton and Marche (2003), creating and successfully executing a business plan is a fundamental task for most businesses. Based on the study of the failure of five high profile e-commerce firms (Pets.com, Streamline.com, Garden.com, eToys.com, and Boo.com), Thornton and Marche (2003) found that there were some common flaws in these firms' business strategies such as lack of detail, poor contingency planning and identification of risk, and lack of financial controls and accountability. However, it is difficult to determine what constitutes a successful plan due to its subjective nature. The word "plan" can be used in a very general sense of strategic intent. However, in more focused circumstances, Thornton and Marche (2003) suggested that a plan must satisfy the fundamental six criteria of articulating objectives, tasks, resources, responsibility, schedule and deliverables.

Constant Reevaluation of E-commerce Strategies/Business Models/Websites and Testing

When the Internet strategy is carried out, it should be reevaluated on a constant basis. Internet technologies change constantly, and so should an Internet strategy, tactics, and operations. New Internet business models are communicated and copied quickly within the online world, since hundreds or even thousands of competitors are competing for similar markets (Huff et al., 1999). Huff et al. (1999) suggested that a company needs to focus in order to differentiate itself from the competition and it needs to be aware of signs that its strategy is not catching on, or that other, better opportunities are available. Chen et al.

(2003) and Duffy and Dale (2002) suggested that a company needs to study its customers. By continuously studying customers, a manager will gain crucial insights about online consumer behaviors. Such insights will help managers refine marketing strategies, product mix, website usability, and inventory control. Chen et al. (2003) also recommended comparing a company's business processes with those of the competitors and industry leaders in order to identify best practices, and to strive to exceed such standards. Thus, a firm needs to be constantly aware of new opportunities and threats, be able to make quick decisions (Godenhielm, 1999; Duffy and Dale, 2000), and be flexible in switching from the old strategy to a new one (Huff et al., 1999). Huff et al. (1999) noted that most of the successful Internet firms had made at least one radical shift in their Internet strategy since inception. According to Kearney (2003), many market exchanges evolve from simple models to more advance models that will better meet participants' needs. At the operational level, a company's website should also be constantly re-evaluated. Duffy and Dale (2002) and Chen et al. (2003) suggested that to remain successful and to serve online customers website is required to be periodically revisions. Herbig and Hale (1997) added that with continuous changing technological innovation in website design, and increasing competitiveness of the medium, marketers must continue assessing their websites' perceived value among targeted customers across countries. Each website revision should represent an upgrade to the storefront's usability, functionality and e-business practices (Chen et al., 2003). In addition, the follow-up evaluations can give management a deeper understanding of what made for a successful e-business by pinpointing both opportunities and problems (Chen et al., 2003). The main tool for learning and reevaluating its e-commerce business strategies/business models/websites is market research. There are several traditional testing methods including end user interviews, consulting experts, and surveys. Traditional testing methods are helpful, but should be limited in duration due to the rapid change within the Internet environment. Researchers note that the data gathering capabilities of the Internet make it the perfect environment for product and idea testing and development (e.g., Godenhielm, 1999; Chen et al., 2003; Duffy and Dale, 2002). Traffic to and from a website, for example, can be immediately observed when a company tries to test whether new prices or new web designs impact a customers' online purchasing behavior. Using the huge benefit of the Internet to constantly test and improve the ideas and features, therefore, is a key to success of e-commerce (Godenhielm, 1999). Researchers note that the data gathering capabilities of the Internet make it the perfect

environment for product and idea testing and development (e.g., Godenhielm, 1999; Chen et al., 2003; Duffy and Dale, 2002). Traffic to and from a website, for example, can be immediately observed when a company tries to test whether new prices or new web designs impact a customers' online purchasing behavior. Using the huge benefit of the Internet to constantly test and improve the ideas and features, therefore, is a key to success of e-commerce (Godenhielm, 1999).

Chappell et al. (1999) suggested that for an e-commerce firm to be successful, it needs to maintain tight control over all business processes in order to maintain responsiveness to customers and to outperform the competition. These business processes include ones that are specific to managing an e-commerce business, and ones that are common to real world and Internet business. Losing control over business processes could, in the worst case scenario, cause a company to fail. According to Thornton and Marche (2003), an e-commerce firm that grows too fast is more likely to fail. Boo.com and eToys.com, for example, expanded rapidly as it experienced growing revenues. Such rapid expansion can be seen through the growing number of their employees. Boo.com grew from 5 employees to 420 within one year. eToys.com grew from 13 o 325 full time employees in its first 2 years. Thornton and Marche (2003) explained that these e-commerce firms grew so quickly within a short period of time that management failed to cope with the high degree of change, to adjust quickly to new ideas or strategies, and to make effective decisions on how to manage in the dynamic environment. Often, even experienced managers have trouble dealing with these types of pressure. On the contrary, Chen et al. (2003) suggested that incremental e-commerce involvement is the key to gain control over all business processes. The successful Getz's e-commerce efforts were carried out over a three year time span with two significant revisions in the storefront design, business processes, and e-commerce strategies. Each revision was based on the lessons learned from the prior experiences. The incremental involvement allows Getz to have time to learn invaluable lessons about how e-commerce should be implemented and focus on developing various areas of expertise gradually, thus avoid the same "doing it all at once" mistakes made by many failed Internet businesses. This does not mean that an e-commerce firm should avoid fast growth, but the point is that an e-commerce firm should always be aware of whether or not it can maintain tight control over all business processes.

Chappell et al. (1999) recommended several control practices. For example, an e-commerce company should continuously monitor all processes, such as ordering, delivery, processing of bills. It needs to understand the costs involved in all their processes and seek to reduce these costs by managing them more efficiently. An e-commerce firm should make quality checks of the products a company sells and the service from third parties (e.g. third party logistic suppliers) a company uses. It is also important that a company can control the ability to make adjustment to any website content whenever necessary. As a result of a change in the market, a company may want to adjust price and advertise new products/services. A company with host services to modify its website does not have sufficient control and may lose valuable time to competitors. An e-commerce firm should also monitor web traffic on its website so it can gain more understanding about its customers, and thus can carry out more successful target marketing.

Target Market

Within this category, two CSFs that relate to how an e-commerce venture chooses its market segment and target are discussed.

Geographical market segmentation.

The capabilities of the Internet allow a company to reach any markets in the world. Eid et al. (2002) pointed out that the nature of the Internet is that the web site automatically serves as an International marketing tool. Despite this fact, it is extremely complicated in practice because a company must consider the local conditions such as language, local culture norms, foreign marketing environment, local taxes and duties, shipping costs and international delivery availability, quality of Internet connection, payment mechanisms, and time zones and customer services (Huff et al., 1999; Eid et al., 2002). Dell, for example, had great success internationally, partly due to its localization policies (Huff et al., 1999). Huff et al. (1999) noted that Dell had to maintain each of 38 separate websites to address different nations and regions. Gateway experienced less success outside its core US market, according to Huff et al. (1999). For example, Gateway did not have a dedicated Canadian order number, and all Canadian sales went through its US sales office (Huff et al., 1999).

Geographic segmentation is applied to regional versus national scope as well. According to Huff et al. (1999), both Peapod's and Homegrocer's websites, for example, can be accessed from anywhere in the US. Homegrocer chose to provide service within 50 kilometers around its Bellevue, WA warehouse.

Unlike Peapod, which ships to many locations, Homegrocer was profitable due to its local market segmenting policy. Brunn et al. (2002) also suggested that e-marketplaces should have a clear focus when it comes to geographic coverage, and horizontal vs vertical focus. For example, with respect to geography, it made sense for gatetrade.net to initially focus on the Danish market because its partners could make the best use of their relationships with key players in the industry and their extensive knowledge of the Danish market. Thus, to succeed, e-commerce must understand the various conditions of each market/location – regional/national or local/foreign, but also must carefully evaluate whether it has the capabilities and resources required to work in such locations.

Niche focusing.

Offering average product lines is not enough to compete with the multitude of firms offering exactly the same thing. Since the barriers to entry for most Internet-based businesses are low, markets are soon saturated with hundreds of firms offering similar products/services. According to Huff et al. (1999), an e-commerce company that has no particular specialty or focus will find it difficult to build its business. Huff et al. (1999) suggested further that a niche can be used as a starting point for growth. Online grocers, for example, have attempted to satisfy segments of the market with unmet needs (Keh and Shieh, 2001). NetGrocer.com created an online store that caters to the needs of diabetics (Keh and Shieh, 2001). Intel's e-business focused on its current markets with solid revenues and earnings. It refrained from expanding into unfamiliar markets (Phan, 2003). After resources, capabilities, and expertise have been accumulated, e-commerce can expand to other related niches. Intuit's website, for example, began as a promotion and support outlet for its financial software. It has now morphed into a financial services site offering investment advice and mortgages.

Focusing on a niche is also the key to success for e-marketplaces (Burnn et al., 2002). According to Brunn et al. (2002), an e-marketplace needs to identify what specific buyer and seller segments to target as well as what type of products should be available in the e-marketplace. This is because buyers and sellers are likely to prefer ones that can cater more directly to their industry-specific needs. In addition, focusing allows an e-marketplace to dominate its chosen market space quickly, which creates mind share and liquidity, and in turn helps the e-marketplace scale up quickly. Moreover, focusing also allows an e-marketplace to tailor its business model to match the target market's distinct requirements. Without a clear

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focus, an e-marketplace can end up trying to sell everything to everybody, but this is likely to result in failure. Thus, to succeed, an e-commerce should focus on a niche that allows it to differentiate itself from its competitors by targeting its specific requirements.

Convenient Website

Online customers can search for and compare values of products/services from one website to another in just a few clicks. based on the principles of information efficiency and transaction efficiency, online customers expect to spend less time and effort in searching product/service information and creating friction-less transactions (Mahajan et al., 2002; Amit and Zott, 2002). An e-commerce company should design a website that helps customers to conveniently find information and conduct online transactions. Feindt et al. (2002, p.55) defined convenience as "the usability of the website for the purpose for which it was designed: for example, to assist, buying or selling, to find information, to track a process."

According to Keh and Shieh (2001), consumers shop online, but do not want to feel the burden of doing research when they shop online. Thus, a well-organized website that allows consumers to navigate easily and comfortably is one of the most critical factors for success in the online supermarket industry. Ease of navigation, user-friendliness, security, useful links, advanced search engines, and desirable interfaces all contribute to overall attractiveness and greatly affect the positive online shopping experience, which in return will induce them to become repeat customers.

One way to create convenience for online customers is to make customers familiar with website interface design. According to Amit and Zott (2001), website interface familiarity can be systematically delivered through customization and personalization methods. Customization allows users to customize products, services, or information to their individual needs in a variety of ways. For example, E*Trade offers a customizable, one-stop 'market command center' that provides frequently updated commentary on stock trading throughout the day, real-time stock-quotes, alerts, and customized news (Amit and Zott, 2001, p.506). Many e-commerce sites contain customized 'one-click ordering' as a standard feature (Amit and Zott, 2001, p.506). Unlike customization, personalization is initiated by the e-business. Numbers of online vendors use data mining methods to set up personalized storefronts or create personalized interface, conduct direct advertising, target e-mails, and facilitate cross-selling. These methods include the analysis of submitted customer information, click streams, and past purchases. According to Smith et al. (1999),

personalization can also be achieved with filtering tools that compare a customer's purchase patterns with those of like-minded customers and make recommendations based on inferred tastes (Amit and Zott, 2001). Amit and Zott (2001) added familiarity of website interface requires customer learning and once this learning has begun, it inhibits customers from switching to other sites where their learning would have to begin again.

According to Zott and Donlevy (2000), another key to efficiency is whether or not the electronic transaction allows the customer to save on transaction time. Zott and Donlevy (2000) suggested that the transaction appearing should be simple to customers. The overall transactional context should be convenient and should minimize the overall level of stress experienced by customers. The process to complete a transaction should be simple involving a small number of steps that a customer must complete to affect a purchase. Zott and Donlevy (2000) noted that there should not be more than three clicks to a purchase – any more and the customers is likely to give up. In addition, shopping functions should be easy for customers to find on the webpages and webpages should not be overly graphical causing slow page loading.

Value-added content.

Chappell et al. (1999) links content closely to convenience. Chappell et al. (1999, p.19) explained that content needs to be delivered conveniently:

> Convenience delivers the best, and most appropriate, experience of the site's content to the visitor. It enables visitors to fulfill their purpose on the site and, at best encourage them to do so because the site is so convenient to use.

Chaffy et al. (2001) stated that "the basic quality of good information is to be accessed rapidly, it must be easy to find, and it must be relevant to users" (Eid et al., 2002, p.116). Eid et al. (2002) noted that websites should not only serve as an electronic order-taking interface, but also have high value-added content. According to Chappell et al. (1999, p.17), content is "the showcase for their products and services on the Internet: if it is not sufficiently attractive and differentiated, they will not attract customers and keep them long enough to buy." The majority of online customers come to the Internet for information, so e-commerce firms that provide more comprehensive content on their companies and products are more likely to succeed (Eid et al., 2002). High value-added, comprehensive content is the key to answering customers'

questions regarding products/services, and to helping customers make well-informed buying decisions (Amit and Zott, 2002). Homegrocer, for example, tried to attract customers to its service by providing them with value-added content. Besides ordering grocery items, consumers can access a large collection of recipes maintained on the site. One click on a recipe loads every item needed to make a meal into a customer's shopping cart (Huff et al., 1999). Another example is Amazon.com's great success with its book review and referral program (Huff et al., 1999). Users are encouraged to write reviews for books they purchase through the site, which are then posted for prospective buyers. Also, they use sophisticated software to analyze purchases and suggest compatible selections. This added value is generally not available at the local supermarket or book store. Keh and Shieh (2001) pointed out that a website must provide more information to shoppers than physical store personal can provide. The comprehensiveness of content can be in the form of the size of product/service offering. According to Huff et al. (1999), online stores overcome physical barriers by offering more products and services to customers. Amazon.com offers more than three million books for sale. One common value offered by e-marketplaces is the access of a broad range of suppliers and customers for buyers and sellers (Brunn et al., 2002). Art.com sells over 100,000 prints, more than a hundred times that of large art stores. However, Zott and Donlevy (2000) argued that there is also the danger of overwhelming customers with too much information. Many companies recognize this and limit the number of choices they offer in order to simplify the decision process for the consumer. Scoot.com, for example, is a directory service that locates and provides contact information of people, businesses, and services in three European countries. Scoot.com realized that customers do not want or need a large array of information so it limits the results to 3-10 choices per search. Zott and Donlely (2000) noted that having more product offerings does not mean you should display all offering to the customer.

Value-added content is also the heart of the e-marketplace. According to Kearney (2000), the critical part of the e-marketplace is to attain a critical mass of buyers and sellers that continue returning to a website. However, an e-marketplace that users value highly and cannot find elsewhere will differentiate itself and create buyer and seller loyalty. In this regard, deep industry knowledge is a key competitive advantage for e-marketplaces (Kearney, 2000; Brunn et al., 2002; "*Coming in to Focus*", 2000). Kearney (2000) discussed further two types of content: commerce content and other value-added content. The

commerce content refers to product descriptions, accurate inventory listings, pricing information, related information, company profiles & ratings, transaction process management, and user purchasing information. Other value-added content includes community information forums, related group information, career information, general industry data, and e-marketplace site information.

Besides the comprehensiveness of content, websites must also provide content that is accurate, up-to-dated, clear, and consistent (Herbig and Hale, 1997; Huneycutt et al., 1998). Regular updating of content encourages repeat visits (Hamil and Gregory, 1997). By providing up-to-dated and comprehensive information, information asymmetries between buyers and sellers can be reduced (Amit and Zott, 2002). Improved information can also reduce customers' search and bargaining costs (Lucking-Reiley and Spulber, 2001). According to Phan (2003), Web content must also be appropriate for each individual customer. Intel continues to work closely with sales forces to ensure that customers are getting what they need and are coming back to the site.

Technology-related issues

Unlike businesses in the real world, e-commerce cannot be conducted without the Internet and web-related technologies. There are three main issues of web-related technologies that have been discussed as critical to the success of e-commerce.

Speed.

According to Sung (2004), the speed of e-commerce systems is critical to the success of e-commerce. The choice of e-commerce technology plays a major role on the speed of processing online transactions and online data inquiries. Customers do not want to spend too much time waiting for the response from a website. Customers neither want to wait for a long time to access a website. It means that the choice of Internet connection is critical to the success of e-commerce. According to Eid et al. (2002), easy and affordable access to the Internet network in the International markets if a company wants to tap a full potential of the Internet. However, high Internet fees and unreliable Internet access in developing countries could be the main obstacle to a company that want to expand its online business to international markets.

Flexibility and scalability.

Having the right technology is at the heart of successful e-commerce. A technological platform is the fundamental requirement for any companies conducting e-business activities, but the right ones should support e-commerce ventures to quickly respond to opportunities and threats. In Huff et al.'s (1999) view, there are three distinct operational levels of e-commerce websites: basic, interactional, and transactional. At the basic level, a company's website basically provides simple static information. At the interactional level, information is no longer static, but is updated, and a website begins to incorporate a degree of interaction between a website and its customers. At the transactional level, full online commerce is also provided. Huff et al. (1999) noted that the technical challenge is roughly 10 times more difficult moving up in each operational level. Huff et al. (1999) noted that as the popularity of e-commerce grows, customers rapidly become more and more demanding, and at the same time, the traffic on a website may escalate with remarkable speed. If the system used to host a website cannot scaled up quickly as demand grows, companies will lose customers. Richard Kish, VP of eGM, stated:

> I think one other mistake that you can make is not thinking big enough. Make sure you look at the scalability, what happens when you get that spot that causes 100 million people to try and hit your site in the first month, and how do you grow that ("*How to Stay Ahead*", 2000, p.125).

Thus, the flexibility and scalability of a technology platform is critical to the success of e-commerce (Huff et al., 1999; Brunn et al., 2002; Phan and Stata, 2002). Setting up a technological platform for e-marketplace is even more challenging than general e-commerce systems as described by Huff et al. According to Brunn et al. (2002, p.291), "setting up an e-marketplace with the right technological platform is of strategic importance as it has direct consequences for the success of the e-marketplace." Brunn et al. (2002) explained that the technological platform for an e-marketplace should be able to support the development of advanced market making tools (e.g. different catalogue structures and auction types), integrated procurement tools (e.g. searchable catalogues and administrative tools), and advanced collaboration tools. Cronin (2001) pointed out that the technological platform for an e-marketplace needs to support complex business transactions and financial management requirement. The ability to apply complex business rules and provide robust back-office functionality is where the rubber meets the road. Brunn et al. (2002) explained further that the platform should also support the migration of intimate

supplier networks (e.g. in the form of supplier extranets). Supply chain management solutions on an e-marketplace, for example, are a big part of the value that e-marketplaces add. If an e-marketplace does not support the migration of supply chain management solutions, the potential for capturing such value cannot be realized. Moreover, the technological platform should be able to integrate with the ERP-systems of participating buyers and sellers. Furthermore, the technological platform should operate under open standards in order to make an e-marketplace as efficient as possible. This also suggests that an e-marketplace should carefully select a technology provider partner in order not to be struck with a non-standard platform. A standard platform allows less expensive integration between e-marketplaces than a non-standard one. Furthermore, using a non-standard platform can be an inhibitor for buyers and sellers keeping them from participating due to the risks involved in backing a non-standard architecture. According to Phan and Stata (2002), a part of the success of Intel's e-business is its decision to standardize its e-business architecture to one hardware vendor, one operating system, and minimized the number of database and application vendors in order to simplify the system maintenance and supports. Finally, the technological platform for an e-marketplace should be scalable, flexible and secure. As discussed earlier, scalability and flexibility of the platform allows an e-marketplace to quickly respond to future demands for functionality increase or change. A secure platform is necessary for ensuring the trust of the buyers and sellers participating on the e-marketplace.

Security.

Security issues make a technology platform even more complex. Several studies have indicated that one of the most common worries is the security of financial transactions (Godenhielm, 1999; Cronin, 1996; Furnell and Karweni, 1999; Honeycutt et al., 1998; Ratnasingham, 1998; Samiee, 1998; Eid et al., 2002; Keh and Shieh, 2001). For this reason, a number of customers use the Web to locate products, but prefer to place their order via offline methods such as telephone or fax (Godenhielm, 1999; Eid et al., 2002; Huff et al., 1999). While customers are concerned about the security of websites, this situation sometimes is reversed. E-commerce companies occasionally are not willing to accept customers' online orders when orders are generated from non-secure server locations (Keh and Shieh, 2001). In B2B e-commerce, security is very important due to the size of business transactions and the proprietary information. According to Cronin (2001), independent trading exchanges (ITX) lack the security that protect proprietary information,

and thus, cause exchange members to be reluctant to share information that could be used against them. To avoid security problems, Intel went to great lengths to find ways to implement the best security schemes and encryption - the 128-bit encryption - worldwide despite that the US government's prohibited of the export of this encryption (Phan, 2002). Furnell and Karweni (1999) discussed the security requirements within the e-commerce community and a number of technologies that exist. For example, the Secure Sockets Layer (SSL) protocol developed by Netscape, which allows encryption of messages, can be used to transfer all data in encrypted form. Electronic Publishing Resources (EPR) developed Virtual Distributed Environment (VDE) technology that encrypts secure information passing over the Internet.

Marketing and Sales

The Internet has impacted several aspects of marketing strategies and sales, including product, brand/website promotion, price competition, and sales-force roles. As for product, Huff et al. (1999) explained that one of the most successful value-added strategies is to offer a choice of products online that on offline merchant can possibly match. Amazon.com, for example, offers more than three million books on its website, while an average bookstore can stock only about 250,000.

As for brand/website promotion, Godenhielm (1999, p.14) stated that "whether you are an e-tailer with an established brand name or a no-name online merchandiser selling brand-name products, branding is a crucial strategy to success" (p.14). Ernst & Young measured the leaders and laggards of online retailing and found out that 79 percent of the leaders emphasized a strong company brand or offered well known products and considered that to be a critical success factor (Godenhielm, 1999). A company brand is critical for a business to engineer Internet trustworthiness and visibility. According to Godenhielm (1999), security issues and the fear of misuse of personal information are the biggest reasons why some people would prefer off-line to online shopping. Branding can reassure customers that the site and product/service is trustworthy. In addition, with millions of websites, if customers do not recognize a company brand name, there is a very small possibility that customers will find a company's website. Chappell et al. (1999) stated that brand image promotion is one of the most difficult to achieve because of the time and cost involved, but e-commerce firms that are succeeding have spent significant effort on promoting their brand name. There are several ways to promote brand image of the company and at the same time create traffic to the website. An e-commerce firm could promote brand image of the company through banner advertising on

selected high visibility websites such as major search engines (Chappell et al., 1999; Huff et al., 1999).

Another way is to build awareness of the website offline through PR activities such as conferences, press

interviews, business cards, and advertising on taxicabs and in targeted publications (Chappell et al., 1999).

An e-commerce firm could also promote its brand name through its association or similar group of websites

so they can cross reference each others (Chappell et al., 1999; Huff et al., 1999). A firm can buy keywords

from third parties that promote placement rank on search engines (Chen et al., 2003). Using chat services to

create word-of-mouth is also another way to promote brand name (Huff et al., 1999). Finding the right

keywords that customers are likely to search for about the company's brand name and products/services

and putting them in the website's metatags is another effective way to promote website (Huff et al., 1999).

Some e-commerce companies invest heavily in extensive marketing and advertising campaigns. Duff and

Dale (2002) noted that due to the lack of well established brands, startup dot-com firms raised external

investment and advertised in order to generate brand recognition. However, Thornton and Marche (2003)

argued that putting a lot of investment on advertising does not guarantee success. Pets.com and eToys.com

are two examples of online firms that spent a fortune on Super Bowl advertising. Although sales were

significantly increased, it was not in proportion with the dollars spent. Thornton and Marche (2003)

suggested that while brand awareness is important, the customers' attitude toward a brand matters more

than brand awareness itself. According to Feindt et al. (2002), brand image does not matter for bricks-and-

mortar firms at the same level as pure-play e-commerce since the new online firms must work harder in

order to become known to the larger market.

As for price competition, it has so far been relatively rare in the e-commerce environment,

according to Huff et al. (1999), E-commerce companies may want to compete on price with bricks-and-

mortars because they have lower overhead costs (Chappell et al., 1999). However, while product/service

prices of e-commerce companies may be lower, transportation costs and complicated local sales taxes and

import duties take away any price advantages (Huff et al., 1999). Chappell et al. (1999) suggested that e-

commerce companies should not attempt to compete on a price basis, because there are considerable

development costs involved in being an e-commerce company and remaining ahead of the market,

including the need for continual investment in state-of-the art technology to support the evolving business.

If e-commerce companies compete on the price basis, it will limit their ability to invest in technology and

the resources required to evolve their businesses over time. Huff et al. (1999) found that online low-cost/low-price strategies were much less prominent than focus or differentiation strategies. Chappell et al. (1999) suggested several pricing strategies that e-commerce firms should consider. For example, e-commerce firms could increase prices above those of off-line firms in exchange for superior goods/services. E-commerce firms could maintain price at the same level as non-Internet traders, but they should add value like additional services over the Internet that bricks-and-mortars or other online competitors cannot offer to customers. Last, e-commerce firms can lower prices on commodity items to attract customers, but charge premiums on specialist services that come with purchased goods.

Another aspect of sales and marketing that influences the success of e-commerce is the role of sales force. In virtual world, web storefronts act as a sales channel. For some companies, web storefronts are the sole venue for selling their products/services. This means that the role of the sales force is replaced by functions of web storefronts. However, this does not mean that the sales force is less important to the success of e-commerce. According to Avlonitis and Karayanni (2000), the sales force has a central role to play in implementing the Internet marketing strategies successfully for industrial organizations (Eid et al., 2002).

Customer Relationship Management

The customer relationship management includes all aspects/processes of business transaction that could be used in developing relationship with customers. According to Davenport et al. (2001), customer relationship management (CRM) is defined as "all the tools, technologies and procedures to manage, improve, or facilitate sales, support, and related interactions with customers, prospects, and business partners throughout the enterprise" (as cited in Zeng et al., 2003). Customer relationship management (CRM) can be used to create customer loyalty. Keeping customers loyal is a challenge since there are plenty of websites for customers to search for products/services and they can compare information to find the best value in a few clicks. According to Reichheld and Schefter (2000), building customer loyalty is vital to the success of the Internet retailer because, without repeat customers, even the most effective business model will fail, and the firm will eventually try to satisfy customers only by competitive price (La and Kandampully, 2002). According to La and Kandampully (2002), the interrelationships among loyalty, trust, and relationship have been well established in marketing and management literature. Graham (1999)

pointed out that customer loyalty, which stemmed from personal relationships between customers and a

firm's employees, has been replaced with the practicality, efficiency, and expediency of the Internet. Thus,

gaining customer loyalty remains a great challenge for e-commerce.

Chappell et al. (1999) suggested that customer relationship can be created through interaction and

community. Interaction is about building relationships with individual customers or groups of individual

customers who visit and use a website by providing timely pre-sales information, and excellent after-sales

support. Interaction activities help a company to build relationships with customers by making a company

appear highly responsive to their inquiries, orders, and needs. Sparkes and Thomas (2001) indicated that

the development of an interactive website involving real customer relationships requires contributions from

content, marketing, and technology (Eid et al., 2002).

Chappell et al. (1999) and Huff et al. (1999) suggested several interaction practices including

responding to customer inquiries quickly, providing online help services, offering full after-sales assistance,

using the website to support telephone queries, providing key personal in the company with an e-mail

address to broaden communication between a company and customers, and creating an electronic

newsletter to provide feedback and helpful information to customers. Some simple techniques such as FAQ

pages can be easily located and well effectively laid out to help customers solve their own problems

quickly. More sophisticated online-help software developed by large companies like Dell can assist

customers in solving their problems by leading them to a solution. Bricks-and-clicks companies may also

provide after-sales-service, including the convenience of returning or exchanging products, at their retail

outlets (Amit and Zott, 2001). Personalization and customization are techniques that can be used to provide

customer service that fits to group of customers with similar interests and preferences. However, Chen and

Tan (2003) pointed out that many customers have shown their frustration at dealing with some websites

when facing problems with products or order fulfillment. According to Chen and Tan (2003) and Huff et al.

(1999), customers are asking for a more 'human touch' and higher service quality in virtual stores. Huff et

al. (1999) suggested that it is critically important that an e-commerce firm be accessible in other ways,

especially by telephone. Those virtual stores that do not have the adequate infrastructure for superior

customer services are not going to succeed in the e-commerce environment. Huff et al. (1999) also pointed

out that customer service is the key to building strong perceptions of trust and physical presence.

In B2B environments, creating a relationship with individual customers through interaction requires much more time, effort, and sophisticated technology. According to Schwager (2003), Dell develops the premier website for its corporate customers in an effort to enhance relationships. These corporate customers receive assigned usernames and passwords from Dell to access their own premier website that provides customized information specifically for particular customers. Another example is Scientific Applications International Corporation (SAIC)'s Internet application system called "StrongBox." SAIC is the nation's largest employee-owned research and engineering company that provides technology solutions for several vertical markets such as energy, national security, logistics, space, health care, environment, criminal justice, and financial services. The StrongBox provides each stakeholder the appropriate tools to manage projects. At the same time, SAIC uses StrongBox as an online center point of direct interaction between SAIC and its clients. This direct interaction provides for a faster and more responsive method of communication (Schwager, 2003).

A second means of relationship building is community. According to Chappell et al. (1999), community refers to the means of relationship-building with groups of like-minded individuals/organizations by enabling the exchange of information and services tailored to the needs of the community. Chappell et al. (1999) explained that enabling community not only heightens customer loyalty through the customers' sense of belonging to the community, but also creates opportunities for brand building, business expansion, and lowering the cost of sales through association with a particular community. Chappell et al. (1999) suggested several community building practices by providing communication technology between members, building communities around specific target groups, and assigning category facilitators to look after them.   Relationships not only keep customers loyal, but also play as an enabler of the e-commerce system. According to Cronin (2001), relationships are one of the CSFs of an e-marketplace. An e-marketplace involves a highly complex supply chain. Rules, operating procedures, and contractual agreements have to be established among several parties such as suppliers, distribution centers, and dealers. Without relationships, trust among parties will be left out of the equation. Involved parties would not trust each others to let them access private business information such as inventory and demand statistics. Without trust, there can be no effective communication among participants, causing an e-marketplace to fail.

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Order Fulfillment Capability

Among the issues surrounding order fulfillment includes the availability of stock to satisfy the requirement, the time taken to deliver the purchase, and delivery scheduling (Duffy and Dale, 2002). According to Duffy and Dale (2002), many e-commerce companies do not cross-check their stock availability when orders are taken on their web sites. Days later, customers received e-mail informing them that their credit cards have been debited, but their purchases are delayed due to stock outage. Duffy and Dale (2002) explained that in the virtual world, retailers are expected to perform the whole delivery chain, and customers expect their requirements to be met by next-day or 48 hour delivery. Keh and Shieh (2001) stated delivery time is one reason customers are reluctant to shop on the Internet is delivery time. According to a BCG study reported by Burton (2000), 19 percent of online customers reported that their orders were delivered either much later than they expected or not at all. In addition, many Internet consumers work Monday-Friday, 8 a.m.-6.p.m., and are not at home when traditional deliveries arrive (Duffy and Dale, 2002). Duffy and Dale (2002) suggested that this challenge has to be answered with logistics by allowing consumers to stipulate windows of opportunity for deliveries.

Another issue in order fulfillment is international delivery that incurs high cost. Palumbo and Herbig (1998) stated that once companies conduct business on the Internet, they may receive orders from customers from around the world. This could be a problem for a company that is not already selling internationally (Eid et al., 2002). Palumbo and Herbig (1998) suggested that it is important for a company to design logistical systems that allow a firm to efficiently deliver its products/services internationally before accepting foreign orders (Eid et al., 2002). White (1997) suggested further that even though shipping charges are beyond a company's control, its website should indicate shipping costs to each country where delivery is available and the time needed for shipments since it is of concern to international customers (Eid et al., 2002). Chappell et al. (1999) added that if a company relies on third parties, such as manufacturers or logistics suppliers, it should make sure that it has quality controls in place over the products and services that third parties supply. Otherwise, the company's image can easily be damaged by association with poor quality third party services.

Thornton and Marche (2003) noted that inventory control and order fulfillment are important issues in the pure-play e-commerce, because when many of them started, they did not give adequate

thought to such issues. Duffy and Dale (2002) noted that existing brick-and-mortar organizations are more likely to have an extensive logistics organization that can be adapted to the new requirements of e-commerce, but a start-up dot-com typically must outsource its logistics requirements because it does not have the capital or experience to build its own logistics infrastructure. This often causes a start-up dot-com to lose its visibility and, more importantly, lose its control over one of the most influential areas of customer contentment and loyalty.

Resources-Management-related Factors

Resources are necessary for any businesses to support the execution of their business activities. Two CSFs for e-commerce that are related to how an e-commerce manages/acquires its resources are discussed below.

Qualified human resources.

Because of the continuous, rapid change of Internet, a window of opportunity has a short time frame. In addition, technologies within the Internet arena are rapidly changing. An e-commerce venture needs to be able to quickly respond to such opportunities and also keep up with new technologies to create competitive advantages over its competitors. New e-commerce strategies cannot be created and executed or new technology cannot be properly implemented without qualified employees. Qualified employees are especially critical to the success of a company that has limited knowledge of e-business models and technologies. For example, based on the case study with Getzs, a well-established retail company in Michigan, Chen et al. (2003) reported that part of Getzs' success is based on the fact that the company quickly recognized the need for full-time e-commerce positions due to its lack of technological knowledge, and thus hired an e-commerce manager to focus on understanding technology. The e-commerce manager of Getzs also acted as a liaison between the company's management and the Web development company. However, according to Godenhielm (1999), finding a great management team and employees is a growing challenge.

A survey by McKinsey & Co. revealed that companies are increasingly competing for talent that meets the criteria of a high tech company. Even Amazon.com reported that it received 15,000 resumes per month, but it was still lacking qualified people (Godenheilm, 1999). Amazon.com's recruitment program is dictating much of the company's strategy and limiting its growth rate. Godenheilm (1999) explained that

there were many product categories that Amazon could enter and become number one in because they had

enough financial capital and customers, but the company did not have the human capital to take all the

opportunity available to them.

Financial control.

According to Thornton and Marche (2003), adequate capitalization is critical to the success of

traditional retail environments. Businesses that did not have sufficient capital investment from the

beginning have shown a greater chance of failure. While a number of high profile e-tailers like Pets.com,

Streamline.com, Boo.com, Garden.com, and eToys.com were able to attract huge amounts of financing, a

number of them failed. This does not mean that such financial support is not critical to the success of e-

commerce. Based on the study of online grocers, Keh and Shieh (2001) pointed out that financial support is

essential for online grocers to sustain the growth and instability of the market. The need is particularly

acute considering that most online firms should expect to be in the red for the first few years of operation,

while requiring cash injections to expand and develop economies of scale. Thornton and Marche (2003)

explained that part of high profile e-tailers' failure is that these businesses spent lavishly on television

advertising and large-scale promotions, but they were in many cases unable to make the cutbacks necessary

to sustain operations. Thornton and Marche (2003) and Duffy and Dale (2002) agreed that to be successful

firms engaged in e-commerce had to exercise strict control on both revenues and expenditures. For

businesses that employ multi-channel outlets for goods, as well as outsourced order fulfillment and call

centers, it is important for them to ensure that all discounts, credits, payments, deliveries and credit card

clearances are monitored and ideally controlled by one financial system.

Outsourcing/ Partnerships/Alliances

Outsourcing plays an important role in the growth and success of e-commerce. According to Keh

and Shieh (2001), in an industry with multiple business process requirements, it is a challenge to perform

every function internally. In addition, Chen et al. (2003) stated that a common mistake made by many

small companies is that management attempts to reduce costs by doing everything in-house without the

requisite knowledge and background. Outsourcing, however, allows an e-commerce company to reduce

time, cost, and risk of market penetration and expansion (Keh and Shieh, 2001). Chappell et al. (1999)

suggested that as an e-commerce firm grows, it will need a range of partnerships to help in running its

business in a streamlined and cost-effective way. E-commerce technical expertise, for example, is absent from a number of companies. Godenhielm (1999) explained that instead of developing and maintaining websites in house, an increasing number of companies turn to outside solution providers, or independent contractors such as web developers, who specialize in e-commerce website development, to develop and maintain the most effective and state-of-the-art site. Based on the Getz case study by Chen et al. (2003), a well-established retail company that markets outdoor work clothing, web hosting was outsourced because Getz lacked the technical expertise to conduct efficient e-commerce in-house. This allowed Getzs to access technical expertise at a fraction of the costs and to ensure its scalability with growth. In addition, development processes were completed more quickly.

Outsourcing partners are not limited to just technical outsourcing partners. Chappell et al. (1999) suggested that an e-commerce firm may wish to outsource business processes such as fulfillment for cost and efficiency reasons. They may wish to partner with manufacturers to bring customized products to market; or with other service providers to increase the scope and content of their service offerings. They may need to form marketing alliances to leverage brand awareness. Godenhielm (1999) stated that partnerships are not only a way of enabling a company to concentrate its efforts on its core business, but also a way of getting its product in front of a larger customer base, to build the company brand and get credibility. Stamps.com, for example, partners with Microsoft. The agreement allows Microsoft to include Stamps.com postage software in the Microsoft Office update. At the same time, Stamps.com can get access to Microsoft's huge customer base.

A company needs to be careful in selecting what to outsource and outsourcing partners (Chappell et al., 1999; Godenhielm, 1999; Chen et al., 2003). According to Godenhielm (1999), deciding what to outsource requires distinguishing between strategic and tactical processes. A company can easily outsource tactical processes, but it should control strategic ones carefully. Chappell et al. (1999) suggested that a company needs to test the capabilities of each new partner before accepting them, because a company' brand image can suffer if partners fail to provide a quality service/product to customers. Godenhielm (1999) added that it is important to make sure that partners are flexible enough to adapt to rapidly changing business and technical requirements. Moreover, Mahajan et al. (2002) noted that partnerships are important, but a company should not totally depend on partnerships for its success.

Information/Products/Services Flow Improvement-related Factors

Internet and related-information technologies also have an impact on the flow of information and products/services in several aspects. Business information, for example, can be exchanged among parties within a supply chain through the Internet medium. A software company can allow customers to buy and then download new software rather than wait for a diskette or a CD to be shipped, affecting the outbound logistics part of the supply chain. This eliminates the costs of the disks and shipping. These saving can be passed on to customers, who find value in the timely delivery, the lower price, and in the product itself. Articles described two main factors related to the improvement of information and product/service flows that are particularly critical to the success of e-commerce. The first factor involves the flow of information and product/service between business parties on a supply chain. The second factor involves the flow of information within an organization itself.

Inter-organization flow.

Warkentin, Bapna, and Sugumaran (2001) explained that in the traditional supply chain, raw material providers sell to component and subassembly manufacturers, who sell to final assembly manufacturers, who distribute their products through wholesalers, distributors, dealers, and retailers to the final customers. This distribution channel or "outbound logistics" (Porter, 1985) may include multiple links along the way. At the same time, a firm would manage the interaction process with its upstream suppliers or "inbound logistics", which may include hundreds or thousands of firms along several links in the supply chain. In addition, the information flows in this traditional supply chain environment were linear from one firm to its immediate suppliers or immediate distributors. Warkentin, Bapna, and Sugumaran, (2000) explained that before the arrival of web-based technologies, widely accepted traditional communication standards caused the supply to suffer from inefficiency of communication and allocation. Furthermore, information beyond one link in the chain was constrained by lack of formal relationships and did not pass on efficiently through the links due to a lack of standard data representation schemes. However, e-commerce over an open-source Internet Protocol (IP) based network allows the integration of the varied media that connect the supply chain, and thereby leads to significant new inter-organizational information flows that facilitate supply chain management. Successful e-commerce companies, however, are those that build systems that can integrate with existing applications and serve the needs of trading partners at either

end of the value chain (Eid et al., 2002). Feindt et al. (2002) and Chappell et al. (1999) suggested that integration/connection between an e-commerce company's system and its trading partners' enables the company to share information more readily, to speed up inter-organizational processes, to increase reliability, and thus result in a better service to customers. In e-marketplace environment, connecting participants on the e-marketplace site and establishing connections across the entire supply chain as well as with other e-marketplaces is one of the determinants of e-marketplace's success, according to Kearney (2000, p.18). There are two types of connections for an e-marketplace. The first type of connection allows basic data to be exchanged through an e-marketplace system between buyers and sellers through an e-marketplace system. For example, when a buyer accepts a bid or selects the goods, the payment system should automatically account for the payable. At the same time, on the seller side, when the bid is accepted or the goods are claimed, an accounts receivable entry should be made. An e-marketplace has to enable these trading processes to be carried out automatically or with minimal human intervention from order to payment and delivery. To accomplish such processes and connection, an e-marketplace has to have capabilities to help buyers and sellers integrate their ERP or legacy processes. Tumolo (2001) noted that participants of an e-marketplace increasingly want to integrate their companies' back-office systems seamlessly with an e-marketplace. They also want to use information generated by an e-marketplace to better forecast demand for their products as well as to compare prices, product characteristics, availability, terms, and sources. Cronin (2001) added that without the integration with the back end systems of e-marketplace members, the complexity of managing the financial aspects of transactions, such as invoices, commissions, and shipping fees will increase.

The second type of connection is driven by the particular value-added services required for the transaction in each specific industry. These value-added services include activities such as risk management, maintenance and repair, logistic, and order fulfillment. An e-marketplace might have capabilities to provide these value-added services by itself, or may partner with third-party service providers, and/or link other e-marketplaces in the supply chain to provide end-to-end services. The connection among buyers and sellers of these value-added services involves complex buying and selling process. For example, once a buyer confirmed the purchase of a piece of equipment, the buyer is linked to a maintenance and parts service to obtain other additional related parts, a leasing corporation to obtain

financing, and a logistics providers to coordinate delivery. Kearney (2000) noted that the ability to interconnect the entire supply chain represents a significant opportunity for an e-marketplace to distinguish itself from its competitors. Kearney (2000) suggested that an e-marketplace that strategically identifies which parties it needs to connect, and effectively analyzes and understands how to connect all of necessary information, systems, and participants will have a defendable competitive advantage in their quest to attain critical mass.

Warkentin, Bapna, and Sugumaran (2000) explained further that web-based technologies can also eliminate the constraints of geography, time and space. The creation of such value webs allows customers to drive the formation of flexible, dynamic networks and allows companies to form real time links with a globally dispersed base of partners. Through such value webs, companies can provide customers with tailored products and solutions and deliver quickly and inexpensively. This leads to increased efficiency and profitability for the firms involved. Moreover, in B2C e-commerce, the process of disintermediation creates new direct channel opportunities. According to Huff et al. (1999), disintermediation refers to the removal of elements in the supply chain. An e-commerce company can use the Internet to bypass or remove some elements in supply chain, and thereby connect directly with targets. Dell, for example, has created huge markets for selling products directly to consumers. Warkentin, Bapna, and Sugumaran (2000) pointed out several benefits of the disintermediation. First, disintermediation creates a significant cost saving from bypassing intermediaries. Second, disintermediation allows a company to have a direct one-to-one interaction with customers. This can lead to mass-customization of production. With web-based technologies, a company can collect information about customers and thereby get better signals regarding customers' preferences and demand levels, which in turn lead to better inventory management and production planning.

Intra-organizational flow.

Chappell et al. (1999) suggested that an e-commerce company should integrate front-end systems or systems that interact with customers over the Internet with its back-end systems carrying out business transactions, such as payment, invoicing, pricing, inventory, and fulfillment. Such integration will eliminate the duplication of data entry between systems, reduce the likelihood of error, and speed up processes. Chen et al. (2003) pointed out that benefits conveyed by e-commerce, particularly by streamlining order entry

and fulfillment processes, reducing business steps, processing returns, cost savings, and automation of redundant tasks are the real contributions of e-commerce. For example, according to Chen et al. (2003), Getz, had to reconfigure its business practices to support its growing online business. Getz had manually processed and fulfilled online orders, but personnel shortages, severe delays, and human errors became the bottle neck to its growth. Getz solved the problem by integrating the website with the back-end order fulfillment system. The system now automatically verifies the credit card payment as soon as an order is submitted. Once the transaction is verified, the packing slip, return label, shipping label and receipt are generated. Such integration not only solved inefficiency problems, but also provided better reporting capabilities to the e-commerce manager. In addition, by fulfilling orders without delays and errors, the quality of Getz.com's service in the eyes of customers has been improved.

The mass-customization previously discussed requires tight integration between front-end system and back-end system (Warketin, Bapna, and Sugumaran, 2000). Dell.com, for instance, allows consumers to design their own computers on their website that is tightly connected to the JIT manufacturing operation, which customizes the assembly of each order. GM transformed itself from a build-to-stock company to custom ordering, thereby cutting in half the $40 billion of parts and unsold cars that existed, and reducing total delivery time from 8 weeks to 11 days (Warketin, Bapna, and Sugumaran, 2000). In service industries like insurance, Roger (2001) also suggested that to create effective service and distribution channel, integration with other customer service functions like agent systems, call centers, marketing initiatives and pricing, and underwriting systems, is definitely a number-one priority. Progressive.com has fully integrated its website and call center delivery channels, allowing up-to-minute web information to be accessed by call center staff. However, Duffy and Dale (2002) noted that there are few organizations that are totally integrated. Many organizations use human intervention to interface between different systems.

Management Support

Chappell et al. (1999) explained that a company that determines to build a successful e-commerce business will need commitment. Simply being on the Internet is not enough. To gain business, a company has to make sure customers can find the website and have good shopping experiences with the company. Running an e-commerce business involves extra hours spent in activities such as exploring new technologies, building and testing a website, responding to customer e-mails, and servicing Internet orders

in addition to its traditional business. The presence of a business plan is also a strong measure of how serious a company is about developing an e-commerce business. Without such plan, all time and effort may be used in a non-optimal way. The support and commitment from top management is also part of this issue. According to Frank (1997), when e-commerce systems impact a company's existing way of doing business, it will be resisted from within, and this resistance often becomes the largest impediment to success in e-commerce. Chaffy et al. (2000) stated that management commitment to the Internet medium helps to promote implementation across the organization. Viehland (2000) suggested that even though technologists have better understanding about technologies that meet the identified needs, the implementation responsibility and ownership of fully integrated e-commerce systems must come from the top (Frank, 1997). Chan and Swatman (2000) also noted that management at the supervisory level plays the most critical role in implementing B2B marketing successfully. Chappell et al. (1999) explained further that due to the fast changing pace of e-commerce market and the short time frame of e-commerce opportunities, constant reevaluation of the company's e-commerce strategies and the openness to new ideas, new approaches, processes and technologies is a sign of commitment.

Domain knowledge.

One impediment to e-commerce success of any e-commerce is that top management often lacks domain-specific knowledge. According to Thornton and Marche (2003), in traditional retail environments, general management experience is considered to be one of the most important contributing factors to success or failure. However, Thornton and Marche (2003) found that managers of failed e-commerce firms possess a wide range of experience. Thornton and Marche (2003) argued that it may have been the lack of their specific industry knowledge that contributed to their failures. In addition, Mahajan et al. (2002) tried to identify characteristics of e-commerce winners from 48 publicly listed dot.coms. They found that dot-com retailers with offline experience are likely to perform better than pure-play dot.coms without prior knowledge about the retail domain. Eid et al. (2002) explained that for an e-commerce firm that plans to enter foreign markets, deep knowledge about foreign market environments is critical to the success of an e-commerce firm due to the complexity of foreign market.

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Trust

Trust is a critical aspect of e-commerce (Gefen, 2000; Reichheld and Schefter, 2000). In the e-commerce literature, Internet vendor trust has been identified as a factor that is critical for success (Torkzadeh and Dhillon, 2002; Eid et al., 2002). Huff et al. (1999, p.457) stated that "trust is the most important perception of all for most Internet firms." A number of studies noted that the reason why many people are reluctant to shop online is due to the lack of trust in online business (Hoffman et al., 1996; Zott and Donlevy, 2000). This mistrust stems partly from the lack of physical representation, since buyers cannot touch and feel products on the Internet, and partly from concerns regarding credit card abuse (Zott and Donlevy, 2000). According to Gefen (2000), some researchers (e.g., Reichheld and Schefter, 2000) suggested that online customers generally stay away from e-tailers whom they do not trust. Therefore it is important for e-commerce companies to build customer trust in order to succeed.

Chen and Dhillon (2003) proposed that trusting beliefs in an Internet vendor has three dimensions: competence, integrity, and benevolence. Competence refers to a company's ability to fulfill promises made with consumers. Integrity means that a company acts in a consistent, reliable, and honest manner. Benevolence suggests the ability of a company to hold consumer interests ahead of its own self-interest and indicates a sincere concern for the welfare of the customers. Chen and Dhillon (2003) also proposed several sources that could influence the perception of competence, integrity, and benevolence of an Internet vendor. These sources reside in a vendor's characteristics, website, and interaction. As for vendor characteristics, Chen and Dhillon (2003) explained that the number of years that a firm has been in business, its reputation, brand recognition, and offline presence could determine the level of trustworthiness of an e-commerce company. According to Zott and Donlevy (2000), some e-commerce companies try to elicit trust by displaying a connection with a well-known partner or associate brand, or by making a connection to their history as a bricks-and-mortar company. Affiliate networks where companies usually post each other's banners on their websites are also common. This allows online pure-play vendors that do not have strong brand recognition or an offline presence to gain creditability by partnering with established brands and/or associations. As for website characteristics, Chen and Dhillon (2003) explained that likeability (appearance and structure), functionality, usability, efficiency, reliability, portability, integrity, privacy and security of a website could determine the level of trustworthiness of an e-commerce company.

Chen and Dhillon (2003) explained that integrity, privacy and security of a website can be shown in tangible cues such as return policies, privacy and security policy, availability of mailing address and telephone numbers, references and testimonials of existing consumers, credible information about the firm that many be provided by certification, licenses, and third-party assurances. According to Amit and Zott (2001) and Zott and Donlevy (2000), websites that use encrypting technologies should show the logo of the securing agency on their homepages. By offering them transaction safety and reliability guaranteed by independent and highly credible third parties, firms can establish trustful relationships with customers. For example, Consodata, a European direct mailing firm, demonstrates this ideal by promoting in-house systems to protect data from misuse, but more importantly, accommodates inspections by French government agency CNIL (Commission Nationale Informatique et Libert'es). As for the interaction, Chen and Dhillon (2003) explained that customers' past experiences with sellers in term of service quality, customer satisfaction, length of relationship, and courtship could determine the level of trustworthiness of an e-commerce company. Courtship refers to marketing activities implemented by an e-commerce company to entice more exchanges with a consumer. According to Chen and Dhillon (2003), customers' past experiences with sellers determine buyer's expectations of a seller's future behavior. Based on this discussion of trust, the researcher noticed that while several value-added content, convenience of website usage, privacy and security, brand image, customer services, and marketing programs are CSFs for e-commerce by themselves, these factors also contribute to trust beliefs.

First Mover Advantage

One of the myths of e-commerce is the myth of first mover advantages. It was believed by many that being first to claim ownership of a particular web space was considered crucial to the success of e-commerce because the first mover can gain brand name recognition (e.g. Porter, 2001; Keh and Shieh, 2001; Godenhielm, 1999). However, Thornton and Marche (2003) argued that if first mover advantages were truly all it took to make a success, garden.com, eToys.com, and pets.com should all have been successful. Rosenbloom (2002) stated that the most successful, such as Amazon.com, were not the first mover. However, according to Keh and Shieh (2001) and Godenhielm (1999), being early to the market can gain media attention, helping to establish a well-known brand as well as gaining important lead time over competitors. It also has an easier time convincing investors. In addition, a company is also farther along the

learning curve, enabling it to realize economies of scale and develop technical know-how before its competitors. Brunn et al. (2002) argue that first mover advantages or speed is important to an e-marketplace because an e-marketplace that can build liquidity fast will have significant advantages over other e-marketplaces as the value of its service will be much higher for potential participants. Brunn et al. (2002) explained that it is preferable to be able to offer high quality offering, but if an e-marketplace has to spend too much time to get its offering off the ground, competitors may achieve critical mass with inferior offerings. Thus, rapid execution to some extent wins priority over quality in industries with network externalities. The main idea behind being early to the market is to establish brand name recognition, develop customer loyalty, and create a barrier to entry for other competitors.

Even though these factors could be used as a guideline to investigate areas claimed to have influence on the success of e-commerce, most factors are identified based on success of e-commerce ventures in developed countries. Do these factors all apply to e-commerce ventures in Thailand, given the differences in business environment and practices, culture, existing infrastructure? This leads to the first research question.

Research question 1: Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

The CSFs for E-commerce Relevant to All Companies in a Particular Industry (The Key Industry Requirement for E-commerce)

The CSFs for e-commerce previously discussed are commonly required by any e-commerce ventures to perform/possess regardless of what industries they are in. These CSFs indicate what e-commerce companies need to have if they want to conduct businesses on the Internet. However, such CSFs might not be sufficient to explain what makes e-commerce ventures succeeded because they did not include their industries' conditions/situations into consideration. Different industries have different set of requirements that companies have to meet. To succeed companies have to meet those requirements. Since a main objective of this dissertation is to understand what makes Thai e-commerce ventures succeed, it is necessary to investigate CSFs for e-commerce relevant to a particular industry. The intent of this section is

to further discuss Rockart's concept of CSFs in order to create a framework that will be used to capture CSFs relevant to all companies in a particular industry.

Key Industry Requirements for E-commerce

Rockart (1979)'s critical success factor concept was built on the concept of the "success factors" stated much earlier in the management literature in 1961 by D. Ronald Daniel. According to Daniel,

> … a company's information system must be discriminating and selective. It should focus on "success factors." In most industries there are usually three to six factors that determine success; these key jobs must be done exceedingly well for a company to be successful (as cited in Rockart, 1979, p.85)

Clearly Daniel specifically focused on success factors that are relevant for any companies in a particular industry as the key information actually needed by executives (Rockart, 1979). Because Daniel's success factors focused specifically on industry groups, Morris (2003) noted that Daniel's discussion of success factors falls into the classification of so-called industry key success factors (KSFs). Ohmae (1982) stated that KSFs are factors that are necessary to the success of any companies competing within the same industry group. Corresponding to the KSFs, a company uses existing skills/capabilities and/or tries to develop ones in order to compete in the industry (Katelhohn, 1998). According to Sousa De Vasconcellos E Sa & Hambrick (1989, p. 367),

> The fundamental paradigm of strategy states that, in order to perform well, the firm must compete in settings in which the prerequisites for success – the 'key success factors' – match the firm's distinctive competencies or strengths. Viewed conversely, the firm must develop strengths that match the key success factors in its industry.

Hofer and Schedel (1978) noted that usually KSFs vary from one industry to another and normally depend on the economic, technological, and competitive characteristics of each industry (Morris, 2003).

Michael Porter's five force model is a useful framework for industry and competitive analysis (Porter, 1996). Porter explains that in any industry there are five forces that influence what happens within the industry: existing companies, potential new companies, substitutes for product/service offered, suppliers, and customers. Boulton (2002) suggests that for any industry KSFs usually relate to five main areas:

1. Customer requirements. Boulton (2002) explained that each buyer segment has different requirements that affect KSFs. These requirements can relate to performance, durability, special features, ease of use, or availability, but ultimately, these requirements relate to those characteristics perceived to create the most value to the customer.

2. Competitive requirements. Boulton (2002) described that competition addresses strategies that provide higher customer value. It often relates to price, quality, and delivery.

3. Industry regulations and standards. According to Boulton (2002), industry regulations and standards often determine technical compatibility, process performance, and interface issues for network or system products. Government regulations may impact safety or environment issues.

4. Resource requirements. Boulton (2002) explained that resource requirement become increasingly critical as market become global and economies of scale become critical for such activities as manufacturing, marketing, and research and development.

5. Technical requirements. Boulton (2002) explained that technical requirements are affecting today's competitive environment. Firms cannot participate in many business activities if they do not possess technical capability or cannot find suppliers who could provide technical capability for them.

For this study, Boulton's key industry requirement framework is used to capture CSFs for e-commerce within a particular industry. This framework thus addresses the second research question as follow:

Research question 2: What are key requirements that all e-commerce companies must have in order to enter the industry?

2.1. What are product/service values that customers look for in the industry?

2.2. What are product/service values that competitors offer in the industry?

2.3. What are the Industry regulation and standard?

2.4. What are resources required by any e-commerce companies in the industry?

2.5. What are technologies required by any e-commerce companies in the industry?

Addressing E-commerce CSFs: E-commerce Business Model

In order to understand how the case companies address CSFs and key industry requirements for e-commerce in Thailand, it is essential to understand the roles of those factors in the overall scheme of a company's e-commerce business activities. For the purpose of this research, an e-commerce business model will be used as the systematic framework for identifying the overall scheme of e-commerce business activities.

Lucus (2002, p.29) defines a business model as "a general template that describes major activities of how an organization functions. It identifies market segments, target customers, products/services offered to target customers, revenue and profit streams, key business processes, and how the firm is organized." Afuah and Tucci (2001 stated that Internet business models explain how a firm plans to make money long term using the Internet medium, and it involves a set of Internet and non-Internet-related activities. In addition, according to Timmer (1998), an Internet business model explains how various business actors are involved in the flows of product, service, and information, and also describes the sources of revenues. Table 2.4 provides a sampling of more prominent definitions of business models. Based on these definitions, an Internet business model covers a broad spectrum of main business activities and systematically explains how those activities involving different business actors function together to create the flow of product, service, information, and revenue. An Internet business model includes several components. The configuration of an Internet business model will be discussed in detail the following section.

Table 2.4: Sampling of Business Model Definitions

Business Model Definition	Author(s)
The totality of how a company selects its customers, defines and differentiates its offerings (or response), defines the tasks it will perform itself and those it will outsource, configures its resources, goes to market, creates utility for customers, and captures profits. It is the entire system for delivering utility to customers and earning a profit for that activity.	Adrian Slywotzky (1996)
An architecture for the product, service and information flows, including a description of the various business actors and their roles; and a description of the potential benefits for the various business actors; and a description of the sources of revenues.	Timmer (1998)
The core architecture of a firm, specifically how it deploys all relevant resources (not just those within its corporate boundaries) to create differentiated value for customers.	Tapscott (2001)
A construct that mediates the value creation process. The business	Chesbrough and

Business Model Definition	Author(s)
model translates between the technical and the social domains, selecting and filtering technologies, packaging them into particular configurations to be offered to the market.	Rosenbloom (2000)
A story that explains how enterprises work. A good business model answer: who is the customer? And what does the customer value? It also answers the fundamental questions every manager must ask: how do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?	Magretta (2002)
A unique blend of three streams that is critical to the business. These include the value stream for the business partners and the buyers, the revenue stream, and the logistical stream.	Mahadevan (2000)
A flow diagram connecting all the elements of a value chain linking producers, distributors and consumers, showing the flow of goods and services in one direction and the flow of money in the other.	Frezza (1998)

The Configuration of Internet Business Models

The literature on business models has been growing in number (e.g. Timmer's, 1998; Rappa's, 2001; Weill and Vitale's, 2001). However, the researcher noticed that the number of articles that discuss Internet business models' configurations is limited. For this dissertation, three key articles will used to investigate configurations of Internet business models.

Afuah and Tucci (2001) examine the creation of product/service value. They define a business model as how a company plans to make money long term using the Internet and provide a list of business model components including customer value, scope, pricing, revenue source, connected activities, implementation, capabilities, and sustainability. Their framework addresses several questions:

1. what value do you offer customers,

2. which customers do you provide the value to,

3. how do you price the value,

4. who do you charge for it,

5. what strategies do you undertake in providing the value,

6. how do you provide the value, and

7. how do you sustain any advantage from providing the value?

Chesbrough and Rosenbloom (2002) use the business model in capturing value from technology. Their study shows that firms can capture value from new technology through launching new ventures that

exploit the technology in new business arenas. They explain that firms must take technology to market through a venture shaped by a specific business model. According to Chesbrough and Rosenbloom (2002), the rise of e-commerce has thrown a spotlight to the topic of business models, but in fact a business model is a modern variation of Andrew's (1971) classic business unit strategy. Their study provides the systematic functions of a business model including the value proposition, a market segment, the value chain, the cost structure and profit potential, the value network, and the competitive strategy.

Osterwalder and Pigneur (2002) develop a building-block-like methodology that defines the essential concepts in e-business models. Their e-business model framework is founded on four main pillars: (1) the product and service, (2) the infrastructure management, (3) the relationship capital, and (4) the financial aspects. The product and service pillar contains three elements: value proposition, target customer, and capabilities. The infrastructure pillar includes three elements: activity configuration, partner network, and resources and assets. The relationship capital pillar contains three elements: information strategy, distribution channels, and trust and loyalty. The financial pillar includes three elements: revenue model, cost structure, and profit model.

While each component was named slightly different, these three frameworks in fact share ten common components of e-commerce business models. Table 2.5 shows components of e-commerce business model. Each component of an e-commerce business model is discussed as followed:

Table 2.5: Components of E-commerce Business Model

Components	Authors
Market segmentation and targeting	Chesbrough and Rosenbloom, 2000; Afuah and Tucci, 2001; Osterwalder and Pigneur, 2002; Boulton, 2002
Value proposition	Chesbrough and Rosenbloom, 2002; Osterwalder, Lagha, and Pigneur, 2002; Afuah and Tucci, 2001; Boulton, 2002; Amit and Zott, 2001
Resources	Afuah and Tucci, 2001; Osterwalder, Lagha, and Pigneur, 2002
Capabilities	Boulton, 2002; Osterwalder, Lagha, and Pigneur, 2002; Afuah and Tucci, 2001
Activity configuration	Chesbrough and Rosenbloom, 2000; Afuah and Tucci, 2001; Osterwalder and Pigneur, 2002; Shin, 2001; Allen and Fjermestad, 2001; Warkenten, Bapna, and Sugumaran, 2000
Partner network	Osterwalder, Lagha, and Pigneur, 2002; Warkentin, Bapna, and Sugumaran, 2000
Revenue sources	Chesbrough and Rosenbloom, 2000; Afuah and Tucci, 2001; Osterwalder, Lagha, and Pigneur, 2002
Competitive strategy	Boulton, 2002; Chesbrough and Rosenbloom, 2001; Afuah and Tucci, 2001

Market Segmentation and Targeting

A business model must specify a group of customers or a market segment to whom products/services will appeal (Chesbrough and Rosenbloom, 2000; Afuah and Tucci, 2001, p.51; Osterwalder and Pigneur, 2002; Hamel, 2000). According to Boulton (2002) and Kotler and Armstrong (2001), market segmentation divides a market into different groups of online customers based on a customer's requirements in purchasing the product and/or service. A company must select those customers for whom it can develop effective products or services that meet their specific needs and requirements. Afuah and Tucci (2001) segment markets in term of geographic areas to which the value should be sold. Customers within each area can be business customers and end customers. Business customers can be segmented based on industries, size, and technical sophistication. End customers can be segmented based on demographics, lifestyles, and incomes.

Value Proposition

A company needs to identify the value required by selected market segments. The value or the full mix of benefits offered to a target customer segment is called the value proposition (Chesbrough and Rosenbloom, 2002; Osterwalder et al., 2002; Afuah and Tucci, 2001; Kotler and Armstrong, 2001). Customers will choose a company's products/services over competitors' only if its product/service offers them a perceived value greater than that of competitors (Afuah and Tucci, 2001). Brandenburger and Nalebuff (1996, p. 18) state that, "a player is your complementator if customers value your product more when they have the other player's product than when they have your product alone." Boulton (2002) and Kotler and Armstrong (2001) suggested that a company should decide how its offerings will be positioned relative to competitive products/services (Boulton, 2002; Kotler and Armstrong, 2001).

Afuah and Tucci (2001) and Osterwalder et al (2002) see product/service value being created through differentiated or low cost products/services. A company can differentiate products in different dimensions such as product features, service, timing, location, product mix, linkage, and reputation. For example, with web-based technology, an e-commerce company can offer product features in term of made-to-order products tailored to the profile of every single customers. The number and variety of product lines and items carried by an e-commerce firm can also be a source of product differentiation for customers who prefer variety or one-stop shopping. Linkage to or associations with a reputable firm can provide credibility

in the eyes of customers. Cost savings can be achieved through optimized infrastructure management or direct selling over the Internet, and thus create value when it is passed on to customers in the form of lower prices than competitors.

Resources

According to Osterwalder et al. (2002) and Afuah and Tucci (2001), firms need resources to deliver promised value. Resources can be grouped into tangible and intangible. Tangible resources are both physical and financial resources, such as plants and equipment – hardware and software – and cash reserves. Intangible resources are the nonphysical and non-financial assets, such as patents, copyrights, reputation, brands and trade secrets, relationship with customers/employees, and knowledge embedded in different forms such as databases. Afuah and Tucci (2001) added human as another aspect of resources. Human resources are the skill and knowledge that employees carry with them.

Capabilities/Competencies

A company needs to convert resources into products/services that customers want. According to Afuah and Tucci (2001), capability or competency refers to the ability required to convert resources to customer value. G.M. Hamel and C.K. Prahalad explained that core competency has to meet three criteria: customer value, competitor differentiation, and extendibility (Afuah and Tucci, 2001). The customer value criteria require that a core competency must make an unusually high contribution to the value that customers perceive. For example, Amazon.com's expertise in developing shopping cart technique set the standard of online purchasing technique for other e-commerce websites. Competitor differentiation requires that a core competency must uniquely hold the firm's level of competence to be higher than that of its competitors. A competence is extendable if it is used in more than one product area. According to Boulton (2002), the core capabilities of a firm are embedded in the business processes and functions and are the basis of a firm competitive strengths and weaknesses.

Activity (Value) Configuration

Targeting a specific market with a clear value proposition informs choices of what must be done and what can be omitted in business activities. A company must configure a set of activities or perform some of the connected activities that underpin the value that customers are willing to pay for. According to Afuah and Tucci (2001), a set of these connected activities is called a value chain because "value is added

to materials or knowledge as it moves up the chain" (p.56). The value chain framework has been used by many researchers to capture connected activities within a business model (e.g., Chesbrough and Rosenbloom, 2000; Afuah and Tucci, 2001; Osterwalder and Pigneur, 2002; Rayport and Sviokla, 1996).

According to Porter and Miller (1985, p.150), these "value activities" fall into two main areas with nine generic categories. Primary activities are those involved in the physical creation of the product, its marketing and delivery to buyers, and its support and servicing after sale. These activities include inbound logistics, operations, outbound logistics, marketing and sales, and after-sales service. Support activities provide the inputs and infrastructure that allow the primary activities to take place. They include infrastructure, human resource management, technology development, and procurement. Every activity employs purchased inputs, human resources, and a combination of technologies. Firm infrastructure, including such functions as general management, legal work and accounting, supports the entire chain. Porter and Miller (1985) explained that a company's value chain is a system of interdependent/linkage activities, which means that one performed activity affects the cost or effectiveness of other activities. Information technology is transforming the way value activities are performed and the nature of the linkages among them. The Internet is considered as the latest form of information technology. Several articles explain how the Internet affects activities of the value chain.

Afuah and Tucci (2001) explained how the Internet affects the primary activities of the value chain in several aspects. For example, the connections and two-way flow of information enabled by the Internet allow the marketing and sales functions to be in more direct contact with downstream customers and more familiar with them. This thereby makes it easier to stimulate demand from the downstream end of the channel. Shin (2001) added that by using direct access to end-customers through the Internet, a company can identify the different needs of customers in niche markets, and thereby create products or services to meet the needs of these niche markets. A company can also provide complete product or service information on-demand, which is accessible by virtually everyone on the Internet because large amounts of information can be stored, searched instantly, and disseminated in a cost-effective manner on the Internet. In addition, the ability to cover a larger geographic area and to shift in time also affects the earlier stages of the value chain. This allows a company to have a wider choice of inputs, distributed manufacturing, and remote testing. Software production, for example, can take place anywhere in the world. As the distribution

channel by itself, the Internet also affects the outbound logistics part of the value chain. Digital products

can be downloaded by customers instantaneously once payment is approved. A software company can save

the cost of disks, time, and shipping costs. The Internet also allows upstream companies like manufacturers

to bypass all intermediaries, and thus sell products/services directly to customers. Product prices, thereby,

could be lowered since a markup portion by intermediaries disappears. As a result, the customer demand

for products is increased. These instances of value creation activities capture only a few of the existing

Internet applications in today's value chain. In Table 2.6, Porter (2001) shows some of the most prominent

applications of the Internet in the primary activities of value chain.

Table 2.6: Prominent Applications of the Internet in the Primary and Support Activities of Value Chain

Primary activities	Applications
Marketing and sales	- On-line sales channels including Web sites and marketplaces - Real-time inside and outside access to customer information, product catalogs, dynamic pricing inventory availability on-line submission of quotes, and order entry - On-line product configurations - Customer-tailored marketing via customer profiling - Push advertising - Tailored on-line access - Real-time customer feedback through Web surveys, opt-in/opt-out marketing and promotion response tracking
Outbound logistics	- Real-time transaction of orders whether initiated by an end consumer, a sales person, or a channel partner - Automated customer specific agreements and contract terms - Customer and channel access to product development and delivery status - Collaborative integration with customer forecasting systems - Integrated channel management including information exchange, warranty claims, and contract management (versioning, process control)
Operations	- Integrated information exchange, scheduling and decision making in in-house plants, contract assemblers, and components suppliers - Real-time available-to-promise and capable-to-promise information available to the sales force and channels
Inbound logistics	- Real-time integrated scheduling, shipping, warehouse management, demand management and planning, and advanced planning and scheduling across the company and its suppliers - Dissemination throughout the company of real-time inbound and in-progress inventory data
After-sales service	- Online-support of customer service representatives through e-mail response management, billing integration, co-browse, chat, "call me now,", voice-over-IP, and other use of video streaming - Customer self-service via Web sites and intelligent service request processing including updates to billing and shipping profiles

Primary activities	Applications
	• Real-time field service access to customer account review, schematic review, parts availability and ordering, work-order update, and service parts management
Supporting Activities	**Applications**
Firm Infrastructure	• Web-based, distributed financial and ERP systems • Online investor relations (e.g., information dissemination, broadcast conference calls)
Human Resource Management	• Self-service personnel and benefits administration • Web-based training • Internet-based sharing and dissemination of company information • Electronic time and expense reporting
Technology Development	• Collaborative product design across locations and among multiple value-system participants • Knowledge directories accessible from all parts of the organization • Real-time access by R&D to on-line sales and service information
Procurement	• Internet-enabled demand planning; real-time available-to-promise/capable-to-promise and fulfillment • Other linkage of purchase, inventory, and forecasting systems with suppliers • Automated "requisition to pay" • Direct and indirect procurement via market places, exchanges, auctions, and buyer-seller matching

(Source: Porter, 2001, p.75)

Partner Network

With the fast changing pace of Internet environment, if a company has to acquire all necessary

resources and develop all of its business capabilities by itself, it will be left behind the competition.

Companies, however, have an option to distribute/delegate some of these connected activities to partner

networks, who possess resources and capabilities to perform particular business activities. According to

Gulati, Nohria, and Zaheer (2000), strategic partner networks refer to stable inter-organizational ties which

are strategically important to participating firms. Partner networks may take the form of strategic alliances,

joint-ventures, long-term buyers-supplier partnerships, and other ties. Warkentin, Bapna, and Sugumaran

(2000) explained further that the Internet and related technologies remove the constraints of geography,

time and space. Firms now can engage in forming real-time links with a globally dispersed based of

partners. One example of a partner network is the way a company uses third-party logistic providers like

UPS and FedEx to deliver products to customers. Most small and medium size e-commerce firms do not

have substantial IS/IT expertise and resources to run the e-commerce operation. Thus, they seek external

expertise and resources in the form of Internet Service Providers (ISPs) and Application Service Providers (ASPs) (Marshall and Mckay, 2002).

Revenue model

Chesbrough and Rosenbloom (2000, p.8-9) defined the revenue model or "architecture of the revenues" as "how a customer will pay, how much to charge, and how the value created will be apportioned between customers, the firm itself, and its suppliers." The Internet and e-commerce also creates a variety of revenue models such as fee-for-service, commission, subscription, and advertising. In addition, the Internet is an arena in which a multiplicity of payment models has arisen (Chesbrough and Rosenbloom, 2000), such as micro payment, online credit cards, and debits from checking accounts. The Internet also has had an important impact on pricing and has created a whole new range of pricing mechanisms such as auction pricing, name-your-price or reverse auction pricing, and choosing prices based on customized products. However, it is not sufficient to design the sources of revenue without the sources of profit. Some companies have only one revenue source from selling their products/services, but others might have several sources of revenues, with a larger share of their profits coming from some of these sources. For example, an online stockbrokerage firm has three sources of revenues: the commissions from the stock trades it executes for clients, the interest from clients who must borrow from the cash reserves of other clients to pay for any securities they buy on margin, and the spread between the bid and ask prices of stocks. An online stockbrokerage may decide to increase the number of its clients with large assets by charging extremely low commissions to them. More clients mean more revenues and profits from interest charges and spreads. Thus it is necessary for a company to understand the sources of profits to make better strategic decisions (Afuah and Tucci, 2001).

Competitive Strategy/Sustainable Competitive Advantage

Researchers indicate that a good business model should be embedded with competitive strategy (e.g., Chesbrough and Rosenbloom, 2001; Afuah and Tucci, 2001; Magretta, 2002). A business model tells how businesses work, but it takes one with competitive strategy to outperform rivals. The concept of competitive strategy is about being different from competitors by performing different set of activities or performing similar activities in different ways (Porter, 2000). A sound business model does not guarantee that it could compete with rivals. Unless a company establishes a difference that it can preserve, a company

will not outperform its rivals (Porter, 2000; Magretta, 2002). If a business model is about putting pieces of businesses together to make money, competitive strategy is about choosing how to differentiate itself from its rivals, assembling pieces that rivals can not easily replicate (Porter, 2000, Magretta, 2002, Afuah and Tucci, 2001). Afuah and Tucci (2001) argued that a firm's core competencies allow a company to have a competitive advantage because they allow the firm to offer customers better value than rivals. Afuah and Tucci (2001) added that core competencies may be difficult to identify and even more difficult to find out how to copy it. Even if competitors can identify competencies, it may take times for them to develop these capabilities. Magretta (2000) explained that in some cases when a business model is hard to duplicate by others, that business model acts much like a strategy. For example, Dell's direct sell business model was hard to copy by its rivals at one point. Dell's competitors tried to copy the direct sales model, but created conflicts with their existing distribution channels and their resellers. The direct model of Dell acted like a strategy because it was difficult to duplicate by competitors. Now, while everyone in its industry is selling direct and offering low-end computers to end-customers, Dell has focused on large corporate accounts by offering high-end machines like servers, which are far more profitable than PCs. The underlying business model remains the same, but the strategic choices have applied the model to different geographic markets, segments, customers, and products (Magretta, 2002). This means that business strategy is embedded within Dell's business model (Magretta, 2002).

These first eight components of e-commerce business models systematically explain how e-commerce for a particular venture works (Figure 2.2). The last component, competitive strategy, embeds in former components. Since CSFs for e-commerce are areas/functions that influence success of e-commerce, they reside within a business model. By examining the business model of an e-commerce venture, the role of formerly indicated e-commerce CSFs within the overall scheme of e-commerce business activities can be understood and whist confirmed that they are truly critical to the success of an e-commerce venture. At the same time, other CSFs that are not completely given by executives can be noticed.

Based on an e-commerce business model framework and the purpose to use it to understand the overall scheme of e-commerce business activities in order to confirm and detect CSFs, we raise the third research question as follow:

Research question 3: What is the company's e-commerce business model?

   3.1.   Who is the company's target customers and market segment?

   3.2.   What products/services and values associated with products/services that the company delivers to the customers?

   3.3   What capabilities the company needs to have/develop to deliver those products/services and promised values?

   3.4.   What resources the company uses to create and deliver products/services and promised value?

   3.5.   What are the set of connected e-commerce business activities the company performs to create products/services and promised values?

      3.5.1. What are the set of main e-commerce business activities (marketing and sales, inbound logistics, operations, outbound logistics, after-sales services) involved in delivering products/services and promised values, and how?

      3.5.2. What are the set of supporting e-commerce business activities (firm infrastructure, human resource management, R&D, procurement) involved in delivering products/services and promised values, and how?

   3.6.   Who provides the main activities needed to create value products or services?

   3.7.   What is the company's revenue model?

      3.7.1.   Where do the company's revenues come from?

      3.7.2.   Where do the company's profits come from?

   3.8.   Based on the company's e-commerce business model, what areas/functions of the business model that allows the company to outperform competitors?

Figure 2.2: E-commerce Business Model Components
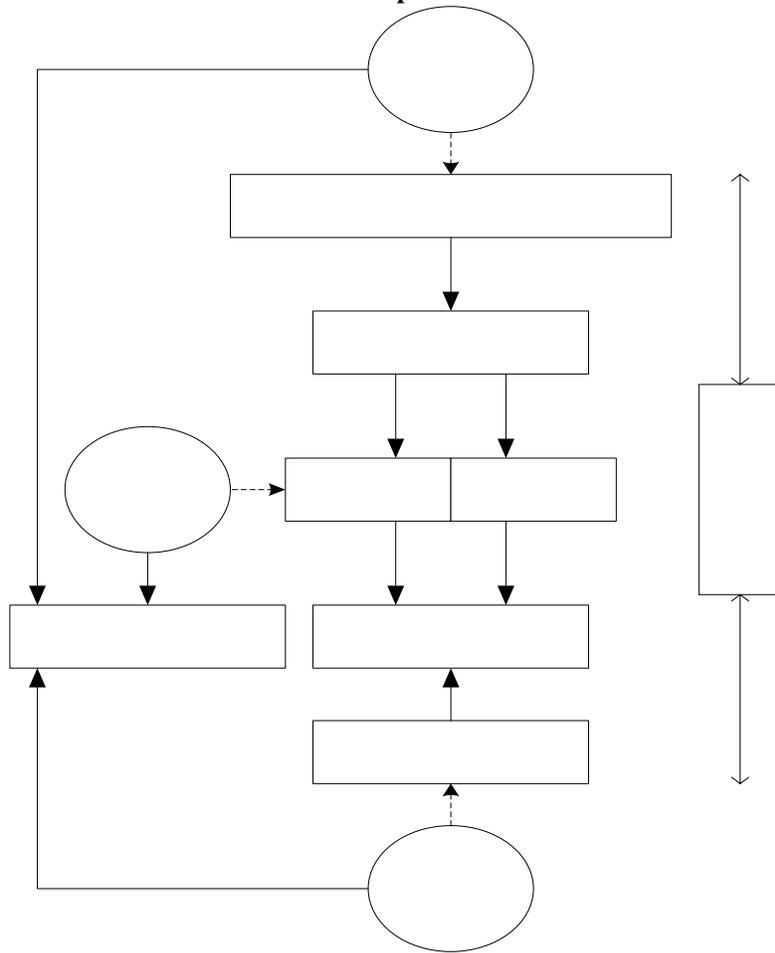
Performance Measurement

To confirm the relationship between CSFs and performance, business performance must be measured. This requires that we define what is considered as "success in e-commerce" so appropriate measures can be selected and carefully assessed. Traditionally, returns on investment and profit have been used as criteria to assess whether a business is successful or not. However, both return of investment and profit might not always be an appropriate mean to justify success of ventures in virtual world. Amazon.com, for example, is considered by a number of practitioners and academia as a successful e-commerce firm despite the fact that Amazon.com has reported minimal profits since the launch of the IPO in 1997 (Margolis, 1999). Jeff Bezos claimed that he could have juggled the books and reported profits but he does not believe this is relevant to the building of a multi-billion dollar business (Margolis, 1999). In

fact, few companies turn profits in the first few years of startup because they have to invest so much in infrastructure, logistics, and marketing (Margolis, 1999). Amazon.com, for example, continues investing 40 percent of every dollar made on its marketing (Margolis, 1999). The investment is not just one of capital but one of time. It takes time for an e-commerce venture to make profit, but it does not mean a company has not grown or improved in its business performance as a result of its e-commerce strategies. For the purpose of this research, e-commerce success is defined as the continuing growth and/or improving business performance of e-commerce. For this reason, it is necessary to be open for other indicators besides profit to justify whether an e-commerce company succeeds or not.

The literature shows several other indicators that are used to measure performance of traditional businesses in general, and e-commerce in particular. Strategic performance is traditionally measured in terms of financial and market success (Boulton, 2002). Financial performance can be measured in terms of key ratios, such as return on investment and sales, and growth in revenues (Boulton, 2002). As previously discussed, return on investments and profit are not always used to determine the success of an e-commerce firm. Amazon.com, for example, had not reached break-even (Edwards, 2002). Jeff Bezos pointed to continued sales growth as an indicator of Amazon's success (Edwards, 2002). As for the market success, market share is usually selected as a key ratio for measuring market success. Market share shows a company's ability to create and hold customers, which determines the long term success of a firm (Boulton, 2002).

Financial and market performance are traditional indicators of strategic performance success of traditional companies. Various studies have investigated e-commerce-related indicators of success. Liu and Arnett (2000) investigate website success on the basis of outcome variable such as attractiveness, dependability, reliability, trustworthiness, meeting demand and pleasing customers. O'Keefe et al. (1998) investigated success on the basis of number of hits, visits, and orders. Similar to those of O'Keefe et al. (1998), Golden (2003) investigated the degree to which the website supports the marketing and sales of an organization by assessing three measures: (1) the number of hits per week to the website (browsing), (2) sales leads generated as a result of the website (request for information), and (3) revenue generated directly from the website (purchase). Golden (2003) selected these measures since many customers initiate their

contact with a company through a website but conclude the purchase via traditional sales channels using in-store, telephone, fax, or mail order.

This study will use four measures adopted from Boulton's (2002) and Golden's (2003) – profit, sales leads generated as a result of the website, revenue generated directly from the website, and market share –to measure the success of e-commerce ventures. Since the success of an e-commerce venture in this study means continuing growth and improving of performance as a result of implementing e-commerce strategies and focusing on its CSFs, this study focuses on the growth/improvement of these measures during the years of operating e-commerce. Based on this discussion, the forth research question is raised to identify business performance of an e-commerce venture in four aspects.

Research question 4: How is the company's business performance?

    4.1.   What performance measurements the company uses to monitor is business performance?

    4.2.   How is the growth of the company's profit from the first year of operation until now?

    4.3.   How is the growth of the company's sales leads generated as a result of the website from the first year of operation until now?

    4.4.   How is the growth of the company's revenue generated directly from the website from the first year of operation until now?

    4.5.   How is the growth of the company's market share from the first year of operation until now?

<div align="center">Research Questions</div>

In order to identify the CSFs for e-commerce ventures in Thailand and understand the difference between these factors and ones found in developed countries, the following research questions will be investigated.

Research question 1: Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Research question 2: What are key requirements that all e-commerce companies must have in order to enter the industry?

2.1.   What are product/service values that customers look for in the industry?

2.2.   What are product/service values that competitors offer in the industry?

2.3.   What are the Industry regulation and standard?

2.4.   What are resources required by any e-commerce companies in the industry?

2.5.   What are technologies required by any e-commerce companies in the industry?

Research question 3: What is the company's e-commerce business model?

3.1.   Who is the company's target customers and market segment?

3.2.   What products/services and values associated with products/services that the company delivers to the customers?

3.3   What capabilities the company needs to have/develop to deliver those products/services and promised values?

3.4.   What resources the company uses to create and deliver products/services and promised value?

3.5.   What are the set of connected e-commerce business activities the company performs to create products/services and promised values?

    3.5.1. What are the set of main e-commerce business activities (marketing and sales, inbound logistics, operations, outbound logistics, after-sales services) involved in delivering products/services and promised values, and how?

    3.5.2. What are the set of supporting e-commerce business activities (firm infrastructure, human resource management, R&D, procurement) involved in delivering products/services and promised values, and how?

3.6.   Who provides the main activities needed to create value products or services?

3.7.   What is the company's revenue model?

    3.7.1. Where do the company's revenues come from?

    3.7.2. Where do the company's profits come from?

3.8.   Based on the company's e-commerce business model, what areas/functions of the business model that allows the company to outperform competitors?

Research question 4: How is the company's business performance?

    4.1.   What performance measurements the company uses to monitor is business performance? Based on those measurements, how is the company's business performance from the first year of operation until now?

    4.2.   How is the growth of the company's profit from the first year of operation until now?

    4.3.   How is the growth of the company's sales leads generated as a result of the website from the first year of operation until now?

    4.4.   How is the growth of the company's revenue generated directly from the website from the first year of operation until now?

    4.5.   How is the growth of the company's market share from the first year of operation until now?

The first research question addresses CSFs for e-commerce, regardless of industries. The second research question investigates five areas of industry requirements in order to identify key industry requirements for e-commerce. The third research question explores how the case companies address CSFs and key industry requirements for e-commerce. The last research question assesses the business performance of the case companies.

By using these questions as a basis for examining CSFs and key industry requirements for e-commerce in Thailand, the frameworks for CSFs and key industry requirements for e-commerce in Thailand are created. In addition, the best practice guidelines for addressing those CSFS and key industry requirements are developed. The research method chosen for this investigation is a case-based research methodology that has been considered appropriate for theory building (Yin, 1994), In the following chapter, the research design and methodology to be used in this study will be discussed.

CHAPTER THREE – RESEARCH DESIGN AND METHODOLOGY

The main focus of this research is to identify factors that influence the success of e-commerce in Thailand. The researcher uses four main research questions to identify critical success factors for e-commerce as follow:

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the industry?

3. What is the company's e-commerce business model?

4. How is the company's business performance?

The purpose of this chapter is to describe the methodology used to answer these questions.

Qualitative Research Design

Qualitative research design is the most appropriate for this dissertation for several reasons. First, given that the purpose of this dissertation is to investigate "what" and "how" questions, a qualitative research approach is most appropriate for this dissertation. According to Creswell (1997, p.17), the initial reason to choose qualitative study is the nature of research question:

In a qualitative study, the research question often starts with a *how* or a *what* so that initial forays into the topic describe what is going on.

Second, according to Creswell (1994, p.94),

In a qualitative study, one does not begin with a theory to test or verify. Instead, consistent with the inductive model of thinking, a theory may emerge during the data collection and analysis phase of the research or be used relatively late in the research process as a basis for comparison with other theories.

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Since the purpose of this research is to identify CSFs for e-commerce in Thailand, not to test or verify existing theory, qualitative study is certainly suitable to this study.

Third, when there is the mount of uncertainty surrounding the phenomenon under study, the less is known about the phenomenon, and, thus, the qualitative research is an appropriate methodology (Trauth, 2001). Also, in the words of Creswell (1997, p.17),

> …choose a qualitative study because the topic needs to be explored. By this, I mean that variables cannot be easily identified, theories are not available to explain behavior of participants or their population of study, and theories need to be developed.

CSFs for e-commerce studies are in the early stage of research development. Urbaczewski, Jessup, and Wheeler (2002) comprehensively assessed 172 e-commerce research articles published in a variety of leading academic journals before 1999. The review identified three major categories of e-commerce research: organizational, economic, and technical. The organizational category included twenty strategy-related research articles. Out of this number, there were only two CSF-related articles. Drew (2002) noted that the research in this area has been increasing, but leaves a lot of room for researchers to continue. When CSFs for e-commerce study applied to the context of developing country like Thailand, in which e-commerce research is totally lacking, the amount of uncertainty surrounding the subject is relatively high and needs to be explored. Thus, quantitative study is suitable to this study.

Conducting Case Study Research

According to Cresswell (1997), there are five research designs under qualitative research: a biographical life history, a phenomenology, a ground theory, an ethnography, and a case study. After examining the purpose of each research design, the researcher finds that a case study methodology is most suitable to proposed research questions of this study. According to Yin (1994, p.13), a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. Yin (1994) explains that case research studies are appropriate when contextual conditions might be highly pertinent to the phenomenon of study. In addition, Benbasat, Goldstein, and Mead (1987) state that case research study is useful when "a natural setting or a focus on contemporary events is needed" (p.372) and when research phenomena is not supported by a strong theoretical base because research and theory are at their early, formative states.

Another problem in which case research study is appropriate is "sticky, practice-based problems where the experiences of the actors are important and the context of action is critical" (Bonoma, 1983, as cited in Benbasat, Goldstein, and Mead, 1987, p. 369). Moreover, Paper (2001, para. 22) states that "Case studies make an excellent vehicle to explore state-or-the-art thinking because researchers can gain a better understanding of "how" an phenomena works and "why" it works the way it does."

The above noted characteristics of case study research are consistent with those of the e-commerce domain. According to Clarke (2000), there are several specific difficulties confronting research into electronic commerce. First, established theories are in short supply because relatively few bodies of theory provide firm foundations on which conventional specific research can be based. Second, the phenomena are highly unstable. According to Clarke (2000, p.10),

> The technologies and applications are going through rapid maturation. So too are the individuals and organizations who apply them. The period during which the results of a well-performed cross-sectional study are valid may be so short that publication is impossible before the results are outdated.

Next, cultural variation is significant due to the capability of e-commerce to transcend national boundaries. Clarke (2000) explained that there are considerable variations among national cultures due to radically different adoption rates, impacts and implications of e-commerce. Moreover, cultures often vary from country-of-origin and country-of-residence. Last, cultural boundaries are mainly ill-defined. According to Clarke (2000),

> There are serious difficulties in defining the culture within which any particular study is being undertaken, and hence in defining populations and samples, and in testing respondents and participants in order to detect their conformance or otherwise with the intended profile.

In addition, the most common qualitative method used in information systems has been identified as case method research (Orlikowski and Baroudi 1991; Alavi and Carlson 1992). According to Clarke (2000, p.2),

> Electronic commerce is a domain of study within various disciplines, importantly including the discipline of information systems. Many domains that are examined by I.S. specialists present serious challenges; but electronic commerce presents even more significant obstacles to academics seeking to undertake and present high-quality research.

Given that information systems (IS) are integral to E-commerce efforts, IS seems a natural source of research. Therefore, the case research design is appropriate to e-commerce research domain. In fact, according to Drew (2002, p.21),

> Since the growth of businesses that use the Internet as a core infrastructure is a very
>
> recent phenomenon, it is hardly surprising that much investigation in the literature to date
>
> is of an exploratory nature. Theory building has taken place at the intersection of:
>
> - Case study
>
> - Extrapolation of known characteristics of the technology to business settings (e.g.
>
>   reach, interactivity)
>
> - Extrapolation of existing theories of strategy, marketing, psychology, economics and
>
>   complex systems (e.g. network effects, increasing returns)

For these reasons, the case study research method is well-suited to the study of e-commerce. Given that the focus of this study is on CSFs for e-commerce, which is the sub-disciplines of the e-commerce domain, the case study research is, thus, suitable to the study. In addition, the subject is applied in the context of Thailand where e-commerce research is sparse. Furthermore, the cultural variation in e-commerce is significant due to radically different adoption rates, impacts and implications of e-commerce (Clarke, 2000). This creates difficulty in applying any theory or framework of e-commerce developed from developed countries to Thailand. This in turn leads to a high level of uncertainty surrounding the phenomenon of the subject, and needs to be explored. As such, the case study research method is appropriate to this study.

The case study itself has at least five different applications – explanation, description, illustration, exploration, and meta-evaluation (Yin, 1994). Yin (1994) explains that if the existing knowledge base to develop theory is poor, the available literature does not provide conceptual framework or hypotheses of note, such a knowledge base will not lend itself to the development of good theoretical statements, and any new empirical study is likely to assume the characteristic of being and "exploratory" study (p.29). Given that existing researches in the area of critical success factors for e-commerce are lacking and most has been

developed based on the success of e-commerce in developed countries, which might not be able to the phenomenon of e-commerce in Thailand, this dissertation is exploratory by nature.

Components of Case Study Research Design

Whereas the previous section dealt with the case study research methodology for this dissertation, this section will focus on the design consideration of this study. Each type of empirical research has a research design. So does the case research. According to Yin (1994, p.19),

> In the most elementary sense, the design is the logical sequence that connects the empirical data to a study's initial research questions and, ultimately, to its conclusions. Colloquially, a research design is an action plan for getting from here to there, where here may be defined as initial set of questions to be answered, and there is some set of conclusions (answers) about these questions. Between "here" and "there" may be found a number of major steps, including the collection and analysis of relevant data.

Yin (1994, p.20) explains that there are five critical components of case studies: a study's questions, its propositions, if any, its unit(s) of analysis, the logic linking the data to the propositions, and the criteria for interpreting the findings.

Research questions.

Yin (1994) explains that the form of question provides an important clue about the most relevant research strategy to be used. "The case study strategy is most likely to be appropriate for 'how' and 'why' questions," according to Yin (1994, p.20-21). However, in some situation where the "what" is an exploratory type of question, the "what" question is also suited to case study research. According to Yin (1994, p.7), the "'what" questions may either be exploratory… or about prevalence."

The researcher used investigatory questions to identify a strategic overview of the critical success factors for e-commerce in Thailand. These preliminary questions were used as a foundation and as context for the following general research questions of this dissertation:

1. Regardless of industries, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

2. What are key requirements that any e-commerce companies must have in order to enter the industry?

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3. What is the company's e-commerce business model?

4. How is the company's business performance?

Each question consists of several more specific sub-questions. A review of the focus and intent of each question and its sub-questions are as follows:

Research Question 1: Regardless of industries, what are the critical success factors relevant to companies engaged in e-commerce in Thailand? The intent of the first research question is to identify the common CSFs for e-commerce relevant to companies engaging in e-commerce in Thailand. The literature review on CSFs for e-commerce is based on the success of e-commerce in developed countries. Such CSFs serve as the foundation of understanding for the researcher when the researcher investigated CSFs for e-commerce in Thailand. Therefore, this research question is meant to be asked in an open-end fashion. The researcher asked this question to management positions (e.g. owners, CEO, or e-commerce managers) who closely engage in e-commerce in each organization across the cases (industries). To ensure that such CSFs for e-commerce can be generalized and applied beyond the immediate case study, those CSFs were reviewed and confirmed by industry outsiders or the panel of e-commerce experts in Thailand.

Research question 2: What are key requirements that any e-commerce companies must have in order to enter the industry? The main focus of the second research question is to identify factors that influence the success of e-commerce in a particular industry or key industry requirements for e-commerce. The sub-questions are as follow:

2.1. What are product/service values that customers look for in the industry?

2.2. What are product/service values that competitors offer in the industry?

2.3. What are the Industry regulation and standard?

2.4. What are resources required by any e-commerce companies in the industry?

2.5. What are technologies required by any e-commerce companies in the industry?

Following Rockart's (1976) discussion of CSFs, one of the sources of CSFs for a company is its industry. Each industry has its own requirements that companies must meet in order to successfully operate. Thus, in order to understand what makes an e-commerce company succeeds within its industry, it is necessary to understand its industry requirements. According to Boulton (2002), there are five main areas of industry requirements: customer requirements, competitive requirements, regulations/industry standards, resource

requirements, and higher level technical requirement. The intent of question 2.1 is to identify industry

requirements that are influenced by customers' expectation in product/service values. Values can be related

to performance, durability, special features or fashion, ease of use, or availability (Boulton, 2002). The

intent of the question 2.2 is to identify industry requirements that are influenced by competition.

Competition always addresses price, quality, and delivery (Boulton, 2002). The intent of question 2.3 is to

identify industry regulations or standards. Industry regulations or standards often set the minimum

requirements for companies participating in the same industry. Industry standard, for example, may

determine technical capability, process performance, and interface issues for network or system products.

The intent of question 2.4 is to identify resource requirements of an industry, such as capital investment and

facilities. The intent of question 2.5 is to identify technical requirements of an industry. Technical

requirements are company internal technical capabilities that allow companies to participate in many

business activities and often stay competitive over their competitors. The researcher asked the second

research question to management positions (e.g. owners, CEO, or e-commerce managers) closely engaging

in e-commerce activities within each case company.

Research question 3: What is the company's e-commerce business model? The focus of the forth

research question is understand how a case company addresses CSFs and key industry requirements for e-

commerce. The e-commerce business model is selected as the framework to investigate the overall

company's e-commerce activities. The sub-questions are as follow:

3.1.   Who are the company's target customers and market segment?

3.2.   What products/services and values associated with products/services that the company

delivers to the customers?

3.3   What capabilities the company needs to have/develop to deliver those products/services

and promised values?

3.4.   What resources the company uses to create and deliver products/services and promised

value?

3.5.   What are the set of connected e-commerce business activities the company performs to

create products/services and promised values?

3.5.1.   What are the set of main e-commerce business activities (marketing and sales, inbound logistics, operations, outbound logistics, after-sales services) involved in delivering products/services and promised values, and how?

3.5.2.   What are the set of supporting e-commerce business activities (firm infrastructure, human resource management, R&D, procurement) involved in delivering products/services and promised values, and how?

3.6.   Who provides the main activities needed to create value products or services?

3.7.   What is the company's revenue model?

3.7.1.   Where do the company's revenues come from?

3.7.2.   Where do the company's profits come from?

3.8.   Based on the company's e-commerce business model, what areas/functions of the business model that allows the company to outperform competitors?

The sub-questions attempt to address eight components of an e-commerce business model, which are online market segment, value propositions, capabilities and resources, value chain activities, network partners, and revenue model, and competitive strategies. The intent of question 4.1 is to identify the company's targeted customers. The intent of question 4.2 is to identify the company's product/service value required by the company's target customers. The intent of question 4.3 and 4.4 is to identify necessary capabilities and resources required to deliver that product/service value to target customers. The intent of question 4.5 is to identify the value-chain activities used to deliver the company's product/service value to targeted customers. The value-chain activities composed of main value chain activities and supporting value-chain activities (Porter, 2001). The intent of question 4.5.1 is to identify the main value-chain activities. The main value-chain activities usually include marketing and sales, inbound logistic, operation, outbound logistic, and after-sales service (Porter, 2001). The intent of question 4.5.2 is to identify supporting value-chain activities. Supporting value-chain activities usually include firm infrastructure, human resource management, R&D, and procurement. The intent of question 4.6 is to identify value-chain activities that are delegated to business partners. The intent of question 4.7 is to identify the revenue sources of the company's e-commerce business model. The question 4.7.1 and 4.7.2 try to identify the revenue sources and the sources of profit. The e-commerce company can have several

sources of revenues such as end-customers, suppliers, and partners, but the profit sources might come from

partners. The question 4.8 focuses on competitive strategies of the company by identifying activities that

allow the company to have competitive advantage over its rivals. Since the essence of strategy is to be

different from competitors, activities that allow the company to compete with its rivals could verify the

company's competitive strategies. The researcher asked the forth research question to ask top management

positions (e.g. owners, CEO, or e-commerce managers) closely engaging in e-commerce activities within

each case company.

Research question 4. The focus of the last research question is to measure the performance of the

e-commerce company. The sub-questions are as follows:

4.1.   What performance measurements the company uses to monitor is business performance?

4.2.   How is the growth of the company's profit from the first year of operation until now?

4.3.   How is the growth of the company's sales leads generated as a result of the website from
        the first year of operation until now?

4.4.   How is the growth of the company's revenue generated directly from the website from
        the first year of operation until now?

4.5.   How is the growth of the company's market share from the first year of operation until
        now?

In this study, four performance measurements adopted from Boulton's (2002) and Golden's

(2003) – profit, sales leads generated as a result of the website, revenue generated directly from the

website, and market share – are used to measure the success of a case company. For the purpose of this

study, the success of an e-commerce venture in this study means continuing growth and improving of

performance as a result of implementing e-commerce strategies and focusing on its critical success factors.

Thus, each measurement is used to investigate the growth/improvement during years of operation of a case

company. Even though this study chooses four items to measure the performance of the company, a case

company might not use the same measurement in monitoring its business performance. Thus, the question

4.1 intends to identify performance measurements that a case company uses to measure its business

performance, and the performance of the company from the first year of its operation until now based on

those measurements. The question 4.2 intends to identify the growth of a case company's profit from the

first year of operation until now. For bricks-and-clicks e-commerce, e-commerce might lead sales to not

only the Internet channel, but also the traditional channels. Thus, the question 4.3 intends to identify the

growth of a case company's sales leads generated as a result of the website from the first year of operation

until now. The question 4.4 intends to identify revenue generated directly from the website from the first

year of operation until now. The research question 4.5 intends to identify the growth of the company's

market share from the first year of operation until now. The researcher asked the last research question to

ask top management positions (e.g. owners, CEO, or e-commerce managers) closely engaging in e-

commerce activities within each case company.

Study propositions.

The second component of research design is the study proposition. According to Yin (1994, p.21),

"proposition directs attention to something that should be examined within the scope of the study." Given

that CSFs for e-commerce found in literatures are from successful e-commerce ventures in developed

countries, these CSFs might not be the same as ones found in Thailand. As such, the proposition of this

research is that CSFs for e-commerce may be found to be different in Thailand.

Unit(s) of analysis.

The next component of a research design is the unit(s) of analysis. According to Yin (1994), "As a

general guideline, the definition of the unit of analysis (and there for of the case) is related to the way the

initial research questions have been defined" (p.21) and "Selection of the appropriate unit of analysis

results from your accurately specifying the primary research questions" (p.23). The research questions

address CSFs for e-commerce ventures in Thailand. As such, the sample selection criterion is Thai

companies that implement e-commerce. The specific unit of analysis is management levels of Thai

companies, such as owners, CEO, and e-commerce managers, tied directly to e-commerce strategies and

their implementation. In addition, some of these management levels of Thai companies referred other

important personnel who work/involve in critical areas of their e-commerce. In such case, this study

included those personnel to be part of the unit of analysis of this study.

The logic linking the data to the propositions, and the criteria for interpreting the findings.

Yin (1994, p.25) explains that the forth and fifth components of the case study research design

represent the data analysis steps in case study and they have been the least well developed.

For the logic linking the data to the proposition, the approach to be taken in this research is to identify (1) CSFs for e-commerce in Thailand, regardless of industries, and difference between the findings and those in developed countries, (2) key requirements for e-commerce within a particular industry, (3) the company's e-commerce business model, and (4) the evaluation of e-commerce success of the case company.

For the criteria for interpreting the findings, Benbasat, Goldstein, and Mead (1987) explain that case data analysis depends heavily on researchers' integrative power. They suggest that multiple methods of data collection provide the opportunity for triangulation (interviews, documents, websites, archival records, etc.) and can lend greater support to conclusions. As such, this dissertation uses multiple methods of data collection from interviews, archival records, documents, to the companies' web sites. To interpret the findings, this study analyzes within-case data and cross-case data to find the emerging patterns from each case and across cases. The within-case data analysis and cross-case data analysis are discussed in detail in the data analysis strategies section.

<div align="center">Conducting Research</div>

The focus of this section is the conduct of the actual research. In the following paragraphs, the researcher outlines the research approach as it was conceived, developed, and conducted. The "phases" of the research are reported in a linear manner, but it needs to understand that the nature of case study research is iterative, which means that many of elements of this research were changed, altered, and changed again as more and more was known about the subject being researched.

Phase I: Theory Development

According to Yin (1994, p.27), "for case studies, theory development…is essential, whether the ensuing case study's purpose is to develop or to test theory." In addition, Yin (1994, p.30) states that, "Theory development does not only facilitate the data collection phase of the ensuing case study. The appropriately developed theory also is the level at which the generalization of the case study results will occur" (1994, p. 30). Yin (1994) described that the method of generalization is ""analytic generalization," in which a previously developed theory is used as a template with which to compare the empirical results of the case study" (1994, p. 31). In addition, Creswell (1994, p. 94-95) state that

In a qualitative study, one does not begin with a theory to test or verify. Instead, consistent with the inductive model of thinking, a theory may emerge during the data collection and analysis phase of the research or be used relatively late in the research process as a basis for comparison of other theories.

To develop the theory underlying this research, the following actions were taken.

Initial expert interviews.

The primary reason for initial expert interviews was to gain not only perspectives on e-commerce in Thailand, but also suggestions for a productive research focus. These interviews were conducted with experts and academics who are closely involved in e-commerce in Thailand. The expert interviewees included the Director of Electronic Commerce Resource Center of National Electronics and Computer Technology Center, Associate Director and Faculty of Commerce and Accountancy of Thammasat University, E-business Consultant Manager of Thai Electronic Commerce Services Co., LTD., Managing partner and COO of Thailand.com, Assistant Vice President, Business Development & Marketing of Thailand.com, and Managing Director of Veloshopping.com. The interviews and personal contacts were primarily in the form of unstructured interviews. This approach is appropriate to the exploratory nature of the research.

Literature review.

According to Creswell (1994), in qualitative research,

The literature should be used inductively so that it does not direct the questions asked by the researcher. One of the chief reasons for conducting a study is that the study is exploratory; not much has been written about the topic or population being studied, and the researcher seeks to listen to informants and to build a picture based on their ideas.

In this research, the literature was used to guide a research direction and as framework for the research questions. Besides the knowledge gained through the literature review, a general research direction was decided upon the initial expert interviews and personal contacts.

Use of existing theory.

Given the results of the initial expert interviews and the knowledge gained through the initial literature review, a general research direction was decided upon. Given that the majority of e-commerce in

Thailand has been struggle in conducting e-commerce business but some have successfully conducted e-commerce businesses that are suitable for their business environment, the researcher decided to focus on factors that influence the success of e-commerce ventures in Thailand. This led to a further investigation of the literature for CSFs for e-commerce in developed countries that provided the foundation of understanding for the researcher when the researcher investigated CSFs for e-commerce in Thailand.

Phase II: Characteristics of the Research Design

Yin (1994) describes that the primary difference in designing case studies is between single and multiple-case designs. According to Benbasat, Goldstein and Mead, "Multiple case designs are desirable when the intent of the research is description, theory building, or theory testing." (1987, p. 373) Yin explained that a research design that generates "evidence from multiple cases is often considered more compelling, and makes the overall study… more robust" (Herriot & Firestone 1983, as cited by Yin 1994, p. 45). This research will employ multiple case studies. For the purpose of this research, a broad range of cases was selected to adequately cover the investigation in each of the e-commerce companies in Thailand.

Eisenhardt (1989) argues that random selection is neither necessary nor even preferable due to the fact that the goal of theoretical sampling is to choose cases, which are likely to replicate or extend emergent theory. According to Yin, "each case in a multiple-case study must be carefully selected so that it either (a) predicts similar results (a literal replication) or (b) produces contrasting results for predictable reasons (a theoretical replication)" (1994, p. 46). However, multiple-case study yields general research result (Benbasat, Goldstein and Mead, 1987).

This study focuses on for-profit e-commerce ventures in Thailand. To ensure that CSFs identified from this study represents CSFs from variety of e-commerce ventures from different industries in Thailand, this study used the following 2x2 matrix to guide the researcher to select successful Thai e-commerce ventures based on its business focus and business format (Figure 3.1). Business focus represents whether the organization's primary customer is the end customer (business-to-customer, or B2C) or other businesses (business-to-business, or B2B). A case company will be considered as a B2C if its main sale revenue source comes from end-customers. A case company will be considered as a B2B if its main sale source comes from business customers. Business format represents whether a company uses a traditional-dominated channel format or an online-dominated channel format. A case company will be considered as a

traditional-dominated channel format if its main revenue source comes from a non-Internet channel. A

case company will be considered as an online-dominated channel format if its main revenue source comes

from an Internet channel. The researcher asked the expert panel to select at least two companies they

considered as successful e-commerce in each quadrant of the matrix. As a result, this study has nine case

companies.

Figure 3.1: 2X2 Matrix

These nine case companies are:

1. Thaigems.com – Online jewelry industry

2. HotelThailand.com – Online tourism industry

3. Tohome.com – Retail industry

4. ThaiTicketMaster.com – Ticket distribution industry

5. Naiin.com – Online bookstore industry

6. Siam Cement – Cement and building material distribution industry

7. Pantavanij – Electronic marketplace industry

8. Officemate – Stationary industry

9. Value System – IT distribution industry

Phase III: Case Study Research Design Quality

Yin (1994) explains that the quality of any given research design can be judged according to

certain logical tests. There are four logical tests that have been commonly used to establish the quality of

any empirical social research, including case studies. These four logical tests are construct validity, internal

validity, external validity, and reliability. The internal validity, which is the tactic that establishes a casual

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relationship as distinguished from a spurious relationship, is for explanatory or casual studies only, and not for descriptive or exploratory studies (Yin, 1994). As such, the following section explains the other three tests based on the summarization of Kider and Judd (1986, p.26-29, as cited in Yin, 1994).

Construct validity.

The intent of construct validity test is to establish correct operational measures for the concepts being studied. Yin (1994) suggests three tactics to increase construct validity: (1) using triangulation or multiple sources of evidence, (2) creating a case study database, and (3) maintaining a chain of evidence. As for the triangulation or the rationale for using multiple sources of evidence, this dissertation uses multiple sources of data including semi-structured interviews, field notes, archival records, organization documents, and direct observation through company's web site. According to Yin (1994, p.92), "The use of multiple sources of evidence in case studies allows an investigator to address a broader range of historical, attitudinal, and behavioral issues." Any findings or conclusion in a case study based on several different sources of information is likely to be much more convincing and accurate (Yin, 1994).

As for a case study database, which is the tactic that has to do with the way of organizing and documenting the data collected for case studies, the researcher organizes case study notes and documents including the interview-digital files, transcribed notes, field notes, and organization digital documents into four main microcomputer folders. These four microcomputer folders are organized based on four different business-focus and business-format cases (e.g. online-dominated channel and B2C folder, traditional-dominated channel and B2B folder). Each microcomputer folder contains two different case folders. As for the physical organization documents, they are organized in the same way as digital folders. In this manner, the researcher can easily maintain and organize database of case studies that can be easily accessed, compared, and analyzed. As for a chain of evidence, the tactic that increases the reliability of the information in a case study, the researcher had all interviewees to review and approve interview transcripts, and had key interviewees approve a draft of the case study report.

External validity.

The intent of external validity test is to establish the domain to which a study's findings can be generalized beyond the immediate case study. Yin (1994, p.36) states that,

"A theory must be tested through replications of the findings in a second or even a third neighborhood, where the theory has specified that the same results should occur. Once such replication has been made, the results must be accepted for a much larger number or similar neighborhoods, even though further replications have not been performed."

Since this dissertation uses a multiple-case study design, it uses this replication logic as the vehicle for establishing external validity. Given that all the cases are companies that conduct successful e-commerce business in Thailand, the replication logic across cases is applicable. The researcher asked each research question to similar management positions who closely engage in e-commerce activities across the cases. However, the first research question tries to identify the CSFs for e-commerce regardless of industries. To ensure that these identified factors are not industry-specific and can be generalized beyond the immediate case study, those CSFs for e-commerce were reviewed and confirmed by the panel of experts of e-commerce in Thailand.

Reliability.

The intent of reliability is to ensure that the operations of a study can be repeated, with the same results. The goal of reliability is to minimize the errors and biases in a study. To accomplish this objective, the researcher tries to create clear and as many procedures/steps of the research approach as operational as possible so the procedures/steps could be repeated with the same results.

Roles of the Researcher and Research Limitations

Creswell (1994) explains that since qualitative research is interpretative research, the biases, values, and judgment of the researcher become stated explicitly in the research report. According to Locke, Spirduso, and Silverman (1987), "the investigator's contribution to the research setting can be useful and positive rather than detrimental" (as cited in Creswell, 1994). Even though the researcher is from Thailand, perceptions of e-commerce in Thailand have not been shaped by personal experience. Since 1997, the researcher has lived in the US, missing the recent rise of e-commerce in Thailand. While lacking exposure to the e-commerce situation in Thailand, the researcher had worked in the business field in Thailand before coming to the US, thereby gaining an understanding the business culture and environment in Thailand in general. Due to this experience, the researcher may bring certain biases to this study.

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Another limitation to this study is that only one researcher is involved in this study, limiting the findings that might evolve based on multiple investigators. According to Eisenhardt (1989), multiple investigators can enhance the creative potential of studies and confidence in the findings as a result of convergence between investigators.

Conduct of Research

Pilot Study

The objective of a pilot study is to help researchers refine their data collection plans with respect to both the content of the data and the procedures to be followed (Yin, 1994). In addition, the pilot study helps researchers to develop relevant lines of research questions and provide some conceptual clarification for the research design (Yin, 1994). For this dissertation, the researcher selected the pilot study based on convenience and access. According to Yin (1994, p.75), "The inquiry for the pilot case can be much broader and less focused than the ultimate data collection plan." The researcher found that the conversation during the interview process of the pilot study always lead in unexpected directions, and did not flow in the logical order of planned questions, but surprisingly covered additional and valuable information. Besides the interview, the researcher also made on-site observation of the company's operations. This information helped the researcher to not only prove the viability of the research topic, but also adjust the research questions and research design. Yin (2994, p.75) states that

> This information was used in parallel with an ongoing review of relevant literature, so that the final research design was informed both by prevailing theories and by a fresh set of empirical observations. The dual sources of information help to ensure that the study to be done reflected significant theoretical or policy issues as well as questions relevant to contemporary cases.

The Case Study Protocol for Data Collection Planning

According to Yin (1994), a case study protocol is essential under all circumstances, especially if a multiple-case design is used because the protocol contains the instrument and the procedures and general rules that should be followed in using the instrument. For data collection planning, the protocol helps increase the reliability of the case study (Yin, 1994). According to Yin (1994, p.64-65), the protocol should cover the following four sections:

- An overview of the case study project (project objectives and auspices, case study issues, and relevant readings about the topic being investigated)

- Field procedures (credentials and access to the case study sites, general sources of information, and procedural reminders)

- Case study questions (the specific questions that the case study investigator must keep in mind in collecting data, and the potential sources of information for answering each question)

- A guide for the case study report (outline, format for the narrative, and specification of any bibliographical information and other documentation)

This dissertation follows this protocol for data collecting planning. First, the overview of the case study project should cover the background information about the project, the substantive issues being investigated, and the relevant readings about the issues (Yin, 1994). For this dissertation, the overview of the case, the initial expert interviews, in-depth literature review, and the pilot study were made to create the boundaries for study and clarify specific research objective. Second, the field procedures of the protocol need to emphasize the major tasks in collecting data. The field procedures for this dissertation involve gaining access to the selected organizations through the expert panel, making contact to organizations and interviewees, submitting research questions to key interviewees, scheduling interview dates and times, and explaining the interviewing process to interviewees. Third, a set of case study questions reflecting the actual inquiry is at the heart of the protocol (Yin, 1994). For this study, each research question was created during preparation of the literature review and adjusted after the pilot study. Each research question reminds the researcher of what information needs to be collected, and why. In addition, all research questions remind the researcher what main purpose of these questions to keep the researcher on track as data collection proceeds.

Besides the information planned to be collected from the interviewees, data related to the organization such as company profiles and public news about the company will be collected from the company, the company's web site, newspaper, and magazines. This preparation helps the researcher to familiarize and understand the business of the company in general during the interview process. This preparation also helps the researcher to find out what remaining information that needs to be collected from

the company when the researcher visits the company. Last, the format/outline of the case study report provides the template for researchers to collect all necessary data items. For this study, the tentative format of the case study report includes organization profile (i.e., history, organization structure, number of employees), CSFs for e-commerce, key industry requirements for e-commerce, the company's e-commerce business model, and business performance.

Data collection techniques.

This study uses several data collection techniques including interviews, field notes, organization documents, published documents, and archival records. According to Yin (1994, p.84), "One of the most important sources of case study is the interview…Most commonly, case study interviews are of an open-ended nature, in which you can ask key respondents for the facts of a matter as well as for the respondents' opinions about events." For this study, the research questions are open-ended questions, which allows interviewees to answer based on fact, opinions, and insights. Open-ended questions also give flexibility for interviewees to address other issues they might feel related to the questions.

The first research question asked interviewees about the CSFs for e-commerce in Thailand, regardless of industries. The relevance and accuracy of information is totally relied on the ability of interviewees to respond with CSFs that are correct, complete, and sufficient. By using open-ended method, information from interviewees can be too overwhelmed. It is also possible that interviewees may not be able to give sufficient or relevant information at that moment. In either case, the researcher thus asked interviewee to verify top three CSFs for e-commerce in Thailand. This allowed interviewees to select CSFs that they feel the most important factors, and the same time, the information would not be too overwhelmed to analyze. After interviewees selected CSFs for e-commerce, the researcher asked the reason behind their selection. This way allows the researcher to ensure that interviewees give the relevant and accurate information. In addition, in the case that interviewees have difficult time to select CSFs for e-commerce at the moment, the researcher showed interviewees the list of CSFs for e-commerce identified in the literature (Table 3.1), and explained to them the meaning behind each factors. This method allows interviewees to be reminded what are the most CSFs for e-commerce in Thailand. However, the researcher used this method only when the researcher found that interviewees had difficulty to answer the question.

The researcher used a digital recorder to record the interview conversation. Using a recorder allows the interview process to be smoother because the researcher can focus on answers of interviewees without having to take note during the conversation. The researcher transcribed and returned it to each individual interviewee for their review and approval for use. During the interview process, the researcher also took field notes to capture the key aspects of information, observation, comment, and impression. According to Eisenhardt (1989, p.538), field notes could be described as a "running commentary to oneself and/or research tem." Other sources of information are in the form of organization documents, published documents, websites, and archival records. Organization documents include internal documents like published reports and advertising. Published documents include news and articles about the company's e-commerce in magazines and newspapers. The researcher also collected information from the company's website such as product lines, mission statement, and customers' testimony.

Table 3.1: List of CSFs for E-commerce

CSFs for E-commerce (Literatures)	CSFs for E-commerce in Thailand
Strategic business planning	
Target market - Geographic market segmentation - Niche focusing	
Convenient website - Value-added content	
Technology-related factors - Speed - Flexibility and scalability - Security	
Marketing and Sales - Product - Price competition - Brand name/website promotion - Sales force role	
Customer relationship management	
Order fulfillment	
Resource-management-related factors - Qualified human resources - Financial control	
Outsourcing/Partnership/Alliance	
Information/product/service-flow improvement-related factors - Inter-organization flow - Intra-organization flow	
Management-related factors - Domain knowledge	

CSFs for E-commerce (Literatures)	CSFs for E-commerce in Thailand
- Commitment	
Trust	
First mover advantage	

Data analysis strategies.

Eisenhardt (1989, p.539) states that "Analyzing data is the heart of building theory from case studies, but it is both the most difficult and the least codified part of the process." Also, according to Yin (1994, p.102), the analysis of case study evidence is "one of the least developed and most difficult aspect of doing case studies." However, Eisenhardt (1989) identified two key steps of analysis: analyzing within-case data and searching for cross-case patterns. As for the within-case analysis, the importance of this analysis step is driven by one the realities of case study research a staggering volume of data (Eisenhardt, 1989). Eisenhardt (1989) explains that since the research problem is often open-ended, the volume of data is overwhelmed. The heart of the with-in case analysis is to become intimately familiar with each case as a stand-alone entity (Eisenhardt, 1989). Eisenhardt (1989) argues that for each case within-case analysis usually involves detailed pure-description case study write-ups, which are central to the generation of insight. This rich familiarity with each case study allows the unique patterns of each case to emerge (Eisenhardt, 1989).

As for the cross-case analysis, the analysis is driven by the reality that people are poor processors of information (Eisenhardt, 1989). Due to this limitation, people often leap to conclusions based on limited data, are influenced by the vividness, ignore basic statistical properties, and sometimes drop disconfirming evidence (Eisenhardt, 1989). Eisenhardt (1989) argues that cross-case analysis can counteract these problems by looking at the data in many divergent ways.

Eisenhardt (1989) suggested several tactics for within-case and cross-case analysis. The one that was adopted by this study is to select categories or dimensions, and then to look for with-in group similarities coupled with intergroup differences. According to Eisenhardt (1989, p.540), "Dimensions can be suggested by the research problem or by existing literature, or the researcher can simply choose some dimensions." Eisenhardt (1989) suggested that a 2 by 2 or other cell design can be used to compare several categories at once.

The 2x2 matrix (Figure 3.1) used by this study to select e-commerce ventures is fit to Eisenhardt's suggestion. The 2x2 matrix divides nine cases into business focus dimension and business format dimension. Business focus represents whether the case company's primary source of sale revenue comes from end customers (business-to-customer, or B2C) or business customers (business-to-business, or B2B). Business format represents whether the case company's source of sale revenue comes from the Internet channel (online-dominated channel) or a non-Internet channel (traditional-dominated channel). For within-case analysis, the researcher analyzed each case based on the identified CSFs. For cross-case analysis, the researcher tried to identify patterns of CSFs across quadrants of a 2x2 matrix.

Conclusion

This chapter addressed the research design and methodology issues for this dissertation. It discussed the status of the e-commerce research domain and the critical success factors for e-commerce, which is a sub-research under e-commerce domain. It addressed the appropriateness of qualitative research approach with the e-commerce research domain. It also addressed three main research questions. In later sections, this chapter discussed the data collection plan and data analysis approach. The next chapter will discuss the results of the pilot case following four main research questions step by step as follow:

Research question 1: Regardless of industries, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Research question 2: What are key requirements that any e-commerce companies must have in order to enter the industry?

2.1. What are product/service values that customers look for in the industry?

2.2. What are product/service values that competitors offer in the industry?

2.3. What are the Industry regulation and standard?

2.4. What are resources required by any e-commerce companies in the industry?

2.5. What are technologies required by any e-commerce companies in the industry?

Research question 3: What is the company's e-commerce business model?

    3.1.   Who is the company's target customers and market segment?

    3.2.   What products/services and values associated with products/services that the company delivers to the customers?

    3.3   What capabilities the company needs to have/develop to deliver those products/services and promised values?

    3.4.   What resources the company uses to create and deliver products/services and promised value?

    3.5.   What are the set of connected e-commerce business activities the company performs to create products/services and promised values?

          3.5.1.   What are the set of main e-commerce business activities (marketing and sales, inbound logistics, operations, outbound logistics, after-sales services) involved in delivering products/services and promised values, and how?

          3.5.2.   What are the set of supporting e-commerce business activities (firm infrastructure, human resource management, R&D, procurement) involved in delivering products/services and promised values, and how?

    3.6.   Who provides the main activities needed to create value products or services?

    3.7.   What is the company's revenue model?

          3.7.1.   Where do the company's revenues come from?

          3.7.2.   Where do the company's profits come from?

    3.8.   Based on the company's e-commerce business model, what areas/functions of the business model that allows the company to outperform competitors?

Research question 4: How is the company's business performance?

    4.1.   What performance measurements the company uses to monitor is business performance? Based on those measurements, how is the company's business performance from the first year of operation until now?

    4.2.   How is the growth of the company's profit from the first year of operation until now?

4.3.   How is the growth of the company's sales leads generated as a result of the website from the first year of operation until now?

4.4.   How is the growth of the company's revenue generated directly from the website from the first year of operation until now?

4.5.   How is the growth of the company's market share from the first year of operation until now?

CHAPTER FOUR – HOTELTHAILAND.COM[1]

The main focus of this research is to identify factors that influence the success of e-commerce in Thailand. After describing HotelThailand.com's business profile and history, the four research questions for HotelThailand.com are discussed:

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies engaged in e-commerce in Thailand?

2. What are key requirements that all e-commerce companies must have in order to enter the online tourism industry?

3. What is HotelThailand.com's e-commerce business model?

4. How is HotelThailand.com's business performance?

HotelThailand.com's Business Profile and History

HotelThailand.com is the first online tourism website owned by Thais that provides an in-depth, searchable, up-to-the-minute, information source on hotels and resorts in Thailand. HotelThailand.com is one of very few online hotel/resort reservation websites in Thailand that still keep growing, while many others have closed their online businesses due to competition. e-Business Alliance has been authorized as the hotel reservation agent by the Tourism Authority of Thailand (TAT) with the TAT license number 11/2252. With the business slogan "Dream Holiday at a Click", HotelThailand.com aims to be a "one-stop-shopping" online travel agency that offers variety of traveling-related services ranging from hotel/resort reservations to packaged tours to domestic and international air-ticketing, and airport pickup and car rental. Prospective travelers can search more than 1,000 hotels/resorts across Thailand to find the best combination of quality and price to fit their needs, interests, and budget.

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[1] Information for this case, except where stated otherwise, is based on interviews conducted October 15, 2002, at HotelThailand.com and on phone interviews conducted July 5, 12, 13, 15-16, 2003.

HotelThailand.com was established in late 1998 by Chatchai Thaweedej and his business partner. Despite having background as a lawyer, Thaweedej had been interested in the Internet and e-commerce. In 1994, his Singaporean friend, the former owner of AsiaTravel.com, asked Thaweedej to work for AsiaTravel.com by overseeing the Thailand market. Back then the business model of AsiaTravel.com was a basic online agent that simply provided information about hotels/resorts and allowed perspective travelers to make online reservation. In 1998, Thaweedej and a few employees left AsiaTravel to start HotelThailand.com under the company name e-Business Alliance Co., Ltd. ("*HotelThailand.com's Members*", 2002).

HotelThailand.com's initial business model was an online agent like AsiaTravel.com. HotelThailand.com was authorized by hotels/resorts to provide hotel/resort information including room rates and availability. The room reservation process was conducted by HotelThailand.com through fax, and customers paid hotels/resorts directly after arriving at their hotels/resorts. As an online agent, HotelThailand.com had no control over room rates, room availability, or any promotional programs. Its only income came from a 10 percent commission fee received from the hotels/resorts after customers checked in.

In 1999, the business model began to change from an online agent to an online travel agency due to the increasing competition. As an online travel agent, HotelThailand.com signs contracts with hotels/resorts for guaranteed room quotas and fixed room rates. As of 2003, HotelThailand.com had more than 1,000 hotels/resorts all over Thailand on its website. At least 400 hotels/resorts were four or five-star hotels. Reservations and transactions were now created and completed by HotelThailand.com, not by the hotels/resorts. HotelThailand.com's primary income stream was generated directly from customers' prepaid reservations. This allowed HotelThailand.com more flexibility in and control over its prices, marketing and promotional programs.

In late 1999, when online reservation and online payments were introduced, HotelThailand.com began introducing other travel-related services such as sight seeing packaged tours, air-port pickup services, international/domestic air-ticketing, and car rentals. HotelThailand.com outsourced these services to tour operators, car rental firms, air-port pick up companies, and air ticket wholesalers. It also began to provide Thai language for Thai customers. In late 2000, its secured online payment was implemented.

In late 2002, HotelThailand.com began to provide online hotels/resorts reservations and packaged tours in several Asian countries and only hotels/resorts reservations in several countries in Europe and the US. In the same year, the e-Business Alliance established a new office in the Philippines named e-Business Online Alliance Philippines Inc. While the Thailand office oversaw services in most countries, the Philippines' office oversaw service in the Philippines and Bali. Figure 4.1 showed HotelThailand.com's the domain names for its geographical locations/market segments.

Figure 4.1: Different Domain Names Used By HotelThailand.com
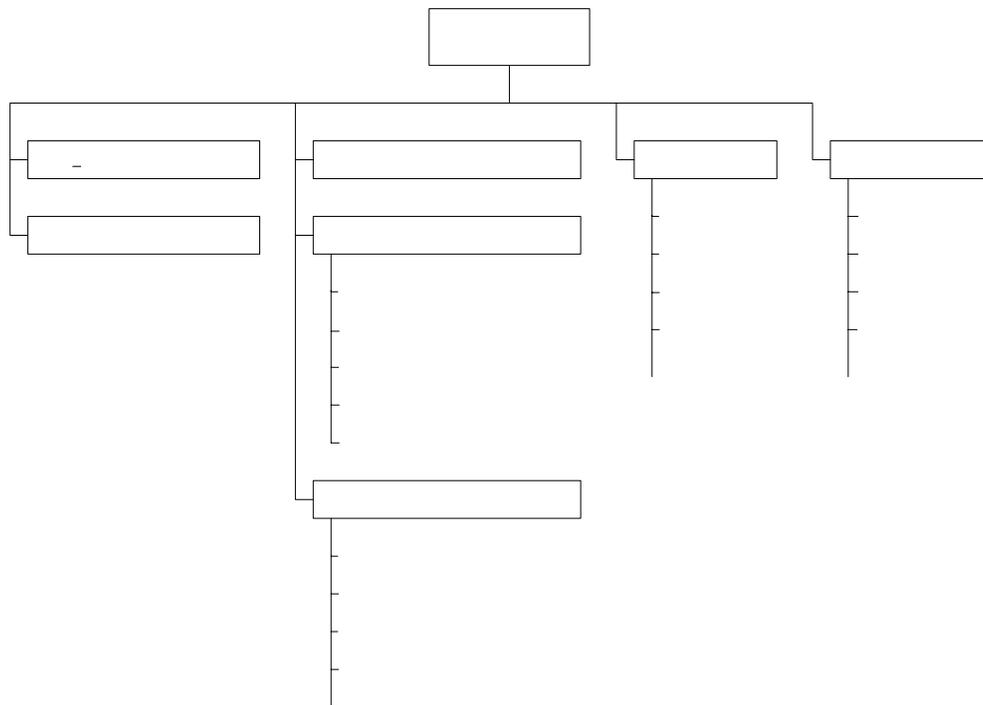
In late 2003, HotelThailand.com formed a partnership with Galileo – the leading wholesaler of airline tickets. This partnership allowed HotelThailand.com to make domestic and international air ticket reservation through the Galileo system. The partnership allowed Galileo to exclusively connect to HotelThailand.com's database of hotels/resorts and to provide online hotel/resort reservation to other travel agencies - both offline and online.

Figure 4.2: HotelThailand.com's Business Time Line
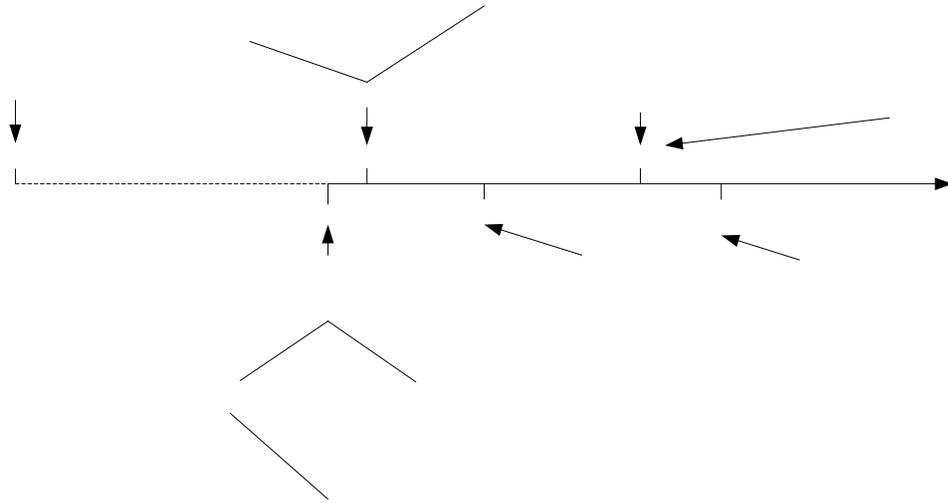
HotelThailand.com's Organization Structure

The business of HotelThailand.com has grown rapidly, along with its size and operations. As of

2003, HotelThailand.com had 48 employees. The organization structure, shown in the figure 4.3, shows its

six departments: sales, business development, reservation, production, information technology, and

accounting. The sales department was responsible for recruiting new hotels/resorts. Business development

was responsible for negotiating contract rates and signing contracts with hotels/resorts. Business

development provided information about hotels/resorts and estimated selling prices for reservations.

Reservations included an English team, a Thai team, and a Japanese team. Thai and Japanese teams served

only Thai and Japanese customers, respectively. The English team served other foreign customers.

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Figure 4.3: HotelThailand.com's organization structure
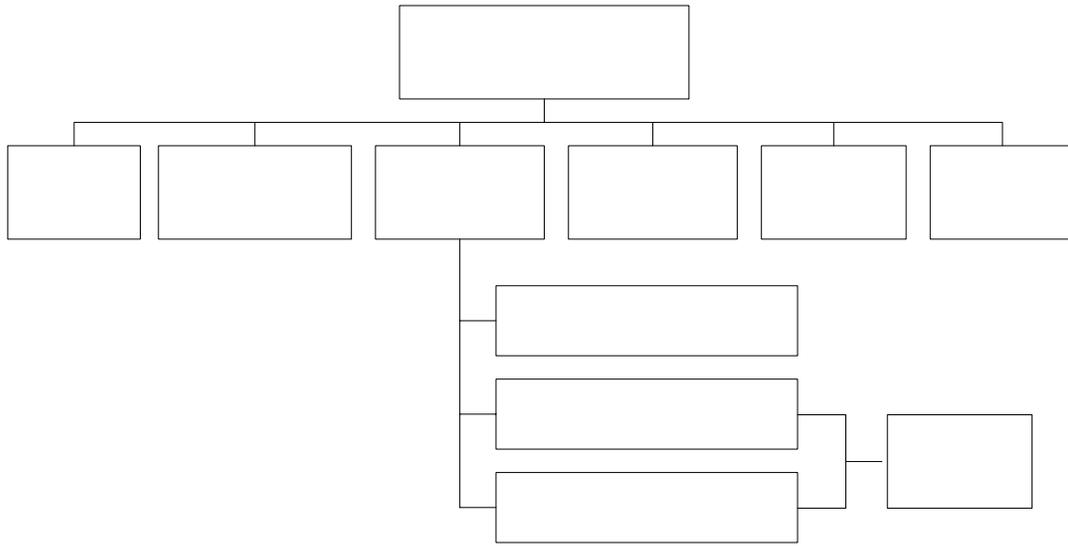
Each team was responsible for both online and offline marketing. They had to select hotels/resorts, adjust selling prices to fit customer segments, arrange promotional programs, and coordinate with tour operators to set up packaged tours programs that targeted specific customers and traveling seasons. Reservation was also a call center or "Hotline" that serviced customers by phone. In addition, the reservation teams had responsibility for customers' e-mails, following up with customers' reservation forms within 24 hours, and processing customers' credit card payments. Each reservation team provided coordination between customers and hotels/resorts/tour operators/transfers. Supplier visits was another responsibility of reservation teams.

Accounting managed all income and expenses, was responsible for customer payment documents transferred from reservations, and transferred money to suppliers' accounts. Production was responsible for the website design. Information technology (IT) looked after the servers and backed up all customer information and e-mail archives.

HotelThailand.com's Website Operation

HotelThailand.com's website was designed to assist customers in making fast and easy online hotel/resort reservation. The website also had a rich archive of constantly updated travel information on destinations, travel tips, getting around, shopping guides, tourist attractions, exchange rates, weather and

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suggesting itineraries. Information on the websites is available in four languages: English, Thai, Japanese, and German. Figure 4.4 showed HotelThailand.com's homepage. Hotels/resorts were categorized based on five major parts of Thailand (Central, North, South, East, and Northeast) so a customer could easily narrow down available hotels/resorts. The homepage also showed other value-added service, including Sight-seeing & Tour, Airport Pickup, Car Rental Service, and International & Domestic Air Ticketing (Figure 4.5 – 4.6). Figure 4.7 showed variety of package tours, such as diving package, golf package, and spa package. HotelThailand.com also offered "Do-It-Your-Way" package, which allowed a customer to arrange their own package tours.

HotelThailand.com provided detailed information about hotels/resorts (Figure 4.8). This information included room rate, location maps, and facilities. HotetThailand.com provided a "Hot Line" and an e-mail inquiry services so a customers could contact a reservation team for further information at anytime (Figure 4.8). The website also showed detail pictures of hotel/resort's room and facilities (Figure 4.9). HotelThailand.com offered two ways of a room reservation. First, a customer could make a room reservation without making any payment upfront. A customer must submit an online reservation form that required his/her contact information with a credit card number (Figure 4.10). If a customer does not feel comfortable with providing a credit card number through the website, a customer also has a choice to print a reservation form and fax to HotelThailand.com instead. However, this method of payment required a customer to pay a walk-in rate when he/she arrived at the hotel/resort. Second, a customer could make an online room reservation. For this method, HotelThailand.com required a customer to make a payment by credit card or a money transfer. The website provided an online payment service (Figure 4.11 -4.14). With this method, a customer paid 75 percent of a published room rate, but a customer must make a payment upfront. A credit card was not charged until 15 days prior to a check-in date in a low season or 45 days in a high season. HotelThailand.com provided a clear policy in method of payment, credit card charges, confirmation, cancellation fee, and privacy policy on the website (Figure 4.15). The website also allowed a customer to submit credit card information by fax or make a money transfer to HotelThailand.com's bank account (Figure 4.16 -4.17).

Figure 4.4: HotelThailand.com's Homepage
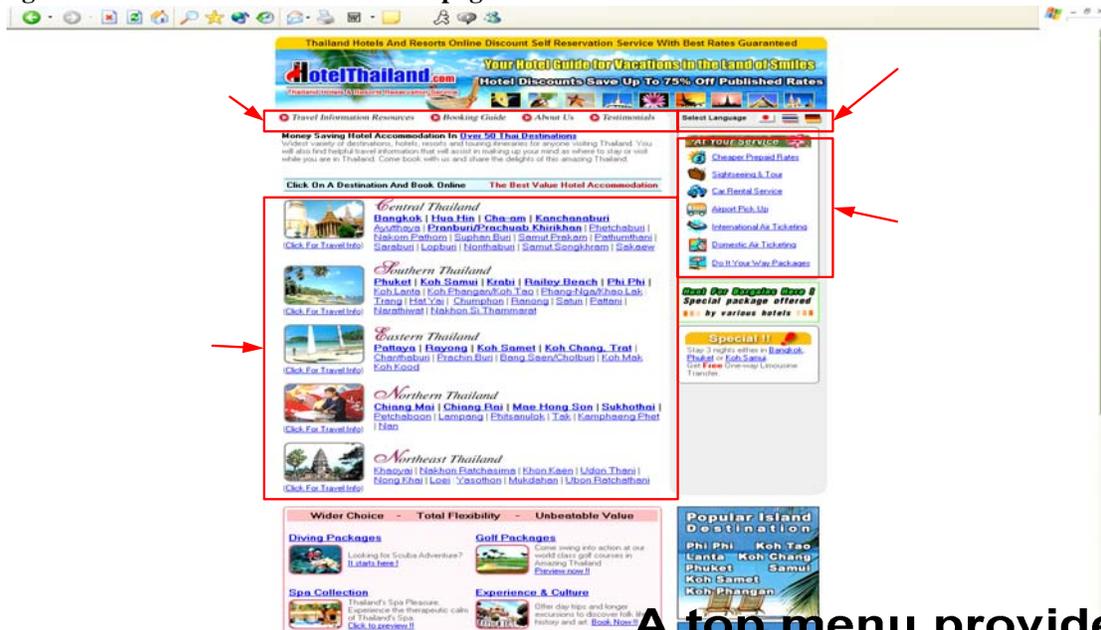
(Source: www.hotelthailand.com)

Figure 4.5: Sightseeing & Tour Service
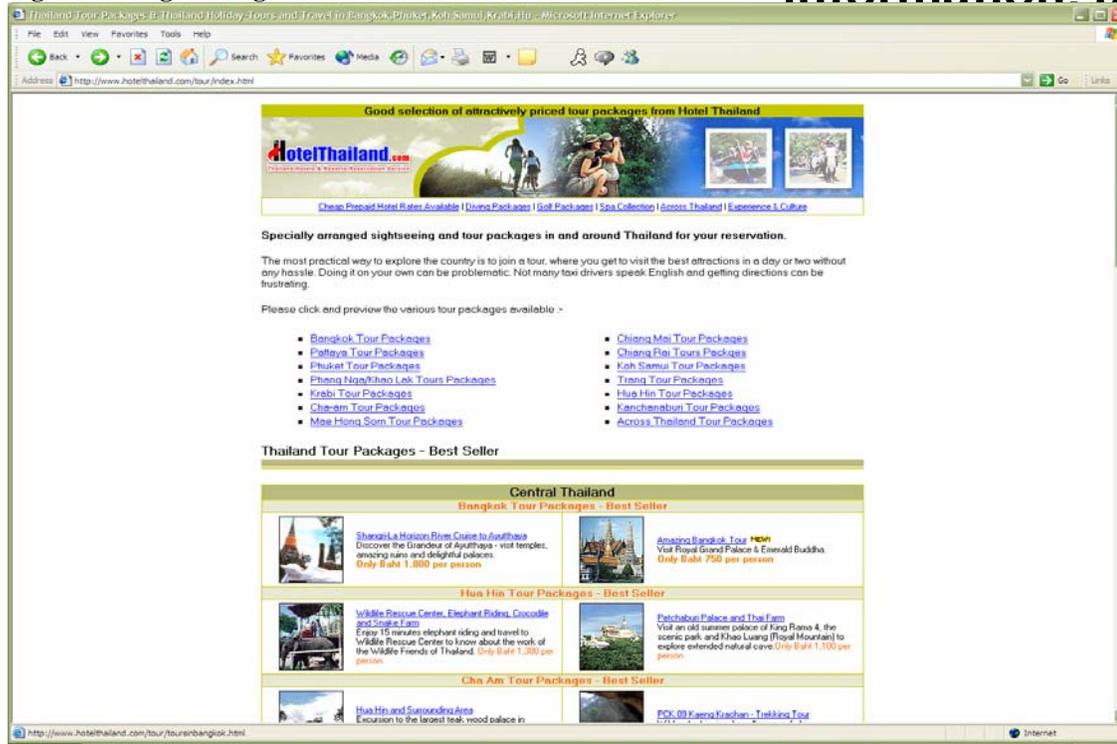
(Source: www.hotelthailand.com)

Figure 4.6: Car Rental Service

(Source: www.hotelthailand.com)

Figure 4.7: Variety of Package Tours

(Source: www.hotelthailand.com)

Figure 4.8: Room Reservation Page
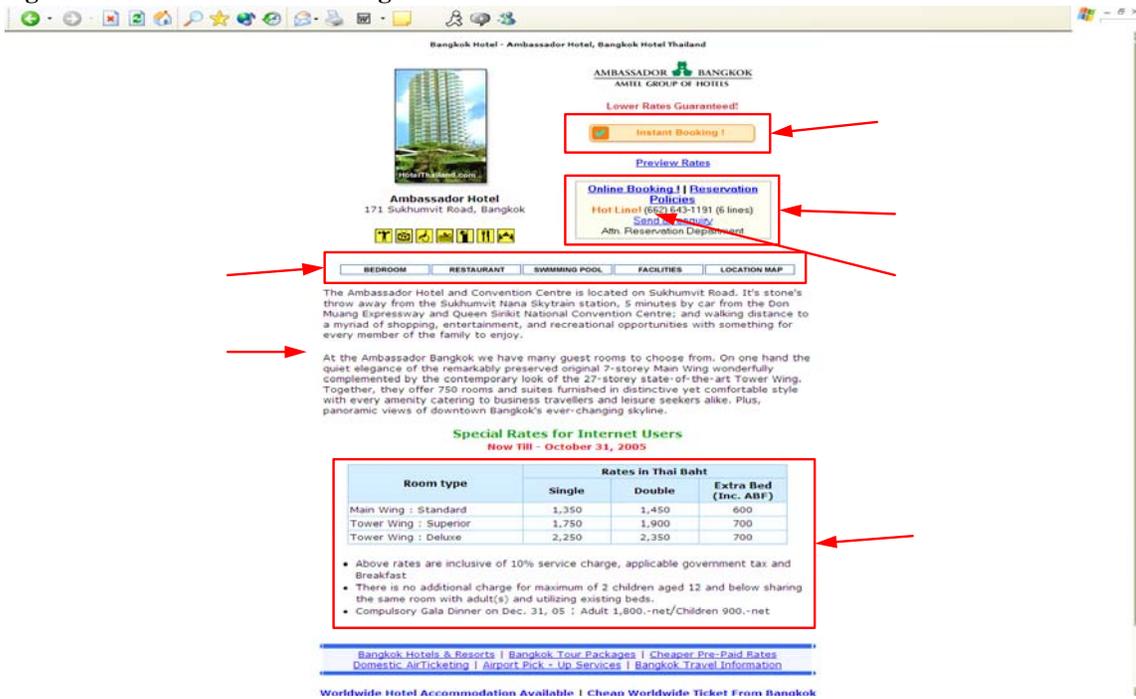
(Source: www.hotelthailand.com)

Figure 4.9: Detail Pictures of Hotel/Resort's Room and Facilities
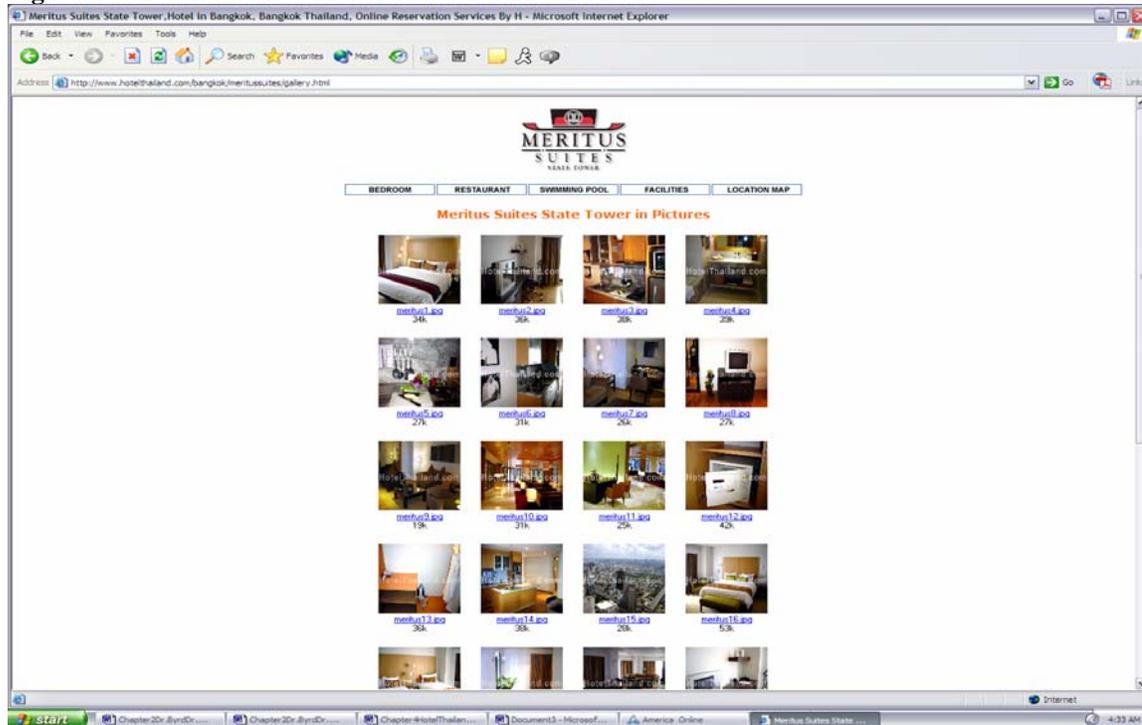
(Source: www.hotelthailand.com)

Figure 4.10: Online Reservation Form (without payment upfront)

(Source: www.hotelthailand.com)

Figure 4.11: Online Reservation Form – Select a Room and Check-in Date

(Source: www.hotelthailand.com)

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Figure 4.12: Online Reservation Form – Confirmation before Payment

(Source:)

Figure 4.13: Payment Information Page

(Source: www.hotelthailand.com)

Figure 4.14: Credit Card Information Page

Figure 4.15: Clear Service Policy

Figure 4.16: Submission of Credit Card Information by Fax
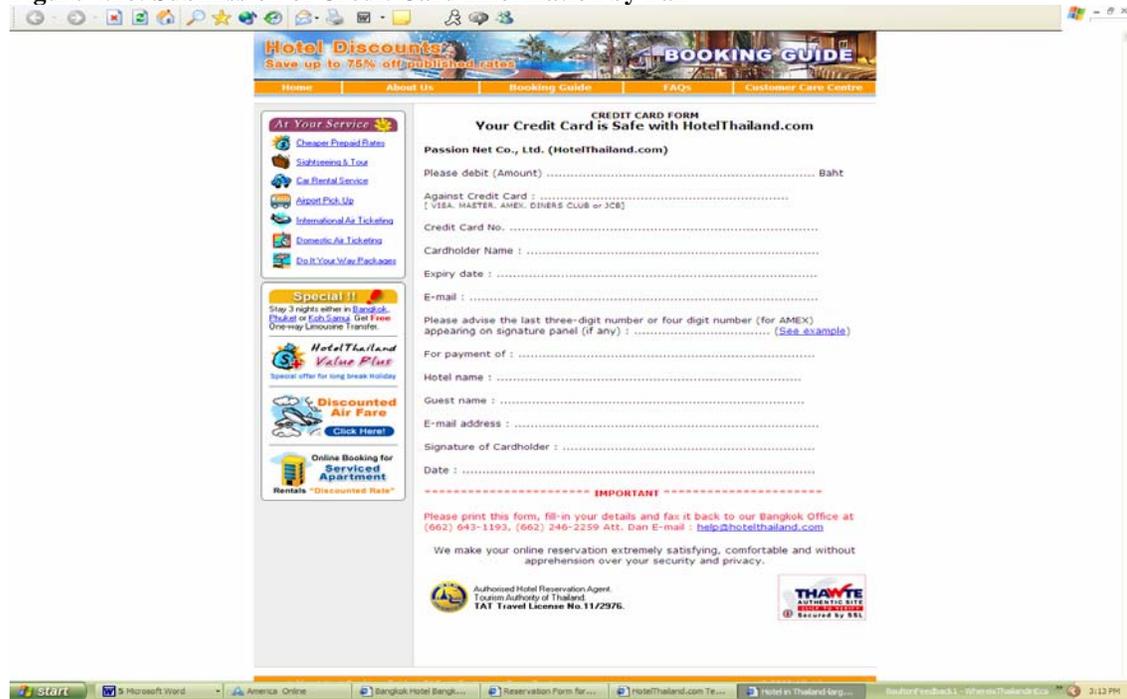
(Source: www.hotelthailand.com)

Figure 4.17: Submission of Payment by a Money Transfer
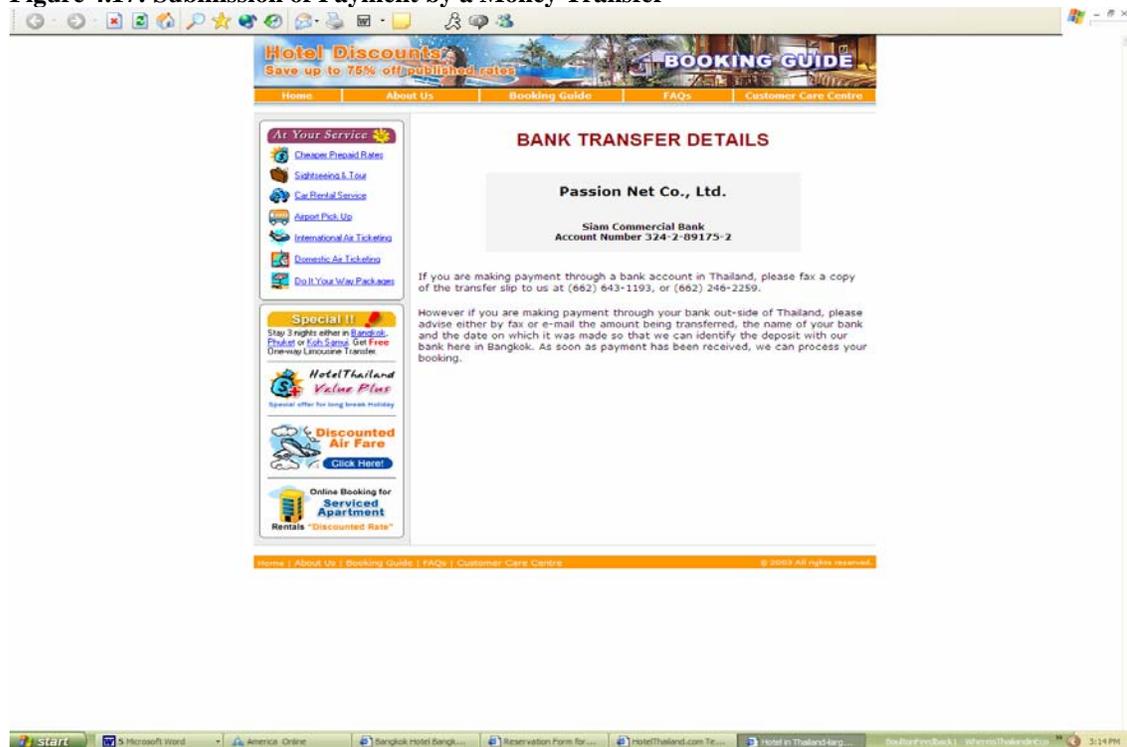
(Source: www.hotelthailand.com)

Research Question 1: What are the CSFs for E-commerce in Thailand?

The intent of this section is to answer the first research question: Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Understanding Thai Consumers

Thaweedej explained that one of the CSFs for e-commerce in Thailand was to understand the behavior of Thai customers. Thaweedej believed that the online behavior of Thai customers was quite different from those in developing countries. Without clear understanding of online behavior of Thai customers for "what they are ready, and what not", it is impossible to choose the right products/services and develop the right strategies.

Online shopping trust and convenience

The majority of Thai customers had not fully embraced the whole idea of online shopping, although the number of online shopping activities had been increasing. Chanika, the sale manager, explained that the number of Thai customers searching for product online has been increasing, but when it came to making buying decisions, they still purchased products/services offline. In Thaweedej's words,

> One of the reasons that expensive technology and sounded business models that work in developed countries did not work well here is due to the "timing". Even though secured online payment systems are provided by several e-commerce websites and are securely supported by Thai banks, Thai customers still do not feel comfortable to use such service. The point is… timing is not right. Thai people are not ready yet.

Chanika explained that security was one of the main issues that cause Thai customers to be skeptical about the whole online shopping process, although it was not the only reason. According to Thaweedej, "Thai consumers were easily spooked by online fraud news."

In addition, Thai customers still compared the convenience of conventional shopping in Thailand with online shopping. The fact that products could not be tested or inspected before purchasing, online payment required a credit card, and customers must wait for delivery were among several issues that created inconvenience of online shopping.

Customer service

Chanika explained that customer support worked well with Thai customers because they love receiving service. In addition, they love to negotiate prices. In Chanika's words,

By talking with customer services, Thai customers felt that they could negotiate for a better deal and they could personally develop connection or relationship with her. They believed that such connection would allow them to receive special offers and/or feel more comfortable to negotiate for a better deal in the future.

More importantly, by allowing Thai customers to communicate with customer service, they not only perceive the shopping to be convenient, but also build trust in the shopping experience.

Industry Knowledge

Another CSF for e-commerce in Thailand was to understand the requirements of an industry. Thaweedej noted that number of failure e-commerce ventures in Thailand made common mistake by simply launch their websites without having true knowledge of their industries. Thaweedej added that "again, it was also about "timing"". An e-commerce venture might have technology and a sounded business model, but the industry might not be ready to support such technology or a business model.

Business relationship development

Thaweedej emphasized that it was important to understand how the roles of other parties, which involved in the company's e-commerce business model because business relationship played the critical role in Thai business. These parties included suppliers, retailers, wholesalers, manufactures, government agencies, and even competitors. In many cases, e-commerce businesses could not be conducted in a particular market in Thailand because these parties lacked understanding of the potential of e-commerce.

First Mover Advantage

Thaweedej added that first mover advantage played a critical role to the success of e-commerce in Thailand. Thaweedej explained that a first mover had more time to develop relationship with involving business parties. An unknown dot.com companies even took more time to develop trust and relationship with customers and other parties in the supply chain. In addition, the first mover was more likely to understand online behavior of Thai customers better than the new comers. The first movers also had time to establish stronger brands that customer recognized and trusted before competition began to be intense.

Qualified Personnel

Thailand still lacked qualified human resource that was ready to work within e-commerce environment. This qualified human resource included not only technical staff, but also management team that has knowledge and experience in e-commerce businesses. Qualified human resource allowed Thai e-commerce ventures to response to rapid change of e-commerce environment. Management needed to have vision about e-commerce strategies in Thailand, and qualified employees were necessary as the main sources of new ideas for e-commerce.

Supporting Business Processes and IT

Chanika explained that an e-commerce venture must have well-designed back-end operation that could effectively respond to the front-end of e-commerce system (website). Chanika explained further that IT also had a critical role to support and control backend operation. She emphasized that IT could be integrated to backend operation to improve efficiency and effectiveness of an e-commerce system.

Research Question 2: What are the Key Industry Requirements for E-commerce in the Online Travel

Industry?

The intent of this section is to answer the second research question: What are key requirements that any e-commerce companies must have in order to enter the tourism industry in Thailand? To answer this question, five areas of industry requirements needed to be investigated: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Consumer Requirements?

Trustworthy Websites

Foreign customers were concerned whether unknown foreign online travel agencies could be trusted in term of online security and quality of service. Thus, online travel agencies must keep their promise by fulfilling orders and providing good before-and-after sale service. In addition, a website must be secured in order to protect customer information. Contact information such as a phone number and an address should appear on a website so customers could ensure the existence of a company. Service policy, especially online payment policy, should be clearly and explicitly stated on a website.

Good customer services

Since service was at the heart of tourism industry, travelers expected to receive good service from a chosen website before and after they traveled. They expected that websites should provide convenient ways for them to contact if they have any questions. More importantly, any customers' inquiries should be responded quickly by a company.

A Large Selection of Hotels/Resorts

Foreign travelers wanted to find a website that provided a wide range of hotels/resorts that meet their needs, such as budgets and locations.

Room Availability

Customers wanted to ensure the room availability when they made online reservation. There were number of online travel agencies providing reservation for the same hotels/resorts. If a room is not available at one website, a customer can simply make a room reservation with other websites that have a room available.

Broad Travel-related Services

For convenient reason, foreign travelers were looking for websites that provided traveling-related services, such as airport pick-up services, car rental services, package tours, and airline ticketing.

Rich Content

Foreign travelers are looking for websites that provide both travel-related services and useful information about hotels/resorts. First time customers are not familiar with unknown foreign online travel agencies and, thus, are more likely to compare information between websites to find providers with the best information about hotels/resorts and other travel-related activities. Chanika added that these customers are looking for not only detailed information about hotels/resorts such as prices, locations, facilities, contact information, and pictures of hotels/resorts, but also traveling-related information such as airport pickup, car rental, tourist spots, currency exchange, and weather.

<div align="center">

What are the Competitive Requirements?

</div>

Due to number of online travel agencies in Thailand market, competitors tried to compete on the basis of larger selection of hotels/resorts, lower prices, and better service. However, according to Mr.

Chaichai and Chanika, there were other competitive requirements that were critical to the success of online travel agencies in Thailand.

Competitive Prices

Due to number of online travel agency websites in this market, customers had number of hotels/resorts to choose. They could also easily compare a price of the same hotel/resort from one website to another to ensure that they received the most competitive price. To compete, an online travel agency must be able to offer competitive prices.

Domain Knowledge

Online travel agencies needed to have strong knowledge of tourism industry in Thailand. They must know hotels/resorts in different locations and tourist destinations so they could provide accurate information to travelers. Moreover, they must also understand the obstacles of implementing e-commerce in tourism industry in Thailand, and the role of parties involved in companies' business models. Such understanding allowed online travel agencies to develop business models that fit to the requirements of the industry and overcome the obstacles e-commerce in the industry.

Supplier Relations

According to Thaweedej, it was critical for all travel agencies to have strong relationship with hotels/resorts and wholesalers. According to Chanika, in Thai business, relationship leaded to "personal favor" and "personal favor" leaded to "extra care and extra service." Strong supplier relationship allowed online travel agencies to have lower room rates and larger room quotas.

Competitive First Mover

The number of online competitors had been increasing during the last four years because Thailand was one of the most popular tourist spots in the world. The first mover had more time to understand how an industry worked. They also had more time to establish relationship with suppliers and trust with customers.

Competitive Responsiveness

Thaweedej noted that due to the intense competition in online tourism in Thailand, competitors tried to copy strategies and tactics from other websites. Online travel agencies must be able to constantly adjust their strategies and tactics in order to response to the opportunities and threat quickly.

Competitive Business Processes

According to Chanika, number of competitors in online tourism industry used IT to support their backend operation. This allowed them to process transaction quicker and provide faster service to customers. Moreover, IT-based business operation could also reduce operation cost, and thus, pass the cost saving to customers.

Competitive Search Strategy

Due to the number of online travel agencies, it was critical that customers found a company's website before competitors' Online travel agencies always competed for key words searched by leading search engines. Competitors bid for key words so major search engines like Yahoo and Google would rank their websites higher than competitors' websites. The competition for key-word search was on the daily basis and very expensive.

What are the Resource Requirements?

Capital Investment

According to Thaweedej, operation and IT investment were the major cost of an online travel agency. Moreover, advertising and promotional expense usually was expensive. According to Chanika, HotelThailand.com paid well over US $5,000[2] per month on a key-word search through leading search engines alone.

IT Personnel

Besides investment, another important resource was the IT personnel. Qualified personnel with e-commerce-related technical skills were in short supply. According to Thaweedej, technical personnel usually worked with big companies because they could afford them. Small-to-medium size e-commerce ventures, however, lacked resources to hire skillful IT employees.

What are the Technical Requirements?

E-commerce System with Support Back-end Operation

To compete in this market, an online travel agency must have an efficient e-commerce system that could not only provide convenient website, but also efficient back-end operation. Major competitors and

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[2] For this research, US $1 is equal to 40 baht.

new foreign competitors usually possessed large capital investment, and thus had sophisticated turn-key e-commerce systems. Manual back-end operation was still the practice of number of companies in Thailand, especially small-to-medium-size organizations, because of low labor cost. However, due to the level of competition in the industry, an online travel agency must try to use IT within its operation in order to process transaction faster, provide better service to customers, and reduce operation cost.

What are the Industry Regulation Requirements?

N/A

Research Question 3: What is HotelThailand.com's E-commerce Business Model?

The intent of this section is to answer the forth research question: What is the company's e-commerce business model? To answer this question, the following components of e-commerce business model need to be discussed:

Market Segmentation and Targeting

HotelThailand.com's perspective customers are ones who prioritized the quality of service over the price. According to Thaweedej,

> We target customers who were willing to pay for convenience of one-stop-shopping and quality
>
> service. Even if a price might be a little bit higher than competitors, they did do not mind. These
>
> customers tend to come back in the future.

HotelThailand.com segmented markets into two main geographic locations: Asia and other zones like Europe, New Zealand, the US, etc. For the Asian market, Thailand and Japan were the main market segments of HotelThailand.com.

Value Proposition

According to Thaweedej, HotelThailand.com's value of its services was based on the combination of large selection of hotels/resorts, one-stop-shopping, saving, and high quality customer service.

Resources and Capabilities

The resource and capabilities of HotelThailand.com were based on the ability to develop strong relationship with hotels/resorts and wholesalers. They were also based on ability to develop websites for specific markets and provide strong customer service to specific group of customers.

Activity Configuration

E-commerce business activities are composed of two major sets of activities: the main business activities (sales and marketing, inbound logistics, operations, outbound logistics, after-sales services) and the supporting activities (firm infrastructure, human resource, R&D, procurement). Only activities that were important to HotelThailand.com's business model will be discussed in the following section.

Procurement

Thaweedej explained that several years ago the majority of hotels/resorts did not have any understanding of the potential of e-commerce and some perceived e-commerce as the fad because they saw number of e-commerce ventures in Thailand went bankrupted. The only way to overcome this obstacle was to convince them and develop relationship with them individually. According to Thaweedej,

> We had to travel to so many provinces to promote our websites. And we used whatever support systems/programs from the government that we can get to make this work. In several occasions, we were invited by the Tourism Authority of Thailand (TAT) as a quest speaker for seminars to promote e-commerce in Thailand's tourism industry. This thing takes times, but we began to see the difference. Many began to use our services. Others even wanted us to be their exclusive online agency. At the same time, we have to prove that our e-commerce works by showing them sales lead through our website.

Today, hotels/resorts had better understanding about the potential of e-commerce in their businesses. HotelThailand.com continued developing and maintaining strong relationship with these suppliers. Competitors usually recruited hotels/resorts directly from wholesalers, which had only few major hotels/resorts in each tourist location. HotelThailand.com, on the other hands, used sales force to recruit number of hotels/resorts from tourist locations around the country. This allowed HotelThailand.com to have larger selection of hotels/resorts. The sales force had to travel all year long to recruit new hotels/resorts and visit recruited hotels/resorts and continue contracts with them. Reservation teams also visited recruited hotels/resorts several times a year to maintain good relationship with them. According to Chanika,

> Each year, we paid visit and brought gift to them to show our appreciation. During the visit we tried to get feedback from them whether they were satisfied with our services, and at the same

time, we tried to provide them all feedback from customers. For three-to-four stars hotels and resorts, we also took this opportunity to inspect their facilities, took new pictures of their facilities to update our websites, and gave feedback to them what needs to be improved to ensure high service quality. They really appreciated that we spend out time to visit them, especially hotels and resorts outside Bangkok vicinity.

With strong supplier relationship, HotelThailand.com received better low rates, extra room quotas, special packages, and extra care to their customers. Chanika added that "Sometimes ran out of room quotas, we called them up and asked them for favor, they always gave extra rooms for us because we have strong relationship with the hotel."

HotelThailand.com also procured hotels/resorts from wholesalers. The company signed contracted with three major wholesalers in the market. This allowed HotelThailand.com to access their hotels/resorts around the world. HotelThailand.com used this opportunity to enter other market segments. The company created number of sub-websites providing online hotel/resort reservation in other countries. Business volumes from these market segments were still low, but HotelThailand.com used this strategy to test the potential of new markets without major investment. As a result, HotelThailand.com opened subsidiaries in Philippines and Dubai markets. HotelThailand.com used the local reservation teams to serve both foreign and local customers. Subsidiaries also had sale teams that directly recruited local hotels/resorts and build relationship with them.

Sales

HotelThailand.com's online reservation system was not a real time system because it was not integrated with hotels/resorts' systems or foreign wholesalers' systems. Thaweedej explained that hotels/resorts' and wholesalers' reservation systems, if any, were legacy systems. They were not ready to integrate to online travel agencies' systems. However, the company received room quota from hotels/resorts/wholesalers. Thus, it knew up front whether rooms were available or not. The company could offer an instant online reservation on its website. After the reservation was made, HotelThailand.com sent customers' reservation information to hotels/resorts by fax.

Marketing

Product.

In order to attract customers, HotelThailand.com tried to offer "one-stop-shopping" websites, where customers could find large selection of hotels/resorts and other traveling-related services including package tours, air ticketing, car rental, and airport pickup. To compete with its main competitors, HotelThailand.com focused on recruiting as many high quality hotels/resorts as possible. Its hotels and resorts were ranged from two to five stars quality. Some hotels/resorts could be found only on HotelThailand.com. In fact, according to Chanika, "I believed that we have the largest selection of hotels/resorts among online travel agencies in Thailand."

Price.

HotelThailand.com was able to offered competitive prices because it had large business volumes and strong relationship with hotels/resorts/wholesalers. HotelThailand.com added 15-20 percent markup prices to each room rate received from hotels/resorts and wholesalers. The same markup percentage was used by most of competitors in the market. For hotels/resorts that could be found only on HotelThailand.com, the company charged premium prices.

Place.

HotelThailand.com designed websites that were convenient to navigate and find information. Information of hotels/resorts on its websites were comprehensive, especially pictures of hotels/resorts. Pictures of each hotel/resort's rooms, location, and facilities were taken by HotelThailand.com. The address of HotelThailand.com's office and contact information were easily found. Policy involving online reservation and online transaction were clearly and explicitly stated. The websites showed the logos of Thawee and Verified by Visa, and the signs of Tourism Authority of Thailand (TAT) and Pacific Asia Travel Association (PATA). Chanika noted that these detailed information contributed to customer trust.

Promotion.

HotelThailand.com tried to promote its websites using both online and offline marketing. As for online promotion, it promoted its websites through search engines. HotelThailand.com competed against other competitors for search engine key words. However, since HotelThailand.com already had large

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customer base, the competition for key-word search was not on the daily basis like other competitors. The company tried to focus more on providing great service to customers.

As for offline promotion, Thaweedej explained that the main idea of off-line marketing was to create word-of-mouth advertising and to help Thai customers recognize the brand. Besides using posters, postcards, and stickers, Thaweedej tried to participate in magazine, television, and radio interviews. In addition, the company used network marketing. For instance, HotelThailand.com had a joint promotional program with Citibank. Citicard holders could use their premium points to receive hotels/resorts' rooms as their rewards. As for frequent Thai customers, the Thai reservation team sent current promotional information to customers' pagers and cell phones. Besides website promotions through search engines and offline promotions, HotelThailand.com also promoted its services using free service such as airport pickup with any reservation or promotional packages that come with the combination of hotels, package tours, and/or airport pickup, at a special price.

Before-and-after-sales Service

HotelThailand.com provided e-mails and "Hotlines", which allowed customers to contact HotelThailand.com for more information or reservation. Thai customers felt that it was more convenient to make reservation through the phone or fax. Chanika explained that Hotlines worked well with Thai customers because they felt less concern about giving credit card numbers to customer services that they were talking with, and it allowed Thai customers to negotiate prices or ask for special deal or promotions from customer service. Hotlines also worked well with foreign customers. First-time foreign customers were often skeptic with unfamiliar foreign e-commerce websites. Hotlines can increase their confidence about HotelThailand.com's service.

When customers arrived Thailand, reservation teams tried to coordinate with hotels/resorts and its third party service providers like tour operators and airport pickups to ensure that customers arrived and checked in at hotels/resorts without any problems. Since suppliers had strong relationship with HotelThailand.com, they tried to provide excellent service to its customers. Customers could also call for the company for any assistants when they required any services from HotelThailand.com during their trip in Thailand.

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R&D and Production

Reservation teams worked closely sales teams and production teams. Sales teams updated current inventory of hotels/resorts with reservation teams on a regular basis. Reservation teams then finalized information and sent it to operations to update the websites. Operations worked closely with the reservation teams before they finalized the websites to ensure the accuracy of the information. HotelThailand.com had in-house website production based on basic HTML. HotelThailand.com's secured online payment and reservation systems were developed by third-party companies.

HotelThailand.com felt pressure to improve its back-end system from the increasing level of competition in the market. According to Chanika, "we tried to compensate the lack of strong IT-based back-end operation by relying on well-trained reservation teams. We carefully trained our reservation teams to provide excellent service to customers and carefully processed transactions." This strategy, however, came with the high labor cost. Due to its increasing business volume and competition, HotelThailand's back-end operation began to show the signs of inefficiency and the cost had been increasing. Thaweedej decided to hire third-party system developer to develop a new IT system to support its operation.

Partner Network

HotelThailand.com formed partnership with several tour operators, air-port pickups, foreign wholesalers of hotels/resorts and airline tickets. HotelThailand.com had one to two tour-operator partners in each the major parts of Thailand. It also had several foreign tour operator partners that provided services in several Asian countries like Vietnam and Laos. HotelThailand.com also formed an exclusive partnership with Galileo, a leading foreign wholesaler of airline tickets. This partnership required HotelThailand.com to connect its database to Galileo. Any travel agencies that had access to Galileo's system could also search and make reservation for hotels/resorts of HotelThailand.com.

Revenue Sources

HotelThailand.com had several sources of revenue. The majority of revenues came from the end customers. Approximately 80 percent of hotels/resorts in the company's inventory signed contract with the company. They must pay a yearly service fee. Customers who made reservations with these hotels/resorts paid directly with HotelThailand.com. The company earned a mark-up of 15-20 percent. The rest of

hotels/resorts signed the commission contract. Customers paid directly to hotels/resorts when they checked in. HotelThailand.com received a 10 percent commission rates from these hotels/resorts at the end of each month. For traveling-related services, such as a packaged tour, an air-ticket, an airport pickup, and a car rental, customers paid directly to HotelThailand.com. The company earned 30-40 percent of mark-ups of these services.

Chatchai explained that the main costs were promotion costs, operating costs and employee salaries. Thaweedej estimated that the gross profit was around 20-30 percent of total revenue. He added that he still had to reinvest the profit into IT and new foreign subsidiaries.

<center>*Competitive Strategies*</center>

HotelThailand.com's main competitors were AsiaTravel, PlanetHoliday, Phuket, and Sawasdee. Like HotelThailand.com, these competitors were the first movers and had high business volume. They were foreign-owned companies. These competitors had similar selection of hotels/resorts because they mainly procured hotels/resorts from the same wholesalers. HotelThailand.com, however, recruited hotels/resorts from not only wholesalers, but also other hotels/resorts at their locations. With larger selection of hotels/resorts than any competitors, the company could serve customers better because they had variety of hotels/resorts that could fit customers' preference and budgets.

Major competitors also targeted only non-Asian customers because this segment had higher profit margins than Asian customers. A number of hotels/resorts in Thailand did not accept Asian customers because they could not afford the same room rates as other foreign customers. Hotels/resorts that accept Asian customers usually charge lower rates. HotelThailand.com's competitors preferred not to target Asian customers because of the small profit margins. HotelThailand.com, in contrast, targeted all customer segments. Although the company earned smaller profit margins from Asian customers, it gained a higher business volume due to small competition in the Asian market target. As one of pioneers in the market, HotelThailand.com gained more experience than other new comers. More importantly, it had strong relationship with its suppliers. Strong vendor relationship allowed HotelThailand.com to receive better room rates and other personal favors like extra room quotas.

HotelThailand.com also had strong brand. Its brand was well known in Thailand and among foreign customers. Large customer bases crated high business volume, and thus allowed HotelThailand.com to continue receiving low rates from its hotels/resorts and wholesalers.

HotelThailand.com also developed secured and easy-to-use websites. It offered customers secured reservation form and online payment so customers can ensure that their information was securely transferred.

HotelThailand.com tried to establish itself as an excellent service provider. The company had three reservation teams to focus on different customer segments: Japanese, Thai, and other foreign customers. The reservation teams were well trained to accommodate customers in any situations. By offering excellent customer service, HotelThailand.com developed customer loyalty, so that they always came back even if they found better rates from other websites.

Since HotelThailand.com could access to recruited hotels/resorts from other countries around the world, it developed number of sub-websites to test market demand of new market segments. Then, it began to establish its branches in the markets that showed high demand and less competition. HotelThailand.com tried to use the first mover advantage strategy to enter these high potential and low competition markets and applied the same e-commerce business model used in Thailand market in new market segments. It began to establish relationship with local hotels/resorts, other suppliers, and customers before competitors. It used the local employees to provide excellent service to both foreign and local customers. At the same time, it tried to expand its local hotel/resort selection by using local employees to recruit local hotels/resorts.

Research Question 4: What is HotelThailand.com's Performance?

The intent of this section is to answer the last research question: How is the company's business performance? The researcher found that HotelThailand.com measured its performance based on its Internet sales growth, Internet market share, level of website visited consummated, and level of repeated business sales.

Sales Revenue Growth

Thaweedej reported that HotelThailand.com reached breakeven in 2000. The total sales in 1999 were US $25,000[3]. In 2000, the total sales were US $750,000. In 2001, the total sales were US $1.25 million. In 2002, the total sales were US $2 million. In 2003, the total sales were about US $3 million.

Internet Market Share

According to Thaweedej, "Our market share in the first year of business was probably around two percent." Thaweedej explained that based on talking with several hotels and resorts, HotelThailand.com was now among the top five of online companies to create the highest business volume for them. These top five companies were AsiaTravel, PlanetHoliday, Sawasdee, Phuket, and HotelThailand.com. Thaweedej estimated that the market share of HotelThailand.com was around 15-20 percent. According to Chanika, "Our main competitors were Sawasdee, AsiaTravel, PlanetHoliday, but both AsiaTravel's and PlanetHoliday's market share has dropped lately. I believed that we are among the top… with probably 20-30 percent market share."

Level of Website Visits Consummated

He estimated that during the first two years, HotelThailand.com received 4,000 to 5,000 online reservation and inquiries, but only 10 percent resulted in completed transactions. At present, he estimates that each month HotelThailand.com receives 8,000 to 10,000 online reservations and inquiries. Around 20 percent of these were completed transaction.

Level of Repeat Business Sales

According to Chanika, "around 60 percent of transactions came from former customers."

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[3] US $1 was equal to 40 baht.

CHAPTER FIVE – THAIGEM.COM[1]

The main focus of this chapter was to identify factors that influence the success of e-commerce in Thailand and Thaigem.com. After explaining the business profile and history of Thaigem.com and the website operation, the following four research questions are discussed:

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the online gemstone industry?

3. What is Thaigem.com's e-commerce business model?

4. How is Thaigem.com's business performance?

Thaigem.com's Business Profile and History

Thaigem.com was the e-commerce arm of Thaigem.com Global Marketing Limited. Its sister company, the NCS Group Co., Ltd., formerly known as Nuntiya Care Stone, Co. Ltd., was a traditional gemstone wholesaler based in Chanthaburi, Thailand. Don Kogen, chief executive officer of Thaigem.com, left Texas and headed off for a backpacking adventure in Asia 17 years ago. During his journey, Kogen learned about a small town named Chanthaburi that was the center of the gem stone market in Southeast Asia. He ended his journey there and never left.

Chanthaburi is a three-hour drive from the Thai capital, Bangkok. In the 1980s, the province used to be one of the world's premier sources for rubies and sapphires, and large scale gem mining was one of the town's main forms of income. However, after the Chanthaburi mines were exhausted, the local industry changed its strategy. As the province already had a wealth of knowledge and expertise in cutting, faceting, polishing and trading, it began to import rough gems from less developed mining areas and became a

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[1] Information for this case, except where stated otherwise, is based on interviews conducted October 10, 2002, June 1, 2004 at Thaigem.com and on phone interviews conducted June 15, 2004.

service center rather than a source of raw gems. While there were a number of gemstone mines around the world, very few possess cutting and processing capability. This strategy was extremely effective and today the Chantaburi's gem market is a mixture of foreign and local gem traders conducting business in the traditional way. Today most gem stones in Chanthaburi come from Africa, Vietnam, Sri Langka, and China ("*Don Kogen Brings*", 2001).

Kogen spent three years learning from local gem traders the various aspects of the gem stone industry, from cutting and sorting gems to trading gems at the local market. In fact, Kogen met his wife, Nuntiya Sukumpeeranont, during that time. After three years of observation, he and his wife decided to enter into the gem stone business themselves. They began by buying gem stones from the local market and reselling them for pennies more to other gem traders. That grew into a catalogue business of selling gems to international buyers. Kogen soon began shipping gem stones to customers by regular mail (Krausz, 2001). For larger orders, he and his wife carried the gems to foreign customers. Figure 5.1 shows a time line of Thaigem.com's business history.

Figure 5.1: Thaigem.com's business time line
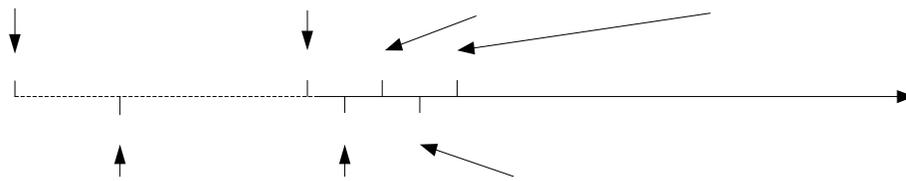
The turning point came in 1998 when Kogen decided to put his business on the Internet. Kogen heard about selling gem stones on the Internet through close friends, but was unsure as to whether people would really buy gemstones online. In addition, he lacked the technical and business knowledge needed for e-commerce. Kogen, however, found eBay, which provided all the tools needed to conduct online auctions at a fraction of the traditional cost. He sold two gem stones on eBay on his first day. Within six months, he was selling over 2,000 gemstones per day on eBay.

Kogen found that the Internet could be used to bypass the inefficiencies of the traditional business, where seven layers of middlemen raised the price of gems from 500-1,000 percent between the wholesale and final retail prices. For individual buyers, gem stones offered by Thaigem.com change hands only once (Meredith, 2002). Thaigem.com promised that its gem stones would appraise for five to 15 times the amount customers actually pay (Mertens, 2001). As of 2001, Thaigem.com supplied over 90 percent of the gem stones offered on Amazon, Yahoo, and eBay ("*Internet World Interview*", 2001). There were also over 20 other auction sites where most of the gem stones came from Thaigem.com ("*Web Start-up*", 2000).

In 1999, Kogen launched Thaigem.com. The main challenge was to find someone who actually had the capability to build an Internet shopping cart, because Thailand lacked a trained workforce that was acquainted with Internet-related technology. Although Kogen hired a third party developer firm, after six months it was still unable to deliver a useable shopping cart ("*Internet World Interview*", 2001). Kogen then dropped the third-party firm and hired Amnat Tipparat, a former instructor of computer science and author of half a dozen books on the subject (Mertens, 2001). Tipparat successfully built a shopping cart system within a week. Traffic was initially driven from auction sites such as eBay to Thaigem.com.

In January 1999, the sales were barely US$25,000 per month (Kittikanya, 2000) and the website received 200,000 unique "hits" per month (Holewa, 1999). Within two years, Thaigem.com was registering over 900,000 database users and over 1.2 million hits per month (Kittikanya, 2000) with monthly sales of US $750,000[2] ("*Thaigem.com Expects*", 2000). In June 2000, Thaigem.com began providing a B2B shopping cart service for wholesalers and retailers ("*Thaigem.com Expects*", 2000). By 2001, Thaigem.com offered over 150 gem types, but it planned to increase its variety of gem stones even more to serve a wider range of customers' needs and a larger base of customers. In addition, the success of Thaigem.com has allowed it to diversify into related areas such as jewelry, carvings, and beads. Thus, in 2001, Thaigem.com received financing of US$4 million from Singaporean investors in exchange for a 20 percent stake in Thaigem.com. Thaigem.com invested mainly in procurement, marketing, and technology. In 2002, Thaigem.com opened a retail superstore on Silom road, the main gem stone market in Bangkok, to serve

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[2] US $1 is equal to 40 baht.

foreign customers who found it more convenient to shop in Bangkok in person ("*Thaigem.com Adds*", 2002).

Today, Thaigem.com offers more than 500 gem types and lists over 1.6 million individual gem stone and jewelry items. Shipping over 2,000 items daily, Thaigem.com was the FedEx's largest customer in Thailand. Offering a 30-days-return policy, Thaigem.com still had only a three percent return rate and maintained over 97 percent customer satisfaction. Repeat customers accounted for more than half of all Thaigem.com sales (Mertens, 2001).

Thaigem.com was a member of the jeweler board of trade, California Jewelers Association, Thai Gems & Jewelry Association, and International Colored Gemstone Association. In 2001, Thaigem.com won the Internet World Asia Awards in Singapore, singled out from over 60,000 Asian companies (Dhamacharoen and Toomgum, 2001). Thaigem.com was recognized to be among the most profitable e-commerce ventures in Asia and was the acknowledged e-commerce leader in Thailand. Total sales in 2003 were in excess of US $15 million. With a 90 percent share of the online market, Thaigem.com was the most successful and the biggest online gemstone trader in the world.

Thaigem.com's Organization Structure

As Thaigem.com's sales grew, so did its organization and operations. With only three employees in late 1998, Thaigem.com grew to 225 employees by the end of 1999 (Holewa, 1999) and 300 employees by the end of 2000 ("*Web Start-up*", 2000). Today Thaigem.com has well over 500 employees. Thaigem.com's organizational structure was composed of four main functional areas: operations, information technology (IT), finance, and purchasing (Figure 5.2). Kogen was the CEO and Gavin Linsell, a media liaison, worked closely with Kogen. One of their main focuses was to acquire gem stones from sources around the world. Nuntiya Kogen served as the COO and ran the operations department, which was responsible for stock, sales, marketing, and administration. Amnat Tipparat was the CIO and ran the IT department, which was responsible for Internet marketing, Web development, and back office systems. Kevin Siharath, the head of the Internet marketing department, worked under Tipparat. The finance department was responsible for accounting, audit, and finance.

Figure 5.2: Thaigem.com's organization structure
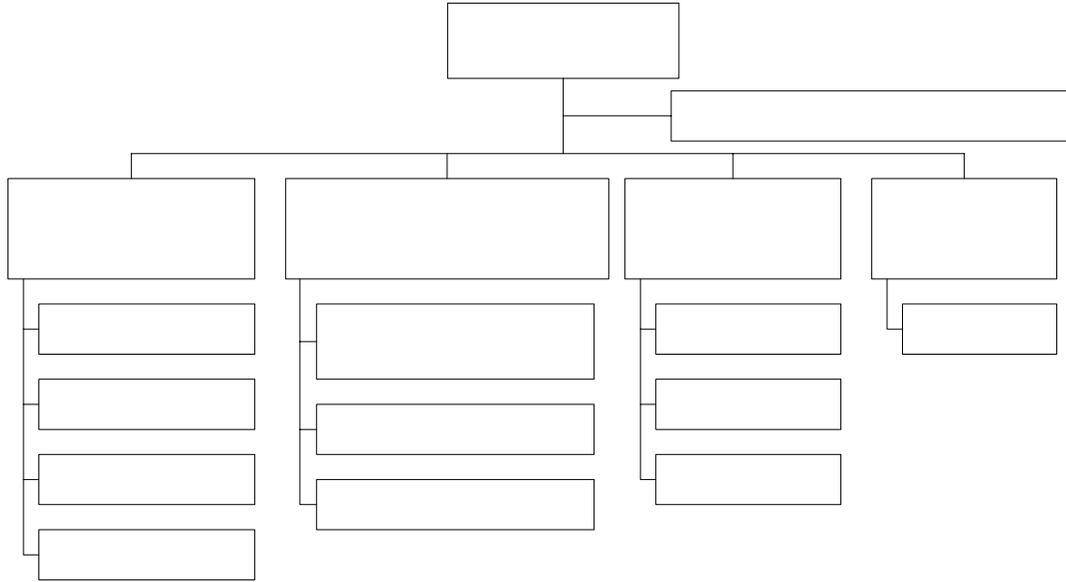
Thaigem.com's Web Operations

Thaigem.com listed over 1.6 million items in its inventory. In addition to over 500 gem types, Thaigem.com provided other related products including gold and silver jewelry, carvings, semi-mounted jewelry and beads. Thaigem.com's homepage offered company information, policies, customer accounts, education centers, and product selection (Figure 5.3). To build customers' confidence in Thaigem.com's online presence and its services, the homepage showed the logos of reputable gemstones and jewelry organizations of which Thaigem.com was a member, including the Jeweler Broad of Trade, California Jewelers Association, Thai Gems & Jewelry Association, and International Colored Gemstone Association. Thaigem.com also clearly stated its service policies on its home page, thus addressing customer concerns connected with shopping on the Internet. These service policies included 24-hour customer support, secured online payment, fast and reliable FedEx shipping, and its 30-days return policy. Thaigem.com also provided a Japanese language option. Customers were offered the opportunity to provide feedback or make suggestions about Thaigem.com's websites, service, and products. Thaigem.com also showed the customer satisfaction rating on its homepage, which was based on the customer testimonials from eBay. As of Oct 1, 2004, Thaigem.com had an overall customer satisfaction rating of 97 percent (Figure 5.4).

Thaigem.com had been striving to deliver excellent customer service and shopping convenience to its customers. It provided 24-hour customer support through several methods, including its *live support service*, in which customers could chat with a sales representative in real time, a toll-free telephone customer support line, e-mail customer support, and a suggestion box (Figure 5.5). Since there were a so many gems types, jewelry and other related products to choose from, this could be overwhelming for customers. Thus, Thaigem.com provided information centers, where buyers could find all vital information about different types of gemstones and jewelry (Figure 5.6). It also provided a site map, an advance search box, and help desk features to assist customer search efforts (Figure 5.3).

Thaigem.com focused on designing a website that assisted customers to narrow their search quickly and easily. For example, customers could search products by gem stone group, bead group, diamond group, gold jewelry group, silver jewelry group, and semi-mounted jewelry group. Customers could also search by top selling gem stones, top selling jewelry, top selling beads, and birthstones. Thaigem.com designed appropriate subcategories for each product category and that took into account how customers frequently searched them. For wholesalers and retailers, Thaigem.com provided separate links to enable them to buy gem stones in bulk. In the gold jewelry category, for instance, Thaigem.com provided advance search boxes that could narrow down jewelry options by gemstone type, jewelry type, gold content, gold color, ring size, quantity in stock, and budget (Figure 5.7). For gemstones, however, the options were categorized into precious gems, semi precious gems, birthstones gems, rough gems, exotic gems, created gems, and collector's corner (Figure 5.8). Search results could also be sorted by size, price, origin, weight, and shape (Figure 5.9). In addition, customers could see the detailed specification of each gemstone and piece of jewelry, such as product name, product ID, shape, color, clarity, weight, size, luster, origin, hardness, specific gravity, refractive index, chemical composition, crystal structure, and treatment[3] (Figure 5.10). Customers could also find detailed information on a particular type of gemstones (Figure 5.11).

The shopping cart process was designed to be easy and quick (Figure 5.12). After a customer added a product to the shopping cart, the item was reduced from inventory on Thaigem.com's database,

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[3] Gemstone treatment is the gemstone heating process that can change the color of gemstones.

and, thus, became unavailable in real time for other shoppers. To operate this system, Thaigem.com's shopping cart process required customers to sign into their account before checking out a product, and new customers were required to create new accounts. During the check out process, customers could also add complementary products or services including engraving, jewelry cases, a gem identification chart, and the standard gemological authenticity certificate. On the same page, the order summary included the shipping rate.

Thaigem.com provided three payment methods: Escrow.com, PayZip.com, and PayPal.com (Figure 5.13). Thaigem.com used reputable third party payment companies for online payment because it wanted customers to feel secure and comfortable with their online purchases. At the same time, third party payment companies protected Thaigem.com from any online fraud.

Thaigem.com had used Escrow.com from the very beginning. When a customer used Escrow.com, Escrow.com had to approve the payment before Thaigem.com would begin to ship an order. A customer had two days to inspect products. After the inspection period, if the order is not canceled, Escrow.com will transfer payment to Thaigem.com's account. Through Escrow.com, customers could pay by check, money order, and wire transfer. In recent years, Thaigem.com added PayZip and PayPal options so customers had a choice of online payment methods. PayZip accepted credit card payment by Visa & MasterCard. As for PayPal, customers could buy using funds from their PayPal account or they could pay by Visa, MasterCard, American Express, Discovery, debit card, e-Check or money transfer. Once a payment method was selected, customers could submit the payment and receive e-mail confirmation from Thaigem.com. After the products had been shipped, customers received e-mails with tracking numbers so they could track delivery from Thaigem.com.

Figure 5.3: Thaigem.com Homepage

(Source: www.Thaigem.com)

Figure 5.4: The Customer Satisfaction Rating and Testimonials on eBay
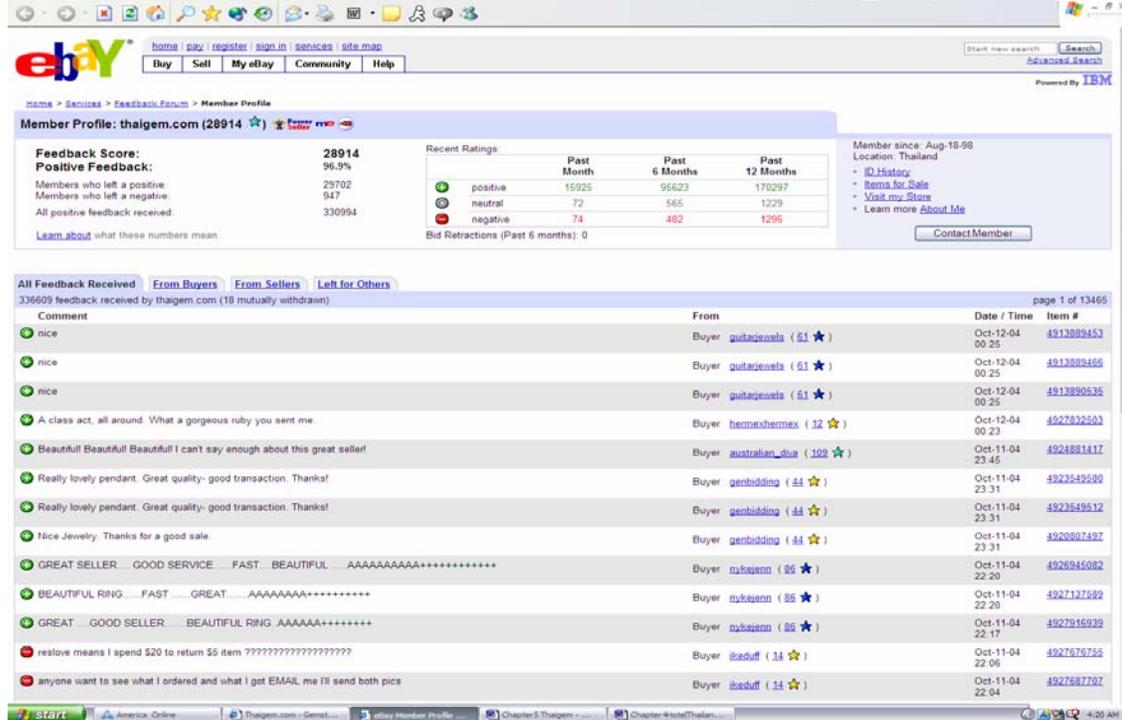
(Source: www.Thaigem.com)

Figure 5.5: Thaigem.com's Customer Support Information

(Source: <u>www.Thaigem.com</u>)

Figure 5.6: Thaigem.com's Information Center
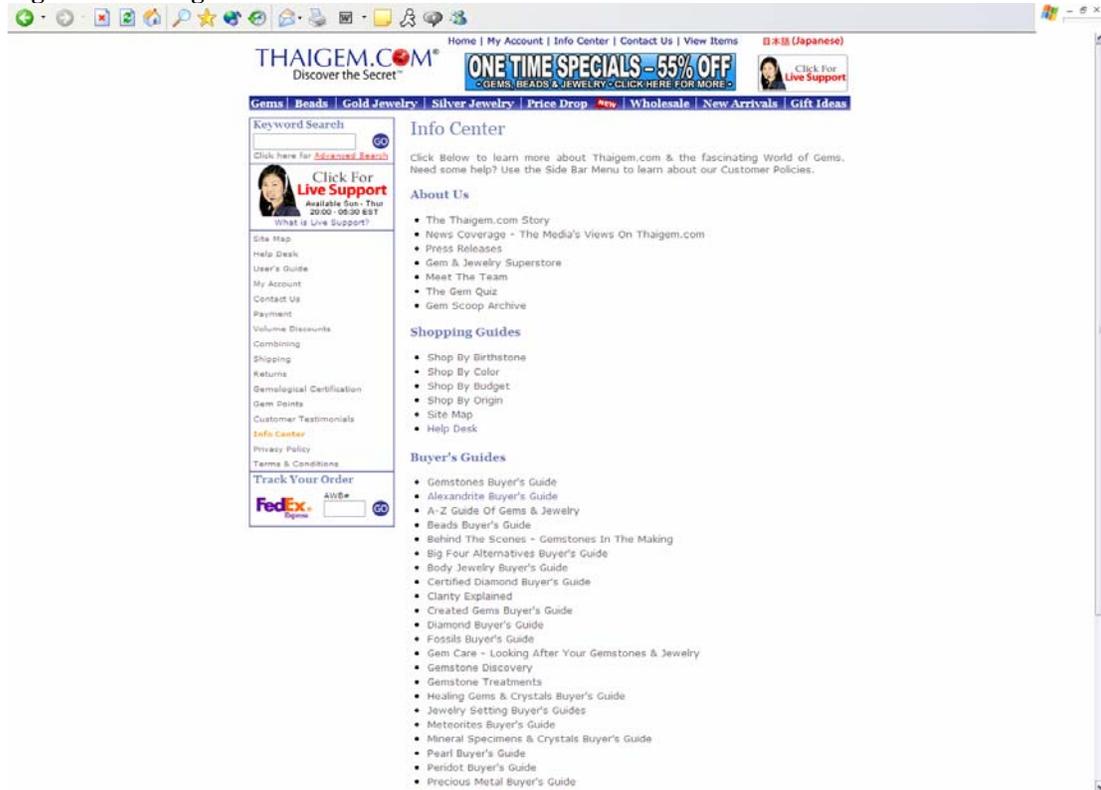
(Source: <u>www.Thaigem.com</u>)

Figure 5.7: Product Search – Gold Jewelry Search

(Source: www.Thaigem.com)

Figure 5.8: Product Search – Gemstone Search

(Source: www.Thaigem.com)

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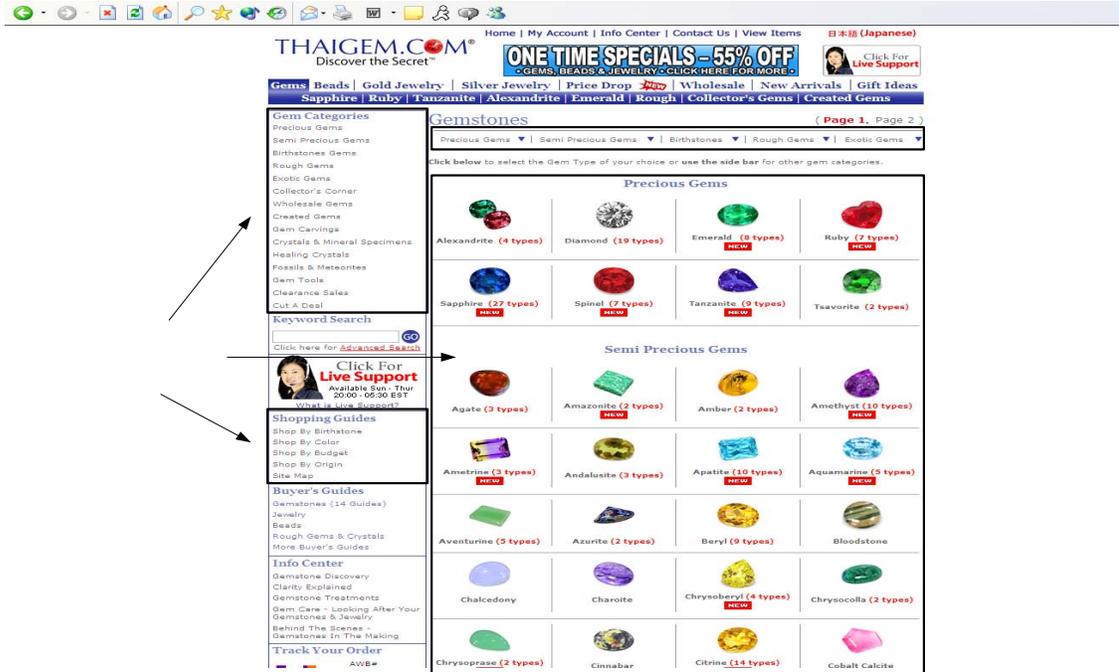
Figure 5.9: Selected Gemstones

(Source: www.Thaigem.com)

Figure 5.10: Gemstone's Detail Specification

(Source: www.Thaigem.com)

Figure 5.11: Gemstone's Information

(Source: www.Thaigem.com)

Figure 5.12: The Shopping Cart

(Source: www.Thaigem.com)

Figure 5.13: Payment Options

(Source: <u>www.Thaigem.com</u>)

Research Question 1: What are the CSFs for E-commerce in Thailand?

The intent of this section was to answer the first research question: Regardless of industry, what were the CSFs relevant to all companies engaged in e-commerce in Thailand?

Trust

Tipparat explained that an e-commerce company must be able to establish a strong basis of trust with customers. Thai customers still did not trust online merchants because online shopping was new for them and they heard about online fraud in the news from time to time. Foreign customers were also concerned about how trustworthy an unknown foreign website would be. They questioned the quality of products, length of delivery, shipping cost, and return policy and processes. An e-commerce company must be able to address all these issues. Siharath added that it was all about service. An e-commerce company must build customer confidence and trust based on its quality of service. A website must also contain a clear service policy statement and privacy policy. Besides good service, a company must be able to provide security on its websites that protected customer information such as credit card numbers and addresses.

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Convenient Website

Linsell added that a website must be convenient to access and use. Customers must be able to access the website quickly. A website must be easy to use, with rich product information that enable customers to find products and information easily and quickly. Shopping cart processes must require only a few steps, and customers must be able to make payments easily.

Good Customer Support

Linsell explained further that providing great customer service was also critical to the success of an e-commerce venture. An e-commerce company must provide a way for customers to contact them for support. A company must be able to respond quickly to customers when they had questions regarding products/services or needed support after sales. A company must also be able to provide a convenient product return process.

Competitive Price

According to Tipparat, e-commerce ventures in Thailand must be able to offer cheaper prices than either their online or offline competitors. Without this, their sales would be low. Tipparat explained further that if Thai e-commerce is selling products to foreign customers, lower prices will be even more important to compensate for the higher cost of shipping. Linsell noted that the positive aspect of being based in Thailand was the cheap labor costs. However, the negative aspect was its high shipping costs. Linsell suggested that "You need to have good relationships with shipping providers". Linsell explained further that another negative aspect of being an e-commerce in Thailand was the lack of trust from foreign customers. However, a low price could compensate for this lack of trust. In Linsell's words,

> American consumers might be a bit less likely to do business with a company overseas. Inversely, you can achieve cost savings. For consumers, they perceive that by going to the country of origin, or country of source, or country of manufacturer, they might be getting a better price. That might offset the trust issue.

Reliable Delivery

Product delivery was also critical to an e-commerce venture. A company must be able to provide reliable delivery service. Thai customers may not have full confidence in the post office service in Thailand, but a company must be able to let customers know when they should expect products to be

delivered. A company may provide other reliable delivery options to customers besides a post office service. When an e-commerce company served foreign customers, delivery service was even more important, because they would be concerned about how reliable the delivery service and how long it would take products to be delivered. In addition, international shipping expense was generally expensive. Thus, an e-commerce company should not only inform foreign customers up front about the length of delivery time, but also choose a delivery service that was reliable and affordable for customers.

<center>*Strong Brand*</center>

A strong brand identity draws not only returning customers, but also new customers to a company's website. A successful brand will be developed based on good price, high quality products, and great service. Tipparat explained that e-commerce in Thailand had not grown rapidly because Thai customers were still afraid to order from unknown online merchants. Thai customers did not trust Thai online merchants because they were still concerned about privacy, online security, online payment, product value, after-sales service, and delivery. Tipparat added that not only Thai, but also foreign customers were afraid to order merchandise from unknown foreign websites for similar reasons. Thus, to overcome the lack of trust issue, Thai online merchants must have the capability to develop or deliver secured websites, provide good customer service, and deliver products with the promised quality and on time. If they can meet these requirements, their brands will automatically be promoted through words-of-mouth, and thus, will draw new customers to shop on their websites. Tipparat explained further that secured websites not only build customers' confidence, but also protect them from online fraud. In fact, Thaigem.com had experienced online fraud. "We lost several hundred thousands [baht] from credit-card fraud from Japanese customers," explained Tipparat.

<center>*Effective Team (Qualified Personnel)*</center>

Tipparat noted that having an effective team was critical to the success of e-commerce in Thailand. Effective teams required qualified members in both IT and management who could work in a dynamic work environment. According to Tipparat,

> When an e-commerce firm is still small, business operations may not be complicated and do not require high levels of cooperation and coordination or effective communication, because an owner and a few employees can manage everything by themselves. But when the firm is growing bigger

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and fast, it is less likely that an owner and a few people can do it all. They require effective team

members that can handle more sophisticated cooperation and coordination within the organization.

Siharath explained that the skill level of individual team members was the key. However, he

noticed that Thai employees still lack several important skills for working in a dynamic environment like e-

commerce. According to Siharath,

> Thai employees lack several skills necessary for e-commerce, like English language,
>
> programming, web design, communication, and project management skills.

Profit-driven E-commerce Business Model

Siharath noted that it was critical that Thai e-commerce ventures have profit-driven e-commerce

business models. In spite of the fact that it was already difficult to come up with an e-commerce business

model that can sell online to Thai customers, it was not enough for Thai e-commerce ventures to focus

mainly on how to sell on the Internet. They must have a solid profit model.

Research Question 2: What are the Key Industry Requirements for E-commerce in the Online Gemstone Industry?

The intent of this section was to answer the second research question: What are the key

requirements that all e-commerce companies must have in order to enter the online gemstone industry? To

answer this question, five areas of industry requirements needed to be investigated: customer requirements,

competitive requirements, industry regulations and standards, resource requirements, and technology

requirements.

What are the Customer Requirements?

Convenient Website

According to Linsell, just as for a CSF for e-commerce in Thailand, an online gem store must be

able to deliver a convenient website that was easy to access, easy to use to find products and information,

and that made it easy to make online payments.

Target Market

According to Linsell, choosing the right targets was critical to the success of online gem stores in

Thailand. Currently, Thai customers were not the main target because they did not buy the idea of shopping

for gemstones online. There were plenty of gem stores in Thailand and customers could negotiate prices

with retailers. The greatest demand for online gemstones, therefore, came from foreign countries. Different countries had different preferences for gemstones, and they valued the same gemstone differently. According to Krausz (The Jerusalem report, 2002),

> Unlike in the strictly regulated, no-nonsense diamond trade, where carat quality and size fetch a set price determined by rigid industry standards, sales value with colored stones … is a matter for the eye and heart. … Whereas a navy-blue 10-carat Ceylon sapphire can go for US$2,000 in Taiwan or Korea, the same stone won't fetch you more than US$1,000 in Italy or England, where jewelers prefer lighter shades.

This meant that the value of a gemstone depends on individual preference. While customers may prefer a similar shade of a gemstone, they may prefer a different size, clarity, and cut. An online gem store must understand the needs of customers in each segment in order to find the right gemstones to serve them.

Gemstone Quality

When customers shopped for gemstones from online merchants, customers were concerned about the trustworthiness of online merchants. Without seeing and touching gemstones and jewelry, customers assumed some risk when purchasing over the Internet. If online merchants are from foreign countries, customers are even more concerned with this factor. Thus, customers preferred buying from secured websites that provided a clear policy about product guarantees, shipping, payment, and returns.

Reliable Delivery

Foreign customers were generallyconcerned whether gemstones would be delivered in a timely manner and affordable. Thus, an online gem store in Thailand must be able to develop a delivery model that was fast, reliable, and affordable.

Availability

Some types of gemstones were rare or in highly demand. Thus, gemstone availability gave a competitive advantage to an online gem store. Moreover, since some online gem stores were located in foreign countries, fast delivery was critical to success, and, in turn, products must always be available in order to facilitate fast shipping.

Customer Support

According to Siharath, creating good customer support was the critical requirement for an online gemstone business. He emphasized that when Thai online gem stores tried to establish their brands in foreign countries, service was even more critical. Customers considered service as one of their main criteria in buying gemstones and jewelry from online stores in order to reduce the risk of online shopping with unfamiliar websites. American customers, for example, were used to receiving good customer support, with satisfaction guarantees and return policies being offered by the majority of businesses in the US to their customers. Siharath noted that these kinds of services were something with which Thai companies in general were unfamiliar. Satisfaction guarantees and return policies were rarely seen in Thai business practice.

What are the Competitive Requirements?

Large Gemstone Selection

Both Linsell and Tipparat noted that gemstone preferences were different from one country to another. Thus, careful selection of gemstones on a website was critical to the success of an online gem store. A number of online gem stores thus tried to offer a large gemstone selection in order to cover a wide variety of customers' preferences.

Gemstone Industry Knowledge

It was critical for anyone who wanted to compete in the gemstone market to have a deep understanding of the industry. There were a number of gemstone types, and thus companies required an extensive knowledge of gemstones and corresponding prices so they could procure gemstones at the right prices. According to Tipparat,

> If you do not know what prices you should pay for different types and different qualities of gemstones, you will certainly be in trouble in this business, because middlemen will add high mark-ups and you won't know the right prices to negotiate.

Competitive Price

Both Tipparat and Siharath agreed that it was important for online gem stores to be able to acquire gemstones at a low cost. This translated to cheaper gemstone prices for customers and higher profit margins for companies. According to the *Colored Stone* magazine, with the increasing number of gem companies

going online around the world, Southeast Asian wholesalers would need to find their own niche (Elmore, 2000). Thus far, their main competitive advantage had been price. Thais and other dealers based in Thailand believed that e-commerce would add to their advantage because they were already a major source of gems and now they could deal directly with retailers and jewelry-makers around the world.

Competitive Online Marketing

Tipparat explained that one factor that prevented traditional gemstone companies in Thailand from entering the online market was their lack of Internet marketing capability. While some Thai companies had successfully developed websites and back-office systems, many had failed to attract customers to their websites. After these companies failed to make sufficient revenues to cover their operating costs, they went back to their traditional gemstone businesses.

What are the Technical Requirements?

E-commerce System

Tipparat added that a lack of technical capability also prevented gemstone companies from successfully entering the online market. According to Tipparat, while websites were now not difficult to develop, it was the back-office system that most companies found problematic. A back-office system, including a database system that really worked, was not easy to develop. It required experienced people who truly understood how the online gemstone business worked and how back-office operations should support the front-end e-commerce operation if they were to correctly design the system. While some companies may have the money to hire third party companies or hire IT people to develop the back-office system, few could make it really work.

What are the Resource Requirements?

Qualified Personnel

One of the main requirements for conducting an online gem store was to have qualified personnel. According to Siharath, the lack of qualified personnel with experience in online marketing and e-commerce-related IT was the main problem preventing firms from entering the online gemstone market. Most of them failed because their personnel could not get systems working or could not attract customers to their websites. Linsell and Tipparat added that another problem with Thai personnel was their lack of English language skills. When they received orders from foreign customers though e-mail, they could not

properly respond. Tipparat summed up by saying that Thai personnel were lacking in three main areas: IT capability, online marketing and strategy, and English language skills.

Production Resources

It was not a requirement for all online gemstone businesses to have their own jewelry factories or gemstone cutting factories because there were a number of jewelry and gemstone cutting factories, especially in Chantaburi. However, Tipparat noted that it was difficult to have full control of gemstone and jewelry quality when they used third parties. When companies built up a large business volume and the companies' reputation depended on product quality, having their own factories for jewelry and gemstone cutting rapidly became a major requirement for a gemstone business.

Financial Resources

Adequate financial resources were another requirement for a successful online business. According to Tipparat, online gemstone businesses required the investment of at least US $12,500 to US $25,000. This money would be initially invested in the e-commerce system, marketing, and inventory. Inventory continually required a large investment.

What are the Industry Regulation Requirements?

Gemstone Import/Export Regulation

According to Linsell, as with other export companies, an online gemstone business needed to comply with all the relevant rules and regulations governing the export of products to foreign countries. In addition, different countries had specific rules and regulations for the gemstone trade had to be complied with.

Research Question 3: What is Thaigem.com's E-commerce Business Model?

The intent of this section was to answer the third research question: What was Thaigem.com's e-commerce business model? To answer this question, the following components of e-commerce business model needed to be discussed:

Market Segmentation and Targeting

Thaigem.com targeted foreign customers. Linsell described Thaigem.com as B2E e-commerce, or business-to-everybody e-commerce. Its largest customers were from North America and Japan. According to Tipparat and Linsell, the North American customers accounted for approximately 75 percent of the total,

while Japan accounted for approximately 20 percent. Tipparat added that there were two market segments: end consumers and wholesalers/retailers. The first segment was largely represented by people aged 25 to 60. The second segment was wholesalers/retailers that mainly ordered products through traditional channels. Tipparat explained that while the sales value from the wholesaler/retailer segment had been growing rapidly during the last few years, today the end-consumer segment still dominated their sales. In addition, profits mainly came from the end-consumer segment. According to Kogen (Gemkey, 1999),

> Our average buyer on eBay is typically an individual for whom gemstones and jewelry is a hobby or interest….Generally, we find we are dealing with smaller sales [usually $100-$200] from individuals, who may then resell the products traditionally or online.

Thaigem.com also provided a shopping cart for wholesaler/retailer customers, but online sales volume from this segment was still small. Usually, when wholesalers/retailers wanted to make a large volume order, they visited Thaigem.com's office in Thailand and placed direct orders.

Value Proposition

According to Linsell and Tipparat, Thaigem.com's product value was based on a large selection of quality products, low prices, and great service. Thaigem.com offered more than 500 types of gemstones, beads, and jewelry pieces that could meet different customers' preferences. Prices were always much lower than those found in traditional jewelry stores. In addition, customers could always trust Thaigem.com because it provided great service from their easy-to-use secured websites, fast shipping, a satisfaction guaranteed policy, and great after-sales service.

Resources and Capabilities

Thaigem.com's main resources and capabilities were based on its ability to access gemstone sources, which allowed the company to offer gemstones at lower prices than competitors. In addition, it increased the value of gemstones by using them in jewelry, and also allowed customers to choose or create their own jewelry styles to match selected gemstones. Moreover, it had the capability to develop not only its commerce website that could provide shopping convenience to customers around the world, but also e-commerce strategies that made customers feel confident in shopping for gemstones and jewelry online through a foreign website. Its satisfaction guarantee, secured online payment methods, 24-72 hours

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shipping, 30-days return policy, and 24-hour customer service were among the strategies that attracted new and repeat customers. It could also keep its operating costs down because it was located in Thailand.

These capabilities could not have been developed without a dynamic, young, and talented management team and employees, whose average age was under 25 according to Linsell. In addition, the majority of employees were local (from Chantaburi province), which allowed the company to keep its operating costs low.

<p align="center">*Activity Configuration*</p>

E-commerce business activities were composed of two major sets of activities: the company's core e-commerce business activities (sales and marketing, inbound logistics, operations, outbound logistics, and after-sales services) and its supporting e-commerce business activities (infrastructure, human resources, R&D, and procurement). Only the core business activities of Thaigem.com's business model will be discussed in the following section.

Operations

Thaigem.com's main business operation was located in Chantaburi and Bangkok, Thailand. Parts of the IT and, purchasing departments, along with the factories were located in Chantaburi. The remaining departments and the showroom were located in Bangkok. According to Siharath, Thaigem.com also had a return center in the US to accommodate the customer return process. Tipparat explained that gemstone and jewelry production were labor intensive. If the labor cost is high, this cost will be translated into higher product prices. Thaigem.com recently opened a new jewelry factory in Chantaburi, hiring well over 200 new workers. Chantaburi had low labor and salary costs. This allowed Thaigem.com to continue to achieve low cost operations even though the size of the company was expanding rapidly.

Sales and Marketing

Product.

Thaigem.com's main product was gemstoness. Since customer preferences for gemstones vary, Thaigem.com's product strategy was the category-killer strategy, offering an extensive selection of gemstones. According to Kogen (24, 2001), "We try to acquire every kind of stone there is… We want to be the biggest colored-stone shopping mall in the world."

Carrying a large inventory can result in a serious cash-flow risk if the company cannot move its stock quickly enough (Internet World, 2001), so Thaigem.com had to keep the market flowing. Thaigem.com used gemstones in other merchandise such as jewelry. In addition, customers requested Thaigem.com's jewelry mounting service because they wanted to put gemstones in rings, ear rings, and pendants. The B2B shopping cart was another product strategy that Thaigem.com used to sell gemstones in large lots to wholesalers/retailers.

Price.

Thaigem.com's gemstones were priced at about 5-15 percent of those quoted in the regular retail market (Mertens, 2001). Since customers had to bear the international shipping and custom importation costs, low product prices were a critical condition for Thaigem.com because it could thus offset those costs to some extent. Siharath explained that the US$15 shipping costs plus import duty for gemstones that were worth several hundred dollars may not be such a big burden to customers, but for gemstones and jewelry in a lower price range, these shipping and custom costs could be relatively significant. Without the low product price, it would be even more difficult to sell to foreign customers.

Place.

Thaigem.com had three main distribution channels: Thaigem.com's websites, auction sites like eBay.com and Yahoo.com, and its showroom in Bangkok, Thailand. The main customers for online channels were end-consumers. The retail store served foreign travelers and wholesalers/retailers. The use of multiple channels allowed Thaigem.com to move its large inventory faster.

Thaigem.com's website focused on delivering the highest shopping convenience by way of fast access, easy and logical website navigation, fast product searches, detailed product information, and easy and secure online payment options. Thaigem.com designed a website that allowed customers to narrow their search fast. It also provided detailed information for each type of gemstone so customers could have a successful and rewarding purchase experience. In addition, it used well-known third party online payment services in order to increase customers' confidence in providing their payment information.

Promotion.

Thaigem.com promoted its websites through leading search engines like Google.com and Yahoo.com. According to Siharath, "a search engine is one of the requirements if you want to compete

online. It is quite expensive. We are second to none in this competition. We have a big budget on this."

Tipparath and Siharath added that Thaigem.com paid for "paperclip"[4]. Ruby, sapphire, gems, and jewelry

are four main [search engine] keywords that Thaigem.com is great at," according to Tipparat. However,

according to Kogen, 60 percent of new business came from word-of-mouth transactions (Internet World,

2001, Mertens, 2001). This allowed Thaigem.com to keep its advertising budget low. In his words, "We are

now getting a lot more transactions from Asia – Japan, Korea and Taiwan – which we didn't expect,"

(Internet World, 2001).

In addition, Thaigem.com continuously offered promotional programs on its website like gem-

points[5], gem-quiz, and gem scoop to draw customers back and at the same time to create a sense of

community. It also had one-time specials and price-drop programs that give extra discounts for certain

gemstones. According to Linsell,

> We create an environment that creates a sense of community, a lot of e-mail communication, and a
>
> newsletter [gem scoop]. We have a lot of gem quizzes. We give a lot of giveaways. We do really
>
> try to maintain that.

Outbound Logistics

One of the main concerns that customers have when ordering merchandises from a foreign country

is the shipping speed and cost. Kogen, thus, made a key decision early on to ensure that Thaigem.com

could offer fast, reliable, and affordable shipping to customers around the world. Thaigem.com used

Federal Express (FedEx) to ship merchandise to customers around the world within three business days for

a flat fee of US$15, plus customs tax and insurance. Thaigem.com covered all the costs of importing,

exporting, customs and credit card charges (Internet World, 2001). In his words, "If you order something

and get it in three to four days, then you will get an order from them every week" (Internet World, 2001).

Sending out between 200-400 packages per day, Thaigem.com became FedEx's largest customer in

Thailand (Internet World, 2001). According to Kogen,

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[4] The search engine service that shows search results in a box on the right hand side of the center search results.

[5] For every dollar spent customers received 15 gem points. For every new customer that an existing customer referred to Thaigem.com, they received 300 gem points. Collected points could be redeemed for gem accessories, loose gems, or even a trip to Thailand to visit Thaigem.com's showroom (Figure 5.3).

We worked out a system that gives our packages internationally priority. We are also integrated with Thai customs so they know what is coming before it arrives. We don't lose money on packages. We don't lose money at all. Actually we make some money on the exchange rate (Internet World, 2001).

Thaigem.com also automatically consolidated the purchase from individual lots of gemstones so customers did not have to pay extra shipping (Internet World, 2001). Customers would receive an e-mail confirming the delivery with tracking numbers, which allowed customers to track their packages directly on Thaigem.com.

After-sales Services

Thaigem.com provided 24-hours customer support. Customers could reach Thaigem.com through e-mail, phone, fax, and real-time chat. Tipparat explained that Thaigem.com tried to keep close contact with customers. Every customer e-mail was given a personal response by the customer service team within 24 hours. Customers could also access and update their accounts or see their purchasing, billing, and shipping history. Thaigem.com also provided a 30-days return policy. Customers had 30 days to inspect the merchandise. If customers are not satisfied with the merchandise for any reason, they could return it through FedEx to Thaigem.com for a full refund. The websites provided complete instructions for the return process, including a FedEx return label. Siharath explained that since there were a large number of US customers, Thaigem.com opened a return center in the US so US customers could save the cost of international return shipping. According to Siharath, it costs US customers around US$5 for shipping, instead of US$15. Siharath noted,

Of course it costs us to have the return center in the US, and we also have to bear the shipping cost from the return center to Thailand, but we do what we can to facilitate our customers… Especially jewelry, like when you are buying clothes [online], we never know how it will look on you. For sure we want to be that open for customers to come back. If you don't like it, you can try on something else.

Procurement

Because Thaigem.com accessed sources of gemstones around the world, it could achieve a low cost for raw materials (gemstones), which in turn led to low priced merchandise. In Kogen's words (Internet World, 2001),

> The key to our success is that we are a low cost provider. We have undercut the market because we are located at the source of the product and we don't have the experience of being located in L.A. or New York. We have undercut our competitors dramatically, by up to 500 percent.

According to Linsell, Chantaburi was the strategic location for Thaigem.com. Prices in Chantaburi were at a very early point of the supply chain. Tipparat added that well over 50 percent of Thaigem.com's gemstones came from Chantaburi.

Thaigem.com bought large quantities of gemstones, from carats to kilos, in order to physically control the gems and aggregate the raw material costs effectively to ensure a good mark-up in their sale price (Internet World, 2001). According to Kogen (Internet World, 2001),

> We achieve our value for money because we buy in big quantities. We will buy US$150,000 to US$200,000 of one gem type and take the risk. Then we break it down into high-grade, low-grade, single pieces and so on. We have 10,000 customers around the world that rely on Thaigem.com to do this for them. They buy what they need. All the gem deals come to us, and our customers can buy cheaply from us.

Linsell added that the advantage of being such a large buyer was that sellers came to Thaigem.com to avoid the problem finding gem traders that could buy in volume. Linsell explained further that Thaigem.com's ownership of its merchandise was one of its critical success factors. In Kogen's words (Internet World, 2001),

> We own everything up on our site. There's no double listing. Everything is in our possession, that is why we are able to facilitate the 24-to-72-hour delivery. You cannot be competitive without buying the merchandise outright. That's also the reason our merchandise is cheap – we pay cash.

R&D

According to Siharath, the shopping cart technology implemented by Thaigem.com was unique, one of a kind that others in the same industry did not have. Thaigem.com continually improved the

performance of its websites and shopping cart capability. In 2001, Thaigem.com deployed the ninth version

of the shopping cart (Internet World, 2001). Since then, the shopping cart had been improved to even newer

versions. According to Tipparat, "I can not even remember what version it is now. We keep improving it."

Tipparat added that he believed that there was no one else in the market that had the same shopping cart

technology as Thaigem.com. From his understanding, none of their other competitors in the market had the

technology capability to develop such a system.

According to Tipparat, Thaigem.com's shopping cart updated the product availability in real time.

Thus, if a product becomes unavailable, the system will update the product availability immediately on the

website. This technology allows Thaigem.com to prevent customers from submitting online orders only to

find out later that products were unavailable. Thaigem.com also implemented an ERP system that

connected its backend to its front-end systems. Every time a product moved from one department to

another, the computer tracked its movement (Internet World, 2001). The database system of Thaigem.com

contained well over 1.8 million stored images of gemstones by 2001 (Internet World, 2001). Tipparat

added that there were no competitors in the market that had a database containing anything like the amount

of product information offered by Thaigem.com's.

Most of Thaigem.com's servers were located in the US to overcome the inefficient

telecommunication infrastructure in Thailand. Siharath noted he would love to have the service hosted in

Thailand, but Thailand's Internet infrastructure needed more solid Internet connections.

Human Resources

Linsell added that the reason behind the success of Thaigem.com was the leadership provided by a

dynamic entrepreneur like Kogen. His knowledge of the gemstone industry and e-commerce allowed him

to make key decisions from the very beginning. Using the Internet to eliminate layers of middlemen, using

professional third party services like FedEx and specialized online payment services, offering a fixed flat

fee for shipping, and emphasizing excellent customer service to build a strong brand identity and large

customer base were among his key decisions. He also mastered the procurement process. In his words

(Internet World, 2001), "Ten new people come into my office everyday to sell me product… I have

mastered the knowledge of how to buy at the right price."

Kogen stated that Thaigem.com's strong, in-house IT team and loyal employees were behind the success of the company (Internet World, 2001). While Thailand lacked the qualified human resources for an e-commerce business, Kogen successfully managed to develop an IT capability in-house. Kogen decided to hire local employees from Chantaburi, even though they lacked English language skills and programming skills compared to employees from Bangkok. He explained that by providing the necessary training for local workers, they would become loyal employees and stay with the company longer than employees from Bangkok area. Today, Thaigem.com had a stronger IT team than any of its competitors in Thailand. According to Tipparat, the lack of an IT capability was one the main obstacles for traditional gemstone companies in Thailand that wanted to compete in the online market.

Behind the success of Thaigem.com was not only its IT team, but also its management team. Kogen stated that another success factor was the fact that it was not a very large company, which allowed Thaigem.com to respond quickly to competition and new strategies ("*Don Kogen Brings*", 2001). While the company's size had grown rapidly since then, Thaigem.com still operated in a loose-structured entrepreneur-like environment where the management team was kept small, which allowed them to be flexible and make quick decisions.

Partner Network

N/A

Revenue Sources

Thaigem.com's revenue sources came directly from end-consumers and wholesalers/retailers through the Internet channel and its retail store. While Thaigem.com sold gemstones at the lowest prices, Tipparat noted that the company's profit margin was around 25 percent.

Competitive Strategies

One of Thaigem.com's main competitive advantages was its low prices. Being located in Chantaburi allowed Thaigem.com to access one of the leading gemstone sources in the world. Moreover, Thaigem.com bought products outright, which allowed it to buy products at a low cost. In addition, its operation costs, including its labor costs in Chantaburi, were low. These low costs also translated into low prices for its merchandise. However, while price was one of the main competitive advantages for

Thaigem.com, Linsell noted that price alone was not a sustainable competitive advantage because there was always somebody that would eventually offer lower price points.

Tipparat explained that Thaigem.com's success had drawn a number of traditional gem traders into the online market. These traditional gemstone traders in Thailand had not only a large investment base, but also had the ability to access gem sources. Some even had exclusive rights to mine gemstones in Madagascar, according to Tipparat. This meant that they were able to compete against Thaigem.com in term of price, but what prevented them from successfully competing with Thaigem.com was its lack of IT capability, online marketing experience, and an established brand. They lacked qualified IT personnel who had significant experience to develop an effective e-commerce system.

Thaigem.com's IT team, in contrast to its competitors, continued to improve its websites for several years. As a result, they felt that they understood the needs of their customers. This allowed them to create a website that provided the highest convenience for customers, while developing the back-end system needed to effectively support the website. In addition, competitors found it hard to attract customers to their websites. According to Tipparat, while some Internet competitors tried to undercut Thaigem.com's price points to attract customers, their margins were then too low to cover their operating costs.

Tipparat noted that Thaigem.com was able to offer higher prices than competitors because of its brand. Customers were willing to pay a higher price with Thaigem.com because they trusted Thaigem.com's service. This brought up another competitive advantage: service. Thaigem.com's brand was built on a foundation of excellent service. The downside of being a foreign website was that customers were reluctant to purchase from the website because they did not trust the quality of products and services. Thaigem.com recognized this problem from the beginning and thus developed critical services to address the major concerns of foreign customers. These services included 24-hour customer service, secured online payment, 24-72 hours FedEx delivery, US$15-flat rate shipping, and a 30-day return policy.

Another competitive advantage of Thaigem.com was its large selection of gemstones. Thaigem.com's goal was to be the largest online gem store in the world. Most other gem stores offered specific type of gemstones. Tipparat believed that there were no online competitors that could offer the same gemstone selection as Thaigem.com. Moreover, it offered other complementary product lines like

ready-made jewelry and create-your-jewelry. This meant that customers could find both gemstones and jewelry in the same convenient location.

Research Question 4: What is Thaigem.com's Business Performance?

The intent of this section was to answer the last research question: How was Thaigem.com's business performance? Thaigem.com measured its performance based on its sales revenue, profit, market share, company size, and level of repeat business sales.

Revenue Growth

Linsell stated that Thaigem.com's sales had grown rapidly. According to Tipparat, the total sales in 2000 were US $1 million. In 2001, the total sales were US $4.25 million. In 2002, the total sales were US $13.75 million. In 2003, the total sales were well over US $15 million. He expected that the total sales in 2004 would be 30 percent more than the previous year.

Profit

Tipparat mentioned that the average profit of Thaigem.com was about 25 percent of total sales.

Internet Market Share

Thaigem.com had successfully maintained a 90 percent share of the online market.

Level of Repeat Business Sales

Returning customers accounted for well over 60 percent of business transactions.

Company Size (Number of Employees)

The number of employees had been steadily increasing, growing from three, to 100, to 200, and to 700 in 1999, 2000, 2001, and 2002, respectively. In 2003, however, the number of employees dropped to about 500.

CHAPTER SIX – TOHOME.COM[1]

The main focus of this chapter is to identify factors that influence the success of e-commerce in Thailand and Tohome.com. After explaining the business profile and history and its website operation of Tohome.com, the following five research questions for Tohome.com are discussed:

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the online retail industry?

3. What was Tohome.com's e-commerce business model?

4. How was Tohome.com's business performance?

Tohome.com's Business Profile and History

Tohome.com was launched in late 1999 under the company named Asian Star Trading Co., Ltd with an investment of US$100,000 (Wong, 2000). The owner of Tohome.com is Teeravut Wongvibulsin. Wongvibulsin was educated in the USA and had previously spent two and half years dispensing business advice in Thailand as a consultant for the Boston Consulting Group. Wongvibulsin was one of many entrepreneurs in Thailand who had followed the dot.com hype in the US. According to Wongvibulsin, Tohome.com was one of the first movers in the online retail business in Thailand.

Tohome.com's mission statement was "To be the ultimate online retailer in Thailand," (Tohome.com, accessed 11/21/04). Its main goals were:

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[1] Information for this case, except where stated otherwise, is based on interviews conducted October 15, 2002, July 22, 2004 at Tohome.com.

- To offer a wide selection of quality products at competitive prices

- To provide the most convenient shopping experience

- To provide highest customer satisfaction

The e-commerce business model of Tohome.com was largely influenced by Amazon.com. Wongvibulsin saw opportunity as an online retail store in Thailand. According to Wongvibulsin (Wong, 2000),

> Physically our country isn't as big as the U.S., which is a disadvantage for the development of e-commerce. On the other hand, our traditional retailers aren't as strong as in the U.S., which represents an opportunity for us. Our focus isn't just on convenience; we try to fill gaps that the traditional retailer can't. Let me give you an example. If you're in Chiangmai (Thailand's second largest city) you can get Celine Dion only on tape, you can't find her CDs in a traditional store. That's where we come in.

While the number of online consumers in Thailand was continuing to rise, it was still small. Using global strategies by targeting foreign customers may seem to make more sense. However, Wongvibulsin saw the potential of the Thai market. In his words (Wong, 2000),

> The Thai government has projected our online population to grow to 16 million in 2004 from the current 600,000 to 800,000. If the numbers keep growing, we will be okay. Overseas, Thais shopping for Thai music and books are another market for us.

He added further,

> For us, who are starting later than the U.S., having a Thai strategy rather than a global strategy makes good business sense. If you become good at selling to the Thai market, that makes it harder for the big guys with global strategies to take it away from you. … (At some point) when you become big enough in your own market, big foreign players who want to get access would have to seek an alliance with you or buy you out. (Wong, 2000).

Tohome.com started its online business with five employees. For over two and half years, Tohome.com outsourced its IT to Shinnawat Corporation, one of the largest IT companies in Thailand, to develop and maintain its websites. Wongvibulsin explained that he decided to outsource the IT due to the

fact that there was a limit number of IT personnel who were acquainted with e-commerce-related technology. In addition, the volume of sales and number of products carried on the websites were still small enough for an application service provider to handle. More importantly, this allowed Tohome.com to focus on the more important aspect of its business which was its customers. According to Wongvibulsin,

> …we could focus on what customers wanted. We had confidence that [Shinnawat] could handle the web operation. What we worried about was how to make customers shop with us.

Today Tohome.com was offering an increasing number of product categories. The number of customers and orders also increased tremendously. After 2002, Wongvibulsin decided to move website maintenance in house because the business was growing so fast that the IT outsourcing did not allow Tohome.com the flexibility to update product information, create promotional programs, and serve customers in a timely manner. A new database system was created to link its website operations with the inventory system and customer service system. The new system allowed Tohome.com to check the availability of products in real time. More importantly, a customer profile database provided Tohome.com with insights about its target market and allowed Tohome.com to understand more about online consumer behavior. This allowed Tohome.com to develop better marketing strategies for its various groups of customers.

Today, Siamguru, the leading search engine in Thailand, describes Tohome.com as the largest online retail store in Thailand with the largest selection of Thai and International tapes, CDs, books, computer, PDAs, software, mobile phones, and electronic equipment (Tohome.com, 2004). Tohome.com began its online business with less than 10,000 registered customers in its first year, but today has well over 50,000 registered customers. Its sales hit well over US $1.25 million[2] in 2003 and was projected to reach US $1.75 million in 2004.

Tohome.com's Web Operation

Tohome.com created simple websites that were easy to use even by Thai customers who had no prior online shopping experience. The homepage contained the folders of product categories across the top of the web page. The same product categories were also showed on the left-side menu. At present,

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[2] For this research, US $1 is equal to 40 baht.

Tohome.com offered eight product categories including books, movies, music, mobile phones, computers and PDAs, cameras, electronic equipment, Internet kits and education (Figure 6.1). Its homepage advertised merchandise in different categories including "best buys", "highlights", "new releases", "top-favorites", and "shock price". Tohome.com provided detailed descriptions and specifications of each product in every category (Figure 6.2). Product prices at Tohome.com were competitive. The websites compared its prices against retail list prices.

The website also provided clear policies and instructions for activities ranging from order processing through the payment process, to the delivery process and privacy policy (Figure 6.3). Therefore, Thai customers who were not familiar with online shopping would feel comfortable shopping at its websites. Customers added merchandise to their shopping cart once they were ready to purchase (Figure 6.4). A new customer was required to register or create a customer profile (Figure 6.5). Tohome.com provided six types of payments, including cash on delivery (COD), money transfers, credit cards, money orders, easy payment, and mobile phone payments (Figure 6.6). Tohome.com offered four delivery methods: in-store pick up, messenger, registered mail, and expedited mail (Figure 6.7).

Figure 6.1: Tohome.com's Homepage

(Source: Tohome.com)

Figure 6.2: Product Specification and Description

(Source: Tohome.com)

Figure 6.3: Clear Instructions
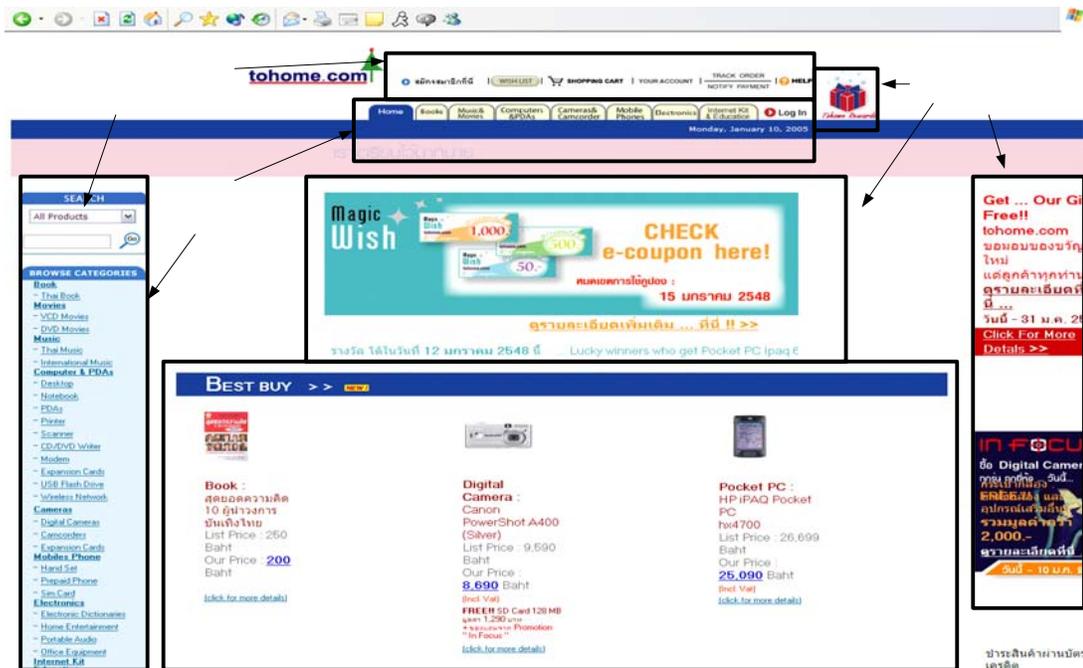
(Source: Tohome.com)

Figure 6.4: Shopping Cart
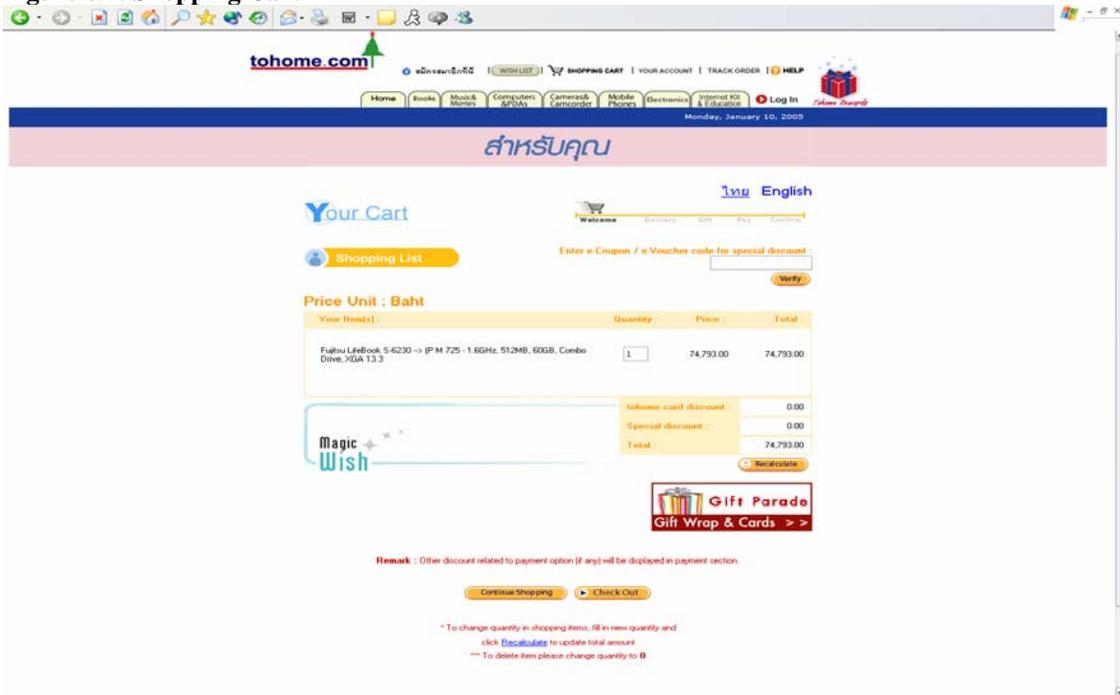
(Source: Tohome.com)

Figure 6.5: Customer Profile Collection
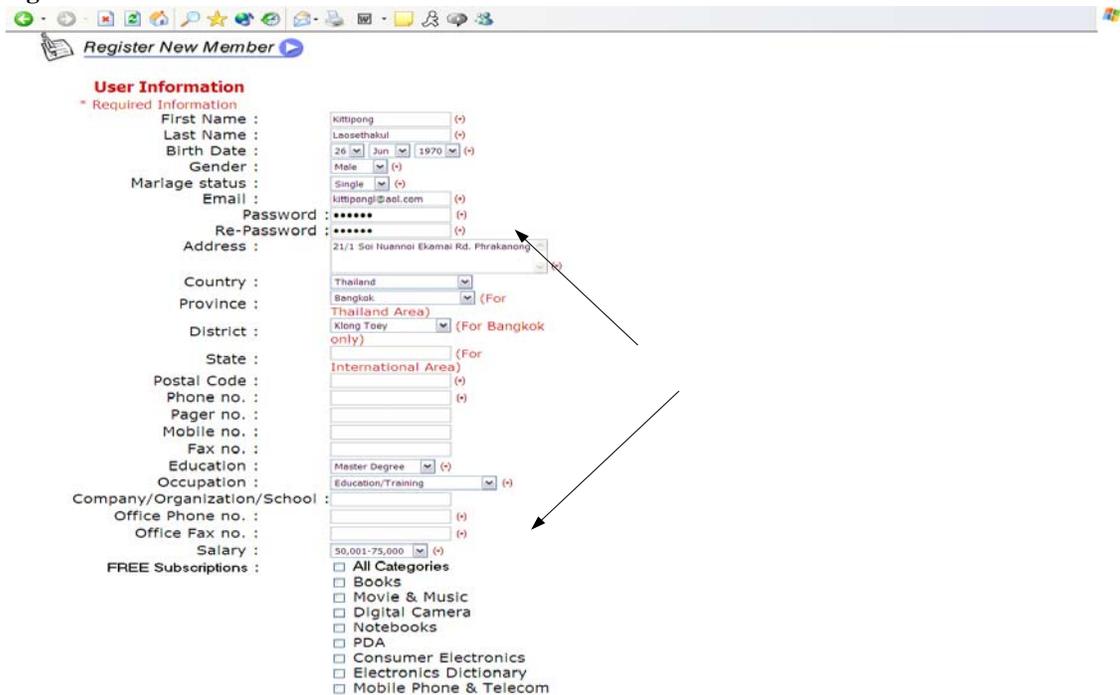
(Source: Tohome.com)

Figure 6.6: Payment Methods
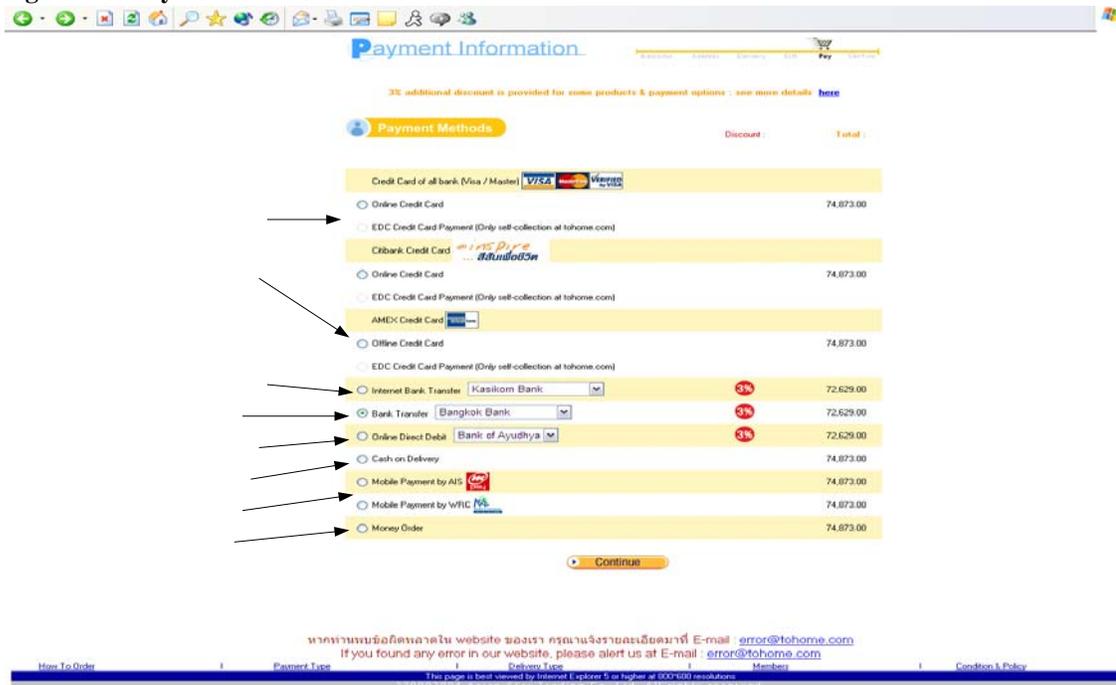
(Source: Tohome.com)

Figure 6.7: Shipping Methods
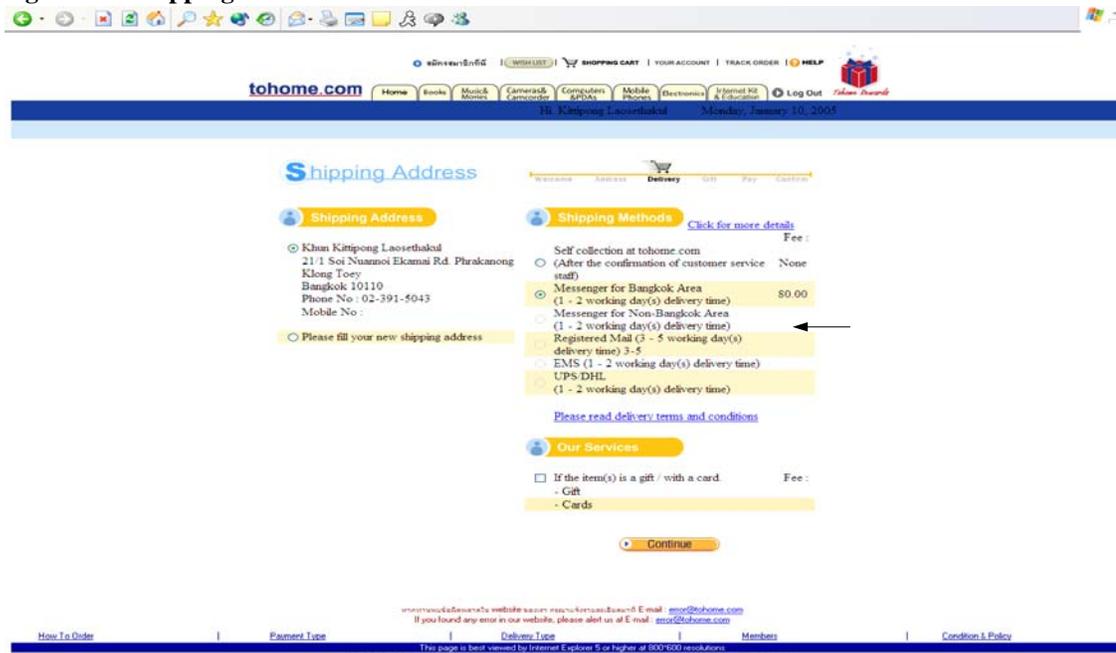
(Source: Tohome.com)

Research Question 1: What are the CSFs for E-commerce in Thailand?

The intent of this section was to answer the first research question: Regardless of industry, what were the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Trust

Wongvibulsin believed that lifestyles and infrastructure in the US prepared US consumers to embrace online shopping quickly. For example, US consumers were familiar and felt comfortable purchasing merchandise through mail-order or through catalog orders. The US had rigid laws that protected consumers, and US consumers trusted in their law. The logistic infrastructure in the US was well developed and also had companies that provided reliable shipping service to customers. Wongvibulsin explained that these factors made customers feel at ease with online shopping. Unlike the US, online shopping was out-of-ordinary for the majority of Thai citizens. With new e-commerce laws and occasional news about online fraud, the majority of Thai consumers, even ones that have already gone online, still did not trust online merchants. Wongvibulsin added that it would take some time for Thai customers to embrace online shopping to a level that creates a critical mass. Meanwhile, Wongvibulsin felt that e-commerce ventures in Thailand must establish recognized and trustworthy brands in which Thai customers had confidence in their product and service quality. E-commerce ventures must understand the available logistics in order to find the best ways to delivery merchandise to customers as fast as possible. Service on websites must also give Thai customers confidence in its security and privacy policy of their personnel information. For example, the websites' online payment system should use an SSL system. Wongvibulsin suggested further that it would require the entire Thai e-commerce venture community to show strong business ethics by providing trustworthy services to online Thai customers. Such practices would expedite the critical mass of online shopping in Thailand.

Target Market

According to Wongvibulsin, some of the greatest challenges for Thai e-commerce ventures were to identify potential online buyers for their products, to determine their online behaviors, and to understand their expectation in term of products and services. While the number of Internet users in Thailand was increasing, it did not mean that everyone who went online was ready to shop immediately or was the target market. In addition, e-commerce ventures in Thailand had little knowledge and few examples of successful

e-commerce ventures to follow which made it even more difficult to identify potential online customers. Wongvibulsin explained that once e-commerce ventures in Thailand identified the right target market for their products/services, they still had to understand online behaviors and identifying customer expectations for their products and services.

Large Product Selection

Wongvibulsin explained that the number and variety of products offered on websites was also important to the success of e-commerce ventures in Thailand. Websites that had a variety of products and large product selections in each category were more likely to draw Thai customers to shop on their websites. In other words, large product selections would create demand for their websites.

Customer Relationship

Wongvibulsin explained that the customer relationship was a critical factor in building long-term customer base. According to him,

> It was a major challenge to make Thai customers shop on your website. It takes a lot of effort and investment for each customer' online purchase. You don't want to it to be just a one time purchase, where they never return. The key is to build a long term relationship with them.

Wongvibulsin suggested that e-commerce ventures in Thailand must develop strategies that draw customers back to their website on the regular basis. However, good service is the backbone of every strategy. Besides providing good service, Wongvibulsin emphasized that e-commerce ventures must ensure that their service meets the expectations of customers, and vice versa. For example, once customers submit online orders, they expect that merchandise be immediately shipped and delivered on time. However, with the current state of Thailand's e-commerce infrastructure and the technology of e-commerce ventures, many e-commerce ventures cannot meet such expectations. E-commerce ventures must thus develop systems and keep their customers informed. For example, they must inform customers about delivery times or the possibility of delay in order to prevent them from being upset about the service. These kinds of actions/operations must be performed in order to keep customers satisfied with services, and, thus, maintain long term relationships with them.

Convenient Websites

With the convenience of traditional shopping in Thailand, it was a major challenge for Thai e-commerce ventures to make shopping on the Internet convenient. Wongvibulsin noted that websites must be easy and intuitive for customers to use, from searching for products and product information, to adding products to a shopping cart, to checking out. He also emphasized that Thai e-commerce ventures must provide secure payment websites. They need a variety of payment methods because the number of credit card holders in Thailand was still low and Thai consumers did not trust online merchants enough to provide credit card information.

Industry Knowledge

Wongvibulsin noted that Thai e-commerce ventures must have knowledge beyond that of Internet technology. To be successful, Thai e-commerce ventures must know their industry including their target customers, online and offline marketing requirements, and merchandising methods. Development of successful e-commerce strategies in their industries requires such understanding.

Research Question 2: What are the Key Industry Requirements for E-commerce in the Retail Industry?

The intent of this section was to answer the second research question: What were key requirements that all e-commerce company must have in order to enter the online retail industry? To answer this question, five areas of industry requirements needed to be investigated: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

Wongvibulsin noted that to succeed in e-commerce in the online retail industry, a company must also be able to meet all critical success factors necessary to compete in e-commerce in Thailand. A company must develop trust with Thai customers, identify right targets and understand their online behavior, establish long term relationship, offer large product selection, develop convenient website, and have strong retail industry knowledge or experience. The following section explains further other factors that were critical to the success of e-commerce in the online retail industry.

Trustworthy Websites

Thai consumers do not trust online merchants, especially in term of quality of service, and the security and privacy of customers' personnel information, such as credit card and income information. While online retailers must deliver good service to establish customer trust, they also must be able to provide secure websites for online payment and have a clear privacy policy.

Good Services

Since online shopping lacked human touch, the convenience of traditional payment methods, and reliability of product delivery, the majority of Thai customers were still reluctant to shop online. Online retailers must address these issues in order to make Thai customers feel more comfortable when shopped on their websites.

Large Popular Product Selection

According to Wongvibulsin, one of the key requirements of the retail business was merchandising. He noted that besides technology, a retailer must be knowledgeable about products because product trends change all the time. A retailer must know what products customers want and what products the competitors were selling in the market. Products must always be available and updated to follow the trends of the market. For an online retailer offering a large product selection, this meant providing customers with the convenience of going shopping at a traditional department store.

Availability

Online customers expect that products would be available when they place online orders. Retail popular products are easy to find in conventional shopping stores. Thus, unavailability leads to inconvenience of online shopping. In addition, after Thai customers placed online orders and found out later that products are not available, online merchants must immediately inform customers and clarify about credit card charge, because Thai customers still do not trust online merchants and online shopping processes.

Variety of delivery methods

One drawback of online shopping is that customers have to wait for products to be delivered. To make it worse, they do not trust the reliability of delivery of the Thai post office. Thus, it is critical that online retailers offer other delivery methods besides the post office.

What are the Competitive Requirements?

Tohome.com considered itself an online retailer that sold a variety of products. Thus, Tohome.com was in the retail industry with competitors who ranged from special retail stores to department stores.

Strong Supplier Relationship

Strong supplier relationship was a key competitive requirement of a retail business. Since Thai customers love to bargain, low prices and promotions are important for online shopping. Online retailer must be able to offer competitive prices and variety of promotional programs. Strong supplier relationship allows online retailers to receive better prices and promotional programs that they can pass on saving and promotions to customers.

Competitive Prices

Retail businesses compete on prices because they sell similar products. For Thai consumers living in metropolitan areas, it was easy for them to find product information and compare prices. Thus, a competitive price was a key criterion in buying decisions. As for online retail stores, Wongvibulsin explained that for first time customers in Thailand, price provides the clearest value of online shopping. For them, a competitive price also compensates for the risk of online shopping with unfamiliar Thai online merchants.

What are the Technical Requirements?

IT Operation

While outsourcing IT was an option for online retailers, Wongvibulsin believed that it was not a practical option. When online retailers reach a certain size, Wongvibulsin suggested that online retailers must consider developing in-house IT in order to keep up with the growing business.

What are the Resource Requirements?

Human Resources (IT, Merchandising, and Service)

According to Wongvibulsin, a retail business generally required employees who possess merchandising knowledge. As for an online retail business, qualified IT personnel and customer service personnel critical resources. Wongvibulsin explained that when online retailers decided to develop and maintain their websites in-house, qualified IT personnel capable of developing and maintaining e-commerce websites were critical to the success of the business. IT personnel must be able to keep up with new technology and new techniques in order to deliver better websites and execute new promotional ideas daily. To deliver good services to customers, online retailers must also have strong customer service teams. This was especially important if online retailers in Thailand expected to establish good reputations and build customer trust.

What are the Industry Regulation Requirements?

Pricing

According to Wongvibulsin, there were no specific rules or regulations in this industry. However, Khamnatee Chivapornthip, the marketing manager of Tohome.com, explained that suppliers monitored the prices of their products in the marketplace to make sure that they were not sold below certain price points. They would ban retailers who dumped products in the market below certain price points.

Research Question 3: What is Tohome.com's E-commerce Business Model?

The intent of this section was to answer the third research question: What was Tohome.com's e-commerce business model? To answer this question, the following components of an e-commerce business model are discussed:

Market Segmentation and Targeting

Tohome.com's main market segment was Thailand. Tohome.com targeted Thai customers who went online regularly and preferred the convenience of online shopping to traditional off-line shopping. While the majority of Tohome.com's customers came from metropolitan areas like Chiangmai and Puket, there were a number of customers from smaller provinces who saw online shopping as a better alternative to off-line shopping at a limited number of stores in their local areas. Thai customers in foreign countries and corporate customers were also targets of Tohome.com. Wongvibulsin explained that the majority of

Thai Internet surfers were teenagers who lacked purchasing power. However, they were not a price sensitive group since their parents were the real buyers. The fact that they did not have credit cards limited them as major Internet buyers. While the 30 to 40 year-old age groups had the largest online purchasing power, they had not yet embraced the online shopping lifestyle. Wongvibulsin expected today's teenager group to become the major Internet buyers in a few years. One of the critical success factors of Tohome.com was the ability to identify its target customers and understand them well.

Value Proposition

Tohome.com clearly stated its value on its websites. Its value proposition addressed five main areas of e-commerce: special price, immense selection, excellent service, reliable delivery services, and safe payment procedures.

Resources and Capabilities

Tohome.com's resources and capabilities were based on its ability to identify the right targets, choose the right merchandise, provide excellent service, and establish relationships with its customers. In addition, it had the needed IT resources and capabilities to develop and maintain e-commerce websites that supported backend systems including inventory management and customer service.

Activity Configuration

E-commerce business was comprised of two major sets of activities: the main e-commerce business functions (sales and marketing, inbound logistics, operations, outbound logistics, and after-sales services) and the supporting e-commerce business activities (firm infrastructure, human resource, R&D, and procurement). The core business functions of Tohome.com's business model will be discussed in the following section.

Operations

Low cost and efficient operations were Tohome.com's critical success factors. Without physical retail stores, Tohome.com's business was mainly conducted through the Internet channel. Well over 80 percent of its orders came over the Internet. The rest came via the telephone. According to Wongvibulsin, brick-and-mortar retail businesses had the cost of its physical stores and operations. Without physical retail stores, Tohome.com had much lower fixed costs than brick-and-mortar competitors. This allowed Tohome.com to offer competitive prices to customers. Wongvibulsin also emphasized that Tohome.com

tried to keep its operations lean and efficient in order to keep its operating costs as low as possible. For example, while online orders grew rapidly, Tohome.com used its IT system to forecast demand for each product in order to keep its inventory cost low.

Sales and Marketing

Product.

Choosing the right products and target markets was one of Tohome.com's critical success factors. Tohome.com's product strategy was to sell well-known branded products that were common in retail markets. According to Wongvibulsin, this strategy made it easier for Tohome.com to select products that were most likely to be purchased by Thai customers online. Wongvibulsin explained that besides having a limited knowledge about potential online buyers and their online behaviors, the majority of Thai e-commerce ventures lacked information about what kind of products could be sold to Thai consumer over the Internet at the current stage of e-commerce development. Wongvibulsin had first assumed that products that sold well offline were more likely to be purchased on the Internet. His merchandising team surveyed retail markets to identify products that sold well. These were products that were popular or well known by Thai consumers. Thai consumers could find information about such products easily and, thus, did not require much time or information in making buying decisions online. Tohome.com began selling a few product categories like books, CDs, DVDs, PDAs, and digital cameras. At the same time, it collected customer profiles and learned about online consumer behaviors using online/phone surveys and focus groups.   After Tohome.com began to understand its target customers' needs in term of products and services, it expanded its product categories and product selection to better serve those needs.

Price.

Tohome.com sold all of its products at competitive prices. Low operating costs and growing business volumes allowed Tohome.com to offer competitive prices. Tohome.com's merchandising team continued monitoring pricing in the marketplace and from suppliers. Prices were adjusted based on the pricing control from suppliers and marketplace prices.

During the first three years of operation, Tohome.com guaranteed the lowest prices for certain merchandises on its websites. According to Wongvibulsin,

Sometimes we had to sacrifice by earning smaller profit margins to make sure that our prices for

particular products were the lowest, because we wanted to be a market leader in those product

segments.

This strategy drew new customers to its websites and drew customers back. However Tohome.com's

pricing strategy has evolved since then. By late 2004, while it still offered competitive prices, it began to

move away from its lowest price guarantee strategy. While low prices could draw new customers and

former ones to the websites, Wongvibulsin explained that ultimately it was the service that kept them

coming back. In fact, Tohome.com had a return customer rating of over 50 percent. In addition,

Tohome.com tried to encourage Thai customers to place orders through its websites rather than the phone

because the operating cost on the phone was more expensive. Products thus were priced more expensive

over the phone than on websites.

Place.

Tohome.com sold its products through both the Internet and telephone channels. As for the

Internet channel, Tohome.com tried to create simple, yet convenient, websites for Thai customers. Products

were grouped into different categories so customers could find them easily. Each category also grouped

products into sub-categories like new releases, best buys, recommend items, and top selling products.

Product information including specification and description was also available for every product.

Customers can submit orders 24 hours, 7 days a week. The shopping cart was easy to use.

Tohome.com allowed several methods of payments and provided detailed explanation for each method,

which was easy to follow. Tohome.com targeted both credit card and non-credit card buyers. The company

offered six types of payments: cash on delivery (COD), money transfers, credit cards, money orders, easy

payment, and mobile phone payments. COD allowed customers to pay cash when merchandise was

delivered by Tohome.com's messengers. Customers could also pay by transferring money from their bank

accounts to Tohome.com's bank. Tohome.com's account numbers were available on its websites. Some

bank accounts allowed customers to transfer money through the Internet using direct debits. Customers

could also transfer money to Tohome.com's bank accounts by ATM. This method required Thai banks to

cooperate with Tohome.com by arranging their ATM machines to have specific screens to transfer money

to Tohome.com's accounts. Clear instructions were available for customers on its websites. Tohome.com

also offered a three percent discount to customers who chose to pay by money transfer method. The third payment method was a secured online payment via a credit card. Tohome.com accepted Visa, MasterCard, and American Express cards. Along with the credit card payment option, Tohome.com offered six credit companies that customers could apply to for credit-card approval. With these credit cards, customers could make a series of payment with low interest rates. Tohome.com often created co-promotion programs with these credit companies to offer zero percent interest rate within a certain period of time. New customers had to fill out information on the website. They also had to submit other required credit documents to Tohome.com. Tohome.com then processed the documents and submitted them to selected credit companies for approval. Another payment option was money order. Orders were processed right after Tohome.com received money orders with its correct address.

One of the most successful payment methods of Tohome.com was the easy payment program which allowed customers to make a series of payment to pre-selected credit card companies that offered low interest rates. Often these credit card companies arranged promotion programs with Tohome.com to offer zero percent interest rates for certain period like six months or one year. Tohome.com often arranged easy payment programs with suppliers. Customers made a series of payments directly to Tohome.com. The easy-pay program worked well with merchandise that had high prices, such as a laptop computers, cell phones, and digital cameras.

Tohome.com also offered payment through a customer's mobile phone. Tohome.com used two third-party service providers named www.mobilepaymentclub.net and M-Pay. It had integrated its e-commerce system with these service providers. Customers who chose this payment method were required to have accounts with either of these providers. Customers who wanted to use mobilepaymentclub.net had to have certain mobile phone services and bank accounts. With www.mobilepaymentclub.net, Tohome.com required customers to enter their mobile phone numbers and passwords. Customers would immediately receive calls on their cell phones with cell-phone-screen instructions to make payments. Payments were then immediately deducted from customers' bank accounts. As for M-Pay, the process was similar, but the cell phone company paid for customers' Tohome.com orders, and then billed the customers' cell phone accounts. After orders were submitted, Tohome.com sent a confirmation e-mail to customers. Welcome

calls were made for new customers. At the same time, welcome calls were used to verify customer information.

Promotion.

Tohome.com created online promotions throughout the year including points for purchases, special prices, free gifts, and free shipping. According to Khamnatee Chivapornthip, the marketing manager of Tohome.com, Tohome.com created new promotion programs on its websites on a regular basis in order to keep its websites interesting for Thai consumers. Direct e-mail was sent to existing customers whenever new promotions were introduced or new merchandise was introduced that fit a customer's purchasing profile.

Tohome.com advertised its websites on major search engines and popular web communities, such as Phantip and Sanook. It also used off-line advertising in public places, such as sky trains and bus stops. Wongvibulsin was surprised at how well Thai Internet were familiar with its websites. According to Wongvibulsin,

> I was surprised by how word spread on the Internet. I believed that we knew our customers very well and we continued providing excellent service that made them keep coming back,… and they spread good words about our websites on the Internet on bulletin boards and in well-know Thai chat rooms. This was how other Thais heard about our website.

Outbound Logistics

When products were available, Tohome.com delivered at once to customers. Tohome.com provided three types of delivery: regular mail, a messenger service, and expedited delivery. Regular mail was the cheapest of the three methods and available for domestic delivery. A messenger was available for domestic customers who wanted faster delivery or wanted to make payment on delivery. An expedited delivery was available to both domestic and foreign customers. Tohome.com used TNT, a global logistics company, to provide its expedited delivery. When products were not available, or shipping was delayed, Tohome.com informed customers by phone. When products were ready for shipping, Tohome.com informed customers by e-mail or by phone for expensive orders.

After-Sales Services

Customer service was the heart of Tohome.com's success. Tohome.com answered FAQs on its websites. It also provided customer services by phone. Customers could call when they needed more product information or when they required assistance in using the websites or had product problems.

Chivapornthip noted that while low prices provided the clearest value when shopping at Tohome.com, it was the service that brought them back to Tohome.com. Wongvibulsin added that it took repetition for Thais to embrace the online shopping lifestyle, but it was happening now. Chivaporthip explained further that Thai customers may not recognize other values beyond low prices when they shopped with Tohome.com for the first time, but after they received services such as an e-mail confirmation, a welcome call, customer support, and a reliable delivery, they began to realize the other values that online shopping with Tohome.com provided.

One of the main after-sales services of Tohome.com was the welcome call. Tohome.com immediately established a relationship with a customer by making welcome calls to new customers. According to Chivaporthip,

> Most of them were surprised when they received our welcome call right after they submitted the first orders. They felt that we really cared about their satisfaction. It immediately established the sense of trust with them.

Wongvibulsin explained three reasons for the welcome call. First, Tohome.com used the welcome call to manage the expectations of customers in term of delivery date and time. If merchandise was not available, Tohome.com had to order it from a supplier. It usually did not take too long to get merchandise before shipping, but Tohome.com let customers know when they could realistically expect it to arrive. For high priced products and pay-at-delivery products, Tohome.com made another call to customers right after products were shipped so customers could arrange to receive the shipment. Second, Tohome.com used the welcome call to verify that customers were not committing online fraud. Wongvibulsin explained that he found fake customer names and payment and shipping addresses registered on the websites. In his words,

> Many times we found that customers wanted us to deliver products at strange places or sometimes they used fake names or someone else's credit card numbers. By verifying them on the phone we can ensure that they are real and thus prevent online fraud. If products are ordered from suppliers

but customer orders are a mistake, they go back into the inventory, which costs us more and

suppliers are not happy if its returned.

Finally, since customers were verified by the welcome call, customer profiles on their database were highly

accurate and represented real customers.

Tohome.com used its customer profiles to learn more about its customers. According to

Chivaporthip, "We knew even what targeted customers liked specific books, CDs, PDAs and laptops. What

knew what time they usually shopped on our website." Tohome.com also randomly chose customers from

its profiles to complete the phone survey. Wongvibulsin explained that these profiles allowed Tohome.com

to better understand its customers. As a result, Tohome.com improved its services in the right direction,

expanded its product selection to meet customer needs, and developed targeted promotion programs.

Tohome.com found that a number of customers preferred a series of payments rather than one-

time payments for high-priced merchandise, like digital cameras and laptop computers. Tohome.com, thus,

launched the easy payment option on its websites. It also contacted a number of large corporations to

arrange the co-payment program that allowed their employees to buy products from Tohome.com and then

have their companies' accounting departments make deductions from their paychecks every month until

full payment was made to Tohome.com.

Procurement

Tohome.com used customer sales history to forecast each product's demand. Tohome.com stocked

merchandise that sold fast, but tried to keep its inventory lean in order to avoid inventory costs.

Wongvibulsin added that some merchandise, like laptops and cell phones, changed models quickly. If

Tohome.com stocks products in large quantity but cannot sell them in the timely manner, they become

obsolete and need to be returned to suppliers or sold at low profit margins. According to Wongvibulsin,

"Suppliers were not happy with companies that often returned merchandise. You need to keep them happy

in order to lower your cost." For these reasons, Tohome.com tried to keep its inventory at a reasonable

level to ensure quick inventory turnover. If products were out of stock, it usually did not take more than one

day to reorder and receive products from suppliers. Therefore, Tohome.com still provided delivery times

that were fast enough to keep customers happy.

R&D

With its in-house IT capability, Tohome.com could maintain and update its website whenever necessary. Products could be updated and new online promotions could be created by the IT team. More importantly, with its internal IT capability, Tohome.com could keep its operation flexible and efficient. Wongvibulsin explained that the main IT system was integrated across such business functions as inventory, merchandising, accounting, and customer service. When orders were sent to suppliers, delivered from suppliers, or shipped to customers, merchandise availability was immediately updated in the system. The e-commerce website was also developed and maintained in-house by the IT department. The system monitored and collected data from customer profiles to visiting times. The accounting department could get all numbers easily from daily sales to supplier orders from the system. The customer service department could pull customer profiles with order and payment histories to support customers whenever it needed. According to Wongvibulsin, the IT system made their job fast and easy, which allowed Tohome.com to grow without hiring more employees. This allowed Tohome.com to continue having low operating costs. Moreover, Tohome.com incrementally understood its customers because it could collect and analyze customer profiles and order history.

Panyarat Uzob, the merchandising manager of Tohome.com, noted that it took time for competitors to develop an IT system competitive with Tohome.com. Moreover, accumulated IT experience of Tohome.com allowed Tohome.com to respond to new marketing strategies that were implemented on competitor's websites.

Human Resources

Uzob noted that human resources were critical success factors for Tohome.com. According to Uzob, Wongvibulsin emphasized to every employee that customers had to come first. Wongvibulsin explained further that since service was the heart of Tohome.com's success, it required that every employee think about customers first and keep them happy with good service so they would come back in the future.

Partner Network

N/A

Tohome.com's revenue source came directly from end-consumers.

Competitive Strategies

One of the Tohome.com's competitive advantages was low price. With low operating cost, efficient operations, and growing supplier volume, Tohome.com could offer low product price points. While competitive prices could also be offered by competitors, the fact that Tohome.com was a pure online store that used IT to enhance its operations allowed Tohome.com to keep operating costs low. In addition, with growing business volume, Tohome.com continued negotiating low merchandise prices from suppliers. Competitors may be able to imitate these functions, but they lacked the operating efficiency and business volume of Tohome.com.

A competitive advantage of Tohome.com was its large customer base. Tohome.com achieved this competitive advantage through years of learning about its target customers. Tohome.com continued conducting market research, such as focus groups, an online survey, and a phone surveys. Its e-commerce system also collected customer profiles and tracked the activities of customers on its websites. These data were very valuable for Tohome.com because they allowed Tohome.com to understand its Thai online targets better and guided Tohome.com to select the right products for the right targets, create the right promotion programs, improve its websites, and deliver a better service to them.

Another competitive advantage of Tohome.com was the strong brand. Since it was committed to delivering excellent service to customers, it continued establishing long term relationships and trust with customers. Its brand was based on trustworthy websites with excellent service, not just low price. The fact that Thai customers still did not trust online merchant created a challenge for Tohome.com and other e-commerce ventures in Thailand to overcome. With its good reputation based on good service, Tohome.com achieved high customer return ratings. Former customers posted good experiences with Tohome.com on the Internet, which, in turn, brought new customers to the website.

Research Question 4: What is Tohome.com's Business Performance?

The intent of this section was to answer the last research question: How was Tohome.com's business performance? Tohome.com measured its performance based on its sales revenue, gross margin,

net margin, and cash flow. However, due to reasons of confidentiality, Wongvibulsin revealed only sales revenue. Wongvibulsin also considered returning online customers as a measure of performance.

Revenue Growth

According to Wongvibulsin, the total sales in 2000 were approximately US $250,000. About 50 percent of the sales revenue came from phone channel. Wongvibulsin noted that its compounded annual growth rate was about 40 percent per year. The sales revenue reached US $1.25 million in 2003, and it was expected to reach US $1.75 million in 2004. In the most recent years, the revenue from telephone sales was reduced to only 20 percent.

Level of Repeat Business Sales

Returned customers accounted for well over 50 percent of business transactions.

CHAPTER SEVEN – SIAM CEMENT[1]

The main focus of this chapter was to identify factors that influence the success of e-commerce in Thailand and Siam Cement. After explaining the business profile and history of Siam Cement and the website operation, the five research questions are discussed:

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the cement and building material distribution industry?

3. What is Siam Cement's e-commerce business model?

4. How is Siam Cement's business performance?

SCG's Business Profile and History

Siam Cement Public Company Limited (SCP) or Siam Cement Group (SCG) was the largest cement company in Thailand. Siam Cement was chartered by King Rama VI in 1913 to help build modern Thailand. The company grew into a full-blown conglomerate by the 1980s, moving into steelmaking, pulp and paper, and petrochemicals. With foreign investors eager to leverage its royal prestige, SCG entered various joint ventures, making cars with Toyota ™, tires with Michelin, and television tubes with Mitsubishi Electric. At its peaks in 1996, the group boasted 130 companies with total sales of more than US $6 billion. The 1997 Asian financial crisis, however, brought both the economy and SCG to their knees. It was buried under some US $4.5 billion in foreign debt. The company posted a US $1.3 billion loss for that fiscal year. Chumpol Na Lamlieng, the president of SCG, asked his bankers to keep his short-term credit lines open, promising them that SCG would make all its interest payments. At the same time, Chumpol managed to raise US $2 billion from issuing debentures (Balfour, 2001).

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[1] Information for this case, except where stated otherwise, is based on interviews conducted September 20, 2002, June 24 and 29, 2003, July 1, 2004 at SCG.

A SCG employee since the early 1970s and a graduate of Harvard Business School, Chumpol was widely considered Thailand's most professional manager. After he successfully bought time to sort out group finances and raised money, Chumpol unveiled his restructuring strategies in late 1998. His plan was aimed at streamlining SCG's core petrochemical, cement, and pulp and paper operations, as well as paying down debt and selling non-core businesses. He sold off more than 30 sideline businesses, such as sheet glass and automotive products, and concentrated on core businesses – cement, paper, petrochemicals, construction materials, and ceramic (Klee, 2002). The toughest part was terminating so many employees because of lack of work. The spin-offs, together with voluntary retirement schemes decreased the group's payroll from 35,000 to 25,000, which was a significant savings that contributed to the bottom line. Following the refocusing strategy, the company restructured its organization in order to change all cost centers to profit centers. According to its restructuring plan, SCG rationalized its corporate structure down to six core business areas and two holding companies:

- Paper & Packaging – The Siam Pulp & Paper Plc. (SPP)

- Petrochemicals - The Cementhai Chemicals Co, Ltd. (CCC)

- Cement - The SCG Industry Co., Ltd. (SCI)

- Construction Materials – The Cementhai Building Products Co., Ltd. (CBP)

- Ceramic – The Cementhai Building Products Co., Ltd. (CBP)

- Distribution – The Cementhai Distribution Co., Ltd. (CDC)

- Cementhai Holding Co., Ltd

- Cementhai Property (2001) Plc.

While SCG was not completely cured, the group successfully reduced its foreign hard-currency debt from $4.5 billion to zero, and short-term loans account for just 10 percent of its US $2 billion in local debts. In 2000, the group earned an after-tax profit of $960,000, compared with a net loss of $110 million in 1999.

Cementhai Distribution Company (CDC)

After the restructuring, SCG designated the sales and distribution responsibility to the Cementhai Distribution Co., Ltd. (CDC). Most of the group's and its third parties' products were now sold and

distributed by the CDC except for petrochemical and paper products, which were sold directly from producers. CDC was composed of three strategic business units. SCT Co., Ltd (SCT) focused on the international trading of SCG. Cementhai Sales & Marketing Co., Ltd (CSM) was responsible for domestic trading of SCG's and third parties' products, and Cementhai Logistics Co., Ltd (CTL) provided the logistical support and transportation for SCG's and third parties' products both locally and internationally. An e-commerce arm of SCG was only extended to the domestic market, and thus directly involved only CSM and CTL.

The Cementhai Sales and Marketing (CSM)

CSM was established in 1999. CSM ,a marketing and distribution expert in the domestic market for building and home improvement products, had a proven track record and extensive sales network encompassing over 550 dealers and more than 2,000 sub-dealers located across Thailand. CSM offered more than 50,000 cement and building material products from both SCG manufacturers and other third parties to suite every consumer's need. SCG's dealers were exclusive, selling SCG's core product lines, including cement, gypsum board, Monic roof tile, and ceramic tile. CSM sold the group's and its third parties' products directly to SCG's exclusive dealers. SCG's exclusive dealers were pressured not to sell competitors' products. These dealers sold products directly to sub-dealers in their local areas. Sub dealers sold products directly to local customers, including home owners, project owners, developers, and contractors. In some situations, exclusive dealers sold products directly to these local customers. Figure 7.1 showed the distribution pattern of SCG's products.

Figure 7.1: Cement Thai's Distribution Pattern
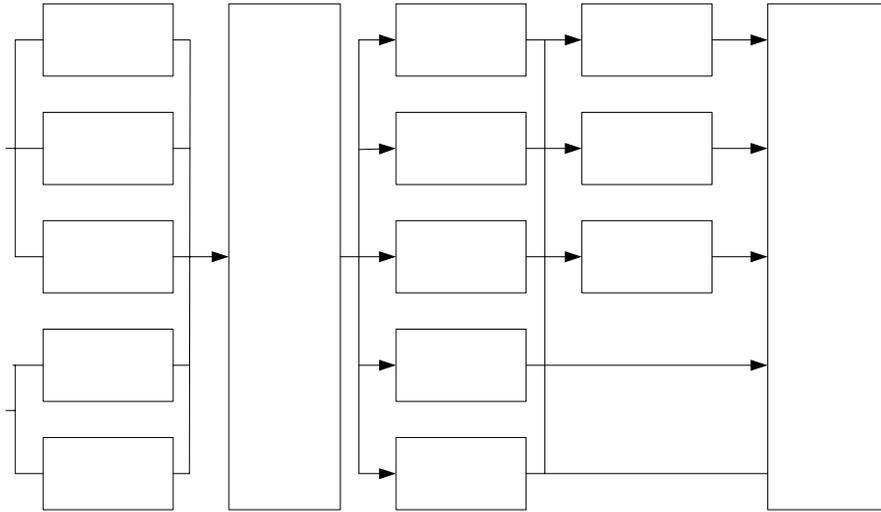
(Source: CSM)

One of the most important responsibilities of CSM was its B2B e-commerce operation. Its Internet-based B2B e-commerce sites enabled CSM to expand its sales network to over 550 dealers nationwide. According to Sriwan Jiranuntarat, the e-commerce manager of SCM, the Internet-based B2B e-commerce system was developed to replace the existing private-network EDI system. SCG was the first company in its industry to implement an EDI system. Jiranuntarat explained that the vision of SCG's top management was to become a market leader using cutting edge technology to support its business operation. The EDI system was introduced in 1988 to strengthen the sales network with SCG's dealers. According to Jiranuntarat, the development and implementation of the EDI system with its dealers had been a major challenge back then. Dealers were local merchants in non-metropolitan provinces. Generations of dealers had operated their businesses without using complicated technology. They placed orders with SCG's sale agents by phone and fax with every order being processed manually by sale agents. Besides having limited computer-related knowledge and skill, dealers lacked the capital resource needed to invest in costly technology like EDI. To overcome these obstacles and to expedite the adoption process, SCG provided all necessary support for dealers including IT investment and extensive training. The EDI system was successfully executed, giving SCG's dealers a whole new level of convenience in product ordering. At the same time, SCG was able to increase the volume of order without increasing sale agents

and, thus, cutting costs tremendously. Before the EDI system was replaced by the Internet-based network system in 1999, 60 percent of orders were submitted by dealers through the EDI system.

While SCG gained competitive advantages through EDI, it was expensive to pay for its lease line each year. Moreover, the EDI-related technology and platform were not flexible and had high maintenance costs. Dealers' terminal computers could not receive graphics-based data. Text-based data limited what the dealers viewed on their monitors and thus made it difficult for dealers to understand or see what products looked like. Thus, product lines available for order through the system were limited due to the lack of graphics.

When terminal computers had problems or required software updates, SCG had to send sales agents to each dealer's site to provide necessary maintenance. This created high maintenance costs for SCG. This also made new proprietary software configurations difficult and expensive to develop. Furthermore, after SCG developed an ERP system as the backend system to support and connect its business units, it wanted to integrate its ERP and EDI systems. Unfortunately, limitation of its EDI technology made integration impossible until the 1998 plan. Once Internet-based technology became available, CSM decided to replace the private network platform with an Internet-based platform. The Internet-based B2B e-commerce platform was implemented in 2000. It reduced both network access costs and maintenance costs. Moreover, CSM could now send sophisticated data/information to dealers because terminal computers were replaced with personal computers. Virtually every type of products could now be ordered through the new system.

The transition from the old EDI system to the new Internet-based system was not as difficult as the initial implementation of EDI system because current dealers had a higher education level than their parents. However, as with other Thais living in non-metropolitan areas, these dealers still lacked PC or Internet experience. CSM had to provide extensive training to its dealers. Once the new system was ready, CSM demanded that its dealers order products through its websites. To assist dealers during the transition period, CSM gradually increased the number of product lines that must be ordered through the Internet. It also created a call center at the head-quarter office to receive phone orders for products that were not yet required for online orders. However, once CSM demanded that dealers to order specific product lines

online, dealers could no longer use the call center except for technical problems with the online system or Internet access.

The B2B e-commerce system was successfully executed and received tremendously support from dealers. It was fully integrated with the ERP system. Through the Intranet, the ERP system was also connected to the call center, SCG's manufacturers, and the CTL (Figure 7.2). As of 2004, well over 80 percent of total orders through CSM came directly from its B2B e-commerce websites. The remaining orders were submitted through the call center.

Figure 7.2: Cement Thai's Infrastructure Network
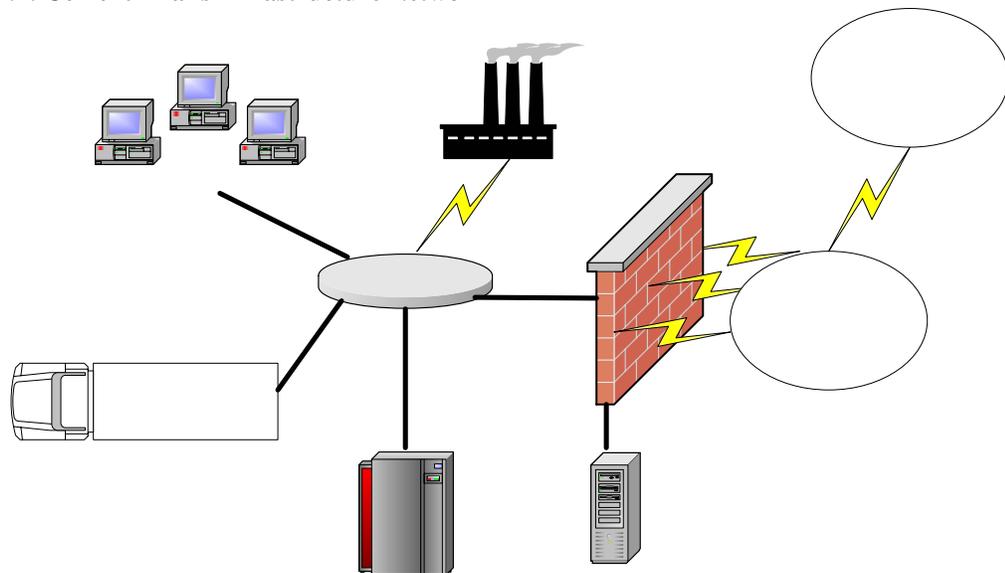
(Source: CSM)

The Cementhai Logistics Company Limited (CTL)

The second company under CDC was the Cementhai Logisitics Company Limited (CTL). CTL provided total logistical support and transportation of products locally and internationally. With an extensive network of strategic transportation carriers, CTL distributed products to retailers, wholesalers, factories, and construction projects throughout the country with accurate and speedy delivery.

Before the restructuring plan in 1998, SCG's central inventory was located in Bangkok. Jiranuntarat explained that SCG used to have over 50 sales centers nationwide. These sale centers served as the sub-inventory centers. Orders could be easily picked up by dealers right after placing orders on the EDI

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system or directly with sale agents. Merchandise was always available at sales centers so, when dealers ran out of merchandise, they could obtain more in a short period of time. While the old model provided convenience for dealers, the operational cost of sales centers was very high. In addition, it was difficult for CDC to track or control the inventory levels in each location, and thus it created a high inventory cost. Following SCG's restructuring plan, CTL closed all sales centers, and opened 4 main hubs as docking stations in 4 different regions of Thailand. By having only 4 main docking hubs, CDC could better control its inventory. The new logistics system cut delivery times on many products from two weeks or more to one or two days.

IT One – The Joint-Venture IT Service Provider

SCG's B2B e-commerce system was developed and maintained by IT One, a 50-50 joint venture created in February 2001 between SCG and Accenture, a leading U.S. consulting company. According to Accenture, SCG was the first company in the Thailand, and one of the first in Asia, to outsource its IT services (Klee, 2002). IT One was not only a cost-effective way of tying information technology to business needs at SCG, but also a vehicle for creating world-class capabilities in customer relationship management, supply chain management, and other vital applications (Klee, 2002). Before the joint venture was established, SCG had the biggest IT operation of any industrial company in Thailand. SCG centrally managed IT using a top-down structure. It was not well suited to meet the needs of individual business units in a faster paced environment. Chumpol, chairman of IT One, explained: "We needed to be more leading edge – and more service-oriented (Klee, 2002)". The CEO of IT One was Allen Ziirsen from Accenture. Most of the 230 staff at the joint venture came from SCG. IT One currently supported well over 4,500 SCG users. It handled essential tasks such as financial accounting and materials management.

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CSM's Web Operation

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SCG's B2B e-commerce websites were under the URL: http://www.cementhaionline.com. CSM allowed only its dealers and some specific end-customers to access its websites. Dealers and end-customers desiring to use its websites had to contact sale agents for access permission. Sales agents then submitted dealer access requests to CSM's management. CSM usually granted the access to its exclusive dealers. CSM considered sub-dealers and end-customers on a case by case, depending on their business history and construction projects underway. Once access was granted, individual dealers or end-customers received

account numbers, passwords, and e-mail addresses. For security reasons, CSM allowed dealers to access the websites only at their store locations, where CSM installed computers and Internet access for dealers. It meant that without proper IP addresses from the designated dealer locations, access was automatically denied.

The websites allowed dealers to order well over 50,000 products online. Orders were automatically processed by the ERP system, and then submitted to SCG's producers and third party suppliers. When products were ready to ship, the information was submitted to CTL. The ERP system tracked products from these producers to the transportation centers/hubs. This information was made available online to dealers and other assigned customers so they could check their order status, track order shipments, and even create sale reports. SCG also provided online payment options to customers. However, as of 2003, there were only two banks in Thailand that had e-payment capability – Asia Bank and Thai Commercial Bank, and therefore, only customers with accounts at these banks were able to make online payments. As a result, a money transfer was still the preferred method of payment for the majority of customers. As of 2003, online payments accounted for 40 percent of online business transactions.

Research Question 1: What are the CSFs for E-commerce in Thailand?

The intent of this section was to answer the first research question: Regardless of industry, what were the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Efficient Internet-related Infrastructure and Convenient of Web Service

Jiranuntarat explained that there was a limitation to the efficiency of the Internet-related infrastructure in Thailand, especially in terms of Internet bandwidth and online payments. This made it difficult for e-commerce ventures in Thailand to provide efficient service to customers, and therefore created a major challenge for e-commerce ventures to make customers feel confident in a company's e-commerce processes. For example, SCG's dealers complained about the speed of the Internet. When they submitted online orders, they wondered whether their orders went through or not. Often they unintentionally re-submitted orders by clicking a submit button again and again. CSM found that dealers wasted 59 percent of their time on communication from end-to-end due to the slow speed of the Internet. As for online payments, there were limited numbers of Thai banks that could provide this service making it inconvenient for Thai business customers to make online payments except with those banks offering online

payment. In other words, an e-commerce company must be able to deliver the convenience of web service to customers. The convenience of web service started when a customer began to access to a website until a customer completes an online transaction.

Jiranuntarat suggested that while these infrastructure problems could not be fully controlled or improved by e-commerce ventures alone, one must understand these limitations and know what needed to be improved. Payungsak Wanthaneeorakul, the business analyst of CDC, suggested that e-commerce firms must know the limitation of the Internet-related infrastructure upfront so they can form the right strategies. For example, knowing what ISP services were available in each area, firms could determine what market segments to enter. In addition, he noted that e-commerce ventures should not totally use online processes/functions without being reliable or available, but rather use the mix of online and traditional processes/functions. For example, a firm needed both online and phone ordering processes. If the Internet access is slow or down, customers need an option to make a phone order so a firm will not totally lose its business.

Trust

Jiranuntarat believed that Thai customers still did not trust online Thai merchants, especially pure online companies. Savijja Akkharayut, a system development manager at CSM, suggested that pure online merchants needed brands to be well recognized both online and offline. Their websites required clear contact information, address, and policy, as well as a detail company profile. Security functions also needed to be in place. Jiranuntarat added that while brick-and-click companies may have the advantage of physical stores and/or established brands/names, they should not ignore those attributes on their websites. She further argued that while Thai customers may recognize brands/websites of online merchants from, for example, advertising, and may feel more comfortable making their first purchase; if online merchants cannot deliver what they promise, Thai customers will instantly lose trust with online merchants. Products, for example, must have good quality and fit their online description. A delivery must also meet the time schedule shown on the website.

Awareness of the E-commerce Value and Internet-related Skill

While the Thai government tried to promote information technology in businesses and education, the majority of Thai people and businesses still had low computer literacy. Thai people and businesses,

especially in non-metropolitan areas, were not aware of e-commerce value to their businesses and had low Internet usage. This created a major challenge for e-commerce ventures that wanted to do e-commerce with business clients in non-metropolitan areas. According to Jiranuntarat, doing e-commerce with business clients involved changing their historical way of doing business. It was even more difficult when the new business practices involved technology that they did not understand or use. To make it worse, at the current stage of e-commerce development in Thailand, the speed of the Internet did not make new processes faster than phone or fax orders. In addition, e-commerce involved more individual work for clients. Therefore, to make this change occur, e-commerce ventures must not only create awareness of the Internet and e-commerce in general, but also convince users that e-commerce provides higher business value than the way they did business in the past. Jiranuntarat suggested further that once awareness was created, e-commerce ventures must be able to provide training of new e-commerce systems for their business clients. According to Jiranuntarat,

When we changed the EDI system to the Internet-based e-commerce system, our dealers had to learn how to use the new system, but the changing processes was not as difficult as the first time when they had to learn how to use the EDI system. That was 17 years ago. Imagine when the first generation of local merchants had to learn how to use the EDI system to make orders. SCG had to provide all necessary training to make it happen. Now, dealers were the second generation. They had a higher level of education than their parents. They were more familiar with computers and the Internet. Therefore, the change to Internet-based system was easier. However, the problem was far from over. A number of these owners did not operate the new system by themselves. They had employees working for them on the new system. These employees were local, and were less likely to have strong computer skills and rarely used the Internet. We had to provide training for their employees. None the less, we often found that many dealers stop using the e-commerce system, and placed orders through the call center instead. After the investigation, we found that dealers' employees quitted their jobs, and dealers had no one else, not even himself, who understand how to use the system. It showed the lack of computer literacy of the local in non-metropolitan areas and necessity of training to make this system works.

Efficient Logistics

According to Wanthaneeorakul, Thailand lacked efficient logistics infrastructure and had only a few logistic providers. Only large corporations could afford their services. However, e-commerce ventures could use the Thai postal service to deliver small packages. As for large commercial packages, the Thai postal service did not have a clear service level and coverage to ensure reliable deliveries. If a package or merchandise was damage during the delivery, the postal service was less likely to take responsibility. E-commerce ventures could use personal messengers riding motorcycles to deliver packages to customers. This method worked only if delivery was within the metropolitan areas. When business volume increased, this method created a bottle neck. Thailand also has ground transportation service like trains or buses that could be used to deliver commercial packages to stations in any province, but the logistic system within those provinces was fragmented. Their logistic providers were small and not reliable. No logistic providers consolidate volume in those provinces. Wanthaneeorakul noted that this factor became increasingly critical when their business volume grew. Above a certain level, e-commerce ventures must develop efficient logistic systems/processes that are reliable and cost effective. Otherwise, they may not be able to sustain their cost and service levels in the long term.

Efficient Back-end Operation

Akkharayut explained that small and large businesses often lacked efficient back-end operations:

It is hard to get anything from companies with inefficient back-end operation. Customers want to know something, but they simply could not answer because they have no way of getting those answers from their own system. They have just one chance, but they turned customers away.

This could be a downfall for e-commerce business. Customers would not have confidence or trust in e-commerce companies that could not provide efficient service. For instance, when customers submitted online orders, the orders should be communicated to manufacturers and/or warehouses in a timely manner. When e-commerce ventures received products from manufacturers and were ready to ship to customers, the back-end operation should record and inform customers in timely manner. Customers should be able to check product availability, track their orders, or check business history. These services could not be delivered if e-commerce ventures lack back-end operations that tie inventory system, manufacturers, or sales and accounting functions together. While it is not necessary for back-end operations to be integrated

with every other business area, Akkharayut suggested that the back-end operation should at least be

designed to support critical business areas of e-commerce.

<p style="text-align:center;">Management Support</p>

Jiranuntarat added that an e-commerce project would not be accomplished without strong

support and commitment from top management. A B2B e-commerce project usually required large and

long term investment. A project was also risky because it involved organization process changes and

integration. Thus, top management must have strong vision in an e-commerce project and believe that it

could give a company's competitive advantage over competitors.

Research Question 2: What are the Key Industry Requirements for E-commerce in the Cement and

Building Material Distribution Industry?

The intent of this section is to answer the second research question: What were key requirements

that all e-commerce companies must have in order to enter the cement and building material industry in

Thailand? To answer this question, five areas of industry requirements needed to be investigated: customer

requirements, competitive requirements, industry regulation and standards, resource requirements, and

technology requirements.

SCG has a number of different businesses. It produced, and at the same time, it sold and

distributed products through its dealer networks. For the purpose of this research, the researcher mainly

focused on requirements directly related to sales and distribution areas of the industry because they were

the areas in which SCG engaged in e-commerce. Moreover, even though there were a number of product

lines in this industry, the researcher focused on cement and building material products because they

accounted for the majority of its sales value. The key products included cement, gypsum board, roof tile,

and ceramic tile.

There were no other companies in this industry, other than SCG, that sold a large number of

cement and building material product lines. Some sold only cement products. Others sold just certain types

of building materials. SCG's competitors ranged from cement companies to building material companies to

<p style="text-align:center;">185</p>

HomePro, depending on the product[2]. Moreover, SCG was the first and the most active company that used the B2B e-commerce system in the industry. According to Jiranantarat, there were very few competitors that began to use B2B e-commerce system to serve their dealers, but they were not active in their online service at this point.

Jiranrantarat note that critical success factors of e-commerce in Thailand also applied to an e-commerce company within the cement and building material distribution industry. It meant that a cement and building material distributor must be able to deliver convenience of web service to dealers, choose the best possible Internet-related service providers, create awareness of e-commerce value to dealers, build dealer confidence in its online service, and provide necessary training to develop Internet skills of the dealers. Moreover, a company must have an efficient logistic system to deliver products to dealers in time. It also needed to have an efficient back-end system to efficiently support large online transaction.

What are the Customer Requirements?

Considering SCG's value chain, the researcher mainly focused on dealers who bought products directly ordered from SCG. However, while dealers and sub-dealers provided market access, manufacturers like SCG played a primary role in promoting its products to consumers. For this reason, it was necessary to describe critical requirements that related to not only dealers, but to consumers.

Dealer Support

In this industry, dealers were the key distributors of products to construction contractors and consumers. Cement and building material manufacturers needed strong dealer networks in order to reach contractors and consumers. As such, dealers required strong support from manufacturers in term of credit lines, discount, product availability, and marketing. For example, dealers tried to sell products to construction contractors in their areas. If there are building projects such as housing or road construction in their areas, contractors will put the bid up for dealers to compete. To be able to compete, dealers must receive support including discounts and credit lines from manufacturers. Dealers also sell products in their stores. Today, an increasing number of Thai consumers were involved in selecting material for their

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[2] A HomePro was a wholesaler or a retailer that sold wide variety of home/building appliances from ceramic tiles to paint to light bulbs. Unlike Siam Cement, for example, HomePro was not a producer of products. HomePro competed directly against cement-and-building-material dealers.

building projects, rather than letting contractors select building materials by themselves as in the past. Customers do not learn about products if manufacturers do not advertising their products in different media. Dealers also required products to be available at all times. Thus, manufacturers must have a strong logistic system that can provide timely delivery of products to dealers.

What are the Competitive Requirements?

Large Product Selection

Today dealers still had to carry only cement and building material products from a particular manufacturer. Thus, dealers wanted to carry products from a manufacturer that had large product selection because products could meet variety of customers' needs better.

Competitive Product Positioning

There were a number of competitors in cement and building material markets offering similar products. Companies, therefore, try to compete by offering a wide variety of colors and styles in order to differentiate their companies in the marketplace.

Competitive Price

Since similar cement and building material could be found from different manufacturers, customers also looked at products that offered competitive prices. Dealers wanted to carry products that could compete with other manufacturers' prices.

Dealer Network

There were almost 6,000 dealers of cement and building material products in Thailand. As an industry practice, dealers carried the key cement and building material products required by a particular manufacturer. Customers found these products at near-by dealer stores. Thus, manufacturers tried to compete by recruiting dealers to carry their products. The greater the number of dealers who carried their products, the higher the chance customers would find their products.

Competitive Sales Force

Manufacturers developed relationship with dealers through their sale forces. Sale forces frequently visited dealers at their locations to check their inventory status and take orders from dealers. Sale forces also help dealers prepare order-related documents and submit them to manufacturers. Sale forces also pushed dealers to sell more of their products and meet a manufacturer's sale goal. In some cases, sale

forces help dealers to find building/construction projects in the dealers' areas. Quality of service and long-term relationships that sale forces developed with dealers was the key factor the kept dealers with manufacturers.

Logistics

A strong logistics system was critical to the success of manufactures in this industry. For one reason, out-of-stock products could cause construction project delays, but at the same time, dealers did not want to stock excess products because of excess inventory cost. Dealers, thus, preferred ordering products from manufacturers as needed. As such, timing was important and dealers expected manufacturers to be able to deliver products on time. Another reason was that the cost of product distribution was one of main costs in the cement and building material products businesses. Cement and building material products had to be distributed to dealers all over the country. The margin of a product in this industry usually was very slim. Without an efficient logistics system that could consolidate shipping, SCG would incur high distribution cost, and, in turn, reduce its profit.

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What are the Technical Requirements?

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IT-based Back-end Operation

Information technology was not a technical requirement for this industry, and the level of competition had been increasing every year. Information technology like ERP and e-commerce could give producers competitive advantage over their competitors in terms of sales and marketing and supply chain management. According to Jiranuntarat, some competitors of SCG began to adopt such information technologies.

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What are the Resource Requirements?

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Human Resources (Sales Force)

A sales force played an important role in developing long term relationship with dealers. Thus, a strong service-mind sales force was the requirement of any manufacturer and distributor in this industry.

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What are the Industry Regulation Requirements?

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The Anti-trust Law

Manufacturers now have to be careful about the anti-trust laws. In the past, it was an obligation for dealers to sell key cement and building material products from a particular manufacture. With Thailand's

anti-trust laws, the exclusive dealer practice became less emphasized. According to Jiranuntarat, manufacturers will not demand dealers to carry only their key products in the future. It would be totally up to dealers whether they want to carry key products from any manufacture. However, manufacturer will provide better benefits and support to dealers that decided to carry their products. In Jiranuntarat's words, "It is a win-win situation. If they expect us to give them full support, we expect them to willingly give us full support as well."

Research Question 3: What is SCG's E-commerce Business Model?

The intent of this section was to answer the third research question: What was SCG's e-commerce business model? To answer this question, the following components of e-commerce business model needed to be discussed:

Market Segmentation and Targeting

SCG's main targets are its exclusive dealers and large construction contractors. According to Jiranuntarat, CSM carefully selected its exclusive dealers. As of 2004, CSM had approximately 550 exclusive dealers around the country. To become one of CSM's exclusive dealers, dealers had to be able to meet its sale goal within the first 6 months. CSM also geographically segmented its exclusive dealers to ensure that they would not compete within the same area. Should an area already has enough exclusive dealers, CSM would not recruit new exclusive dealers in that area. Wanthaneeorakul explained that while there were almost 6,000 dealers around the country, CSM focused on a limited number of dealers because it could build stronger relationships with them. These exclusive dealers then targeted sub-dealers and contractors in their areas. Depending on the size of construction projects, large contractors sometimes directly contact CSM or SCG's manufacturers in order to get larger credit lines.

Value Proposition

The main value that CSM provided to its exclusive dealers was the sale support in term of IT investment, marketing, product availability, product delivery, credit lines, and discounts. This support would help dealers compete with other dealers in their areas, and in turn help develop long term relationships with CSM.

Resources and Capabilities

According to Jiranuntarat, the main resources of CSM were human resources, including sale forces and sales & marketing team. CSM had strong sale forces that provided service directly to exclusive dealers. These sales forces were trained to help exclusive dealers promote products and find construction projects in dealers' areas. Another resource was capital. CSM covered all expense of the e-commerce system for exclusive dealers. This helped expedite the adoption process of its e-commerce system.

CSM's core capabilities were based on its abilities to develop its e-commerce system and use it to support sales and marketing activities. Its capabilities also included the ability to develop sales and marketing strategies that fit to each market segment. Its logistics capabilities also played an important role to the success of its e-commerce system.

Activity Configuration

E-commerce business activities were comprised of two major sets of activities: the main e-commerce business activities (sales and marketing, inbound logistics, operations, outbound logistics, after-sales services) and the supporting e-commerce business activities (firm infrastructure, human resource, R&D, procurement). Only core business activities of SCG's e-commerce business model will be discussed in the following section.

Operations

SCG used the ERP system as the backbone of their operation. CSM over saw the ERP system. The ERP system was fully integrated with the e-commerce websites. The ERP system was also connected to SCG's manufacturers and other main functions of SCG like logistics and the call center though private networks. When orders were received from the websites or the call center, the ERP system consolidated and electronically delivered them to different manufacturers. The ERP system also monitored every movement of products from manufactures to CTL to dealers.

Sales

CSM sold SCG's and its third parties' cement and building material products through its e-commerce websites, a call center, and sale agents. Online orders were accounted for 80 percent of the total orders. CSM invested everything for its 550 exclusive dealers from computers, to Internet connection fees, to training. By having its exclusive dealers to place orders through the online channel, CSM could maintain

and/or increase business volume without increasing the number of sale agents. This tremendously reduced CSM's operating costs. More importantly, the e-commerce system freed up sale agents' time and effort from doing routine work like receiving orders and completing paper work. Sale agents now spent more time and effort helping dealers to better market products, such as finding construction projects and creating promotion programs/events in dealers' local areas. According to Jiranuntarat, even though dealers had more responsibility to place orders and prepare paper works, they were willing to cooperate because they perceived a higher value of the e-commerce system.

CSM planned to extend its e-commerce service to exclusive dealers' sub-dealers. To make this model work, exclusive dealers would set up prices on CSM's e-commerce websites for their sub-dealers. Exclusive dealers, thus, could still earn money, and at the same time, it would require less manual work receiving and submitting sub-dealer orders to CSM. Exclusive dealers would have more time to find more projects and better provide service sub-dealers.

Marketing

In the past, CSM developed a marketing strategy based on only intuition. CSM used the same marketing strategy with every exclusive dealer. In Jiranuntarat's words, "It was a mass-marketing strategy." However, after the e-commerce system was introduced, the ERP system collected online activities of exclusive dealers into its database. CSM analyzed the data, which gave the company a better understanding of markets in different locations. At present, CSM is developing different marketing strategies for different markets and different groups of customers. According to Jiranuntarat, the ability to gain these insight and develop specific marketing strategies for dealers was critical to the success of e-commerce for the company.

Product.

SCG's products were positioned at higher quality products than competitors. CSM required its exclusive dealers to buy four key product lines – cement, gypsum board, roof tile, and ceramic tile because they were the most common products used in building and usually ordered in large volume. In addition to four key product lines, SCG had a wide variety of cement and building material products available on its websites. According to Akkharayut, "we have everything customers need when they build a house." While exclusive dealers were not required to buy non-key products, they tended to buy other non-key products

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along with key products from the websites due to convenience. Jiranuntarat noted that the large product selection was one of the key success factors for SCG.

Price.

SCG priced its products higher than its competitors because it positioned its products at a higher quality position than its competitors'.

Place.

CSM wanted its exclusive dealers to order products through the websites as much as possible because it was the most cost effective channel. CSM continued improving its websites to make sure that it was easy for dealers to use. One of the most popular features of its e-commerce sites was the price quotation request. When dealers had construction projects that required larger credit lines or discounts, dealers needed to negotiate new credit lines or discounts with the CSM managers and SCG's producers. However, with an online price quotation feature, dealers could simply submit the price quotation and detail project online by themselves. This feature tremendously reduced time and effort of sale agents and the call centers to prepare paper works and submit information to the ERP system. The online requests were then electronically submitted to CSM managers and SCG's producers. When credit lines and discounts were approved by them, CSM customized specific credit lines and discounts for particular projects for dealers that submitted requests. These dealers then could receive larger credit lines or discounts when they submitted online orders for those projects.

Even though CSM preferred dealers to place all orders through the websites, CSM still needed to have the call center to serve phone orders. House-hold material products, for example, had a large variety and took times for dealers to find them on the websites. According to Jiranuntarat, exclusive dealers preferred ordering house-hold material products through the call center because it was faster. In addition, according to Wanthaneeworakul,

Sometimes dealers just simply did not want to place online orders, but rather used the call center. You could not do anything about it. We need to have a call center to serve dealers in this kind of situation.

Jiranuntarat added that the call center was critical for e-commerce because the quality of Internet in Thailand was still unreliable. The call center was the back-up system when Internet was down and when dealers had technical problems with their computers or Internet access.

Another strategy that SCG implemented was the Cement Thai Home Mart. The Home Mart was a concept of modern trade stores that attracted consumers. According to Jiranuntarat, consumers are increasingly involved in the process of selecting cement and building material products. When they saw products from retail stores advertised in the different media, they told their contractors to use those specific materials. However, according to Wanthaneeworakul,

A dealer store usually was a dusty, non-decorated store that had cement and building material products laying around on the floor and shelves. In the past that was ok because it mainly served sub-dealers or contractors, but today things are quite different. Consumers are increasingly involved in product selection processes. They go to the stores to select products or they see products advertised in the media. Then they tell contractors to use what they see.

Thus, the new concept of a dealer's store, the Cement Thai Home Mart, was developed. The Home Mart store was fully decorated inside and outside to attract customers. Instead of using a dealer's store name, every CSM's exclusive dealers put a big Cement Thai Home Mart name up. Products now were strategically organized and displayed for consumers. As of 2004, CSM converted well over 200 exclusive dealers' stores to Cement Thai Home Marts.

Promotions.

SCG had created its brands as high quality brands that customers trusted. The company promoted its products in different media like television advertising and magazines. According to Wanthaneeworakul,

In reality most cement and building materials in the market have about the same quality. Cement, for example, is cement, but we have built our brand image all along to have higher quality. Customers recognized the SCG brand. They choose our brands simply because they believe that ours have higher quality than other brands.

CSM also gave promotions to exclusive dealers in term of credit lines and discounts when they met sale goals. CSM used data collected from e-commerce websites to develop the promotion program that fit each dealer's market. CSM then sent sale agents to help dealers execute promotion programs in their areas.

Outbound Logistics

When CSM received orders from the websites or the call center, the ERP system sent orders to different manufacturers and CTL. The CTL consolidated the shipping orders and used the extensive network of strategic transportation carriers to distribute products to 4 main hubs located at 4 main parts of Thailand. Then local carriers delivered products to particular dealers. The delivery times on many products were a day or two.

After-Sales Services

SCG's e-commerce websites allowed exclusive dealers to track orders and created sale reports. CSM also provided similar websites for large contractors who bought products directly from SCG's manufacturers, even though they did not order products directly from the websites. Moreover, CSM developed sale forecast report for exclusive dealers to help them better manage their sales, orders, and inventory. Dealers could download the report from the website. CSM also provided e-commerce training for dealers at its headquarters once a year. CSM also provided the online training for exclusive dealers so they could access the training at their locations anytime.

Procurement

While CSM was a company under the SCG, CSM acted as the trading company that had to buy products from SCG's manufactures and third parties. CSM bought products from these manufacturers when it received online orders or phone orders. The ERP system of CSM then sent those orders to manufacturers to produce merchandises.

R&D

CSM has operated the e-commerce system and ERP system, but these systems were developed and maintained by the IT One, a joint venture of SCG and the Accenture. While SCG once had the largest in-house IT department in Thailand, outsourcing IT with a multinational consulting company like Accenture allowed SCG to gain world-class IT experience, and continually improve its e-commerce websites with up-to-date technologies.

Partner Network

A business partner directly involved in the e-commerce activities was IT One.

Revenue Sources

CSM's revenue resources came directly from exclusive dealers. As a trading company, CSM purchased from SCG's manufacturers and third parties. It added small commissions or margins when it sold these products to dealers. According to Jiranuntarat, the margin was very small which required it to sell products in large volume to make profits. That was why it set sale goals for every exclusive dealer and tried to help them sell more products to sub-dealers and contractors.

Competitive Strategies

CSM's competitive advantages were its strong dealer network. Unlike CSM, competitors focused on a larger number of the 6,000 dealers around the country. Competitors tried to recruit as many dealers as possible. The larger the number of dealers, the higher the chance that customers could find their products at a near-by store. However, the draw back of this strategy was the inability to provide strong support for the large number of dealers. Today, dealers expected manufacturers to provide support after sales. By focusing on a limited number of exclusive dealers, CSM could provide strong support in areas like sales & marketing and IT investment for each of its exclusive dealers. Unlike CSM, competitors still relied on a large number of sale agents to receive orders from their dealers. To keep up with market demand, competitors increased the sale forces. This created high operating costs. In addition, SCG was the first company in the industry that implemented the EDI system and e-commerce systems. The e-commerce system allowed SCG to reduce its sales and distribution costs and tremendously improve the efficiency. Sale agents now had less paper work and spent more time providing better marketing support to exclusive dealers. In return, relationship between exclusive dealers and sale agents was stronger. Moreover, the e-commerce system and the ERP system collected real time data from dealers' online activities. CSM analyzed this data and gained tremendous insight about its markets in different locations. It then customized marketing strategies to fit dealers' market conditions. Today competitors only have mass marketing strategies.

The experience gained from implementing the EDI system and the IT investment for its exclusive dealers also allowed CSM to implement an e-commerce system faster. Competitors, on the other hands, just

began to implement e-commerce systems with their dealers. The large number of dealers, the cost, and the lack of experience in online system would prevent competitors from successfully implementing e-commerce in a short period of time.

Another competitive advantage was SCG's strong established brands. Customers perceived SCG brands as higher quality than competitors. In addition, SCG also had a larger variety of cement and building material products than any single competitor in the market. These large product lines allowed SCG to meet all possible customer needs. Another competitive advantage of SCG was its sophisticated logistic system. With large number of product lines from different manufacturers and third parties, SCG must be able to effectively manage its outbound logistics, otherwise, the shipping costs would be very high. SCG's logistic system was fully integrated with the ERP system. It effectively consolidated shipping volume to make sure that every shipment was cost effective. In addition, SCG had an extensive network of strategic transportation carriers that could reliably distribute products to dealers.

Research Question 4: What is SCG's Business Performance?

The intent of this section was to answer the last research question: How was SCG's e-commerce business performance? SCG measured its e-commerce performance based on the percentage of online orders and online sales revenue. However, Jiranuntarat noted that while online sale revenue could provide an idea of how well its e-commerce was, it could not entirely represent the performance of its e-commerce because online revenue was also influenced by the economic condition in Thailand. Percentage of online orders was also influenced by the fact that Cement Thai demanded its dealers to submit online orders. Jiranuntarat added that another performance indicator of the e-commerce system was the fact that most of exclusive dealers invested their own money in adding more computers at their stores to connect to the company's e-commerce system. SCG bought only one computer for each exclusive dealer. In her words, "It means that they really see the value of our e-commerce system."

Revenue Growth

Cementhai's online and ERP systems started in November 2000. The total online revenue in 2000 was US $475 million or 62 percent of total CSM's revenues. In 2001, the online revenue was US $550 million or 65 percent of total CSM's revenues. In 2002, the online revenue was US $ 625 million, or 72

percent of total CSM's revenue. In 2003, the online revenue was US $695 million, or 72 percent of CSM's total revenue.

Growth of E-commerce Orders

From 1997 to early 1999, exclusive dealers still ordered through the EDI system. Online orders that were placed through the EDI system accounted for 55 percent in 1997, 56 percent in 1998, and 59 percent in 1999. Exclusive dealers began placing online orders through the Internet-based e-commerce system in 2000. Internet-based orders accounted for 62 percent in 2000, 65 percent in 2001, 75 percent in 2002, and 80 percent in 2003.

CHAPTER EIGHT – PANTAVANIJ[1]

The main focus of this chapter is to identify factors that influence the success of e-commerce in Thailand and Pantavanij. After explaining the business profile and history of Pantavanij and the website operation, the four research questions are discussed:

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the e-procurement industry?

3. What is Pantavanij's e-commerce business model?

4. How is Pantavanij's business performance?

Pantavanij's Business Profile and History

Pantavanij was Thailand's first and largest B2B electronic procurement (e-procurement) company. Pantavanij's core business was to provide procurement solutions through technology and consulting to its customers. In 2000, Patavanij was founded by six of the country's largest conglomerates: Bangkok Bank Plc., Charoen Pokphand Group (CP Group), Siam Cement Group (SCG), Siam Commercial Bank Plc., TelecomAsia Corporation Co., Ltd., and United Communication Industry Plc. (UCOM). On January, 2001, the founders signed a memorandum of understanding with Freewill Solutions,[2] the leading software development firm in Thailand, to establish a world class e-procurement company. Freewill Solutions was a major shareholder of Pantavanij. Freewill Solutions also provided technical support services to the company. Pantavanij also selected Accenture[3] as its advisor in the areas of system and technology infrastructure. The CEO of Pantavanij was Tri Kanchanadul, an accomplished veteran investment banker with extensive international experience. Before joining Pantavanij, Kanchanadul was the managing director

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[1] Information for this case, except where stated otherwise, is based on interviews conducted August 28, 2004 at Pantavanij.
[2] Freewill Solutions was the major share holder of Pantavanij.
[3] Accenture is a global consulting company

of American International Group (AIG). He also served in key positions at several established companies, like UBS Warburg, Merrill Lynch, and Citibank NA. Figure 8.1 shows the organization structure of Pantavanij.

Figure 8.1: Pantavanij's Organization Structure
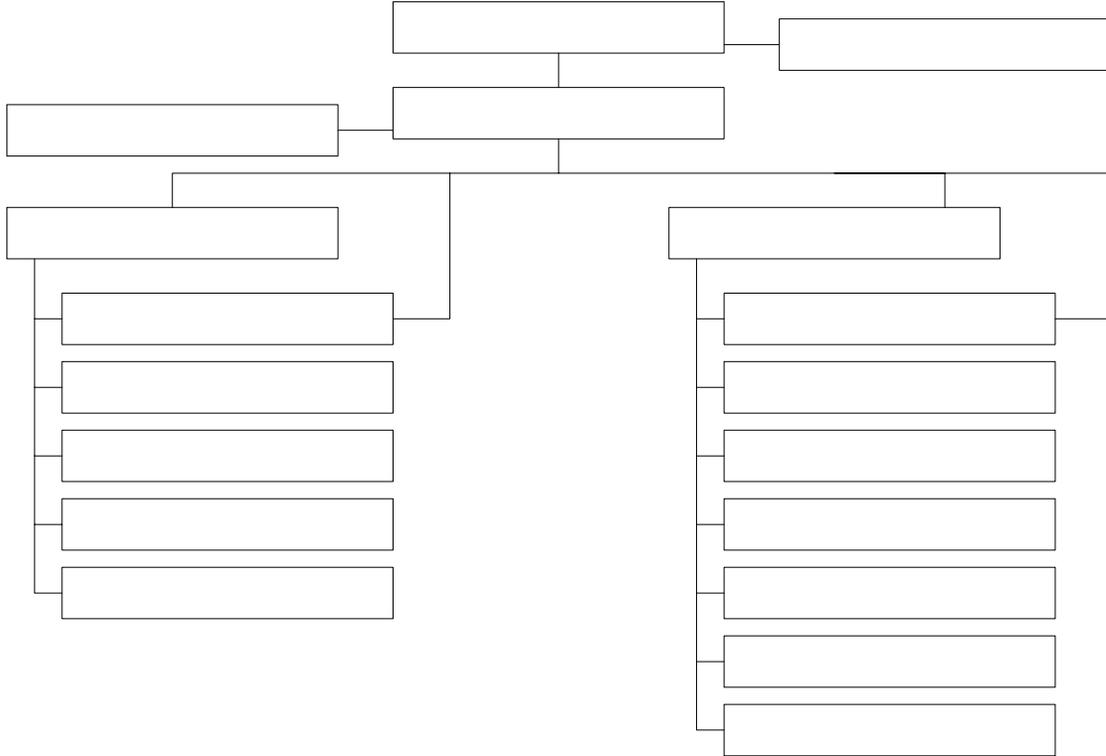
Pantavanij provided three main services: electronic purchasing (e-purchasing), an electronic auction (e-auction), and consulting. For its e-purchasing service, Pantavanij used a private electronic marketplace (e-marketplace) website, Pantavanij.com, where buyers and sellers could conduct online trading of indirect goods and service in real time. Sellers could access the catalogues of multiple sellers and suppliers. The site could also be customized to fit each buyer' unique approval hierarchy, spending limit, special request and specific supplier treatment. In addition, the site provided content management that created product data and prices through the supplier' catalogues and automatically created trading reports for both buyers and sellers. As of 2005, there were well over 100 member companies that occasionally

purchased through Pantavanij.com, and about 10 frequent-buying-member companies, which included some founders, their subsidiaries, and other companies ("*Pantavanij Provided*", 2005).

As for the e-auction service, processes were transparent, fast, and simple. It required low technology involvement from bidders, and, thus, allowed them to participate in online bidding events from home or the office. Sellers could see dynamic price movement in real time. This allowed buyers to ensure the best price.

The fact that an e-auction did not require any integration or re-engineering processes for buyers and sellers, the e-auction service grew faster than the e-purchasing service. Thus, e-auction in Thailand grew much faster than e-purchasing. In addition, in late 2002, the Thai government established an e-procurement policy that promoted transparency and cost savings for state agencies. The policy required all state agencies to start acquiring products through e-auction channels. This change in Thai government policy immediately created a large demand for an e-auction service. Pantavanij was one of the first two e-marketplace companies that were certified as providers of e-auction channels to state agencies. By 2004, Pantavanij hosted well over 2,600 e-auctions for the public and private sectors ("*Pantavanij Re-focused*", 2005). It had 72 buying customers from the public sector and 88 buying customers from the private sector ("*Pantavanij Re-focused*", 2005). In addition, it had well over 6,000 sellers participating in its e-auctions ("*Pantavanij Provided*", 2005).

Another of Pantavanij's main services was its consulting service. The consulting service was dedicated to assisting organizations to develop effective and efficient business processes, save cost, and ensure that their procurement and sourcing functions were strategic and beneficial to the organization. Its services covered areas such as procurement strategy, e-procurement strategy and solutions, procurement management models and process change/redesign, inventory management, and project management. In 2003, Pantavanij partnered with AT Kearney, a worldwide management consultancy firm with expertise in e-procurement management, to provide strategic sourcing services. AT Kearney had expertise in strategic sourcing. According to Kanchanadul, strategic sourcing would make procurement more efficient and enable customers to contain resources. The collaboration between Pantavanij and AT Kearney would bring benefits to Thai customers in the areas of category experts, supplier databases, and management processes so customers could successfully select and negotiate with strategic suppliers (Boonruang, 2003).

Pantavanij also provided value-added services such as e-payment and e-logistics. E-payment allowed Pantavanij's customers to automate payment. The e-payment system had the ability to route bills through a formal approval process prior to payment. Approval could be defined organization-wide, and allocated to specific individuals, cost centers, and departments. Integration between buyers' accounts payable systems, and suppliers' accounts could also be arranged. As for e-logistic service, Pantavanij collaboration with its reputable logistic partners allowed for rapid shipment requests, real time collaboration between buyers and suppliers, and tracking of shipments.

Pantavanij's Web Operation

E-purchasing

An e-purchasing service not only moved the whole chain of procurement processes online, but also bypassed non-value-added processes, such as paper requisition forms and bulky catalogs. Traditional procurement processes started from the creation of a purchasing requisition (PR), searching products and suppliers through paper catalogs or simply contacting a familiar supplier without comparing prices with other suppliers, creating Purchasing Order (PO) and sending PO to suppliers by fax. E-purchasing processes of Pantavanij, on the other hands, started from finding products/services and negotiating product prices based on volume discounted in order to create an online catalog on Pwantavanij's websites. Buying member could access this catalog for a number of pre-negotiated-price products/services from qualified suppliers (Figures 8.2-8.6). The whole processes were designed to enforce contract purchasing so buying members could take full advantage of pre-negotiated prices and eliminate inadvertent spending with other suppliers. When buying members created PRs on the website, the system electronically informed all involved parties for approval. Once PRs were approved, the system automatically created POs and sent to the selected suppliers (Figures 8.7-8.8). The process not only relieved the buying companies from tedious clerical work, but also reduced their procurement cost. It also helped the company eliminate maverick buying. Purchasing agents could concentrate their attention on more strategic activities, such as price negotiations and strategic vendors.

Figure 8.2: Pantavanij's Homepages
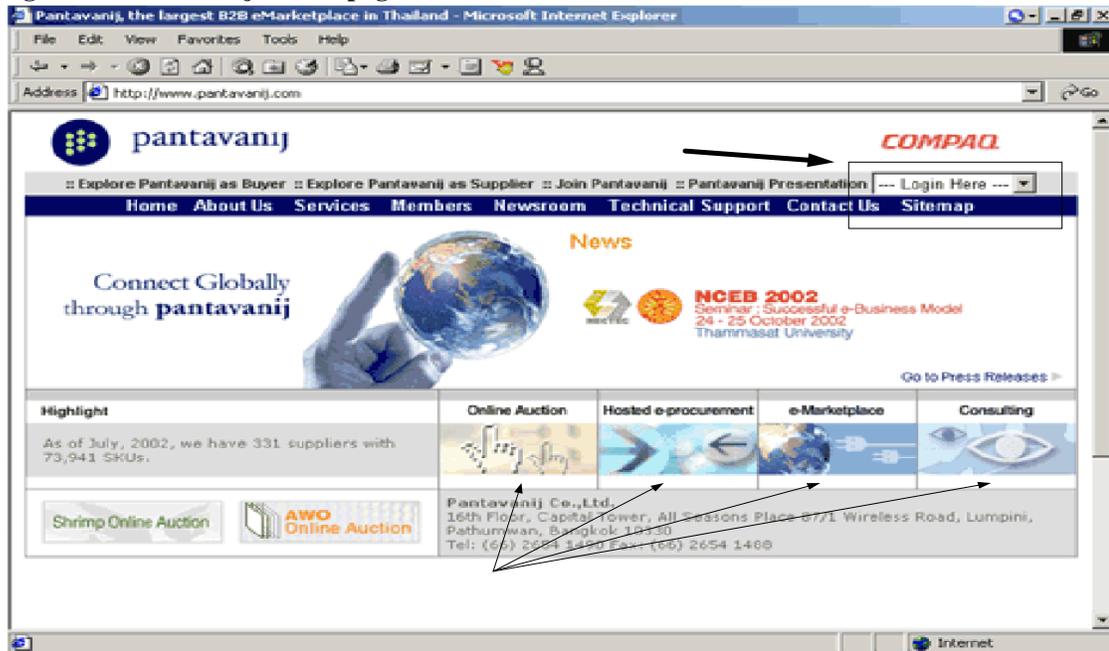
(Source: www.pantavanij.com)

Figure 8.3: Buyer Log-in Page
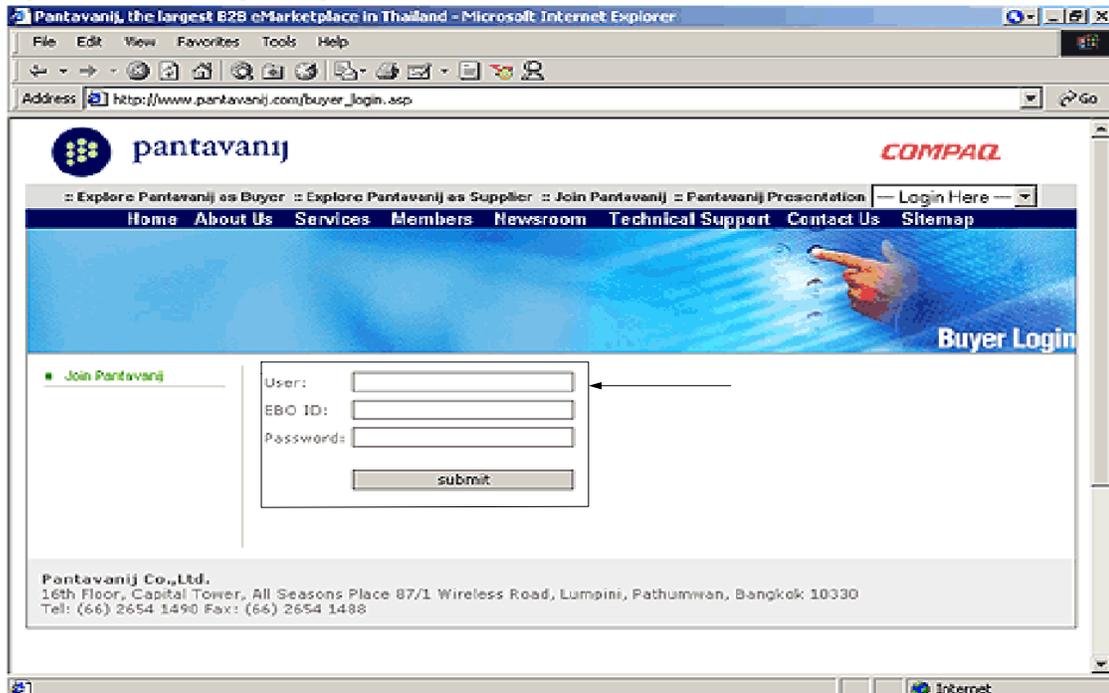
(Source: Pantavanij)

Figure 8.4: Buyer Site

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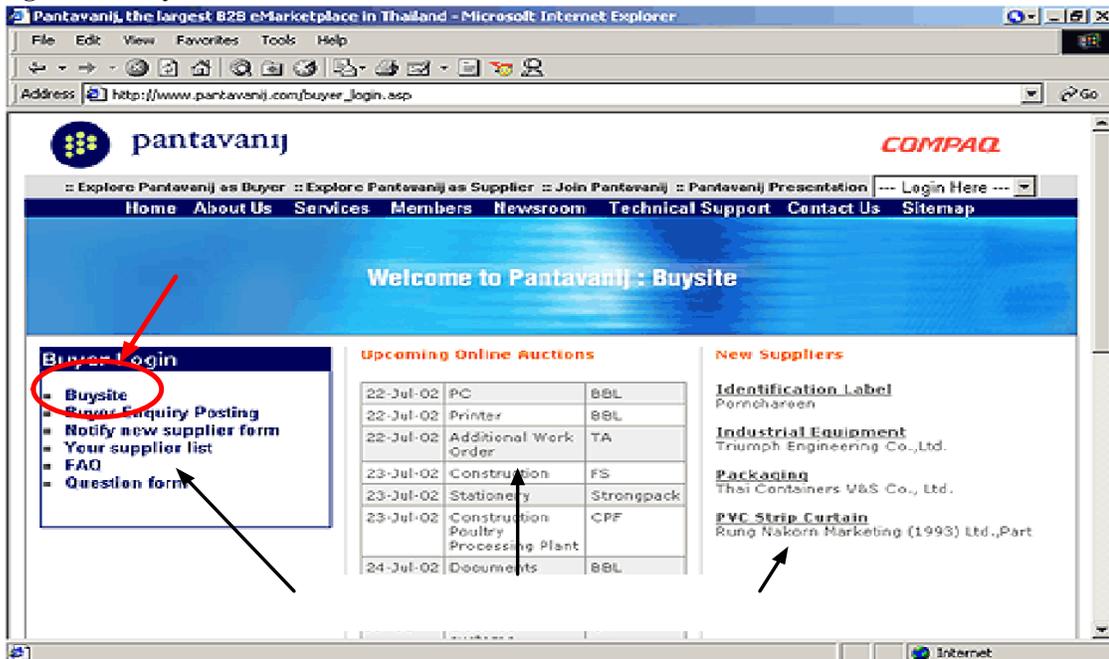
(Source: Pantavanij)

Figure 8.5: Four Main Functions of an E-purchasing: Selecting Products/Services, Approving, Ordering, and Checking Order Status

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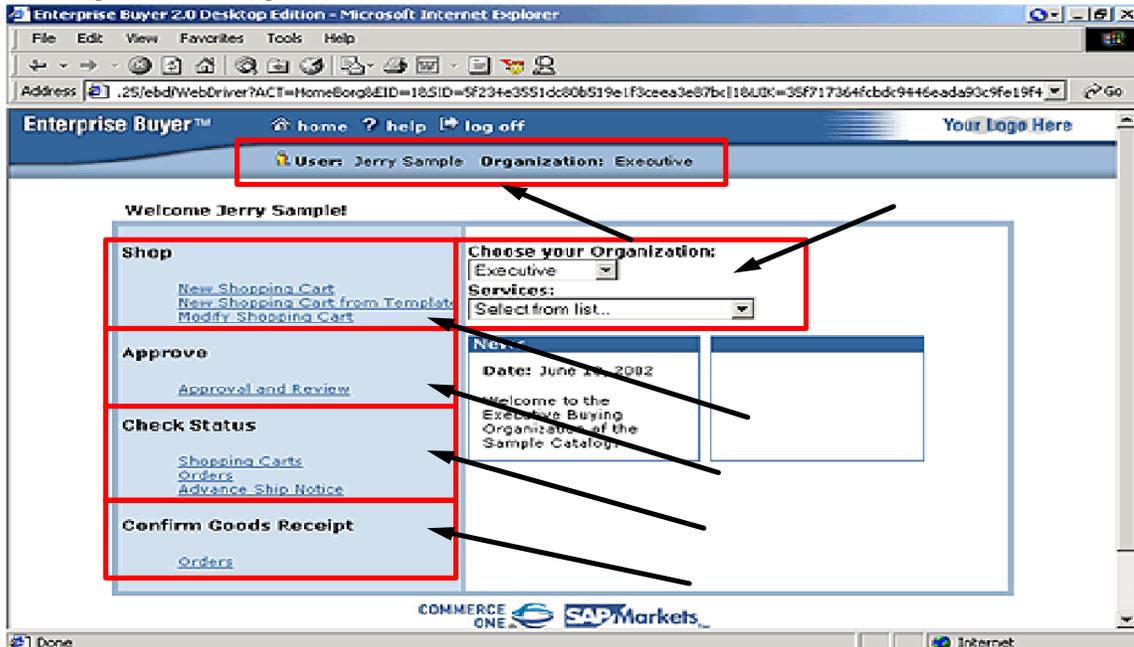
(Source: Pantavanij)

Figure 8.6: The Product Catalog and the Shopping Cart
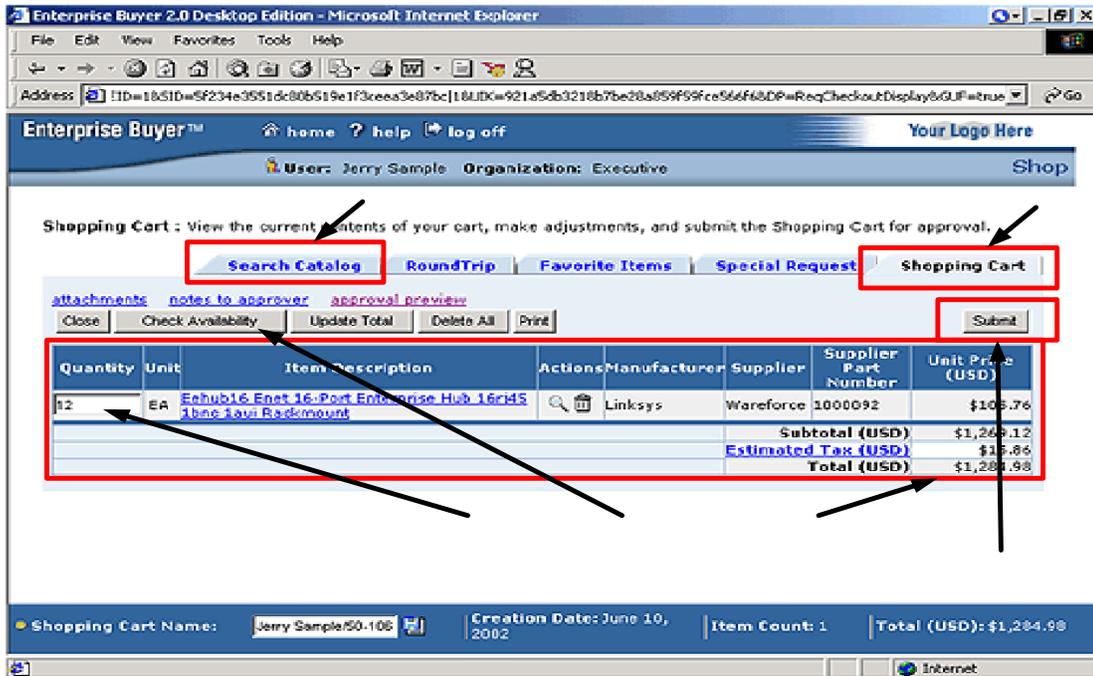
(Source: Pantavanij)

Figure 8.7: Approval Pages
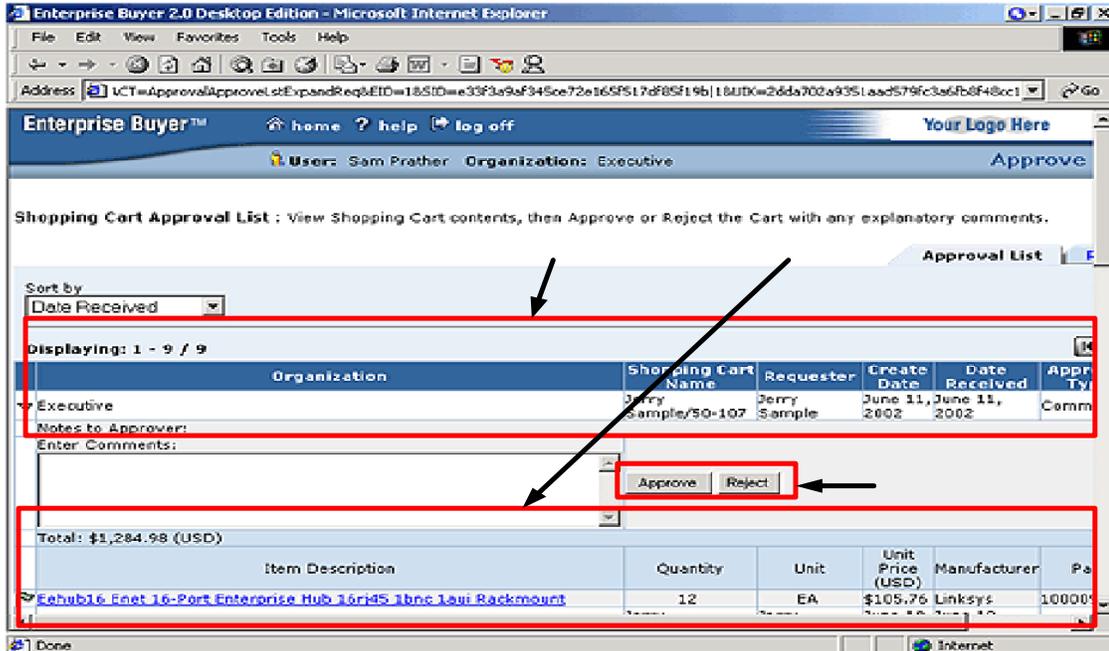
(Source: Pantavanij)

Figure 8.8: Order Status and Actions
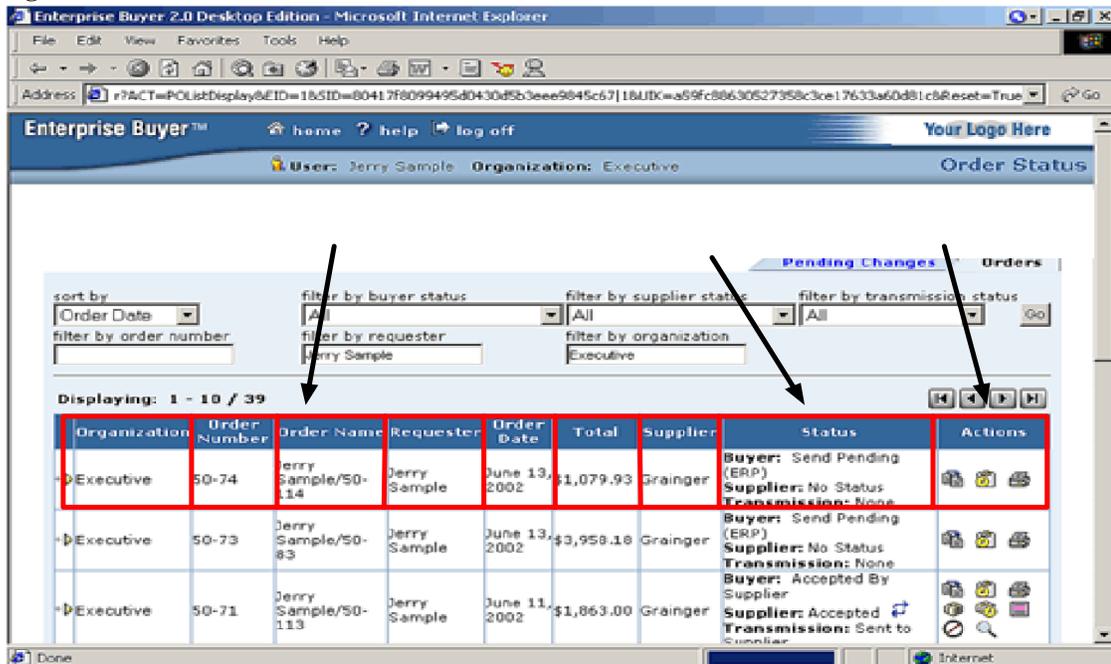
(Source: Pantavanij)

E-auction

Pantavanij's e-auction processes were simple and transparent. For auction originators, an e-auction was the fastest and the cheapest way to buy because it allowed for real time dynamic pricing to ensure that the best prices were achieved. It allowed buyers to access to new suppliers with much shorter supplier negotiation cycles. For sellers, an e-auction allowed sellers to reach new agents. To take purchasing services, sellers were not required to be Pantavanij members. Any buyers could originate an online auction through Pantavanij, however, bidders must be invited by an auction originator. Pantavanij operated two kinds of auctions: reverse and forward. For a reverse auction, a buyer initiated the auction to buy a particular product/service. The winner with the lowest bid won. For a forward auction, a seller initiated the auction to sell a particular product/service. A buyer with the highest bid won. Each kind of e-auction also varied by different methods such as English auctions and Yankee auctions. During the bidding processes, bidders could see bidding prices of other bidders. At the same time, bidders were allowed to submit as many bids as they wished. Once an e-auction was completed, the system awarded the contract to a winner. Fulfillment could also be conducted through the system after an e-auction was over. Figures 8.9 -

8.11 showed the online processes that bidders must follow when they participated in an auction event on

Pantavanij's websites.

Figure 8.9: E-auction Log-in Page
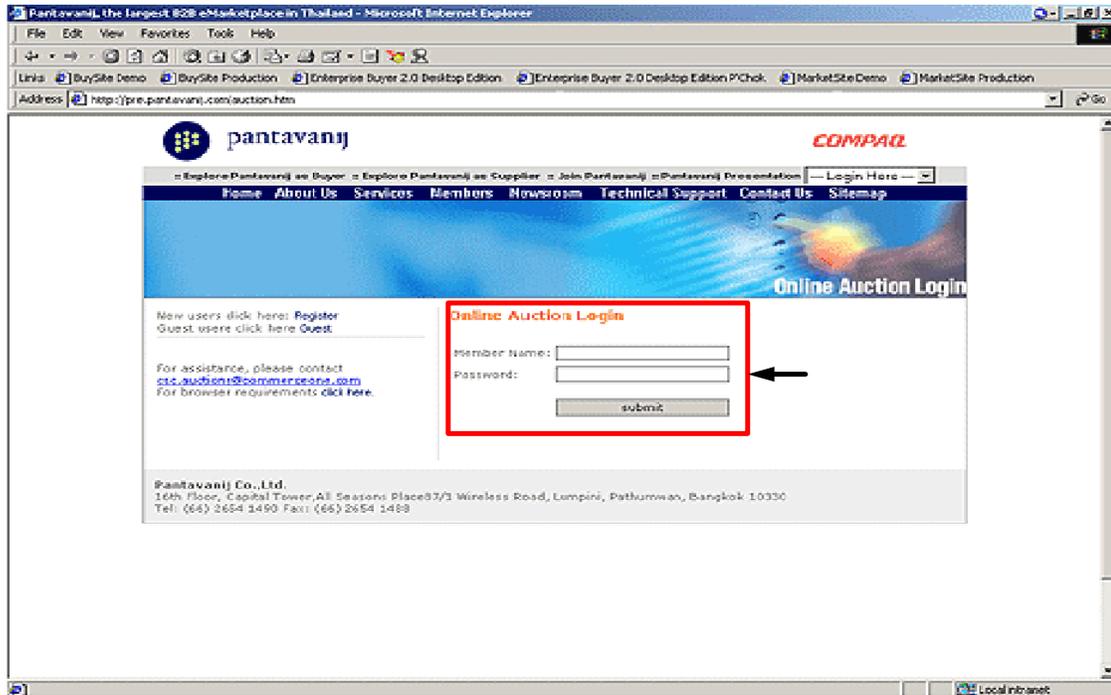
(Source: Pantavanij)

Figure 8.10: E-auction Page
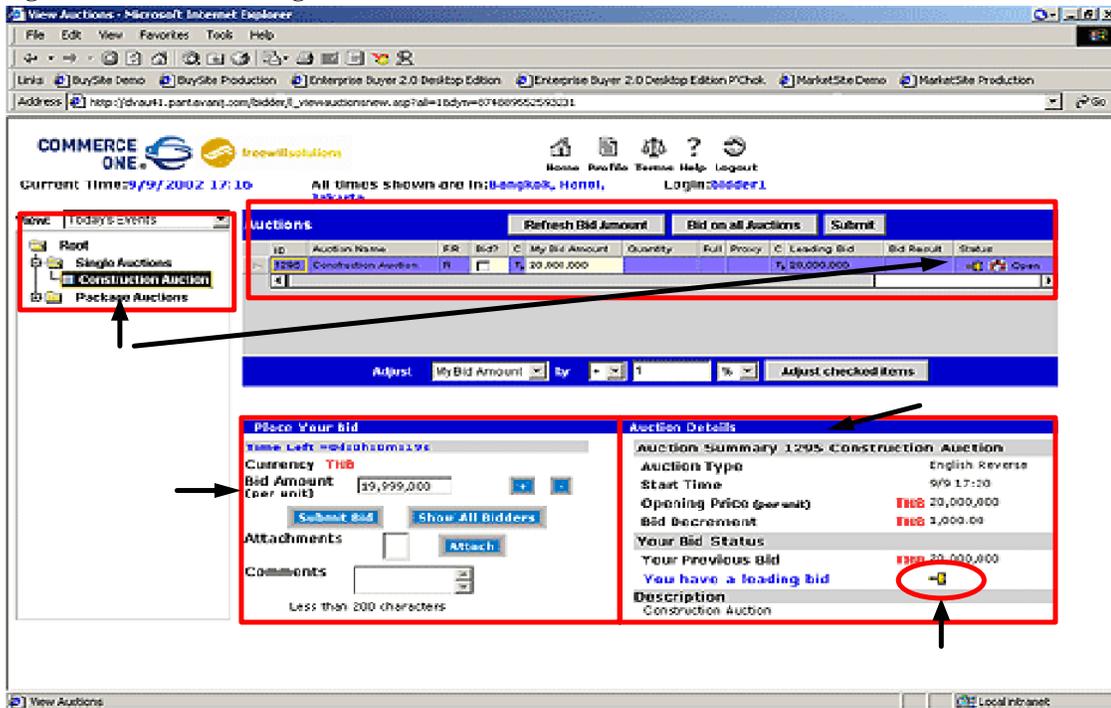
(Source: Pantavanij)

Figure 8.11: Bid History
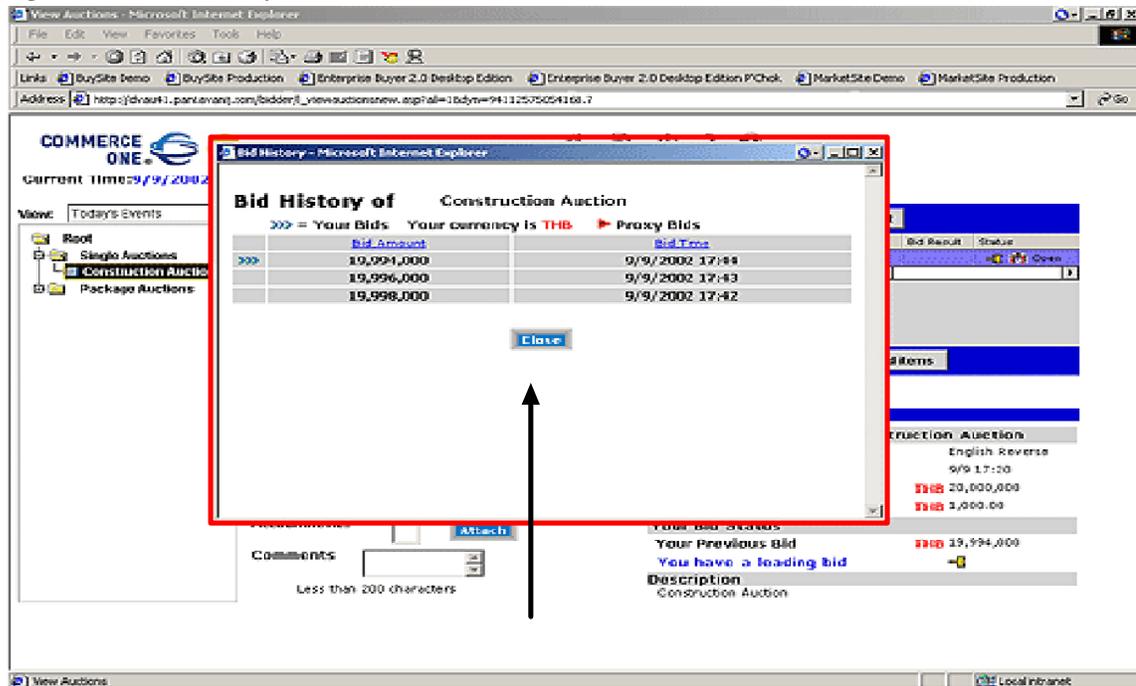
(Source: Pantavanij)

t
auction events and
see the current status
of the selected
auctions

A bidder can

Research Question 1: What are the CSFs for E-commerce in Thailand?

The intent of this section is to answer the first research question: Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Feasible E-commerce Business Model

According to Wongvasu, one of the reasons that e-commerce ventures in Thailand failed was because they failed to think of e-commerce as a business. In his words, "Websites were created as an easily implemented salvation. If they built it, people would come." E-commerce was a business conducted on the Internet channel. It required other business functions just like any other traditional businesses. Wongvasu explained further that a company must investigate whether or not an e-commerce business model is feasible with its existing businesses, products, and customers. This required a company to have knowledge of conducting business on the Internet, the limitations of the e-commerce infrastructure in Thailand, and knowledge of its own industry.

Demand- Leaded E-commerce

Dan Bunnag, chief commercial officer of Pantavanij, explained that e-commerce must be demand-led, not product-led. Another reason that e-commerce in Thailand failed was that online products or services did not have enough demand. Some products/ services simply would not be purchased by Thai people on the Internet. For example, the number of targeted customers may be too low, or some online products/services might not fit the business infrastructure in Thailand. Some products/services required physical testing before making buying decision. Some online products/services lacked the same value of products/services sold offline. Bunnag suggested that business ventures needed to focus on demand first before selecting business models for e-commerce.

Clear Value Proposition

E-commerce may have sufficient demand, but if the value is not clearly articulated to potential customers, it will fail. Bunnag explained that a number of companies in Thailand still lacked an awareness of the e-commerce value of their businesses. As the Thai government creates this awareness among Thai businesses, it will improve in time. Meanwhile, e-commerce ventures must be able to educate potential customers about how e-commerce can help their businesses or give them competitive advantages. For

example, e-commerce ventures can use sales and marketing teams to show new customers success stories of former customers using their e-commerce services.

Management Support

Wongvasu suggested that it was critical to have full support from the senior management of companies involved in e-commerce. He explained that B2B e-commerce often engaged several business parties. To engage in e-commerce businesses, all parties were often required to re-engineer existing business processes and/or integrate their information technology systems with e-commerce firms. Such change was usually difficult due to the resistance to change from employees. Wongvasu suggested that to overcome this obstacle, e-commerce ventures must have full support from senior management from the beginning. However, Bunnag noted that while the involvement of senior management was critical to the success of e-commerce, it was not always sufficient because of the conflicts of interest inside the organization. For example, the senior management team decided to use an e-procurement service from a third party provider because they found that e-procurement could save the company money. The procurement department and other related business units, on the other hands, were not interested in saving the company money because they were concerned that the new processes/systems would put their jobs in jeopardy. Bunnag suggested that the ideal strategy was to approach different levels of the organization with different objectives that fit all of their interests, not just the interests of top management.

Performance Measurement

Kosarat noted that B2B e-commerce often involved a large capital investment. In addition, today the chance of e-commerce failing in Thailand was very high. Thus, e-commerce ventures must frequently be able to measure improved performance. Wongvasu suggested that e-commerce ventures should provide the right resources in areas that need performance improvement, like training. A reward system should also be used to encourage employees to keep up with good work.

Alternative Solutions for Inefficient E-commerce-related Infrastructure

Arisa Kosarat, a management trainee of Pantavanij, noted that Thailand still lacked efficiency in several areas of e-commerce-related infrastructure. For example, Internet access services were not so cheap that they could be afforded by most Thai customers, nor were they reliable. Thai people doubted the effectiveness of e-commerce-related laws and online payment security. They also doubted about the

reliability of delivery service of an e-commerce company. The awareness of e-commerce value in business was still low among Thai businesses. Kosarat added that these factors were not controllable by e-commerce ventures. However, they still must find alternative solutions for these obstacles. An e-commerce venture, for example, may provide different methods of payments so customers can choose comfortable methods of payment. This gave e-commerce ventures more opportunity to reach larger groups of online customers.

Research Question 2: What are the Key Industry Requirements for E-commerce in the E-Procurement Industry?

The intent of this section is to answer the second research question: What are the key requirements that all e-procurement companies must have in order to enter the e-marketplace industry in Thailand? To answer this question, five areas of industry requirements need to be investigated: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

Wongvasu noted that factors that are critical to the success for e-commerce in Thailand are also critical to the success of e-commerce company within the e-procurement industry. This means that an e-procurement/e-auction company must be able to develop a feasible e-procurement or e-auction business model. It must ensure that its target customers would have high enough demand, and in return, draws sellers to trade on e-procurement or e-auction platforms. Moreover, it must be able to clearly articulate e-procurement value to customers' businesses, and , thus, gain support from their management to implement e-procurement processes in their organizations. To compete with other competitors, an e-procurement or e-auction company must constantly measure performance of its employees in term of strategic procurement/sourcing knowledge. In addition, an e-procurement or e-auction company must find an alternative solution for inefficient e-commerce-related infrastructures that may impact the quality of e-procurement service to the customers.

What are the Customer Requirements?

E-procurement service providers provide service both buyers and suppliers/sellers. Buyers are private firms and government agencies. Suppliers/sellers are private sector companies. As of 2005, government agencies use e-auction services, but none used e-purchasing service. Private firms, on the other hand, use both e-purchasing and/or e-auction services.

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Cost Saving

The main expectation of buyers using e-procurement services using either e-purchasing or e-auction was to reduce the cost of their products/services. E-procurement service providers must be able to show potential buying companies how e-procurement or e-purchasing services or e-auction services could save reduce product/service costs.

Process Improvement

Another expectation of buyers and suppliers using the e-procurement services was the improvement of their procurement processes. Bunnag noted that procurement was the most outdated business process in any Thai organizations. According to Wongvasu,

> "Even a company that already applied SAP in its procurement processes, we found that we could improve the efficiency of their processes by 50-70 percent. … They never really fully integrated SAP to their business processes because they wanted to save money by implementing SAP in-house. Without knowledge they were half way there. That was why we still could find room for process improvement in procurement, even customers who implemented SAP in procurement."

Traditional procurement processes were redundant and slow. It involved paper-works and several approvals. For buyers, finding suppliers and comparing product/service prices was a time consuming process. Some procurement managers did not even bother with these processes and simply did maverick buying. E-procurement service providers must be able to use their technology and expertise to improve or replace these traditional processes. New processes must be easy, fast, and transparent.

<center><i>What are the Competitive Requirements?</i></center>

Know-how

An e-procurement service provider must have knowledge of process integration so a company can help buying customers/suppliers integrate their business processes and technical systems with that of the company. In addition, different products/services require a different knowledge of procurement. Computers, for example, had different purchasing criteria from other business supplies. An e-procurement service provider requires deep knowledge in purchasing different products/services. The company must know the qualified suppliers of different products/services. The company must know the key purchasing specification of particular products/services. The company must also know the price range of a particular

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product/service. This knowledge helped an e-procurement service provider to assist buyers in selecting the right product from the right supplier at the cheapest price.

Power Buyers

For an e-purchasing service, the main reason that suppliers joined an e-purchasing firm was the fact an e-purchasing firm had buyers with buying powers. Thus, an e-purchasing company must be able to recruit a pool of power buyers on its service.

Large Number of Suppliers

Another reason that buyers wanted to use an e-purchasing service was that they could conveniently reach large number of suppliers and made product/service and price comparison. Thus, an e-purchasing company must be able to recruit a pool of qualified suppliers.

Reputation

E-procurement services were still new to the majority of Thai businesses. For e-purchasing services, buyers and suppliers were required to adjust their procurement processes and integrate their processes with the e-procurement systems of the service providers. These customers wanted to ensure that service providers had the knowledge and capability to deliver cost saving to their procurement. For the e-auction service, buyers and sellers wanted to ensure that e-auction service providers could deliver fast, easy, and transparent service. Therefore, buyers and suppliers/sellers looked at the past record of successful services of service providers as a criterion in selecting services. Similar to an e-purchasing service, buyers and sellers looked at the past record of e-auction service providers when choosing a service. Thus, e-procurement service providers must have successful records of past services in order to compete with established competitors.

Competitive Service Fees

To build record of services, e-procurement service providers, e-auction service providers, tried to lower their service fees to attract buying companies. Some new service providers even gave free service to buyers or auction originators.

What are the Technical Requirements?

B2B E-procurement System

Any e-procurement service provider must have B2B e-commerce systems that had the capability to serve online trading between buyers and suppliers. For an e-purchasing service, a company must also have technical capability that could integrate technical system of buyers/suppliers with the company's system.

What are the Resource Requirements?

Human Resources

While technology played an important role as the medium for providing service to buyers and suppliers/sellers, it was the know-how of consulting teams and technical support teams that created the key value of the e-procurement service. Consulting teams had to educate buyers and suppliers/sellers on the value of the services. They had knowledge in procurement of different products/services so they could assist buyers in choosing the right products at the right prices from a right supplier. Technical support teams also play a critical role in integrating buyers/suppliers' technical systems with e-procurement service providers.

What are the Industry Regulations?

Government Certified E-auction Service Provider

E-auction service providers that want to provide services to government and state-enterprise agencies must be certified by the Thai government.

Research Question 3: What is Pantavanij's E-commerce Business Model?

The intent of this section is to answer the third research question: What was Pantavanij's e-commerce business model? To answer this question, the following components of e-commerce business model needed to be discussed:

Market Segmentation and Targeting

Wongvasu explained that generally there were two kinds of e-marketplace models. First, the model focused on the supplier side. By gathering a number of sellers, an e-marketplace attempted to attract buyers to use its service. If buyers want access to a pool of suppliers, they will have to pay service fees to an e-marketplace. If they don't integrate their technical system with the e-marketplace, they double their

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work load. They would work through the e-marketplace system, and still repeat the same work on their own procurement system. This model did not work well since buyers usually have more power than sellers. If buyers decide not to purchase through an e-marketplace, sellers had no power to demand that buyers change their purchasing practices. When an e-marketplace failed to create a critical mass or sufficient number of buyers and suppliers trading on its platform, the e-marketplace could not survive. Wongvasu added that the majority of e-marketplaces that failed had used this model.

Unlike the seller focused model, the second model focused on attracting buyers. The strategy of the second model was to recruit buyers first. Once buyers existed, sellers would come. If buyers wanted to do business with sellers' e-marketplace, they must be willing to cooperate, trading on the e-marketplace and integrating their procurement processes with the e-marketplace's platform.

While there are very few seller-driven e-marketplaces in the world, they have all survived. Pantavanij was such a model. Pantavanij had carefully studied this model from the beginning. Wongvasu explained that Pantavanij was founded by the six largest conglomerates in Thailand, ensuring that it had enough suppliers for its e-marketplace. These founders had a number of subsidiaries that bought a variety of indirect goods and services from a number of suppliers. If the suppliers do not want to lose their business, they will have to use Pantavanij's service. The success drove new buyers and suppliers to join Pantavanij.

In addition to founders, Pantavanij's main targets were buying organizations that wanted to improve procurement processes and reduce their product/service cost through new procurement processes. Pantavanij targeted customers that were looking for high quality services as opposed to only price. As for suppliers, Pantavanij targeted suppliers of any type of products/services. However, Pantavanij focused on indirect goods and services because these products/services were usually used across industries. Pantavanij also targeted government agencies for its e-auction service.

Value Proposition

The core value that Pantavanij provided to its customers was its high quality services through its expertise in procurement and online technology. Customers could expect to reduce its products/services' costs through improved procurement processes and the e-purchasing/e-auction services of Pantavanij.

Resources and Capabilities

Pantavanij had strong technical capabilities that allowed the company to conduct e-purchasing and e-auction services, and to integrate its customers' technical systems with the company's platform. Pantavanij saw itself as a knowledge-based company, rather than a technology-based company. Thus, the main resources and capabilities of Pantavanij were based on its employees who had strong knowledge of strategic procurement and sourcing of different products/services. They were capable of articulating the value of e-procurement to customers and assisting them in purchasing products/services at the best price from qualified suppliers.

Activity Configuration

E-commerce business activities were composed of two major sets of activities: the main e-commerce business activities (sales and marketing, inbound logistics, operations, outbound logistics, after-sales services) and the supporting e-commerce business activities (firm infrastructure, human resource, R&D, procurement). Only these core business activities of Pantavanij's e-commerce business model are discussed in the following section.

Operations

Buyers and suppliers that want to be Pantavanij's members must complete online registration forms and submit them through Pantavanij's websites. When the application was qualified and accepted, Pantavanij's buyer or supplier support teams and system integration teams helped members integrate their businesses processes and technical systems into Pantavanij's until they could complete their first online transaction.

Pantavanij assisted suppliers in creating online catalogs. Pantavanij used the Universal Standard Products & Services Classification (UNSPSC) when creating online catalogs. With UNSPSC, suppliers could sell their products to a wider customer base. It also allowed suppliers to reduce their cost and time in marketing, sales and customer service due to more efficient order management. Pantavanij also provided analysis of buyers' purchasing pattern to suppliers. The shorter lead time and improved analysis of buyers' purchasing patterns helped suppliers to better manage their inventory levels.

As for its e-auction service, auction originators simply contacted Pantavanij. Pantavanij then helped auction originators set up the request for qualifications (RFQ) or specifications, volume, value, and

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conditions of the product/service required. Patanvanij also recommended the type of auction appropriate for the specified product/service. Pantavanij also helped auction originators to source sellers (a reverse auction) or buyers (a forward auction) and sent the e-auction invitation with specifications and conditions of products/services to pre-qualified participants. Suppliers submitted specification details or product samples for the auction originators for inspection. Auction originators then announced which suppliers were qualified to participate in the e-auction. Pantavanij held online auction workshops for invited bidders a few days before the actual e-auction date. In such cases that bidders faced technical problems with computers or Internet access, Pantavanij also allowed bidders to bid via fax.

Sales & Marketing

Suppliers or buyers interested in using the service of Pantavanij could contact the company through its websites. Pantavanij used sales and marketing teams to visit Thai companies around the country. The main goal was to create awareness of e-procurement services and explain the values of e-procurement services, especially e-purchasing.

Products.

Pantavanij's product strategy was based on using its know-how to differentiate its service from competitors. With an e-purchasing service it takes time for customers to realize cost savings because such a service requires technical system and process changes. However, according to Bunnag, Pantavanij had no competitors in this market segment. FoodMarketExchange was an e-procurement service provider, but its expertise was in the food market, not indirect goods.

The e-auction service required neither process changes, nor system integration. Customers saw the value of this service as cost savings in a short period of time. Thus, Thai businesses had a high awareness of the value of e-auctions. In addition, the Thai government promoted the use of e-auctions for its agencies. This factor increased the number of competitors to this market segment. Since e-auction-related technology was not complicated, barriers to competition were very low. Generally the revenue from each e-auction was only US $500 - $750 due to the small value of auctioned product/service (*Pantavanij Re-focused*", 2005).

Since competitors constantly cut the prices of their services, this market segment was less attractive to Pantavanij. Pantavanij targeted customers who emphasized the quality rather than the price of

services. It also targeted e-auctions that had product/service value at least US $50 million to ensure that the revenue from each e-auction was worth its effort. At the same time, Pantavanij tried to increase the value of its e-auction service by adding other value-added services like strategic procurement and sourcing.

Price.

As for e-procurement services, Pantavanij provided free service to buyers. Suppliers, on the other hands, had to pay membership fees and commissions, which were set at 2 percent of each completed transaction ("*Innovation Special*", 2003). This pricing strategy was to attract buyers to join Pantavanij, and, knowing that some suppliers had to join Pantavanij to sell to their existing customers, or lose their business with these customers. Some suppliers wanted to join Pantavanij to reach new buyers. As for its e-auction service, Pantavanij did not charge the auction originator. The winning bidder, however, paid Pantavanij a service fee based on the value of transaction.

Place.

N/A

Promotion.

N/A

After-Sales Services

Besides providing system maintenance to involved parties, Pantavanij provided spending analysis reports and purchasing reports to help buyers maximize overall supply chain management. The company also provided an analysis of buyers' purchasing pattern to suppliers to help them better manage their inventory levels.

R&D

Pantavanij bought the e-procurement software from CommerceOne, the well known US-based company providing e-procurement solution software. It also received technical support from Freewill Solution Co, which was a major shareholder of Pantavanij. Pantavanij also used two levels of firewalls: CheckPoint Firewall I (SSL 128 bit) and authentication solution from VeriSign to provide secured trading websites.

Pantavanij had to pay software maintenance fees to CommerceOne of between US $125,000 and $150,000 per year. The company, thus, began to develop its own e-procurement software system in 2004.

The new in-house software was expected to give Pantavanij more flexibility in customizing features to fit needs of customers. The new system was expected to implement within the next two years ("*Pantavanij Focused*", 2004).

Partner Network

All technical support was provided by Freewill Solution Co. Pantavanij's e-payment partners were the Bangkok Bank[4], Bank of Asia[5] and the Siam Commercial Bank[6]. E-logistics partners were Cementhai Logistics[7], Dynamic Logistics[8], SGS Logistics[9] and TNT Corporation[10].

Revenue Sources

The main revenue resources of Pantavanij's e-procurement services were service fees and commissions from e-purchasing suppliers and e-auction winning bidders.

Competitive Strategies

There were few e-procurement marketplaces in the world that successfully created a critical mass. Pantavanij was one of them. The fact that Pantavanij had six large conglomerates in Thailand as its founders was not a strategy that other competitors could easily follow. Even though Pantavanij had no direct competitors in the e-purchasing market, it would not be easy for future competitors to recruit such large buyers as Pantavanij's. In addition, a large pool of Pantavanij's suppliers also attracted new potential buyers to join Pantavanij.

The long list of successful procurement services that Pantavanij provided to its customers was another competitive advantage. Thai customers still lacked awareness of e-procurement and how it would improve their businesses. The list of successful services would not only give the company a credit, but also attracted new potential customers.

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[4] Bangkok Bank was Thailand's largest commercial bank (Pantavanij.com).
[5] Bank of Asia was an International Bank with its headquarter located in Bangkok (Pantavanij.com).
[6] Siam Commercial Bank was Thailand's first indigenous bank (Pantavanij.com).
[7] Cementhai Logistics Co., Ltd. was the logistics company under Siam Cement Group, one of the Pantavanij's founders.
[8] Dynamic Logistic was the logistics company under the CP Group, one of Pantavanij's founders.
[9] SGS Logistics was the leading company in verification and monitoring services for international trade in agriculture, mineral, petroleum and consumer products (Pantavanij.com)
[10] TNT was the world-class logistics provider whose services span over 200 countries (Pantavanij.com)

Moreover, since Pantavanij was the first e-procurement company, its first mover advantage allowed Pantavanij to gain experience from providing e-procurement services before anyone else in the market. It knew not only the problems of e-procurement in Thai organizations, but also how to overcome those problems by changing processes and applying technology. It knew how to procure different types of products/services. In addition, Pantavanij partnered with AT Kearney, which was an expert in strategic sourcing.

Today, Pantavanij is an expert in procurement. According to Wongvasu, "I strongly believed that we are even better than leading consulting companies in procurement areas." While technology played an important role in Pantavanij's success, its core strength was its know-how in procurement. E-auction technology was not difficult to develop and e-procurement software could be bought if a company had enough money. Thus, technology was not the key that gave the company a competitive advantage in the long term. An e-auction market, for example, was full of competitors. These competitors, however, did not have a deep knowledge in procurement, according to Bunnag. They offered e-auction service because state agencies were required to procure products/services through e-auctions. Without any knowledge in procurement, they all offered similar online services. To compete, they cut their service prices. Bunnag believed that these kinds of companies would begin to disappear. Pantavanij, on the other hand, avoided price competition and tried to differentiate its services by offering value-added services such as strategic sourcing to e-auction customers. The company could do this because it had deep knowledge in procurement.

Research Question 4: What is Pantavanij's Business Performance?

The intent of this section is to answer the last research question: How was Pantavanij's e-commerce business performance? Even though Pantavanij used balance score cards to measure its business performance, only financial performance was available for this research. Pantavanij measured its performance based on transaction value through its websites and its revenue growth.

E-Procurement Transaction Volume

In 2000-2001, the total transaction volume through its e-procurement services was approximately US $6.5 million ("*Pantavanij Believes*", 2003). In 2002, the total transaction volume through its e-procurement services was around US $98.4 million. Approximately 60 percent came from an e-auction

service, and 40 percent came from an e-purchasing service ("*Pantavanij Believes*", 2003). The transaction

volume grew to USD $360.7 million in 2003 (Front Line, January 21, 004). Approximately 55 percent

came from an e-auction service and 45 percent from an e-purchasing service ("*Pantavanij Re-focused*",

2005). In 2004, the total transaction volume grew to US $365 million in 2004 (*Pantavanij Provided*, 2005).

Approximately 40 percent came from an e-auction service and 60 percent from an e-purchasing service

("*Pantavanij Re-focused*", 2005). The company expected that the transaction volume would reach US $500

million in 2005.

Revenue Growth

According to Wongvasu, the revenue in 2001 was less than US $25,000, but revenue grew to well

over US $500,000 in 2001 and US $2.5 million in 2003.

CHAPTER NINE – THAITICKETMASTER.COM[1]

The main focus of this chapter was to identify factors that influence the success of e-commerce in Thailand and ThaiTicketMaster.com (TTM). After explaining the business profile and history of TTM and the website operation, the four research questions are discussed:

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the entertainment ticket distribution industry?

3. What was TTM's e-commerce business model?

4. How was TTM's business performance?

TTM's Business Profile and History

ThaiTickeMaster.com (TTM) was the entertainment ticket distributor in Thailand. It was the first company in Thailand that provided web-based and online ticket reservation system. The company's mission statement was "Your Ticket to Great Entertainment." TTM was a joint venture between Bec-Tero Entertainment Co., Ltd. and Samart Corporation Co., Ltd. Bec-Tero was a leading entertainment company in Thailand. It owned television channel 3, and produced a number of Thai movies. Bec-Tero was also the leading foreign concert promoter, with well over 50 percent of the foreign concert market share in Thailand. Samart, on the other hands, was a world-class telecommunication company in Thailand. According to Kromkrit Sirirat, the general manager of TTM, ticket distribution was a headache for any concert promoters. While selling tickets was an important process for their businesses, the process was not the main focus. In other words, ticket distribution was not their expertise. When there was a concert, a promoter either distributed the tickets used third parties to sell the tickets. For example, a promoter put its

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[1] Information for this case, except where stated otherwise, is based on interviews conducted September 15, 2002, June 16 and 25, 2004 at ThaiTicketMaster.

employees at major outlets, like department stores or concert locations, to sell tickets. A promoter must pay service fees to outlet owners. Sometimes a promoter paid department stores and concert-location owners to sell tickets to customers. Either way, processes were tedious and error prone because all processes were manually operated. Another problem was what Sirirat called "Ticket Hunting." Different seat sections and prices were distributed to different outlets. When customers found that ticket prices or seat sections that they wanted to purchase were gone at one outlet, they went to other outlets to purchase. Many customers often gave up purchasing concert tickets due to the inconvenience of the process. While there was a demand for a more efficient service in the market, there was no company that could deliver one. Bec-Tero saw this gap in market. It thus wanted to create a business that was solely devoted to efficient ticket distribution using telecommunication technology. As a result, Bec-Tero joined with Samart Corporation to establish TTM in early 2000. Samart provided all technical support to TTM. At the same time, Bec-Tero provided its expertise in entertainment business to the joint venture. Chokchai Aiemrithkrai was transferred from Bec-Taro to TTM to look over the company's business operations, sales and marketing, and also technical aspects including software development. Aiemrithkrai worked with Bec-Taro for well over 7 years and had a great deal of experience in managing foreign concert events in Thailand. Another key member of the management team of TTM was Sirirat. Before joining TTM in 2002, Sirirat managed global communications network for Thai airways for several years. While Bec-Tero and Samart were the major shareholders of TTM, TTM was not managed by them. In fact, Bec-Tero was considered as one of TTM's customers because it is also a concert promoter.

According to Aiemrithkrai, the goal of TTM was to develop distribution channels that could reach the mass consumer market. TTM used a conventional off-line outlet or kiosk as its main ticket distribution channel because it could reach the general Thai consumer. Unlike a conventional outlet, TTM's outlet was carefully designed in order to create a strong brand image (Figure 9.1). The web was another channel that was used to support the off-line outlet. The key was have an online-ticket-reservation system as the backbone of the operation that could be connected to all distribution channels. By having this in place the same tickets could be purchased in real time regardless of distribution channels. Another important feature of the system was the seat assignment. Aiemrithkrai added that unlike customers in some foreign countries who cared only about seating zones, Thai customers wanted to select specific seats in concert arenas and

movie theaters. This online system solves the "ticket hunting" problem, and in turn provides convenience to consumers.

After the first two months of system development, TTM's first commercial service was to sell "Disney on Ice" concert tickets for Bec-Tero. Well over 180,000 tickets were sold through the TTM's outlets, which were located at major department stores. The web-based system, however, was not ready to serve customers. Customers could view the information about concerts and other entertainment information on the website, but they could not purchase ticket through the website. Even though the first service was

Figure 9.1: Thaiticketmaster.com's Outlets

(Source: Thaiticketmaster.com)

successfully delivered, TTM found the problems with the system including lost Internet connections and server crashing. As a result they discontinued the service for improvements. After five months of system improvements, TTM began providing its service again in September, 2001. The web-based ticket reservation, however, was not available until early 2002. The web-based system allowed customers to select seats and make online reservations. Due to the limitation of Thai banks' policies on online payment, TTM required customers to pick up tickets at kiosks within three days after online reservations. In 2002, TTM developed a call center as another sales channel. In 2003, TTM began to provide the "Verified by Visa" service, which was a secure online payment service provided by Visa. With this service, TTM allowed customers to pick up tickets at the concert venue. According to Sirirat and Aiemrithkrai, Visa unofficially informed TTM that they were one of the top three B2C e-commerce companies in Asia and

that had highest e-commerce business volume. In 2004, TTM added a mobile channel so customers could purchase tickets via cell phones.

During the first two years of business operation, most of TTM's businesses came from Bec-Tero. According to Aiemrithkrai, during the early years TTM focused on improving its system and operation rather than sales and marketing activities. In late 2001, TTM began to market its service beyond Bec-Tero. The service quality reputation of TTM improved and was recognized in the industry. In Aiemrithkrai's words, "today almost all entertainment companies in Thailand use our services." By 2004, TTM had almost 90 percent of the market in ticket distribution.

TTM's Web Operation

TTM provided not only online ticket reservation service, but also related-information on concerts and events. The website also provided other entertainment information, such as sports, movies, and music. Figure 9.2 showed the TTM's homepage. The website was simple to use. Customers could read the content of the website in two languages: Thai and English. The website also provided contact information, instructions for purchasing tickets, payment information, and ticket pick-up options. It also had specified clear policies for ticket purchasing, payment, and security.

To purchase an event/concert ticket through TTM, customers had to register at the website (Figure 9.3). Then customers used their usernames and passwords to log in to the purchasing page. TTM told its service policy of the website (Figure 9.4). Once customers logged in, they could view completed transaction and e-mail confirmation (Figure 9.5). When they were ready to buy tickets, they had to select an event/concert. After that, customers selected a zone and a seat at the event/concert arena (Figure 9.6). When they finished selecting their seat, they had to select their payment methods. TTM provided two payment methods (Figure 9.7-9.8). First, customers could pay by a credit card, Visa or MasterCard. If customers selected this payment option, the website showed the order detail including total price and selected seat. The next step was to make a payment by submitting their credit card information (Figure 9.9). The other method of payment was through the Counter Service. The Counter Service was a third-party-bill-payment-service provider. The Counter Service was located at all branches of 7-11 convenient stores around the country. If customers choose this option, they will be required to submit their phone numbers as references. The website then created the order detail page that customers printed for their reference (Figure

9.10). Customers had to show this order detail at counter service to make their payment. After payments

were made at the Counter Service, customers confirmed their confirmation numbers at

http://www.thaiticketmaster.com/confirm or at TTM's call center. The website also explained how to pick

up tickets based on different methods of ticket purchasing. As for online customers, tickets could be

received at the event/concert venue or the TTM's outlets. Customers must show their personal

identification card (or passport) and their credit cards to receive their tickets.

Figure 9.2: TTM's Homepage

(Source: Thaiticketmaster.com)

Figure 9.3: Registration
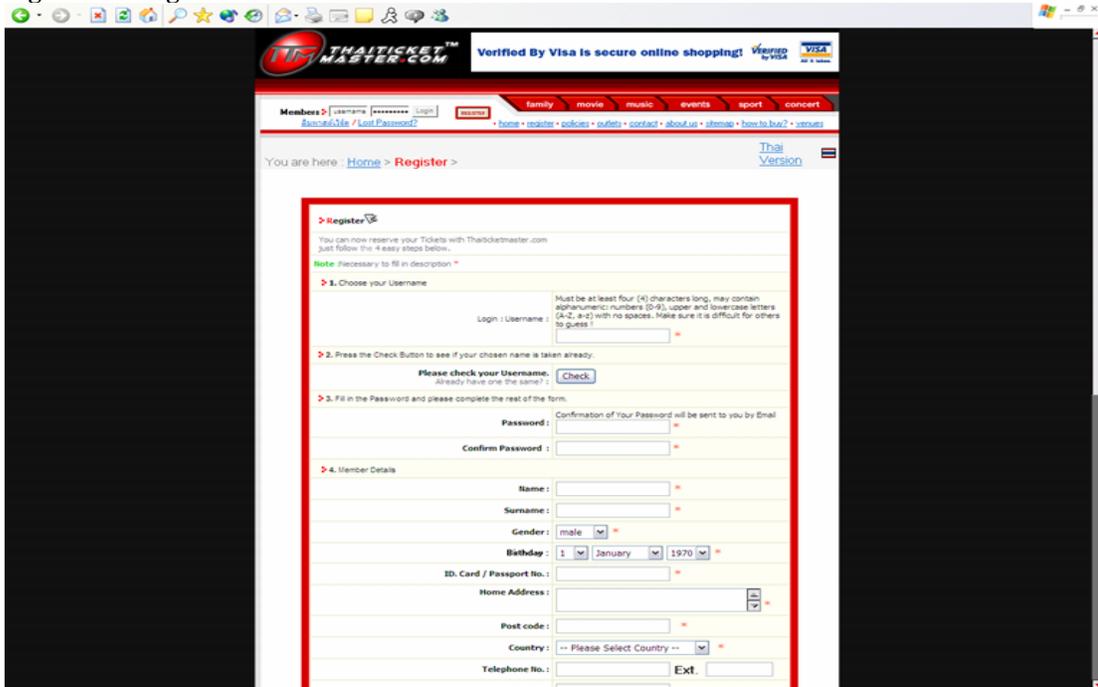
(Source: Thaiticketmaster.com)

Figure 9.4: Clear Policies
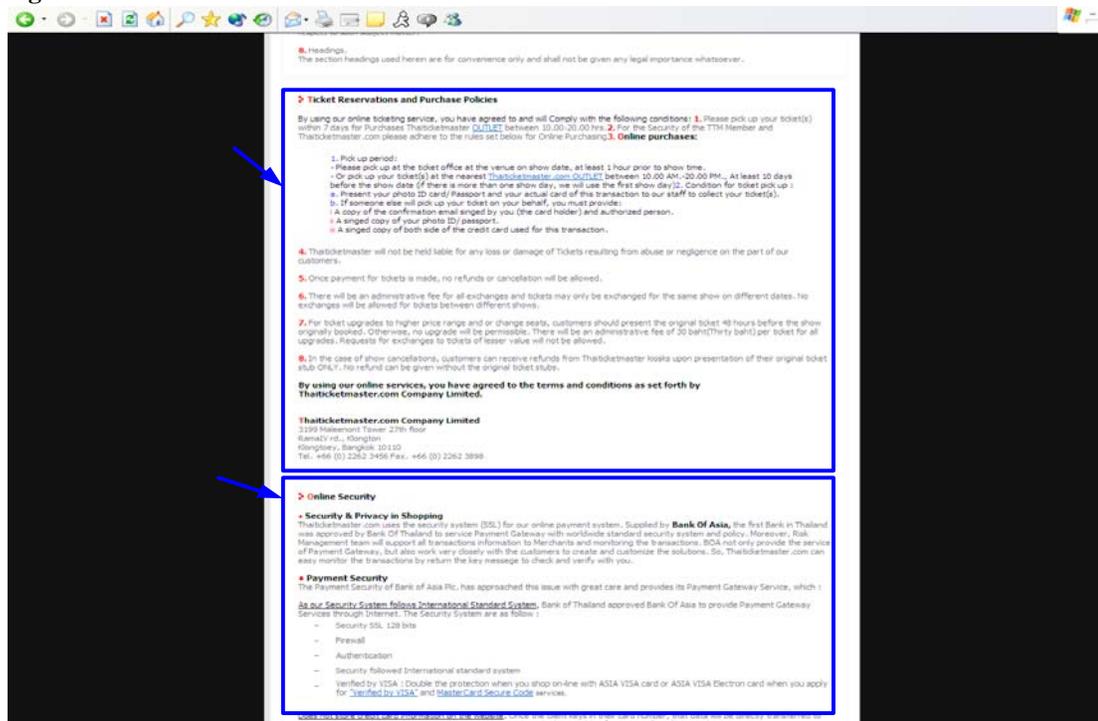
(Source: Thaiticketmaster.com)

Figure 9.5: Customer Information Page
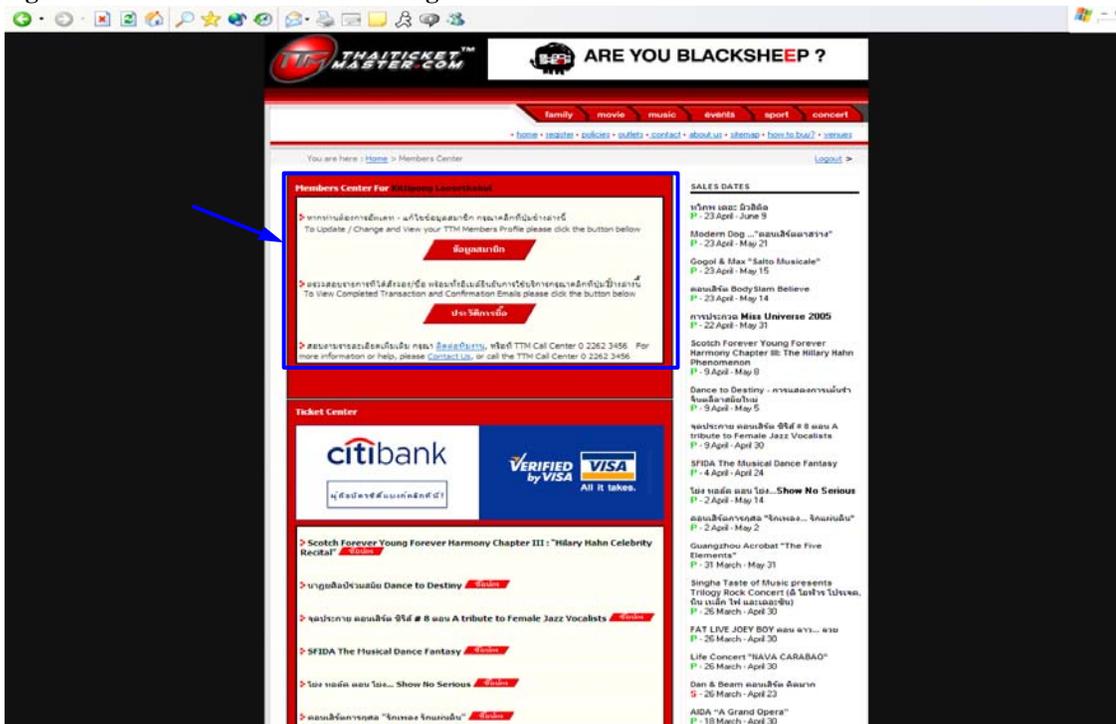
(Source: Thaiticketmaster.com)

Figure 9.6: Seat Selection Service Pages
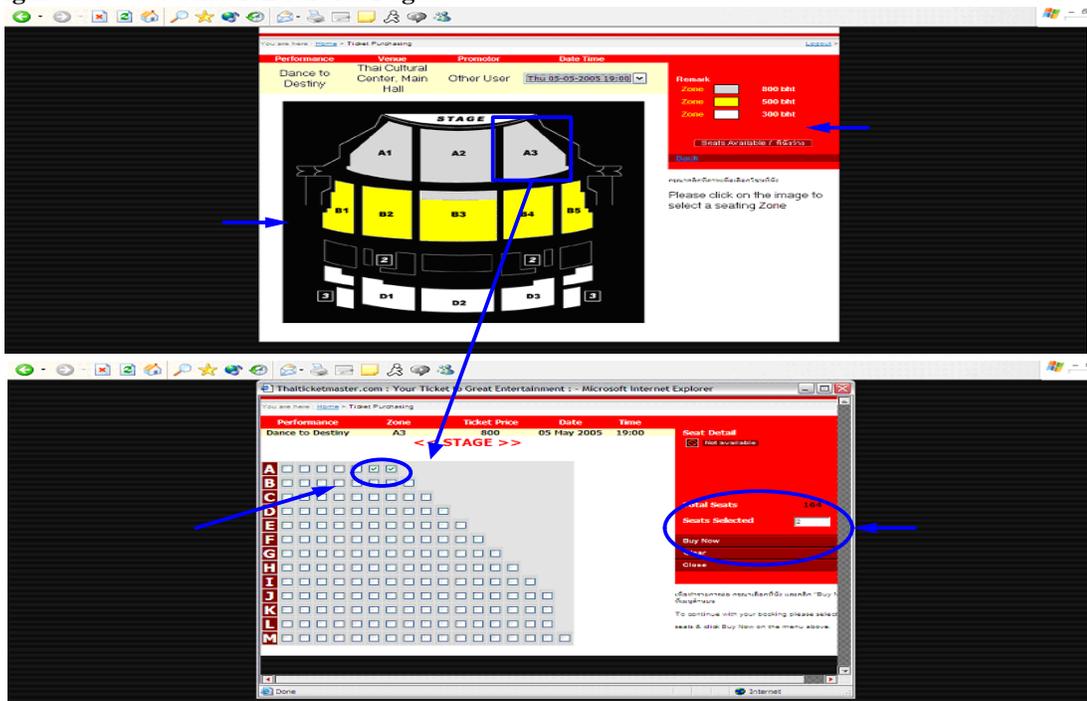
(Source: Thaiticketmaster.com)

Figure 9.7: Payment Methods
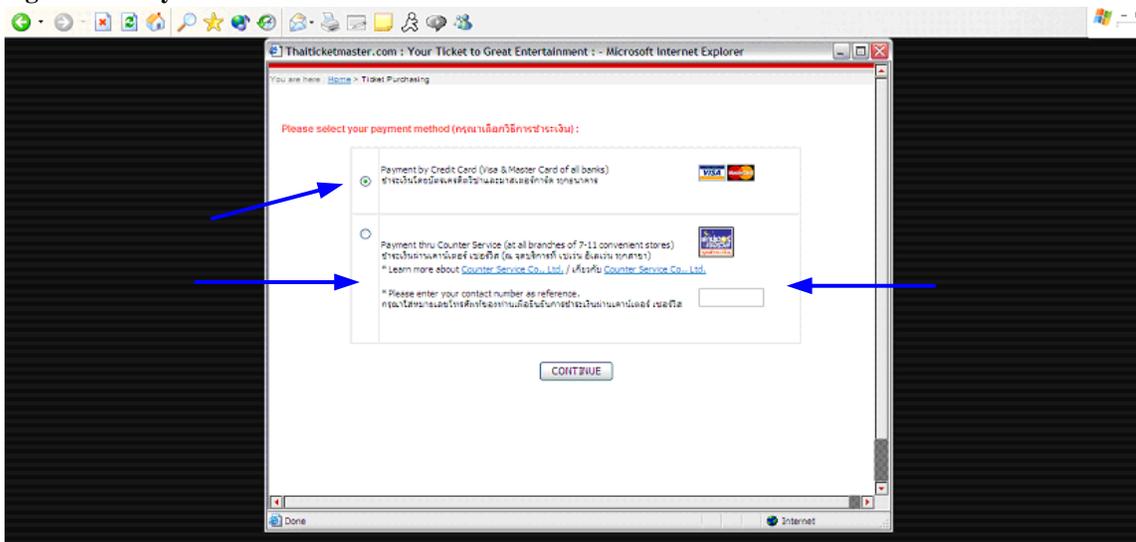
(Source: Thaiticketmaster.com)

Figure 9.8: Order Detail Page
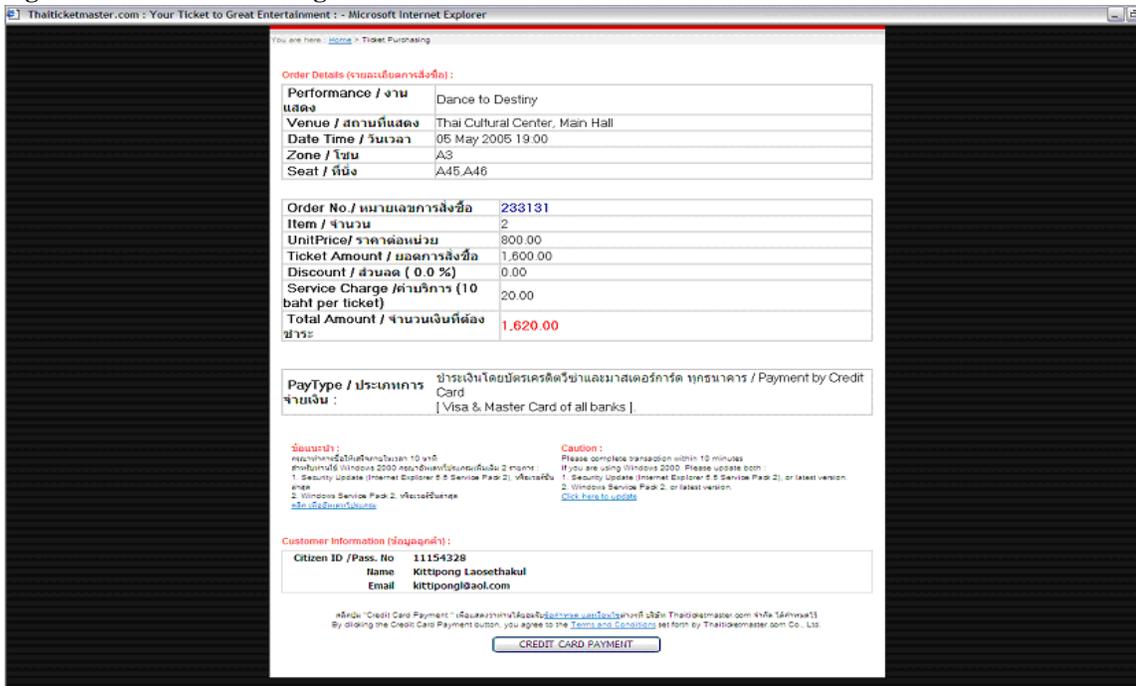
(Source: Thaiticketmaster.com)

Figure 9.9: Credit Card Payment Page
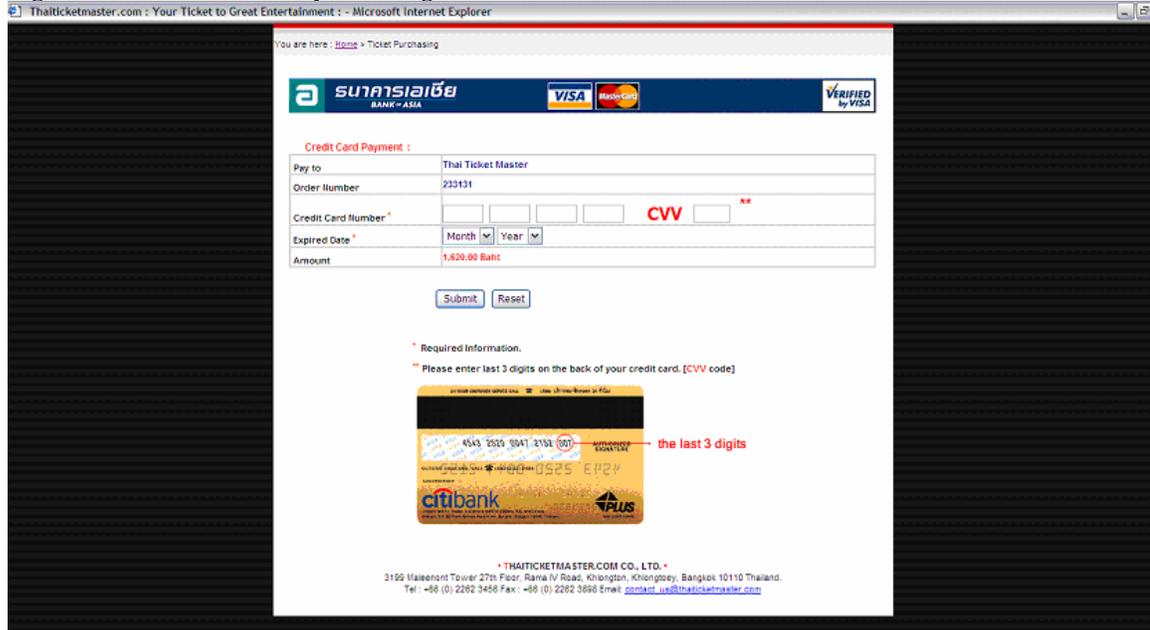
(Source: Thaiticketmaster.com)

Figure 9.10: Counter Service Payment Reference Print Page
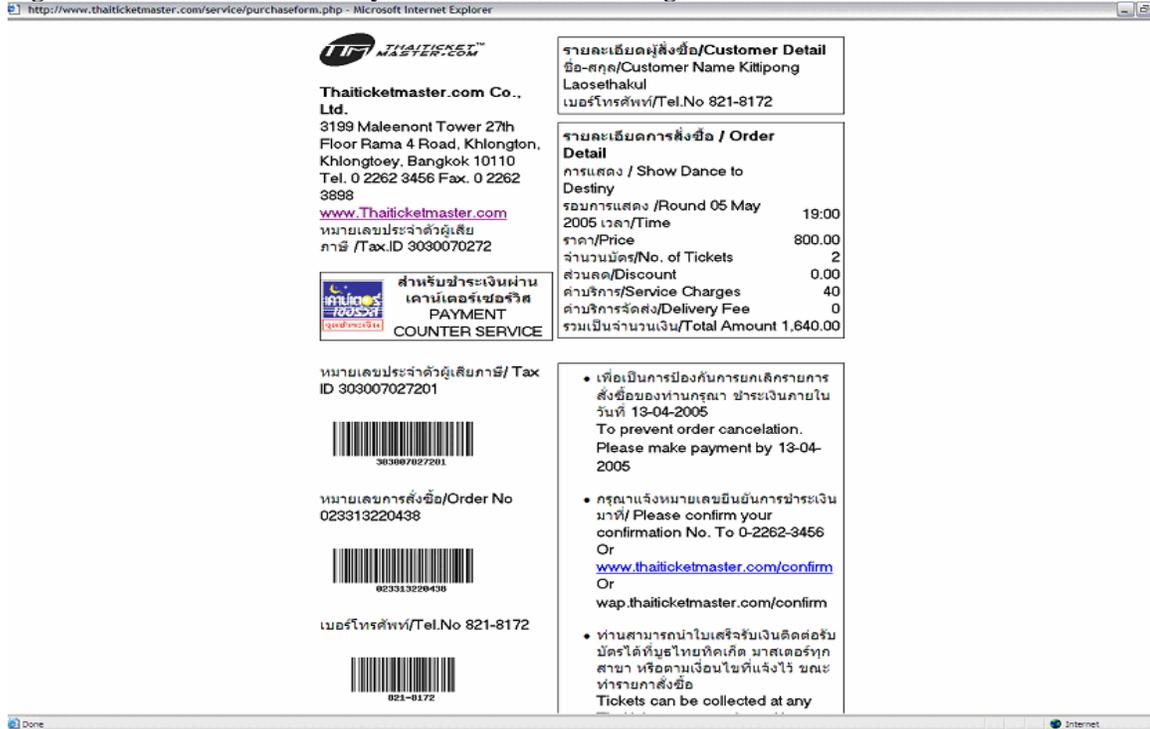
(Source: Thaiticketmaster.com)

Research Question 1: What are the CSFs for E-commerce in Thailand?

The intent of this section was to answer the first research question: Regardless of industries, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Trust

Sirirat explained that Thai customers still lacked trust in the online merchant. He suggested that e-commerce ventures must build customers' confidence by providing good service to customers. An e-commerce company needs to build its reputation based on excellent before-and-after services. They must be able to fulfill their promises in term of quality of products/services and delivery. This may take a while for an e-commerce company to achieve. Meanwhile, a company must also provide online security and post a clear privacy policy on its website. E-commerce ventures should use third party security, such as Verified by Visa or VeriSign Secureds, so customers would feel more confidence in online transactions.

E-commerce Business System (Back-end System)

Aiemrithkrai explained that e-commerce was not just websites. A company must understand that e-commerce was a business. The lack of this fundamental understanding caused a number of Thai e-commerce ventures to fail in the past. An e-commerce venture must have full business processes that supported the objective of its website. A company must carefully design all necessary business systems from the beginning. This includes the careful selection of technology, including software and hardware. For example, if a company plans to receive orders and payment through the website, well-thought business processes that supported payments and order fulfillment must be designed and developed.

Convenient Website

Aiemrithkrai noted that an e-commerce company must also focus on the design of a website to make sure that it was easy for customers to use. Products, services and supporting information must be easy to find. Different payment methods must be available to meet customers' preferences and an online payment must require only a few steps to complete.

Website Promotions (Advertising)

Aiemrithkrai and Sirirat emphasized that it was critical for e-commerce ventures in Thailand to aggressively promote their websites in order to create awareness among Thai customers. Sirirat added further that Thailand still had a limited number of online customers, and, thus, it was not sufficient to

mainly promote websites through the Internet channel. At this point of e-commerce development in Thailand, e-commerce ventures must especially promote their websites through traditional offline channels like print media, television advertising, radio, and mobile phone channels. In addition, the greater the number of Thai people knowing about the websites, the greater the web traffic and the higher the confidence of Thai customers to try online serviced.

Unique Products/Services

Sirirat noted that due to the convenience of traditional offline shopping in Thailand, Thai merchants still had little knowledge of the kind of products/services that Thai customers would buy via the Internet. In addition, the fact that Thai customers still lacked confidence in online shopping, especially with unfamiliar online merchants, made the situation even more difficult for online merchants to sell their products/services on the Internet. If products/services could be easily found at traditional retail stores, Thai customers would rather shop at those traditional offline channels because it was convenient and they could avoid the risk of online shopping. However, Sirirat suggested that online merchants should sell or provide unique products/services that could not be easily found at traditional offline stores. While unique products/services did not directly build customers' confidence in online shopping, the fact that it could not be easily found offline could assure the demand and compensate of the risk of online shopping.

In-house IT Capability

According to Aiemrithkrai, in some cases, outsourcing website development and maintenance to a third party application service provider is practical if an e-commerce venture has small online business volumes. However, Aiemrithkrai suggested that once online business volume increased, it needed to have in-house IT to develop and maintain its own websites. This also allowed the company to quickly update product information and adjust its online strategies in a timely manner.

Dynamic Team Work

Aiemrithkrai added that qualified human resources, both technical and non-technical, were critical to the success of e-commerce businesses. It was not difficult to find competent employees, but like other businesses, managing them was a challenging task. E-commerce businesses were dynamic and, thus, required employees to work as a team to quickly adjust to any market changes.

Research Question 2: What are the Key Industry Requirements for E-commerce in the Entertainment

Ticket Distribution Industry?

The intent of this section was to answer the second research question: What were the key requirements that all e-commerce companies must have in order to enter the entertainment ticket distribution industry in Thailand?

Aiemrithkrai and Sirirat agreed that factors that were critical to the success of e-commerce in Thailand also applied to any e-commerce company within the entertainment ticket distribution industry. This meant that an online entertainment ticket distributor must be able to build trust with customers through high quality service. Also, it must provide online security to protect customer information. A company must develop a supporting back-end system that corresponded with a website in order to keep up with online transactions and provide the best customer service. An entertainment ticket distribution must be convenient for customers to use and make online reservation. More importantly, a company needed to have strong in-house capabilities to develop and maintain a website. Sale consultants must be strong service-minded to serve customers on the phone, kiosks, or at concert venues. If TTM can get a contract with a concert promoter, it becomes the exclusive source for ticket sales. Therefore, a great deal depends on the abilities of the sales agents to get the contracts. As for the website advertising factor, a concert/event promoter promotes its ticket distributor along with its concert/event. This automatically created awareness of an online ticket distributor's website.

The intent of the following section was to investigate other critical success factors for an e-commerce company within the entertainment ticket distribution industry. Five areas of industry requirements needed to be investigated: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Considering the position of TTM in the value chain, there were two types of customers: concert/event promoters and consumers. Concert/event promoters ranged from promoters that bring foreign concerts to Thailand, to music corporations that arranged music concerts, to event creators that produced shows or plays. Consumers were concert/event audiences. The majority of audiences in this market were

Thais. There were also some foreign visitors who came to Thailand just to attend particular foreign concerts/events. Audiences ranged from young to old, depended on the types of concerts/events.

Strong Ticket Distribution Channels

Concert/event promoters wanted to sell their concert tickets to mass customers. At the same time, consumers wanted to easily purchase tickets at outlets located at convenient locations. Thus, ticket distributors must have a variety of strong accessible channels of distribution.

Convenient Website with a Seat Selection Service

A website must be easy for a customer to use. More importantly, a website must allow a customer to select seats at the point of reservation. Thai audiences wanted to know exactly where they would sit in a concert/event arena. They wanted to select their seats when they purchased tickets. Thus, ticket distributors must be able to provide seat selection service to customers.

Availability

Customers buy tickets online because it is more convenient than waiting on a line to purchase tickets. Tickets should be available on a website just like they are available at conventional distribution outlets.

Trustworthy and Responsive Services

Concert/event promoters wanted ticket distributors that they can trust because the transaction involved large amounts of cash. Moreover, since each concert/event set specific dates for ticket sales, many customers came to the outlets at the same time creating waiting lines. Ticket distributors must be able to response quickly to any problems. For example, if there is a power outrage, it is not possible to process credit card payments. Thus, ticket distributors must be able to handle this kind of situation to make sure that they could not only accurately collect money, but also provide good service.

<div align="center">*What are the Competitive Requirements?*</div>

Risk Management

Aiemrithkrai explained that an online ticket distributor must be able to protect itself from online fraud. It must develop a model that prevented them from losing money from customers who after-the-fact indicates that they did not make the charge for the ticket. Thai bank policies for online transaction protected credit card owners, not online merchants. When an online customer states that he/she did not use a credit

card, a bank requires an online merchant to show proof of purchase with customer's signature. Usually this paper work costs the company more than that of the ticket price. Aiermrithkrai suggested that an online ticket distributor must develop a model to protect itself from losing money to this kind of fraud.

Competitive Service Fees/Commissions

Concert/event promoters must also consider the cost of distributing tickets. If concert/event promoters decide to sell tickets by themselves, they often have to hire temporary staff. Therefore, ticket distributors offer their services at a fee lower than the cost of hiring additional manpower. In the industry, all the players compete with one another for the lowest service fee/commissions.

Supplier Relationship

Aiemrithkrai added that strong relationships with a concert/event promoter played a critical role in the success of an online ticket distributor. In addition to service quality and service fees, a concert/event promoter considers personal relationships as an important factor in selecting a ticket distributor. Strong supplier relationship allows an online ticket distributor to negotiate business deals easier and faster.

Industry Knowledge (Value-added Service)

How much the ticket distributor knows about the concert/event production, the venue and its seat arrangements, ticket pricing, and ticket design and production played an important role in its success. A concert/event promoter looked for not only the ability to distribute tickets to mass customers, but also the ability to advice concert/event promoter.

What are the Technical Requirements?

Online Ticket Distribution System

An online ticket distributor must be able to develop an online ticket distribution system that allowed customers to make online ticket distribution and seat selections. The system should be able to integrate with the company's other ticket distribution channels to prevent the 'ticket hunting' problem. The system should allow a company to accurately track customer information and payment history. In addition, the online system must be secured.

What are the Resource Requirements?

Human Resources (Sales Force)

Ticket distribution was a labor intensive industry. Ticket distributors required skillful sale forces that could not only provide good service to large numbers of customers, but also collect money accurately.

What are the Industry Regulation Requirements?

Sole Ticket Distributor

When a concert/event promoter selected a ticket distributor for a particular concert/event, that individual was the sole distributor in the market for that concert/event.

Research Question 3: What is TTM's E-commerce Business Model?

The intent of this section was to answer the third research question: What was TTM's e-commerce business model? To answer this question, the following components of e-commerce business model needed to be discussed:

Market Segmentation and Targeting

There were two types of TTM customer: promoters and ticket buyers. Promoters ranged from music companies, foreign concert promoters, to show producers. Ticket buyers ranged from 14-40. Customers who bought tickets through TTM's website used cedit cards. Their ages usually ranged from 20-40. Aiemrithkrai explained that the average number of Internet customers was different from one concert/event to another because different concerts/events targeted different groups of audiences. When a concert/event targeted older audiences, web sales increased because these older audiences had credit cards. However, the majority of older audiences still felt more comfortable purchasing tickets from more traditional channels.

Value Proposition

For concert/event promoters, TTM provided a good online system to ensure that it could reach mass audiences. Moreover, TTM's knowledge of concert/event production could assist concert/event promoters in managing their concerts/events. For consumers, TTM's wide variety of distribution channels and online ticket selling system allowed customers to purchase tickets at convenient locations/channels without the ticket hunting problem. Customers could access TTM's website for the most updated entertainment information from sports to movies to concerts/events.

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Resources and Capabilities

TTM's resources and capabilities were based on the abilities to develop an online system that could support ticket distribution and seat selection in real time. Its knowledge of concert/event production was valuable for concert/event promoters. Its strong customer team helped TTM provide excellent service to consumers.

Activity Configuration

E-commerce business activities were comprised of two major categories of business activities: the primary e-commerce business activities (sales and marketing, inbound logistics, operations, outbound logistics, after-sales services) and supporting activities (firm infrastructure, human resource, R&D, procurement). Only core business activities of TTM's e-commerce business model will be discussed in the following section.

Operations

When concert/event promoters hired TTM to sell their tickets, TTM began developed seating plan for the concert arenas, developed web-based information for new concerts/events, and designed concert/event tickets. When tickets started selling, customers could purchase tickets through the website, retail outlet, a call center, or via their mobile phones. TTM sent sales teams to each outlet to sell tickets. Since each channel and each outlet connected to the ticket selling system through the Internet, every ticket could be purchased in real time from any distribution channels without the ticket hunting problem.

One of the most critical parts of TTM's operation was money transactions. TTM provided variety of payment methods depending on the channels of distribution, but the credit card payment through the TTM's websites and call center posted the highest risk of losing money because TTM could not check customers' identification cards along with their credit cards. In the past, TTM could not charge customers' credit cards in real time when they made ticket purchase on its websites because Thai banks did not recognize online transactions. According to Thai law, TTM was responsible for any online fraudulent transaction because there was no proof of purchase. To avoid the risk of online fraud, TTM required web customers to pick up their tickets at outlets within four days with signed photo copies of their credit cards and identification cards. Customers later realized that TTM did not charge their credit cards right away so they made seat reservation through the websites knowing they were under no obligation to pick up tickets

at outlets. Promoters were not happy with this model because they lost the chance of selling tickets. Customers also were unhappy because the ticket pickup process was inconvenient. Some customers felt uncomfortable letting TTM keep photo copies of their credit and identification cards. As a result, many decided not to purchase tickets. Some even called to complain about the process. TTM did not have a better model until Visa started implementing the "Verified by Visa" program. The "Verified by Visa" required Visa credit card holders to register at Visa websites to receive personal passwords. Only Visa credit card holders knew these passwords. Participated websites required customers to enter these passwords to verify credit card holders. When TTM implemented this service, it changed its policy to charge customers' credit cards in real time. Once credit cards were charged, tickets were not refundable. Sirirat said that using Visa was a low risk venture since almost 80 percent of credit cards in Thailand were Visa cards. The only way to reserve seats was to purchase tickets immediately. Promoters were satisfied with the new model. They had higher confidence in TTM's money collection ability. With this model, TTM allowed customers to pick up tickets at outlets at least 10 days before the show dates or they could pick up tickets at the concert/event venue. Customers were required to show their photo ID and their credit cards when they picked up tickets. According to Sirirat, he could see the difference immediately after implementing the new model. The number of customers was happier with the Internet service. Number of customers purchasing tickets through TTM's websites increased.

According to Aiemrithkrai, risk management was one of TTM's critical success factors. He explained that since the development of e-commerce in Thailand was still in the early stages, there was still the risk of fraud. TTM used the pick-up model to protect the company, even though the model created an inconvenience to customers.

Sales

The fact that TTM had variety of distribution channels attracted concert/event promoters to use TTM's service. However, there were two important factors that played a major role in TTM's sales activities. First, Aiemrithkrai knew a number of people in the entertainment business. This factor allowed TTM to talk with the right people in trying to convince concert/event promoters to use its service. Second, TTM not only provided ticket selling services, but also assisted concert/event promoters in term of concert/event production. Aiemrithkrai gained lot of experience in concert/event production when he

worked with Bec-Tero. His insights added value to TTM services. Concert/event promoters, often, relied on his suggestion with regard to ticket prices, concert arenas, seat arrangements, and stage productions. According to Aiemrithkrai, today most of leading entertainment businesses in Thailand use TTM's services.

As for consumers, Aiemrithkrai explained that when promoters used TTM's service, TTM was the only ticket distributor for their concerts/events.

Marketing

Product.

TTM's variety of ticket distribution channels was a selling point to concert/event promoters. Because TTM could demonstrate successful money collection, promoters often returned to use TTM's services. TTM also designed and produced concert/event tickets for promoters. Tickets were made of plastic with the size of a credit card. Number of customers collected TTM's concert/event tickets.

Price.

Ticket prices were set by concert/event promoters. Ticket prices depended on the type of concerts/events and target audiences. TTM, however, added a small service fee to ticket prices sold on its websites and a call center.

Place.

TTM had four channel of ticket distribution: retail outlets, the website, a call center and purchase via mobile phone. TTM had seven outlets. One was located at its headquarter and the rest were located at Central department stores[2] located around Bangkok. Customers could pay by cash or credit cards. As for the TTM's website, when tickets for particular concerts/events started selling, customers could purchase tickets and selected seats at anytime 7 days a week. Customers could pay by credit cards or through the Counter Service[3]. TTM's call center is located at its headquarters in Bangkok. Customers could pay by credit cards, ATM, money transfer, and the Counter Service. Customers, however, were not allowed to select seats through the call center because it was time consuming factor. As for a mobile phone, customers

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[2] Central is one of the biggest shopping department stores in Thailand.
[3] The Counter Service is the third party bill payment service provider located at Seven-Eleven around the country.

had to log on TTM WAP site (http://wap.thaiticketmaster.com) via their mobile phones. When customers

registered at the WAP site, they could not only receive concert/event information, but also purchase tickets.

Customers could pay through the Counter Service or mPay. The mPay was the mobile phone bill payment

service provided by AIS, the leading cell phone service in Thailand.

Promotion.

According to Aiemrithkrai, TTM did not have to promote its service to consumers. When

concert/event promoters promoted their concert/event on television, radio, and print media, they also told

customers to buy tickets at TTM. TTM did not have to pay for any advertising, but its name was very well

recognized among Thai consumers. Aiemrithkrai added that there were times when some promoters used

other services to sell tickets and customers mistakenly called TTM's call center. While outlets were the

most popular distribution channel, the operation cost of this channel was not low. TTM tried to promote its

website because the cost of ticket selling was much lower. TTM had variety of website promotions. For

example, unlike other customers who purchased tickets at outlets, customers who purchased tickets through

the website were able to use an express line when picking up tickets.

After-Sales Services

As for the online service, TTM's provided an online transaction history for existing web

customers. For concerts/events that were canceled, TTM refunded the money. According to Aiemrithkrai,

> Last year several foreign concerts canceled because of the SARS and terrorist incidents, we
>
> refunded money back to the customers. The refund process costs a lot more than the cost of selling
>
> of tickets, but we had to get money back to customers and make it as convenient as much as
>
> possible to build their trust in our service.

Outbound Logistics

Tickets purchased through TTM's websites, the call center, or via mobile phone could be received

at outlets or at concert venues. Customers simply brought their credit cards and photo ID when they picked

up the tickets. Tickets purchased through the call center could also be mailed or sent by messengers to

customers for extra fees.

R&D

TTM had an in-house IT team that developed and maintained its online system and website. According to Aiemrithkrai, TTM's online ticket distribution system was difficult to develop. The TicketMaster.com, which had branches in many countries around the world, had a similar online system. At one point TicketMaster.com, the global company, wanted to acquire TTM in order to have a presence in the Thai market. The cost of opening TicketMaster.com's franchise, which included complete software and hardware package, was about US $40 million.

Partner Network

TTM's servers were located at Samart Corporation. TTM's Internet connection was also provided by Samart. TTM also outsourced the development of WAP to a third party.

Revenue Sources

TTM's main revenue came from service fee/commission from concert/event promoters. The main costs for TTM were its operation cost and hardware cost.

Competitive Strategies

TTMs' competitive advantages were its strong distribution channels. Unlike its competitors, TTM was the only ticket distributors that offer a variety of distribution channels from outlets, to a website, to a call center, and to a mobile phone purchasing. These provided convenience to customers and, thus, increased the chance for promoters to sell more tickets.

No other competitors in the market had the same system or even had capability to develop one. The online system allowed TTM to sell tickets in real time regardless of distribution channel. The chance for promoters to sell all of their ticket was even higher because the ticket hunting problem was eliminated. In addition, the payment model of TTM not only made it easier for customers to choose the best payment methods for them, but also protected TTM from online fraud. With its online system and its strong sales teams, TTM could accurately collect money for its promoters.

Another TTM's competitive advantage was its expertise in concert/event production. Other competitors simply provided ticket distribution services, but TTM added value to its service by giving promoters insight into locations, seat arrangements, stage productions, and ticket prices. In addition, the

fact that Aiemrithkrai knew a number of key people in the entertainment industry allowed TTM to have access to the right people.

Strong brand recognition was another of TTM's competitive advantages. In spite of the fact that TTM was not a pure e-commerce company, TTM created its company's name as a dot com company. During the period of the dot.com boom in Thailand, TTM's brand name was easily recognized. More importantly, TTM did not have to promote its brand by itself. Promoters promoted TTM's brand along with their concerts/events. Since TTM had about 90 percent of the market share, when there were new concerts/events, TTM's name could be found/heard everywhere on television, radios, and print media.

<div align="center">Research Question 4: What is TTM's Business Performance?</div>

The intent of this section was to answer the last research question: How was TTM's e-commerce business performance? TTM measured its business performance based on the sales of tickets and the revenue. According to Aiemrithkrai, ticket sales in 2003 were at several million dollars and the revenue was at several hundred thousand dollars. TTM measured its e-commerce performance based on the volume of tickets sold through the website. Aiemrithkrai noted that he is happy if he has about 5 percent of customers purchasing tickets from the web for each concert/event. In his words,

> You have to understand that the majority of Thai customers still do not embrace the
> online shopping lifestyle. For me five percent is a lot. That five percent helped reduce our
> work load at the outlets. A number of B2Cs in Thailand have less than 5 percent of their
> sales from the Web. In concerts when the target audience is older, our web sales could go
> up to 35 percent.

<div align="center">*Volume of Tickets Sold*</div>

TTM sold well over 300,000 tickets in 2000. Less than 10 percent were ordered through the website. In 2001, approximately 10 percent of the total of 500,000 tickets was sold through the website. In 2002, approximately 10 percent of the total of 800,000 tickets was sold through the website. In 2003, approximately 15 percent of the total of one million tickets was sold though the websites.

CHAPTER TEN – NAIIN.COM[1]

The main focus of this chapter is to identify factors that influence the success of e-commerce in Thailand and Naiin.com, an e-commerce arm of the Amarin Printing and Publishing plc. After explaining the business profile and history of the Amarin and Naiin.com and the website operation, the four research questions are discussed:

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the online bookstore industry?

3. What is Naiin.com's e-commerce business model?

4. How is Naiin.com's business performance?

Amarin's and Naiin.com's Business Profile and History

Amarin was the largest lifestyle book and magazine printing and publishing company in Thailand. Chukiat Utakiat, the founder of Amarin, formed a small Bann Lae Suan Magazine Limited Partnership in 1976 with the launching of the first issue of Bann Lae Suan (Home Care and Gardening) magazine. In the following year, the company decided to establish a small printing house since its printing, which was outsourced, was often delayed. With excess printing capacity, the company offered printing services to other publishers and thus generated supplementary income. The company continued creating new magazines in response to the diverse tastes and needs of different groups of readers. All of its magazines were highly successful and became leading magazines in the market.

Amarin expanded its publishing business into the pocket book market. It published a number of well-known writer books. The company had the honor of serving as the sole printer, publisher, and

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[1] Information for this case, except where stated otherwise, is based on interviews conducted July 14, 2004, August 5, 2004 at the head quarter of Amarin Printing and Publishing plc.

distributor of His Majesty the King's Literary Works, and the publications of Her Royal Highness Princess Maha Chakri Sirindhorn and Her Royal Highness Princess Galyani Vudhana.

In 1987, the company gradually transformed itself from a small Limited Partnership into a Limited Company. In 1993, the company went public under the name of Amarin Printing and Publishing Public Company Limited. During the same year, Amarin expanded its business into distribution services. Its affiliate, Amarin Book Center Company Limited, was established. The book center was responsible for the company's distribution of magazines and books and the management of Amarin's retail outlet, Naiin Bookstore. Today, Amarin offers a full-line service. Its businesses were divided into three divisions: Publishing Business, Printing Business, and Distribution Business.

The Publishing Business

The publishing business was comprised of six subdivisions including magazines, pocket books, training & short courses, Amarin tours, and the Amarin information center.

Magazines

As of 2005, Amarin had nine highly successful flagship magazines (Figure 10.1).

Pocket books

Amarin had 12 sub-publishers. Each focused on different target audiences and life style subjects (Table 10.2).

Table 10.1: Amarin's Magazines

Magazines	Subjects
1. Bann Lae Suan	Home and Garden
2. Praew	Lifestyle working women magazine
3. Sudsapda	Variety magazine for teens
4. Sheewajit	Alternative healthcare magazine
5. Health & Cuisine	Articles of good health and perfect taste Thai recipes
6. National Geographic (Thai Edition)	In-depth editorial coverage of cultures, nature, science, technology and conversation issues and has set the standard for excellence in reporting, photography and mapmaking.
7. Room	Home decoration guide magazine
8. WE	Love & relationship
9. Real Parenting	Practical, real experience parenting

(Source: Amarin Printing and Publishing plc: Corporate Profile)

Table 10.2: Amarin's Pocket Book Publishers

Sub-Publishers	Subjects
1. Praew books	Literary works by almost 100 well-known authors in a very board range of contents and forms
2. Praew children books	Educational books for children
3. Praew juvenile books	Specially selected literatures from award-winning authors
4. Praew entertain books	Entertainment articles from films, theatres, to music
5. Baan Lae Suan books	Home care, decoration, and gardening
6. Khrua Baan Lae Suan books	Variety of food preparations and cooking methods
7. Health clinic books	Body and mind health articles
8. Amarin books	High quality and advanced level textbooks and research monographs
9. Arun books	Quality novels by Thai-leading authors
10. Sudsabda books	Interesting and comical stories of your favorite celebrities
11. National Geographic books	Captivating and inspirational non-fiction titles that cover a variety of topics from adventure and exploration to art and culture; or from human civilization to lives in the wild
12. Translation rights	Foreign novels, literatures, and textbooks from many well-known international publishers such as Penguin USA, Prentice-Hall, Harper Collins USA, UK and Australia, Frederick Warne and many more.

(Source: Amarin Printing and Publishing plc: Corporate Profile)

Training & Short Courses

Amarin offered different kinds of training from hobbies to careers including paper mache, water painting, and Japanese facial sculptures.

Amarin Tours

Amarin arranged home and garden's visits and travel programs, specializing in cultural tours both within Thailand and aboard. Tours were accompanied by expert guides who offered varied information, ranging from culture and tradition, to the architectural background of each exotic place visited.

Amarin Information Center

The information center collected and organized printed and non-printed materials in a systematic manner. This provided information to all editorial staff. The service was also extended to the general public with applicable service fees.

The Printing Business

With over 28 years of experience in all aspects of high quality printing, Amarin became one of Thailand's leading printing service providers. Amarin provided a full-range of one-stop services from editorial services to packaging & delivery. Its printing plant was fully equipped with the latest technology, from extremely high speed network graphic work stations to the latest book finishing facilities. This

allowed Amarin to not only offer complete printing services from pre-press, printing, and post press, but also ensured the production of top quality products for in-house publications and for the demanding high-end world-wide market. With its commitment to the highest quality of printing services, it became the first printing factory in Thailand to receive with ISO 9002:2000. In 1990, Amarin received the prestigious 'Asian Award' at the 4th Tokyo Creation Awards, from the Tokyo Fashion Association of Japan for utilization of the most advanced printing technology, and its dedication to the promotion of culture, arts and other academic fields in Thailand.

The Distribution Business

Amarin distributed not only its own magazines and books, but also ones by other publishers. There were four main business areas under the distribution business.

Magazine Distribution

With its distribution network of 40 minor distributors in Bangkok and about 100 local minor distributors in nearby provinces, Amarin distributed magazines to more than 8,000 local news stands. Amarin also distributed magazines to its network of subscriptions through the company's home delivery messenger service. These subscriptions then distributed magazines through the postal service to subscribers in Thailand and overseas. Amarin also sold magazines through its e-commerce channel: www.naiin.com.

Book Distribution

The company distributed over 600 book titles that were published under various imprints of Amarin plus over 300 more titles published by other publishers and independent authors. Amarin employed five main book distribution channels.

- E-commerce: Customers could order books through its e-commerce website: www.naiin.com.

- Retail outlets: The company opened the first book store, Nai Indra (Naiin), at Tha Phra Chandra in 1994. Today there are well over 50 Naiin bookstores including Naiin franchises, located at different business centers and communities around the country.

- Direct mail: Four issues annually Amarin used direct mails to inform customers about book recommendations.

- Direct sales: The company's direct sales teams created lists of books relating to educational and social subjects, and submitted lists to government departments, educational institutions, schools, and publish libraries.

- Mobile sales: Amarin also had mobile teams that organized sales promotion through participation in school library weeks.

Circulation and Delivery Service

 Due to its comprehensive distribution networks and experienced personnel, Amarin extended the circulation and delivery service to other publishers and e-commerce businesses.

Naiin.com and Amarin's Magazine Websites

Naiin.com and Amarin's nine individual magazine websites were managed under a newly established department called New Media. The mobile channel was also under the management of New Media. New Media was under the supervision of Rarin Utakapan, the Executive Vice President of Marketing and Public Relation. According to Rarin, the goal of New Media was to strategically develop new distribution channels beyond traditional retail outlets. While traditional retail outlets were the main distribution channel for the book and magazine industry, competition was very intense. The majority of leading book and magazine publishers and distributors competed with retail bookstores located around Thailand, especially big cities like Bangkok. Opening new retail outlets required high investments and competitors competed fiercely for good locations. While most competitors sold through retail outlets, Amarin sought out less-common channels to gain a competitive advantage. According to Rarin,

> If you manage e-commerce right, the operating cost is much lower than a retail bookstore. Another advantage for online bookstores is the fact that there is no theft problem. Stolen books were the major problem of retail bookstores…all bookstores, not just us. We have to pay publishers for those stolen books. The problem is sometimes serious to the level that some branches had to close and manage the problem before opening back up.

Most competitors also had websites, but few took this channel seriously and instead focused efforts on retail stores. For instance, Se-Ed was the leading computer book publisher. It had a number of retail bookstores around Thailand. B2S was the new leading retail book and magazine distributor owned by Central, the largest department store chain in Thailand. B2S was not a publisher, but it opened retail

bookstores wherever Central was located. Both Se-Ed and B2S aggressively competed in the retail store channel, but did not emphasize their online channel. Se-Ed.com was purely an information website. The AR4U was a major computer magazine publisher in Thailand. It was the first online bookstore and one of the most well known B2C e-commerce sites in Thailand, but has now stopped its online operation. Mathishon was the publisher of the leading newspaper, "Mathichon." It had an e-commerce website called Mathichonbook.com. Chulabook was the leading education book distributor. It also had an e-commerce website called Chulabook.com. There were several small e-commerce ventures, such as Tohome.com, that sold books on its websites, but it was not a publisher. Today, Naiin.com was considered one of the most active online bookstores for lifestyle books and magazines. Moreover, Amarin developed individual websites for each of its magazines. The goal of these websites was to create communities of interest for magazine customers.

According to Rarin, Naiin.com previously had different managers with different e-commerce models, but had not been successful. Managers from the distribution business did not have the knowledge and skills to manage an e-commerce business. When Naiin.com was launched in 2000, it sold only Amarin's books and magazines. Its business operation was totally separated from the rest of Amarin. Naiin.com shared only the accounting system of the Amarin's book center, but had its own inventory and delivery system. As online orders began to increase, managing products proved too complicated. To solve this problem, Naiin.com began using the company's inventory system to manage its products. This strategy proved effective until Naiin.com decided to offer books from other publishers on its websites. The company's central inventory carried only Amarin's books/magazines, not other publishers. The only inventory that carried both Amarin's books/magazines and other publishers was at the Amarin book center. To sell other publishers' books, Naiin.com began sharing the Amarin book center inventory system. Today Naiin.com has integrated its inventory processes with that of the Amarin book center. Besides inventory processes, Amarin also has integrated its marketing strategy with the Amarin book center. This strategy proved to be highly effective due to the rapid growth of online sales in the past year.

Naiin.com's website not only provided information on books/magazines, but also allowed customers to place online orders. Figure 10.1 shows the Naiin.com's homepage. Naiin.com created a simple and easy-to-navigated website that allowed customers to conveniently find books/magazines of Amarin and other publishers. Customers could search for books in different categories from Thai novels, to home and decoration, to text books, to foreign novels. The homepage provides contact numbers and MSN instant messaging, so customers could easily reach Naiin.com's customer service when it had questions about books/magazines or website usage (Figure 10.2). New promotions were always updated on the websites. Customers could also search for books based on recommendations, best sellers, new releases, and authors. Naiin.com also provided a web-board for customers to share their thoughts about books they read. The website also provided detail information of books, including cover pages, excerpts, publications, customer reviews, and prices (Figure 10.3).

The method of placing an order was easy, quick, and safe. The websites clearly explained step-by-step how to place online orders and make online payments (Figure 10.4-10.5). Customers were required to register at the website before placing online orders (Figure 10.6). The security of online transaction was also clearly stated on its website (Figure 10.7). The website used the Bank of Asia's payment gateway module. The Bank of Asia routed credit card numbers to issuing banks for verification. Thus, customers could feel comfortable that the company would not store their numbers and only banks issuing their credit cards would see those numbers. Naiin.com accepted online payment through Visa and Master Card credit cards issued by most leading banks in Thailand. Naiin.com also implemented the "Verified by Visa" service to enhance the security of online transactions and to ensure that online payments were made by true credit card holders. Naiin.com offered other payment methods, including Direct Debit, money order, money transfer through bank accounts and ATM (Figure 10.8).

After orders were completely processed, books/magazines were shipped via the postal service to customers. Books/magazines, however, could not be returned for refunds, although customers could exchange books/magazines at Naiin.com's retail book stores if damaged from shipping. The shipping fee depended on the weight of the total order. However, shipping was free for orders over US $12.50. Naiin.com also provided a pre-order service for new books (Figure 10.9). Customers could also order

books not available on Naiin.com, and Naiin.com tried to find those books for customers for no extra

charge (Figure 10.10).

Figure 10.1: Naiin.com's Homepage
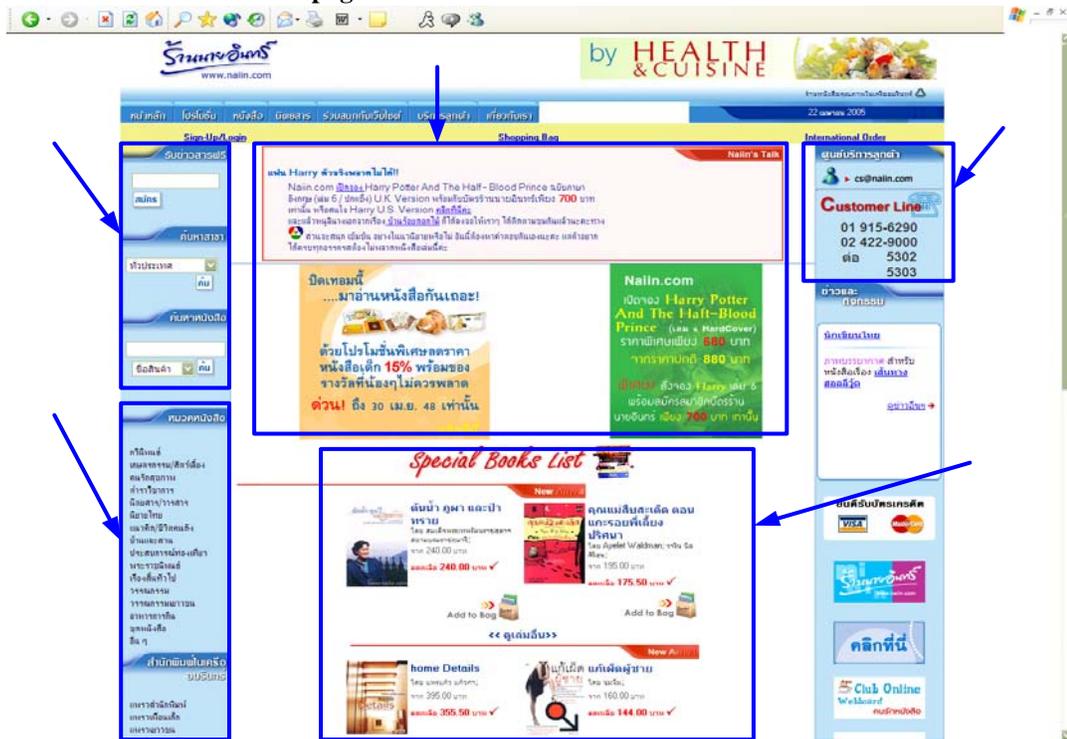
(Source: Naiin.com)

Search Tool

Figure 10.2: Book Information and Customer Reviews
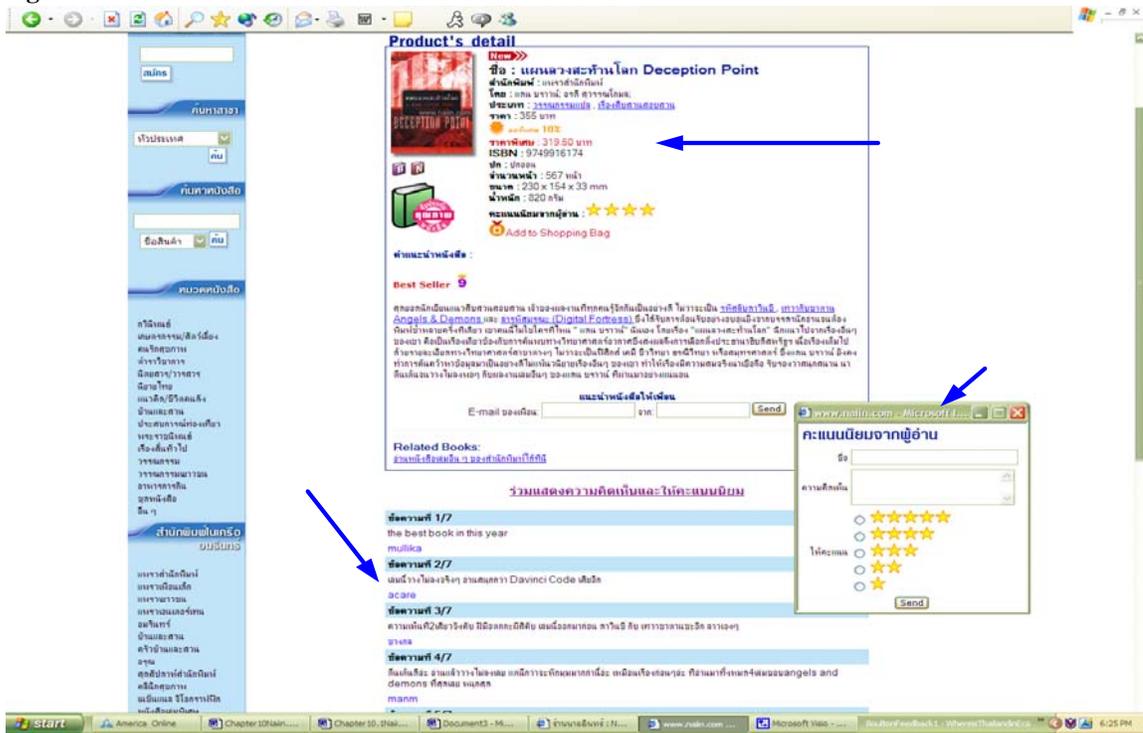
(Source: Naiin.com)

Figure 10.3: Step-by-Step Instructions of Online Shopping Processes

(Source: Naiin.com)

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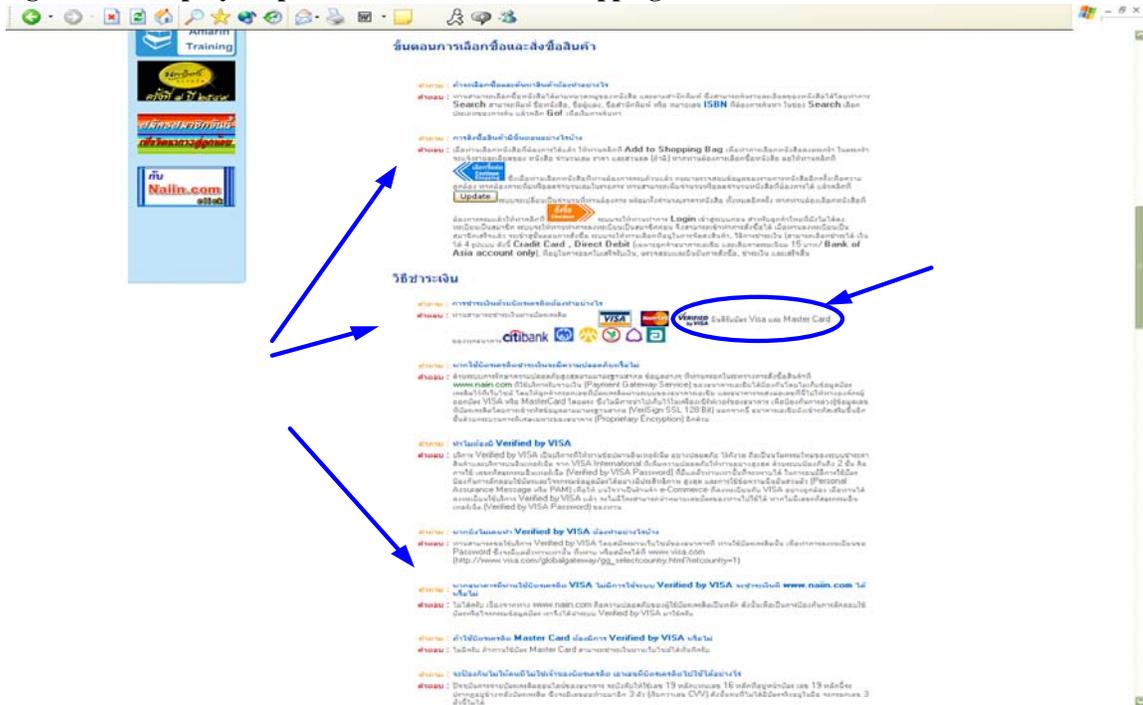
Figure 10.4: Shopping Bag
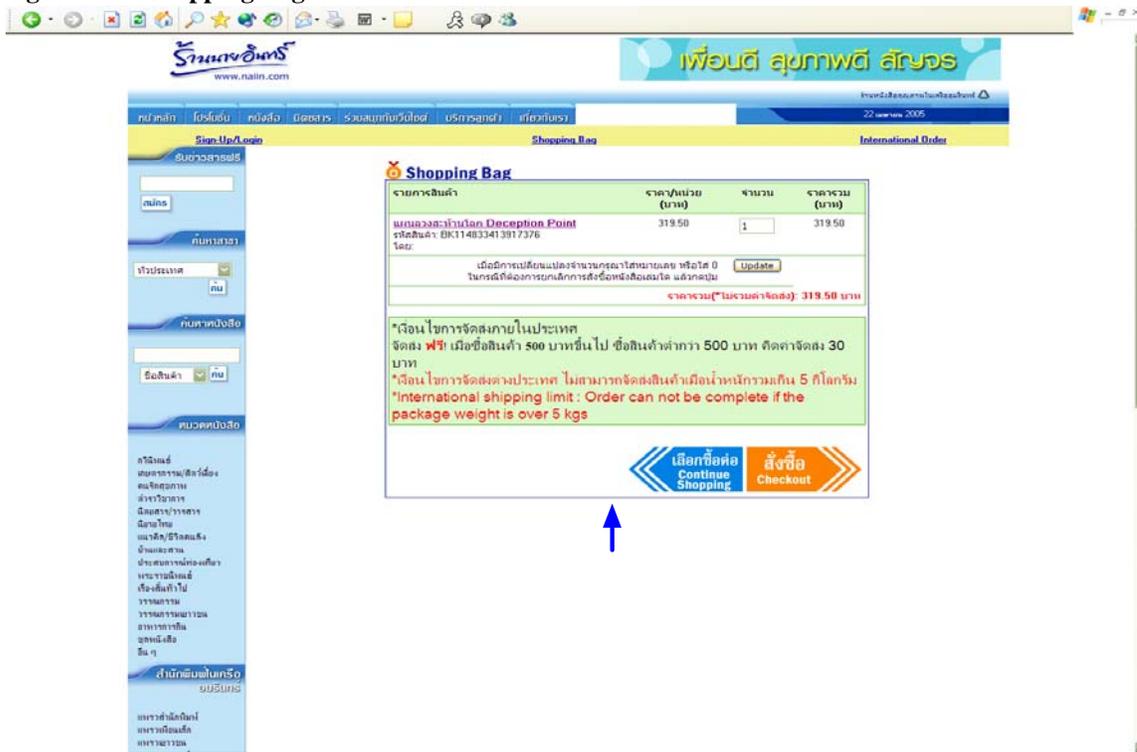
(Source: Naiin.com)

Figure 10.5: Log-in Page
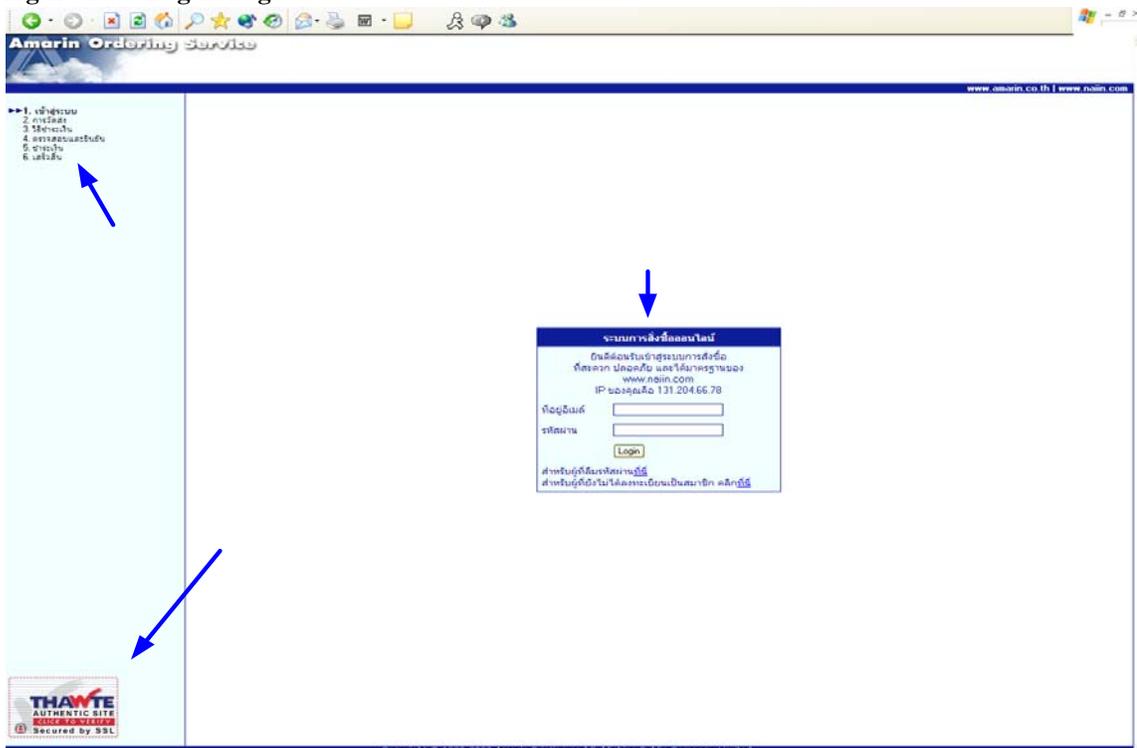
(Source: Naiin.com)

Figure 10.6: Registration Page
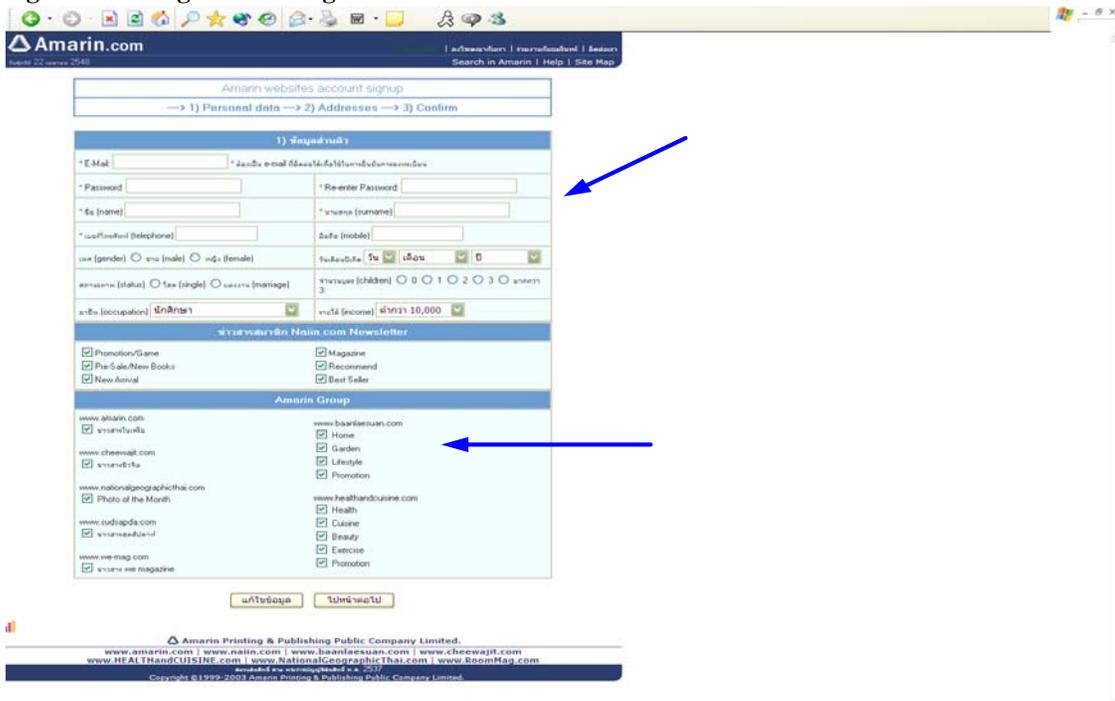
(Source: Naiin.com)

Figure 10.7: Select Payment Methods
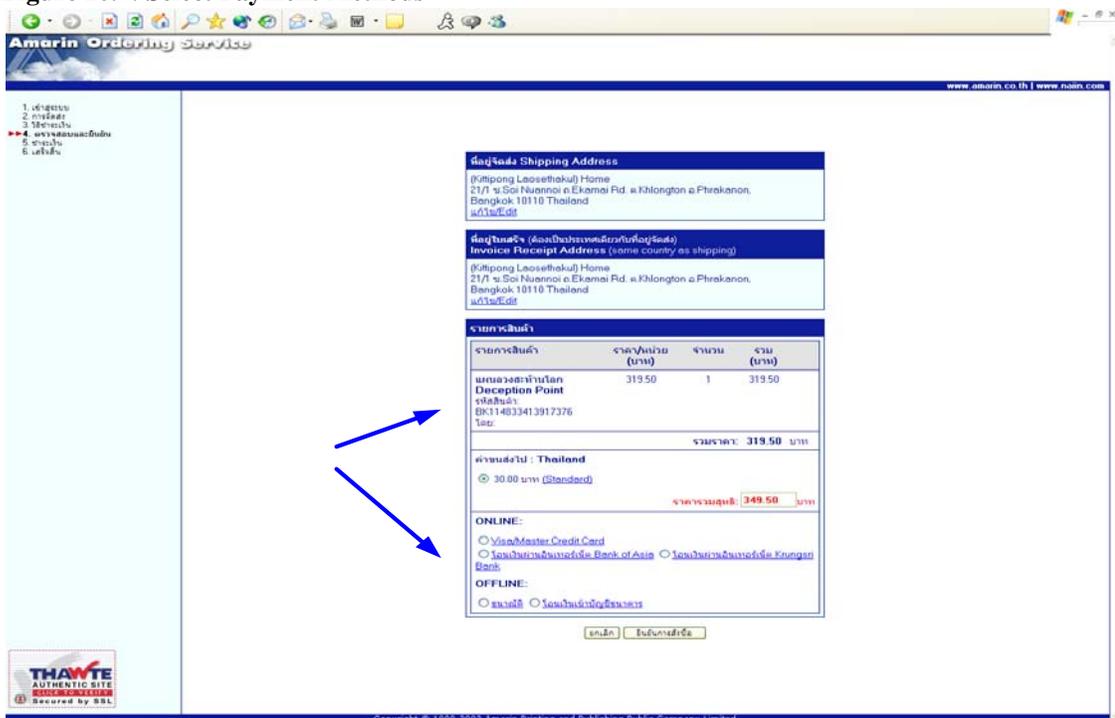
(Source: Naiin.com)

Figure 10.8: Payment Gateway by Bank of Asia
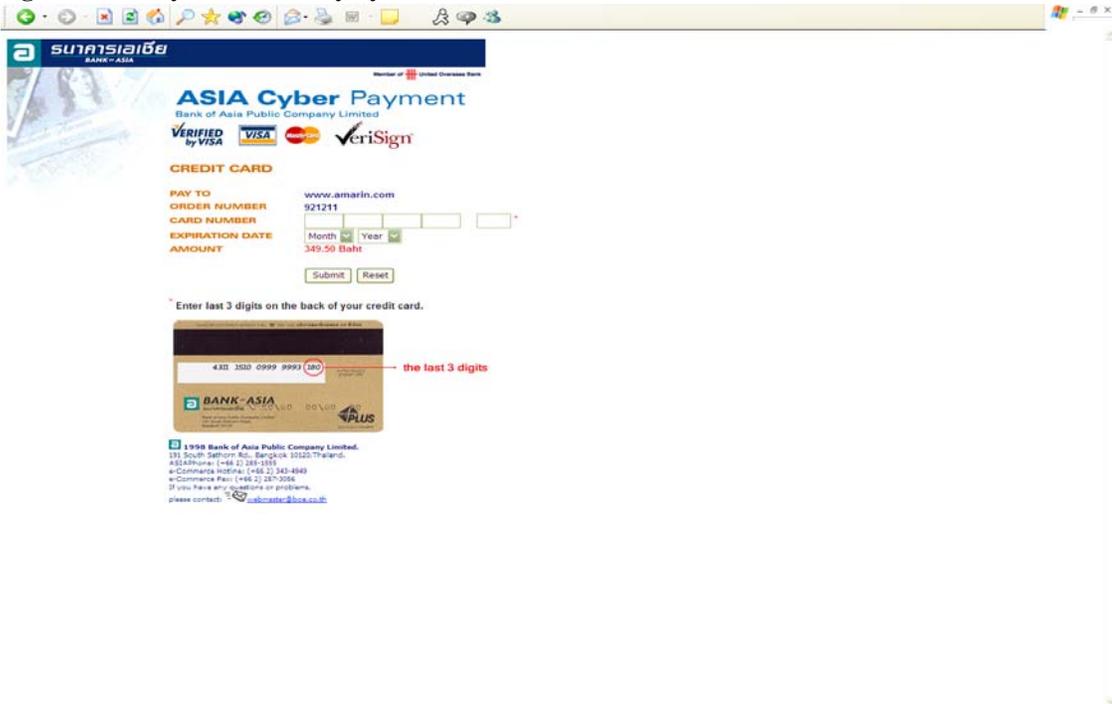
(Source: Naiin.com)

Figure 10.9: Pre-order Book Page
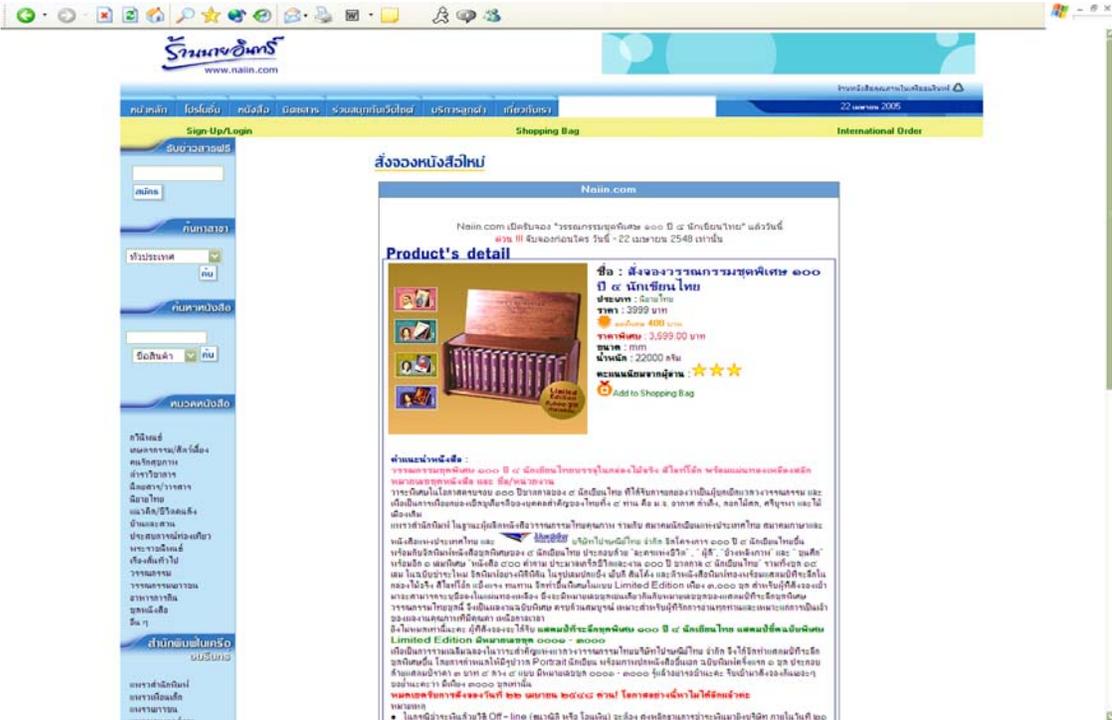
(Source: Naiin.com)

Figure 10.10: Special-Book-Order-Service Page
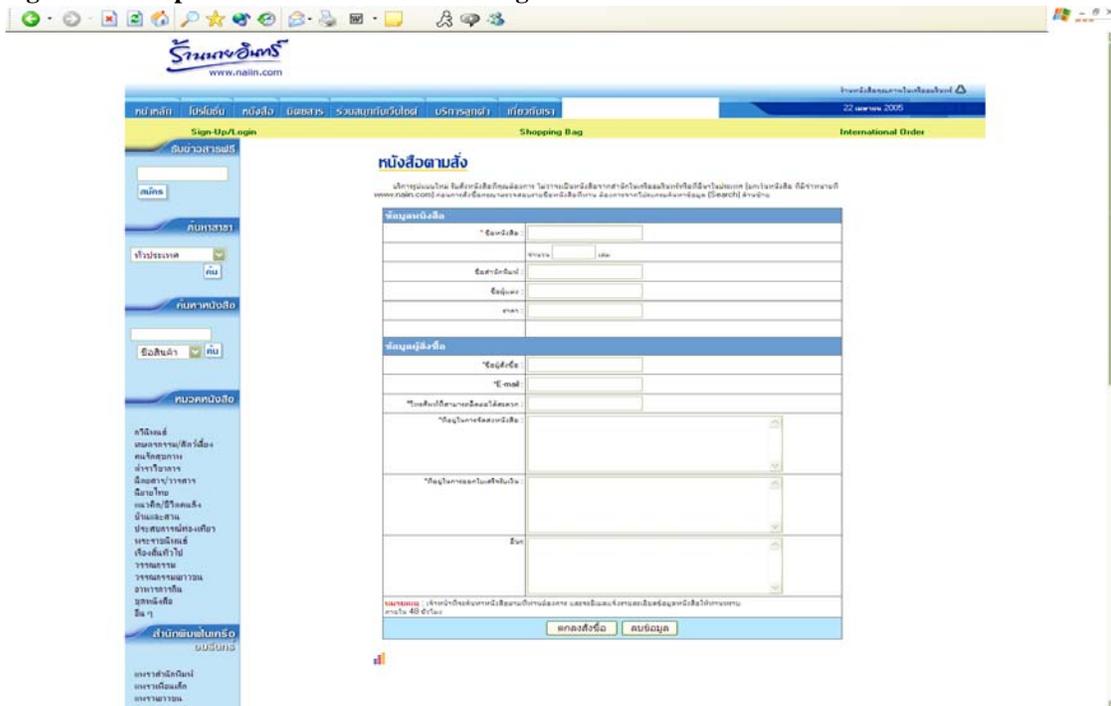
(Source: Naiin.com)

Research Question 1: What are the CSFs for E-commerce in Thailand?

The intent of this section is to answer the first research question: Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Right Product/Service

According to Rarin, a Thai merchant must carefully analyze its products to determine whether they are suitable to sell on the Internet channel, and whether they are suitable to sell to Thai people at this stage of e-commerce development. Rarin explained further that some products, like books and magazines, were suitable to sell on the Internet because they did not require special handing procedures. Customers did not require testing such products before making purchasing decision. Information about products could be easily and sufficiently acquired on a company's website. However, a Thai merchant had to also consider the buying behavior of Thai customers at the current state of e-commerce development as a way of doing business in Thailand, because it ultimately determined whether Thai customers were ready to buy a particular product through the Internet. While US customers were comfortable purchasing products on the

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Internet, Thai customers still wanted to try products before purchasing them. Besides, such products were easily found everywhere in Thailand. Apparel, for example, would not be suitable to sell on the Internet at this time. Thus, choosing the right products critically determined the success or failure of e-commerce in Thailand from the beginning.

Trust and Convenience of Web Service

Rarin added that a Thai e-commerce venture must provide services that address the trust issues of online shopping for Thai customers. What prevented the majority of Thai customers from shopping online was the lack of trust for online merchants. Thus, customer service and ease of online service were critical in making online shopping easier for Thai customers, especially first time customers. The number of Thai Internet users rapidly increased over the past few years, while the majority never experienced online shopping because they did not feel comfortable with unknown online merchants and lack of online security. They also preferred traditional shopping with human-customer service to online shopping with self-service. According to Mr. Srijamal, the e-commerce manager of Naiin.com, "We [Thai online merchants] must approach these Internet users and do whatever to make them purchasers." Rarin suggested that a Thai e-commerce venture must address issues that caused Thai customers to feel uncomfortable when purchasing online. For example, while Thai e-commerce ventures addressed the security issue of online transaction, they also needed a variety of payment methods to meet whatever method customers felt comfortable with. Srijamal suggested that online services should add human touch, such as customer service chats and phone calls, so Thai customers would find assistance when they had problems using online services.

Large Product Selection

Thai customers were used to conveniently purchasing a variety of products from sidewalks and retail stores at every corner, especially in large cities like Bangkok or Chiengmai. To imitate the same shopping environment, e-commerce websites should offer large product selections for one-stop shopping. The larger the number of product selections, the higher the chance that customers could find what they were looking for and purchase it on the website. The main idea behind this strategy was to encourage Thai customers to experience online purchasing from the website. When they made their first online purchase, they would feel less hesitant to shop with the website in the future.

Strong Brand

According to Srijamal, a strong brand name not only helped customers to search for a website quicker and easier, but also increase customers' confidence about an online merchant and online shopping service. Thus, for no-named e-commerce ventures, aggressive online and offline brand promotion was critical to the success of their e-commerce businesses. For well-known companies that open e-commerce businesses, their brands would help build customers' confidence from the beginning, but they still were required to promote their e-commerce businesses to create customer awareness.

Supporting IT and Business Processes

Another CSF for e-commerce in Thailand was having efficient information technology and business processes that effectively supported the e-commerce business. Online orders must be effectively processed and fulfilled in a timely manner. Timing played a critical role in creating satisfaction for online purchasing experiences because customers always compared the online speed with their traditional shopping experience. Online orders could not be fulfilled at the same speed as traditional shopping since online merchants still had to process orders and deliver products to customers. If an order was not fulfilled in a timely manner, online merchants had to inform customers so they would not lose trust in their services.

Research Question 2: What are the Key Industry Requirements for E-commerce in the Online Bookstore

Industry?

The intent of this section is to answer the second research question: What were key requirements that all e-commerce companies must have in order to enter the online bookstore industry in Thailand? To answer this question, five areas of industry requirements needed to be investigated: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Large Book/Magazine Selection

In Thailand, major publishers specialized in certain types of books/magazines. Amarin, for example, was known as the leading lifestyle books and magazines. AR was known as the leading computer magazine publisher. SeEd was known as the leading computer book publisher. Chula Book was not a publisher, but it was the leading educational book distributor. Some publishers like Amarin and SeEd had

their own retail bookstores. They also sold other publishers' books and magazines. While Naiin bookstores carried SeEd books, they did not have the same expanse of computer book selection as the SeEd's. While customers could find some other publishers' books/magazines at Naiin bookstores, they went to Naiin bookstores for Amarin's published books/magazines. Independent bookstores and newsstands carried a variety of publishers' popular books and magazines, but they lacked depth in their books/magazines selection.

The online book/magazine industry also had a similar environment. Leading publishers had their own websites. There was also a number of e-commerce websites that sold books from a variety of publishers. Online bookstores like Naiin.com had a large selection of their own books/magazines, and a limited selection and variety of other publishers' books/magazines. Some publishers only carried their own books/magazines on their websites. Most Thai customers knew that certain types of books/magazines were under a particular publisher. Thus, when they looked for those books/magazines, they were drawn to those publishers' websites. The most popular books/magazines, however, were available on many websites. Thus, online bookstores with a large selection of books/magazines attracted customers to their websites. They also attracted customers by being first to have the most popular books/magazines on their websites.

Availability

Customers wanted books/magazines to be available when they wanted them, especially popular books/magazines.

Product/Service Information

Readers wanted to read book excerpts and reviews. They wanted to know about products' availability, prices, shipping and handling costs, and delivery time. They also wanted to know about service and privacy policy, security of payment, and contact information.

Convenience

Books and magazines were readily found at newsstands and retail bookstores located on almost every busy street, shopping mall, and business and academic community. Thus, it was quite convenient for Thai customers to buy books and magazines. Customers who ordered books/magazines online were often first time buyers. They may have a busy lifestyle and prefer the convenience of buying books/magazines online. So, Thai customers expect that buying books/magazines on the Internet will not be complicated or

time-consuming. Product searches and web navigation must be simple and quick so customers can easily find books/magazines on the website. Online order processing must also be intuitive and quick. Different payment methods must be available to fit different customers' preferences.

Speed of Delivery

Thai customers do not want books/magazines to take too long to be delivered. Otherwise, they prefer to buy their books/magazines from retail stores. The speed of delivery, thus, played a critical role to keeping Thai customers satisfied with their online shopping experience.

Customer Support

While online shopping was expected to let customers serve themselves with the minimum human-customer service, Thai customers, especially first time online buyers, still required human-customer support because they lacked the online shopping experience. They were still nervous when ordering books/magazines online or using their credit cards on the Internet. In addition, Thai customers preferred merchant services to self service. If they had problems finding books or were not sure if they completed the online transaction processes correctly, they expected to easily access customer support.

Secured Online Transaction

The majority of Thai customers did not trust online merchants and/or online transaction processes. Thus, regardless of the products/services, a secured online transaction service was critical to making Thai customers comfortable in shopping on the Internet.

What are the Competitive Requirements?

Competitive Brand Name

Well-known retail book stores took advantage of their names to attract customers to their websites. Customers automatically knew what kind of books would be available on their websites. These bookstores also gained the confidence of customers about their online service faster than unfamiliar e-commerce websites.

Competitive Prices

Since books and magazines could be easily found in traditional channels and Internet channel, customers could compare prices easily. Thus, a competitive price was necessary for online bookstores.

What are the Technical Requirements?

Secured E-commerce Website and IT-based Back-end System

Secured online transaction was the main technical requirement for online bookstores. Moreover, a book business required an effective inventory system that could track a variety of books and magazines. Inventory was one the main costs in the book business. Thus, it was critical for online bookstores to have a back-end system that could control the inventory level.

What are the Resource Requirements?

Human Resources (Sale Support, In-house IT team)

The critical resource for online bookstores was customer service support. Customer trust depended on the quality of customer service provided to Thai customers. Customer support team required not only knowledge about books/magazines so they could assist customers in finding their books/magazines, but also website usage skills so they could assist Thai customers that needed help.

Another critical resource was an in-house IT team. An online bookstore must constantly update book/magazine information, price, and promotional programs. A website must also be secure to protect customer information. These activities required in-house IT team to develop and maintain website.

What are the Industry Regulation Requirements?

N/A

Research Question 3: What is Naiin.com's E-commerce Business Model?

The intent of this section is to answer the third research question: What was Naiin.com's e-commerce business model? To answer this question, the following components of e-commerce business model needed to be discussed:

Market Segmentation and Targeting

Naiin.com's main target was the existing customer base of Amarin's books and magazines. These were customers who loved lifestyle books and magazines and knew Amarin and Naiin bookstore very well. However, a number of Amarin or Naiin Bookstore customers still were not Internet users or online shoppers. Naiin.com's goal was to attract these customers to its website and online purchases. Once they overcame their fear of online shopping, they would see its convenience, and, thus, come back in the future.

Value Proposition

Naiin.com's main value was its large selection of quality books and magazines, the convenience of online shopping, and trustworthy Naiin online service.

Resources and Capabilities

Naiin.com's main resources were its books and magazines, capital investment, and knowledgeable personnel. Its core capabilities were its abilities to develop an e-commerce system and provide strong customer support to online customers. More importantly, it had the capabilities to publish, print, and distribute its own lifestyle books and magazines.

Activity Configuration

E-commerce business activities were comprised of two major sets of activities: the main e-commerce activities (sales and marketing, inbound logistics, operations, outbound logistics, after-sales services) and the supporting e-commerce activities (firm infrastructure, human resource, R&D, procurement). Only core business activities of Naiin.com's e-commerce business model will be discussed in the following section.

Operations

Online orders were processed once customers submitted their orders through Naiin.com. Naiin.com's website operation was located at the Amarin main office. After a credit card number is verified by a bank or a money transfer is made by a customer, an order is immediately processed. The order is sent to the Naiin bookstore warehouse, located at Tha Phra Chandra branch. While the online business shared the same warehouse with Naiin bookstore, Naiin.com had a separated team at Tha Phra Chandra that processed only on online orders, and, thus, online orders were processed quickly. Naiin.com's warehouse employees checked orders through the website on a regular basis. When they received orders, they took books/magazines from inventory and shipped them to customers by a post office. The warehouse employees informed the main office by updating an order status on the website. When an order was delayed for any reasons, such as out-of-stock, the warehouse updated the current status of an order on the website. The main office then informed a customer. By sharing the same inventory system with Naiin bookstore, Naiin.com could save time and money from developing a separated inventory system. This strategy proved to be one of the critical success factors for Naiin.com.

Marketing

Both Rarin and Srijamal explained that the fact that the company published, printed, and distributed its own books and magazines, the company had the flexibility to exercise its marketing strategy. According to Rarin, Naiin.com used to have separated marketing activities from Naiin bookstore, but after the company began to coordinate marketing programs of Naiin.com with Naiin bookstore, the online sales increased rapidly.

Product.

Naiin.com used to carry only Amarin's books and magazines. It now carries other publishers' books like Naiin bookstores. The main idea was to increase the variety of book and magazine selection. This strategy intended to increase the chance that customers would purchase books/magazines from Naiin.com and, thus, realize the convenience of online shopping for the first time.

Price.

Books/magazines on Naiin.com were cheaper than ones found at Naiin bookstores. This strategy was to encourage customers to buy books and magazines from the website.

Place.

Naiin.com offered an easy-to-navigate website. The search functions and menu were designed to help customers find books/magazines that matched their search. It also had detailed product information from excerpts to customer reviews. Customers could easily find contact information for customer support. The website also provided online transaction security and a variety of payment methods that fit customers' preferences. Naiin.com also provided a web board service so customers could share their thoughts about books and magazines. Customers could also pre-order books or request books not found on Naiin.com. The website also provided links to Amarin's magazine websites.

Promotion.

Today, Naiin.com's marketing team coordinated promotional programs with Naiin bookstores. According to Chinaporn Thepruangchai, who is in charge of Naiin.com's web marketing, when Naiin bookstores had nationwide promotion programs, the company also applied the same programs on Naiin.com or adapted them to fit Naiin.com. Naiin.com promoted the same books that were currently promoted at Naiin bookstores. At the same time, Naiin bookstores also advertised new promotions of

Naiin.com to store customers. Each Amarin's magazines devoted one page to promote Naiin.com. When a Naiin bookstore joined book fairs, it tried to create customer awareness of Naiin.com. Naiin.com also advertised its websites through banner ads on a number of popular web communities.

Outbound Logistics

Books and magazines were shipped from the warehouse at Tha Phra Chandra to a near-by post office. The shipping cost depended on the weight. The rate was available at the website of the post office. When online orders were over US $12.50, the shipping was free.

Before-and-After-Sales Services

Naiin.com provided online customer support using MSN instant messaging. Customers had to download the MSN instant message software in order to chat with the online support. Naiin.com also provided phone support. According to Thepruangchai, MSN chat helped lower the phone volume from customers. First time customers usually lacked online shopping skill. They were often concerned whether their credit cards were securely processed and their online orders were completely submitted. Sometimes they could not find books and needed help from customer support. MSN chat and phone support played a critical role in assisting these customers.

E-mail confirmations were sent to customers when an order was received and orders were shipped to customers. Naiin.com also informed customers by phone when orders were delayed more than two days. Naiin.com also allowed online customers to exchange books/magazines damaged from shipping at any Naiin retail bookstore.

In-Bound Logistics

Naiin.com gained advantage by using the strong inventory system of Naiin retail bookstore. The company usually shipped Amarin's books and magazines from its printing facility located at the main office to Naiin bookstore's warehouse at Tha Phra Chandra. Tha Phra Chandra had an inventory system that managed all books and magazines from Amarin and other publishers. Amarin books and magazines were always available for Naiin bookstores and Naiin.com. Other publishers' books and magazines, however, sometimes ran out of stock. Tha Phra Chandra ordered those books and magazines from other publishers to be delivered to its warehouse.

R&D

Naiin.com had an in-house IT team that designed, developed, and maintained the e-commerce system. The team worked closely with Rarin and the marketing team to improve the system and update new promotion programs.

Partner Network

N/A

Revenue Sources

Naiin.com's main revenue resources came directly from selling books/magazines to customers. The main cost of Naiin.com was its operating costs, which was considered low because several business functions were integrated with existing business operations of Amarin.

Competitive Strategies

Naiin.com's competitive advantage was the fact that it owned products. It was the publisher, the printer, and the distributor. This gave Naiin.com flexibility to exercise its marketing strategies. More importantly, Naiin.com coordinated its promotional strategies with Naiin retail bookstores, and thus helped draw existing offline customers to visit Naiin.com. Naiin.com also integrated its online system and inventory system with Naiin retail bookstore. By using the existing strength of Naiin retail bookstore, Naiin.com could quickly process online orders and delivered orders to customers in a timely manner.

Another competitive advantage of Naiin.com was the strong brand names of Naiin retail bookstore and Amarin. Customers recognized Naiin and Amarin and trusted its quality of products and services. This made it easier for Naiin.com to build customer confidence in its online service. These competitive advantages were difficult to imitate by small e-commerce ventures that sold books/magazines. Large book/magazine publishers that developed e-commerce websites were not direct competitors since they focused on selling their own books. In fact, since other online bookstores also sold Amarin's books, it was a win-win situation for Amarin. Another competitive advantage of Naiin.com was its first mover advantage. While competitors focused on offline competition, it had less competition on the Internet and started building its online customer base before its competitors. The learning curve allowed Naiin.com to stay ahead of its competitors in the future.

Research Question 4: What is Naiin.com's Business Performance?

The intent of this section was to answer the last research question: How was Naiin.com's e-commerce business performance? Naiin.com measured its e-commerce performance based on online sales. According to Rarin, the book and magazine market still had room to grow. Thai people did not love to read books. However, Thai government tried to improve the level of education and encouraged reading.

Sales Growth

Rarin described online sales growth during the past three year as an index figure. The sales growth was 100 in 2002, and grew to 104.9 in 2003, and 143.8 in 2004.

CHAPTER ELEVEN – OFFICEMATE[1]

The main focus of this chapter was to identify factors that influence the success of e-commerce in Thailand and Officemate. After explaining the business profile and history of Officemate and the website operation, the four research questions are discussed:

1. Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the stationery and office supply industry?

3. What is Officemate's e-commerce business model?

4. How is Officemate's business performance?

Officemate's Business Profile and History

Officemate was the largest catalog-based stationery and office supply retailer in Thailand. Officemate originated over a decade ago from a small family retail store selling stationery directly to consumers. The predecessor to Officemate was a small retail stationery store in Bangkok. The expanded business known as Officemate evolved in the next generation of the founding family. Unlike consumers, business customers preferred spending less time purchasing stationery at a retail stationery store. With the slogan "make things easier", the concept of Officemate was to provide a delivery service without having a retail store. It created its own call center, warehouse, and logistic system. It was also the first stationery business in Thailand to create a price list of products for convenience in ordering.

While developing a price list, Officemate also began to carry a wide variety of stationery and office supplies with different brand names. However, a downside of using a price list was its limitation of product details. It was not easy for customers to know what products looked like when they had never

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[1] Information for this case, except where stated otherwise, is based on interviews conducted September 27, 2002, June 10, 2004, and August 11, 2004 at Officemate main office.

ordered them before. To accommodate customers, in 1998 Officemate issued the first stationery and office supply catalog containing detailed specification and pictures of products. In fact, Officemate was the first company in Thailand to issue a complete stationery and office supply catalog annually. It contained well over 8,000 stationery and office supply products of various brands. Customers could simply place orders through phone or fax.

Officemate's catalog was well accepted by customers and other retailers in the market. While considered as competitors, stationery retail stores simply used Officemate's catalog to serve their own in-store customers. When customers could not find what they are looking for in the store, retail stores used Officemate's catalog to order those products for customers. The Officemate catalog allowed retailers to stock fewer stationery products. Suppliers also responded well to Officemate's catalog and paid to advertise their products in the catalog. In fact, Officemate treated its catalog as a profit center, not a cost center. According to Wilawan Rerkriengkrai, the telemarketing and e-commerce manager of Officemate, one of Officemate's main suppliers conducted market research and found that during the first three months after a new issue of Officemate's catalog hit the market, sales for the whole stationery market increased by 40 percent.

In 2003, Officemate invested over US $175,000 to establish a new call center system. It had over 50 employees serving call orders from customers. Officemate served approximately 2,000 call orders per day. Due to its increasing number of products and fast growing business, Officemate built a new warehouse with well over 3,500 square meters of space. Following the success of its catalog, in 2005 Officemate launched a monthly magazine, called 'At Office,' to promote its products and services. The magazine contained not only articles, but also had information about its stationery and office supply products.

With Internet use growing in Thailand, in 1998 Officemate created two new sales channels: a website and a CD-ROM. The Officemate.co.th website was created to serve new and temporary customers. Unlike the catalog that was updated yearly, product information on Officemate's website was constantly updated. Thus, customers could check for the most current prices on Officemate's website. However, since the majority of Thai organization did not allow employees to access the Internet at work, Officemate issued a CD-ROM to overcome this obstacle. The CD-ROM contained the digital description of products, with

updated prices and pictures. It was distributed to customers monthly. What was special about the CD-ROM was that it allowed customers to submit orders directly to Officemate through its Internet channel.

In 2002, Officemate went another step ahead its competitors. Citibank saw Officemate's e-commerce website and contacted the company regarding the possibility of developing an e-procurement service. Officemate suddenly saw an opportunity to develop an e-procurement market. If it succeeds providing an e-procurement service to Citibank, it will open a much larger e-procurement market in the future. While the company did not have an e-procurement system ready, it had confidence that it's in-house IT staff had sufficient capability and experience to develop an e-procurement system. Officemate then accepted Citibank's proposal and began to develop the system. It took Officemate almost a year to completely develop an e-procurement system for Citibank, but Citibank was very satisfied with the results. Well over 800 Citibank employees now order stationery and office supply products directly through Officemate' e-procurement website. The success of its e-procurement service was heard by other large organizations. Today, a number of large organizations use Officemate's e-procurement service. On average, Officemate was adding e-procurement service at a rate of one new organization per month.

With its success in both traditional channel and online channel, Officemate continued to grow. By 2004, it had well over 300 employees. With a market share of 15-20 percent, it was among the four largest stationery retailers in the market.

<div align="center">Officemate's Web Operation</div>

Officemate.co.th

With well over 8,000 stationery and office supply products, Officemate's website was designed to help customers easily find products. Figure 11.1 shows Officemate's homepage. The website provided a contact number on the top of the website for customers who required assistance or who preferred placing orders through a call center. Officemate offered 11 product categories including computer and accessories, pen and pencils, basic office supplies, glue and tape, paper and forms, files and storages, presentation tools, office electronics, plant office supplies, canteen drink and snack, and office furniture. The website showed detail product information including prices, pictures, specifications, and availability. Customers had to register on the website before shopping (Figure 11.2). The website provided a shopping cart service (Figure 11.3). Officemate delivered orders that had a total value of over US $ 12.50. Officemate promoted the use

of its website by giving a three percent discount for any customer who placed an online order. Officemate offered two methods of payment: pay at delivery and money transfer (Figure 11.4). For the money transfer method, the website provided Officemate's account numbers (Figure 11.5). Once Officemate received a money transfer, it immediately processed the order.

Two important features of Officemate were its 'My Favorite' and 'Quotation'. Its My Favorite feature shortened an online shopping process for a business customer who routinely bought the same products (Figure 11.6). The Quotation service was for business customers who wanted to buy products in large volume. The Quotation service prepared a quotation document for a customer (Figure 11.7). However, customers had to submit a quotation document by fax to Officemate. Officemate also provided 'member rewards'. Every time a customer shopped at Officemate, the customer collected reward points for exchange.

Figure 11.1: Officemate's Homepage

(Source: Officemate.co.th)

Figure 11.2: Product Information

(Source: Officemate.co.th)

Figure 11.3: Shopping Cart
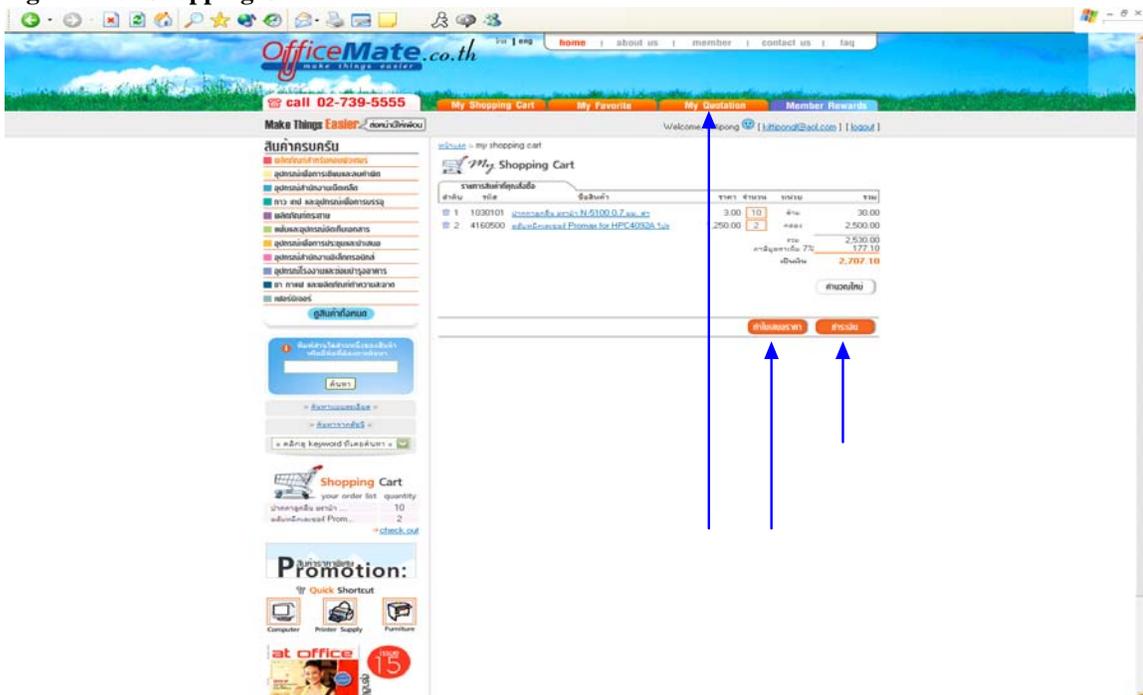
(Source: Officemate.co.th)

Same product line, but different specification

Figure 11.4: Methods of Payment
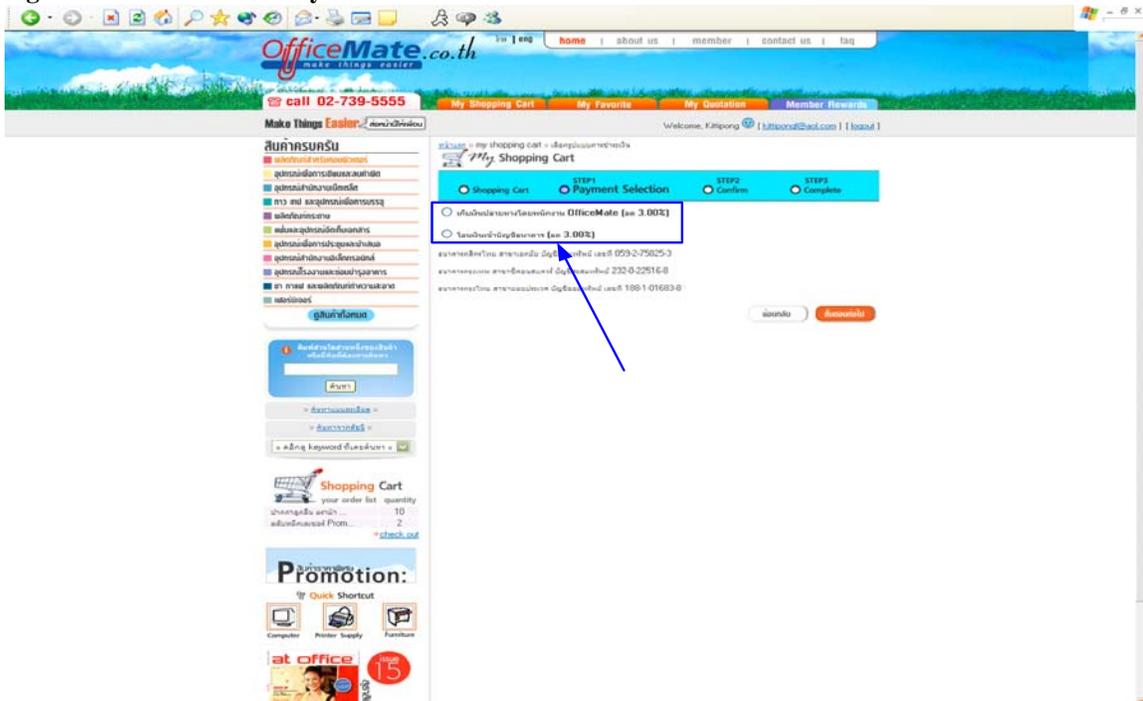
(Source: Officemate.co.th)

Figure 11.5: Confirmation Page
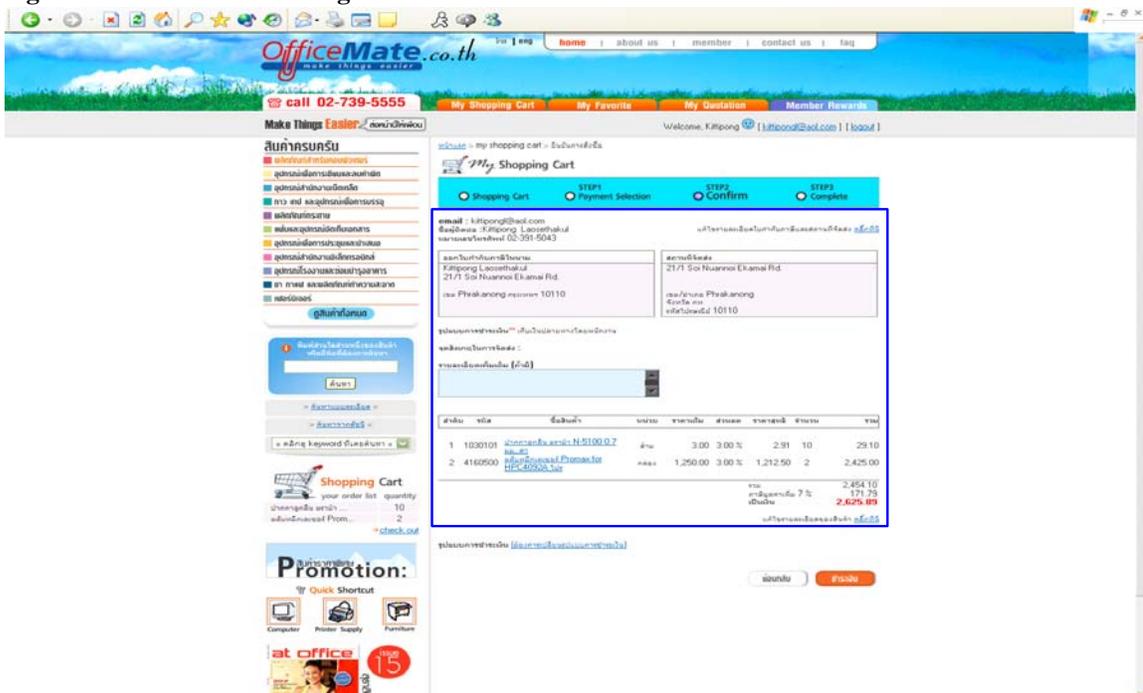
(Source: Officemate.co.th)

Figure 11.6: 'My Favorite' Feature
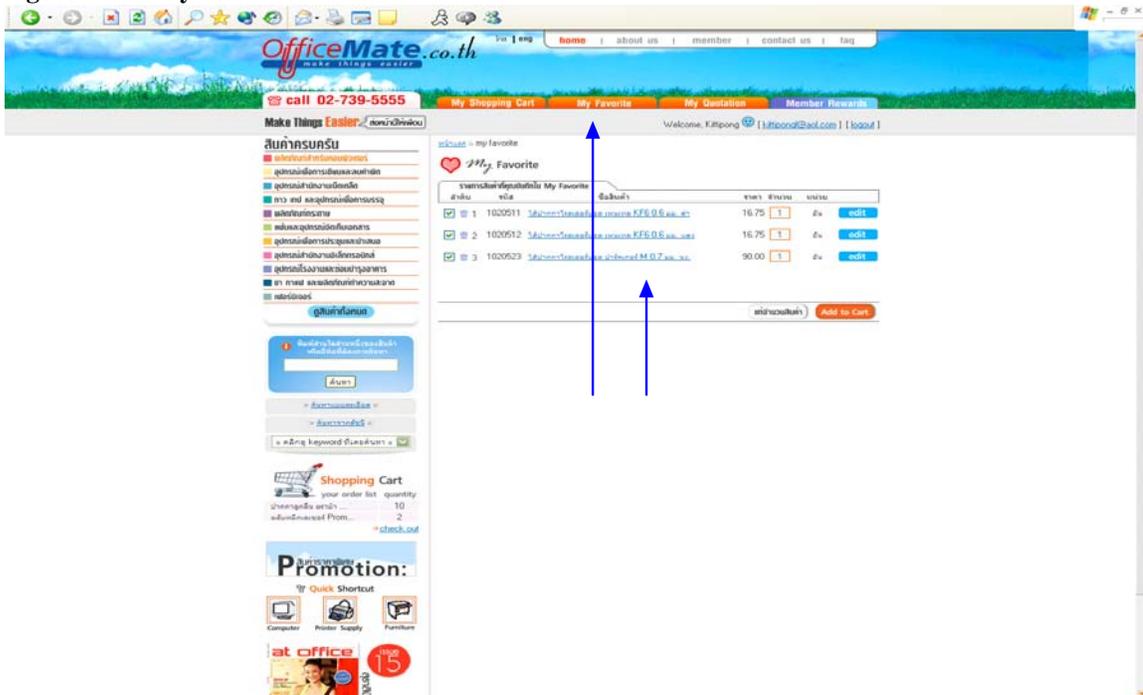
(Source: Officemate.co.th)

Figure 11.7: Quotation Service
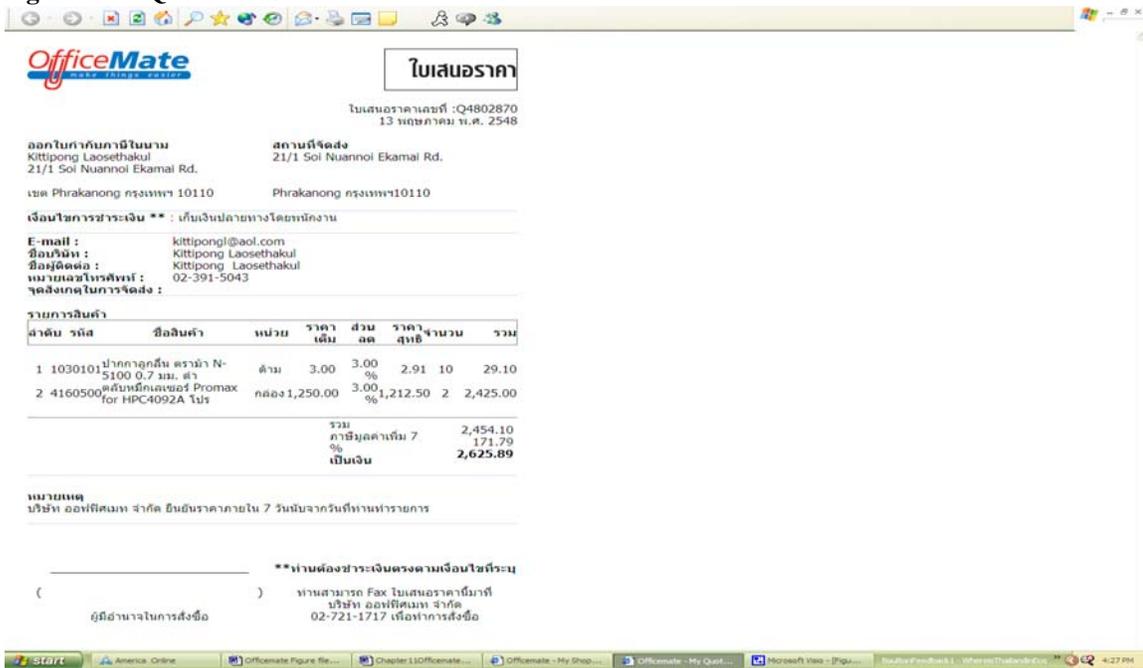
(Source: Officemate.co.th)

E-procurement

Officemate's e-procurement websites were private websites. E-procurement processes could be customized to fit each organization's specific purchasing requirements/steps, and, thus, each member organization had its own customized website. In general, e-procurement was comprised of three main processes: generate order, approve order, and reports. Figures 11.8 and 11.9 showed examples of Officemate's e-procurement login page and homepage respectively.

The generated order process, product search and shopping cart processes were similar to Officemate's regular e-commerce websites. Figures 11.10-11.14 shows the step by step procedures for selecting products, adding products to a shopping cart, and submitting orders for approval.

As for the approval order process, once an order was submitted by an employee or a requester, the e-procurement system immediately generated an e-mail to inform the requester's authority or approver. At the same time, the system generated a purchasing order (PO) and stored it on the system. Meanwhile a requester could check the status of his/her order (Figure 11.15). An approver had to access the e-procurement website to check the PO (Figure 11.16). Whether the individual approved or rejected a PO, the system generated e-mails to confirm the decision and have the requestor check the status on the website. If a PO was approved, the system sent the PO to Officemate to process the order.

As for the report processes, a purchasing department could access to its e-procurement website to create all purchasing-related reports (Figure 11.17-11.18). An e-procurement service freed up time for a purchasing department from tedious order consolidation and paper works. At the same time, it could better monitor the spending of its organization.

Figure 11.8: E-procurement Log-in Page
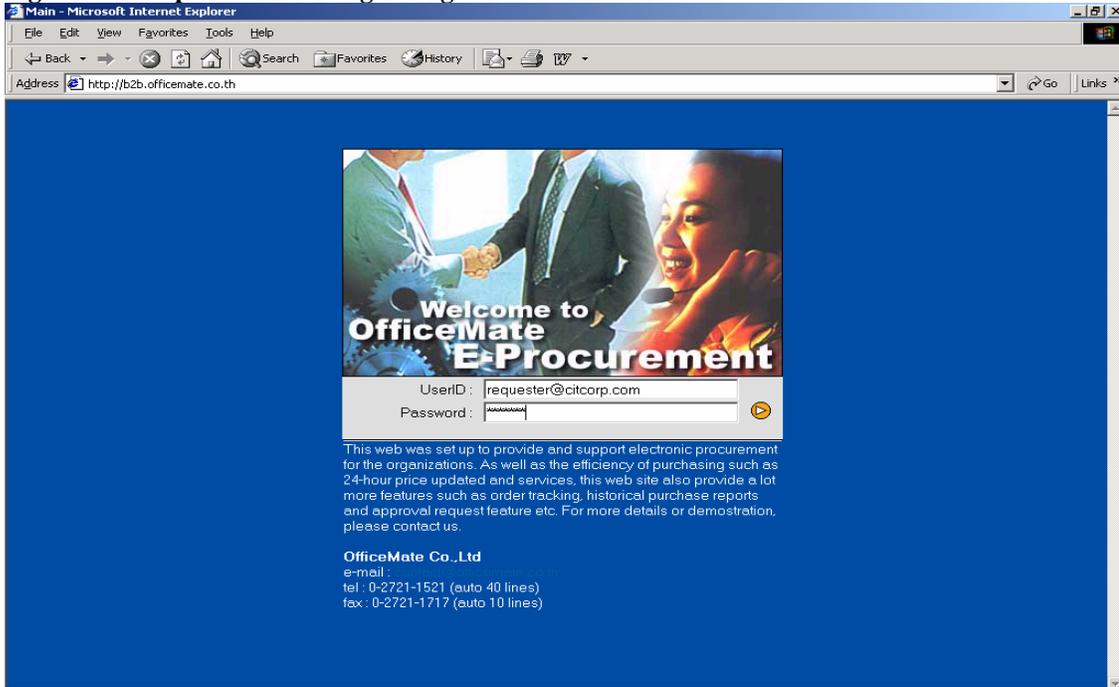
(Source: Officemate.co.th)

Figure 11.9: E-procurement Homepage
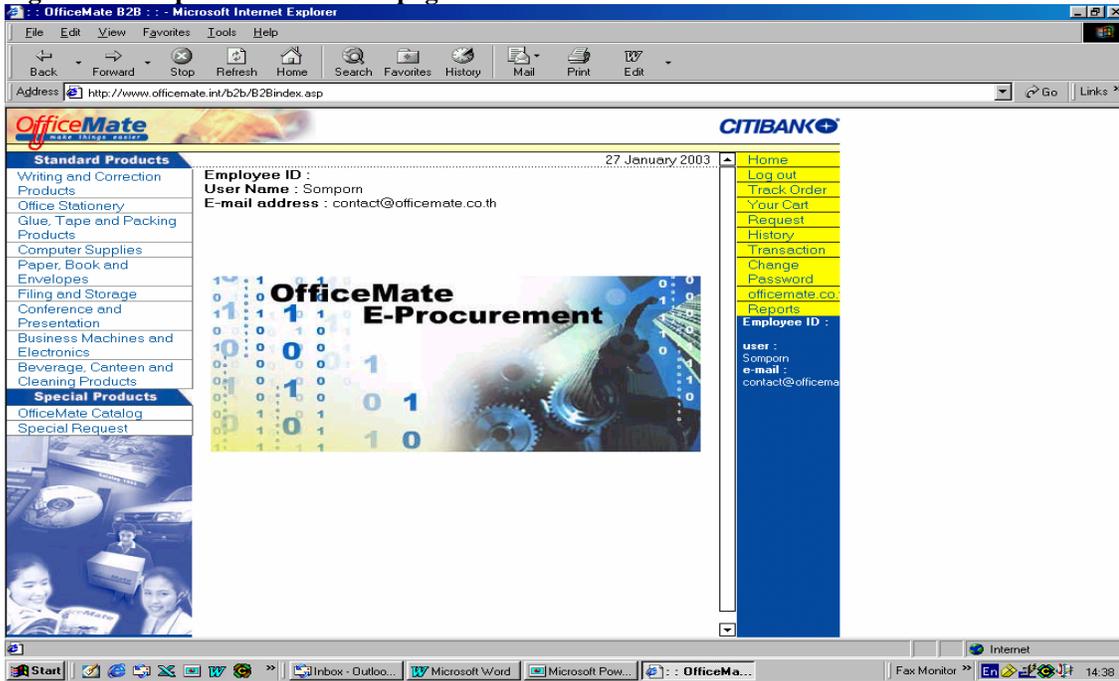
(Source: Officemate.co.th)

Figure 11.10: Product Description Page
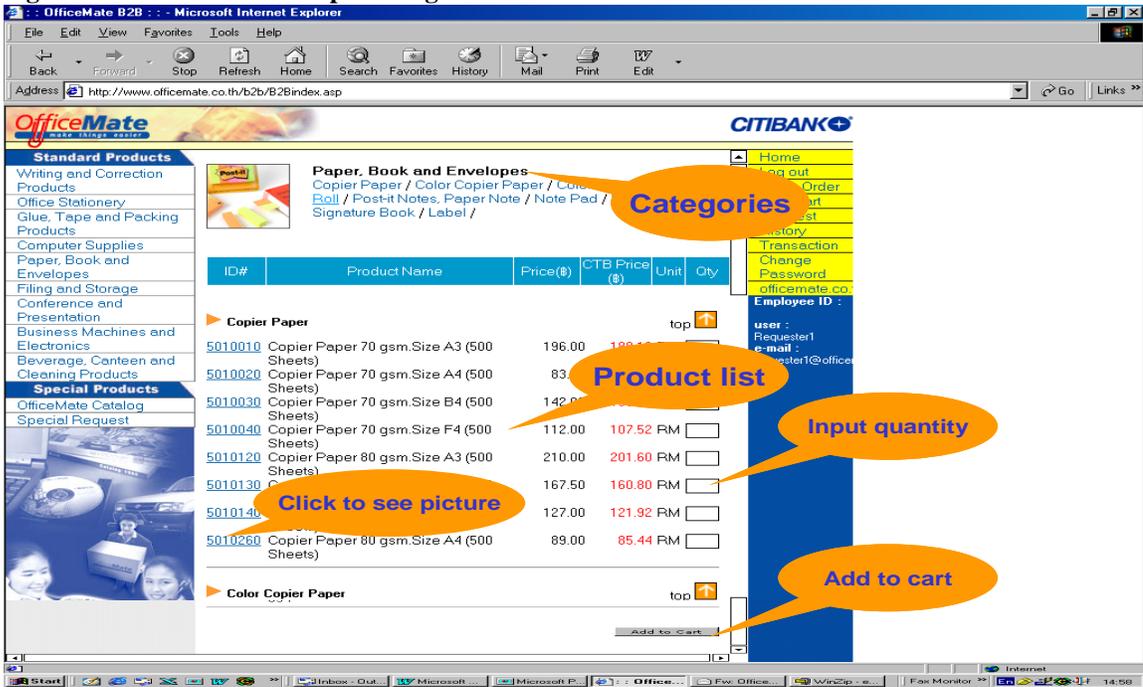
(Source: Officemate.co.th)

Figure 11.11: Shopping Cart Page
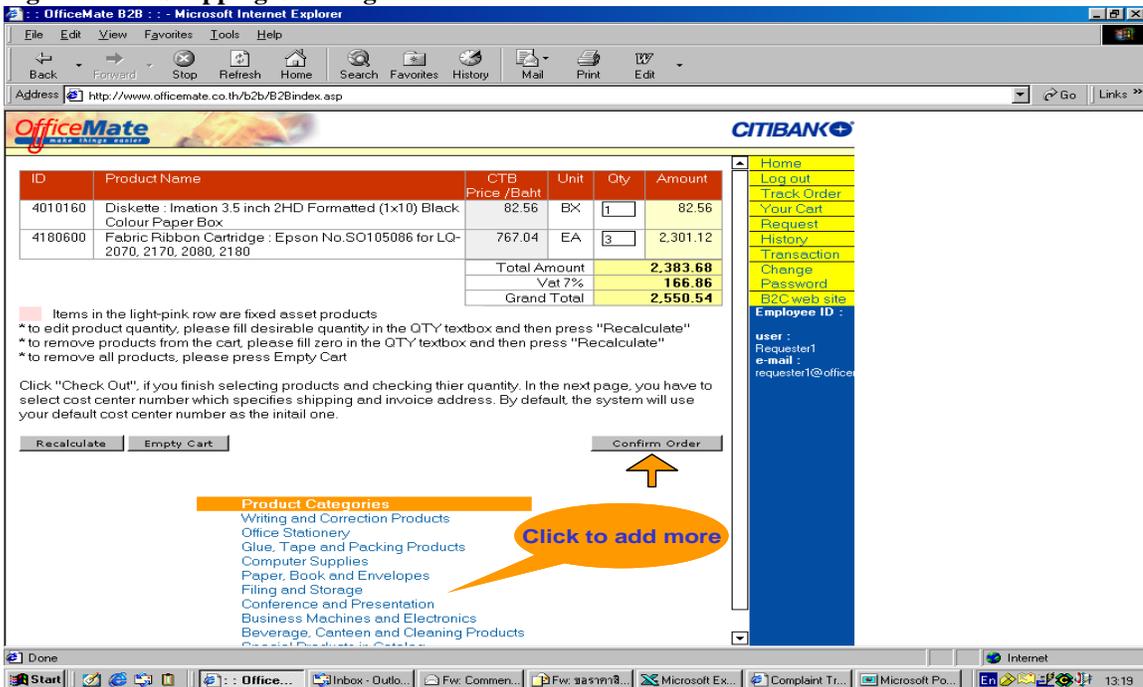
(Source: Officemate.co.th)

Figure 11.12: Submit Order Page
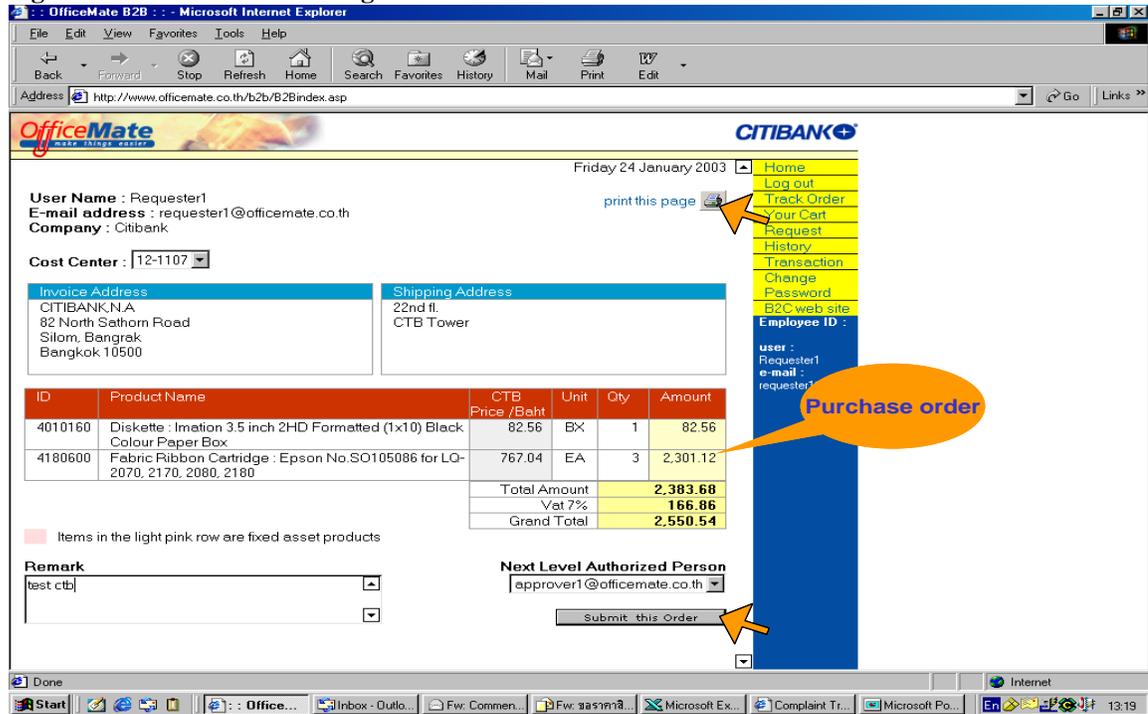
(Source: Officemate.co.th)

Figure 11.13: Special Request Form
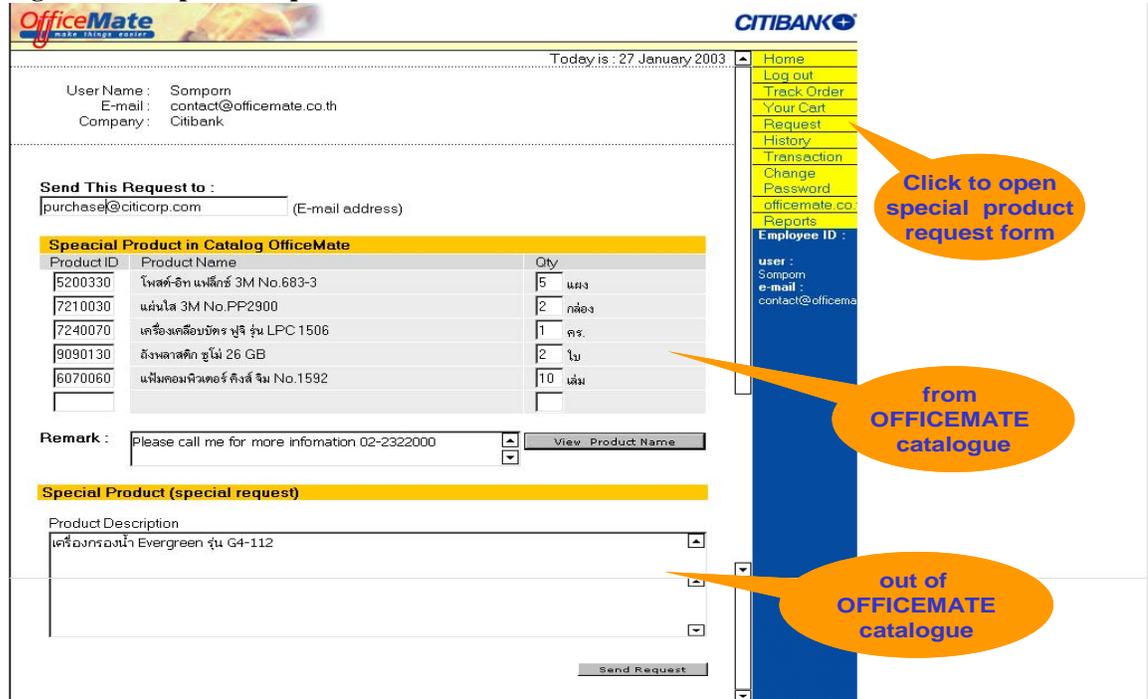
(Source: Officemate.co.th)

Figure 11.14: Confirmation Page

(Source: Officemate.co.th)

Figure 11.15: E-procurement Process Flow
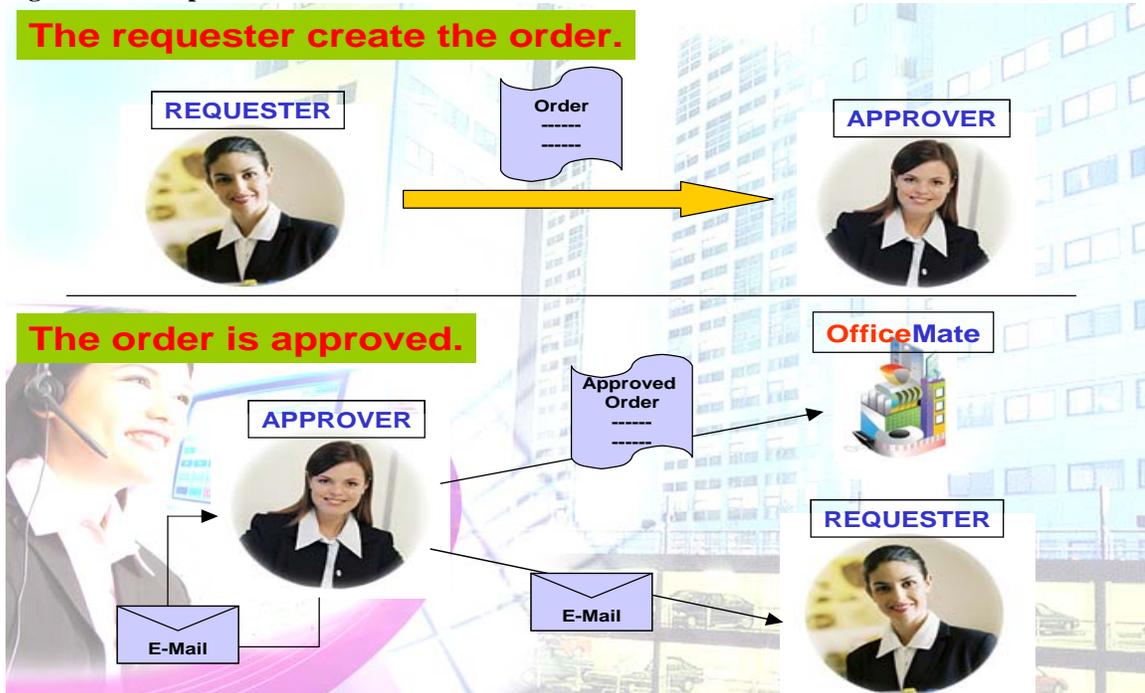
(Source: Officemate.co.th)

Figure 11.16: Order Status

(Source: Officemate.co.th)

Figure 11.17: Report Page

(Source: Officemate.co.th)

Figure 11.18: Example of a Purchase Order Report

(Source: Officemate.co.th)

Research Question 1: What are the CSFs for E-commerce in Thailand?

The intent of this section is to answer the first research question: Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Right Product/Service

Rerkriengkrai noted that the first thing that determined whether Thai e-commerce merchants would succeed or not was the products/services they sold through the Internet. Not all products/services could be sold to Thai customers/clients at this stage of e-commerce development in Thailand because customers were not ready. She explained further that products that had high prices or which required in person testing before buying would be difficult to sell to most Thai customers because online shopping still represented high uncertainty. Products that were usually bought in large volumes or sold as raw materials were also difficult to sell on the Internet channel because clients usually needed to negotiate prices before purchasing. Products that were usually found in retail stores and routinely bought were a good fit for online shopping in Thailand because Thai customers or clients did not require a lot of time making the decision or comparing prices before buying.

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Website Promotion

Ratri, a telemarketing supervisor of Officemate, explained that Thai people in general still had a low awareness of e-commerce websites. To create traffic to websites, e-commerce ventures must aggressively advertise their websites' names and services to their target markets. Depending on the targets, website promotions could be online and/or offline. However, offline advertising through magazines, television, posters, and billboard was the most popular method because it could reach the majority of Thai customers.

Awareness of E-commerce Value

According to Rerkriengkrai, Thai business clients still lacked awareness and knowledge about the value of e-commerce to their businesses. Thai business customers may be aware of e-commerce, but the majority of them still lacked a clear understanding of how to use/apply e-commerce to their businesses, or how e-commerce could provide a competitive edge. Due to the lack of information sources or organization that could provide them necessary information, e-commerce merchants must be able to consult, clearly articulate the value of its e-commerce service, or provide necessary training to prospective clients.

Convenient Website

According to Ratri, an e-commerce website must be easy to use. Products should be easily searched. Product information/specification and prices should be complete, accurate, and updated. Customers should not spend extra time trying to figure out how to use a website, searching for product information, or even calling an e-commerce venture to confirm prices and information. Otherwise, they would rather use traditional shopping/purchasing channels.

Rerkriengkrai added that a B2B e-commerce system often required a certain degree of system integration and/or change in the client's business processes in order to improve the flow of information or products between the client and the B2B e-commerce firm. While clients expected a certain degree of change, their main concern was that new processes were simple and easy to use. In addition, there were certain business practices/procedures in each client's organization that must be followed. A client thus expected an e-commerce firm to understand these guidelines/procedures and have the ability to customize its e-commerce system to fit them. Successful e-commerce processes must be flexible and simple to use.

An e-commerce firm must have the capability to understand its clients' business processes/procedures and customize its e-commerce system to fit them.

In-house IT Capability

Buying a B2B e-commerce system from a third party developer is usually expensive. A company must also pay for future system maintenance. Moreover, a commercial B2B e-commerce system often required some degree of customization to fit the particular business processes of a client. If a company does not have an in-house capability to customize or update a system, it must contract service from a system developer. This caused inflexibility in system customizations, updates, and maintenance. In turn, it limits a company's ability to provide high quality service to its customers. By having an in-house IT capability, a company can develop its own e-commerce system that fits its needs with far less expense than outside contracting. Moreover, it can provide service and support to its clients in a timely manner. However, having an in-house IT capability was not an easy task in Thailand because Thailand still lacked qualified IT persons who had experience in e-commerce systems development.

Reliable Logistics System

Unlike traditional shopping, online shopping required a customer to wait for a physical order to be delivered. Online customers, however, are often concerned as to whether delivery service will be reliable. As for business clients, reliability was even more important. They expected orders to be delivered on time. A B2B e-commerce venture must develop its own logistic system in order to gain control over the quality of service and cost. Otherwise, it must use the services of a highly reliable logistic provider. However, third-party logistics services can be too costly for small e-commerce ventures to afford.

Trust

Trust played an important role in a B2B e-commerce service. As explained earlier, B2B e-commerce service often required a certain level of integration or a process change on the client side. Moreover, for some types of a B2B e-commerce, business clients had to commit themselves to use an e-commerce service from a particular e-commerce firm for the long term. These conditions will raise the risk to business clients if they do not choose the business partner well. According to Rerkriengkrai, a business client, particularly a large one, needed to have confidence in an e-commerce firm's reputation, quality of products, delivery service, and e-commerce knowledge and experience, and IT capability.

Management Support

Like qualified human resource, the majority of management personnel still lacked knowledge and skill in e-commerce business. Somporn, a telemarketing supervisor for Officemate, explained that management played critical role in projecting vision and direction of e-commerce development and strategies. However, the lack of knowledge and examples of successful e-commerce in Thailand made it difficult for executives or managers to guide their company into e-commerce business. Executives/managers must mainly rely on their business experience in an industry, intuition, and "learning as doing". Firms that successfully conducted e-commerce usually had executives/managers with a deep knowledge and experience in their industries and were strong entrepreneurs.

Research Question 2: What are the Key Industry Requirements for E-commerce in the Stationery Industry?

The intent of this section is to answer the second research question: What are the key requirements that any e-commerce company must have in order to enter the stationery industry in Thailand? According to Rerkriengkrai, factors that were critical to the success of e-commerce in Thailand were also applied to an e-commerce company within the stationery industry in Thailand. First, stationery and office supply products were products that did not require customers to inspect them in person. For business customers, they did not want to spend much of their time on purchasing stationery products, thus, purchasing convenience was important to them. Thus, stationery and office supply products was fit to the nature of online shopping. Second, an online stationery company must be able to establish strong trust with customers. This was especially important for an online stationery company that provided an online procurement service. An e-procurement service may require a business customer to change its purchasing processes or commit itself to one stationery supplier. This will pose high risk to a business customer if the quality of service of an online stationery company is not good enough. Third, an online stationery and office supply company must be able to aggressively promote its website to target customers. Forth, a company must be able to clearly articulate the value of its e-commerce service to its customers. This factor was especially critical to an online stationery company that provided an e-procurement service to customers. Fifth, a website of an online stationery company must be easy for customers to use. Customers must be able to search for number of stationery and office supply products quickly. Online ordering processes must be quick and easy. Sixth, to be able to update product information and promotional

programs on a daily basis an e-commerce website, an online stationery company must have an in-house IT capability. Next, an online stationery company must be able to provide fast delivery service to business customers. Last, strong support from management was critical to the success of an online stationery company.

The intent of the following section was to investigate other CSFs for an e-commerce company within the stationery industry. Five areas of industry requirements needed to be investigated: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Large Product Selection

Customers wanted to find a large selection of stationery products in one place. There were a large number of stationery product lines in the market. There were also a wide variety of brands in the market. However, stationery was not a raw material. A customer or a purchasing department did not want to spend time searching stores for their purchasing needs. They wanted to find all stationery requirements in one convenient location.

What are the Competitive Requirements?

Competitive Speed of Delivery

Rerkriengkrai explained that there were two types of buyers in the stationery market: those who went to a retail stationery store to purchase products and those who placed orders via call centers, faxes, or websites. The former buyer tended to be a small organization with less than 10 employees. Speed was not the issue for this type of customer because it could get stationery whenever it wanted from a retail store. The later type tended to be an organization with more than 10 employees. While it was more convenient than going to a retail store, a customer had to wait to receive their goods. A customer thus expected that products would be available and quickly delivered. Speed of delivery thus played a critical role in this industry.

Competitive Product Availability

Since business clients always ordered stationery in volume, and speed of delivery played a critical role, products had to be available when ordered. This required a stationery retailer to carry products in

inventory. However, a retailer must be careful in carrying too inventory because of inventory costs.

Moreover, some types of stationery were outdated quickly because manufacturers constantly updated their

products.

Competitive Price

Since a business customer usually bought stationery products in volume, they negotiated prices

and expected discounts from a stationery retailer.

What are the Technical Requirements?

IT-based Back-end System

An online stationery retailer must have efficient back-end systems to support online business. An

efficient back-end system was particularly critical to online retailers that carried a large supply of stationery

and office products because it allowed the retailer to update product information and process online order

quickly. For example, any large stationery retailer needed to have an effective IT-based inventory system in

place. Since they carried a large number of stationery products, they needed to track their inventory

turnover in order to control inventory costs, and accurately forecast and reorder products from

manufactures in a timely manner.

What are the Resource Requirements?

A Strong Sales Force

A sales force played an important role in developing long term relationship with business clients'

purchasing personnel. According to Rerkriengkrai,

> When customers were satisfied with the service provided by a particular sales person, customers
>
> began to develop a business relationship with him. When they returned, they wanted to place
>
> orders with the same sales person that they were familiar with because he knew exactly what they
>
> were looking for. This made order processing quick and easy. More importantly, clients felt more
>
> comfortable in negotiating prices with sales people that they knew. Some times our prices were
>
> not the cheapest in the market, but clients simply placed orders with a sales person because they
>
> like him.

Thus, a sale force needed to have not only strong knowledge of products, but also a strong service

orientation to build relationships with his/her clients.

N/A

Research Question 3: What is Officemate's E-commerce Business Model?

The intent of this section is to answer the third research question: What was Officemate's e-commerce business model? To answer this question, the following components of e-commerce business model needed to be discussed:

Market Segmentation and Targeting

While Officemate was a retail business, its main target was a business organization. Officemate targeted a business customer that emphasized good service, rather than price alone. The majority of Officemate's customers still used its catalog and placed orders through the call center. As for the e-commerce channel, Officemate's e-commerce website targeted transaction customers who tended to be a small organization with a small business volume. Thus, transactions did not require price negotiations by phone with an Officemate's sale personnel. On the other hand, medium-to-large organizations usually negotiated discounts due to larger business volume. A medium-to-large organization tended to be a long-term or return customer. An organization with large order volume per month was a target of Officemate's e-procurement service. Rerkriengkrai noted that the majority of Officemate's e-procurement clients were international corporations, such as Citibank, Exxon, and Cisco. According to Rerkriengkrai,

> I saw the trend that these subsidiaries in Thailand began to use e-procurement services because their headquarters had a policy that required them to procure supplies through e-procurement services. They believed that an e-procurement service usually improved the efficiency of purchasing processes, which in turn lead to transparency and lower cost of procurement in the long term.

Another possible reason that large corporations showed strong interest in an e-procurement service was that the Thai government aggressively promoted the use of e-procurement in business. The Thai government was also among the first adopters of e-procurement. It demanded all government agencies to use e-procurement services for purchasing.

Value Proposition

Officemate's main business value was its high quality service. Officemate provided large product selections with competitive prices. More importantly, Officemate tried to make it easy for customers to place orders by offering a variety of sale channels from its catalog to its monthly magazines to its e-commerce website to its CD-ROM. Each channel had strong IT and customer support. Thus, placing orders was fast and easy. It had a strong network of logistic systems so customers could trust that their orders would be delivered on time.

Resources and Capabilities

Officemate' main resources were its human resources, including the sales and marketing team and the IT team. Sales persons' strong product knowledge and service orientation were key in serving customers. A marketing team was a key to effective marketing strategies used to provide Officemate's e-commerce services. In addition, its in-house IT team was a key behind the development of Officemate's inventory system, Intranet system, e-commerce website, and e-procurement system. Officemate's primary competence came from its ability to provide a large product selection through different channels, develop a strong logistics system, maintain strong supplier relationship, and develop a strong in-house IT team.

Activity Configuration

E-commerce business activities were composed of two major sets of activities: the main e-commerce business activities (sales and marketing, inbound logistics, operations, outbound logistics, after-sales services) and the supporting e-commerce business activities (firm infrastructure, human resource, R&D, procurement). Only core business activities of Officemate's e-commerce business model will be discussed in the following section.

Operations

A backbone of Officemate's business operation was its Intranet system. When products were delivered from suppliers to Officemate's warehouse or when they were shipped to customers, shipments were monitored and availability was updated by the inventory system. The inventory system was directly connected to the Intranet system so sales personnel could verify product description, availability, price, and order status of products in real time. When customers called the call center, sales personnel at the call center accessed product information through the Intranet system and provided the most accurate

information to customers. When customers placed orders through the call center, a fax or an e-mail, sales personnel entered orders through a sales system, which was also a part of the Intranet system. Officemate's website, however, was not virtually connected to the Intranet system. A sales person updated product information, including prices and availability, on a web server twice a day. According to Rerkriengkrai, even though the web server was not virtually connected to the Intranet system, it did not cause any problems because stationary prices did not frequently change and Officemate always had sufficient products in its inventory. Besides the call center, the website was considered as the most updated product information.

The e-procurement system was also separated from the Intranet system and the e-commerce website. After a client agreed to use Officemate's an e-procurement service, Officemate began to investigate a client's purchasing procedures and its specific rules and regulations. A private website was then tailor made to fit a client's specific purchasing processes and requirements. According to Rerkriengkrai, there could be some purchasing steps or procedures that were unique to each organization, but in general purchasing processes were always similar regardless of the client's business. Product information was updated on each client's e-procurement website for every quarter. One CSF for Officemate's e-procurement was its ability to provide comprehensive training sessions to a client's employees. After an e-procurement system was developed, Officemate assigned a password to each client's individual employees. With Officemate's e-procurement system, individual employees now placed purchase orders (POs) directly on the website, and, thus, a client's purchasing personnel no longer had to consolidate stationery orders from within an organization. Once a PO was approved, Officemate immediately processed the order.

Sales

A call center was the main sales channel of Officemate. However, with its e-commerce website and e-procurement system, Officemate freed time and effort of the call center to serve other customers. For an e-procurement service, sales began when a business client contacted Officemate for the possibility of using an e-procurement service. According to Rerkriengkrai, "These clients had strong interest in an e-procurement service, but they obviously lacked knowledge of e-procurement and what the service would do to their organizations." One of Officemate's CSFs was its ability to clearly articulate clear value of its e-

procurement service and consult on how those values could be applied to clients. By gaining more understanding about the concept of e-procurement and how the service could be tailored to fit its purchasing procedures and requirements, a client gained more confidence in Officemate's e-procurement service.

A custom-fit e-procurement website was free of charge to a client. A client only had to agree to meet the purchasing budget quota each year. There was no contract that obligated a client to solely purchase stationery and office supply products from Officemate. However, Officemate believed that when a client began to use the service, the client's purchasing personnel were less likely to go back to a traditional way of purchasing with other retailers because of the greater convenience of an e-procurement service.

Marketing

Product.

Customers could find almost every type of stationery product on Officemate's e-commerce website because it carried well over 8,000 stationery and office products. Officemate guaranteed the quality of its products by selling only well-known brand names. Product information on the website, including prices, pictures, and specification, were always updated. Thus, customers could get accurate product information quickly through the website without calling a call center.

Price.

While Officemate's prices were competitive, they were not the lowest in the market. Prices on its e-commerce website and at its call center were the same. However, when a customer had a large volume order, it placed an order through a call center, not a website, because it wanted to negotiate a discount and credit terms. As for the e-procurement service, orders were aggregated by client's employees on a daily basis. Officemate updated product prices with a client every quarter. The company gave discounts based on a client's yearly expected expenditures on the e-procurement system. Rerkriengkrai admitted that Officemate's prices were not the cheapest in the market. However, a client could reduce its purchasing cost by using Officemate's e-procurement service. A purchasing department no longer made several calls to check prices between retailers, but spent its time consolidating orders from a number of employees, and prepared a purchasing report.

Place.

Officemate tried to create an easy-to-use e-commerce and e-procurement website. Both websites required only few steps to complete online orders. The e-procurement website was designed to have only six steps for a user to complete an order. For an employee or a requester, processes started from (1) login, (2) view items, (3) select items, (4) add to cart, (5) issue PO, and (6) submit to approver. For an approver, processes started from (1) receive mail, (2) login, (3) view PO, (4) approve, (5) add comment, and (6) submit to Officemate.

Promotion.

Officemate tried to create awareness of its e-commerce website and an e-procurement service by advertising them through its catalog, monthly magazine, and delivery van. It also created a promotion program 'Customer Rewards', which allowed a customer to collect points for future reward exchange when he/she placed an online order. In addition, an e-commerce website offered promotion products with special discount prices. When a customer paid cash on delivery, he/she received a five percent discount. Officemate had temporally stopped providing an online payment option due to online fraud. According to Rerkriengkrai, "Even though we used the 'Verified by Visa' service, it did not really protect us because we found that customers still denied using the credit card. Therefore we decided to stop an online payment until a bank can provide a better solution for us."

Outbound Logistics

Officemate had its own delivery service. It had 40 delivery cars and 15 motorcycles. For customers within Bangkok and its vicinity, an order was delivered within 24 hours. For customers from other provinces, orders were guaranteed to be delivered within seven days.

After-Sales Services

Officemate's call center was always available for customers when they had problems using its e-commerce website or its e-procurement website. Officemate allowed customers to return products when they found defective product.

R&D

Officemate had a strong IT team with over ten employees. Its IT team developed and maintained the Intranet system, websites, and servers. According to Rerkriengkrai, Officemate invested about US $175,000 for its e-procurement system. It would have cost Officemate three to four times if Officemate had had to hire a third party developer to build the e-procurement system for the company. With its in-house IT capability, the company could implement a variety of online promotion programs for the e-commerce website, and customized the e-procurement system to fit the purchasing flow of a client.

Partner Network

Officemate had logistics partners that delivered products to customers who were outside Bangkok and its vicinity.

Revenue Sources

Officemate's revenue resources came directly from its business customers. The major cost of Officemate was its operating, IT investment, and procurement cost. According to Rerkriengkrai, the operating cost of a call center was the highest among its channels. The major cost of the e-procurement channel was the initial IT investment, but it did not have to keep investing in new systems for every new client. It simply customized its e-commerce website to fit each individual client. Thus, the long term cost for e-procurement was very low. In addition, the e-procurement operating cost was very low because it required only a few employees to process orders from business clients.

Competitive Strategies

Officemate had a number of competitors in the stationery and office supply market ranging from small to large retailers, such as Office Depot, B2S[2], Macro Office Center (MOC)[3] and Lyreco[4], to name a few. However, each used different strategies. Small stationery retail stores did not pose a threat to Officemate because they even used Officemate's catalog to serve in-store customers and also ordered products from Officemate. Thus, it is a win-win situation. Office Depot's and Macro Office Center (MOC)'s strategies were to open one-stop-shopping super stores that carried stationery. B2S opened a

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[2] B2S was the bookstore and stationery & office supply chain store operated by Central department store, the largest shopping store chain in Thailand.
[3] MOC was the subsidiary of Macro, one of the largest super store chain in Thailand.
[4] Lyreco, was a French stationery and office supplier known as the largest of its kind in Europe.

stationery and office supply section along with its bookstore located near Central department stores around the country. These giant retailers did not pose a direct threat to Officemate because Officemate focused on business customers who preferred a delivery service rather than in-store shopping. However, in 2002, Lyreco entered the Thai market. Lyreco was considered a direct threat to Officemate and the whole industry because it already took over Japan, Taiwan, and Hong Kong markets. Lyreco used a catalog and a delivery service just like Officemate. According to Rerkriengkrai, before Lyreco officially entered the Thai market, it wanted to acquire Officemate because Officemate had the same catalog and delivery service strategy. However, an Officemate owner rejected the proposal. Since Lyreco entered the stationery and office supply market in Thailand in 2002, it was still too early to pose a serious threat to Officemate.

Officemate's competitive advantages were its catalog and strong sales channels. Other competitors like Office Depot and Lyreco also had stationery and office supply catalogs, but Officemate's was the most referenced by customers. It contained more than 8,000 different items. Smaller retailers even used Officemate's catalog to serve their customers. Even though it did not have a retail store like most competitors, it had a strong call center that served large number of clients per day. A call center could effectively provide updated and accurate product information to customers because each sales personnel accessed product information from the Intranet system, which connected to the inventory system.

According to Rerkriengkrai, some competitors had e-commerce websites, but they did not focus on this channel. Officemate's e-commerce website played an important role in serving customers with a small order volume and reducing the work load of the call center. In addition, no other competitors offered an e-procurement service in the market. Officemate's e-procurement service not only reduced the work load of its call center, but also prevented clients' purchasing departments from buying from competitors. When clients got used to a convenient service, they were less likely to switch to other services. Another competitive advantage was that Officemate used its catalog and its monthly magazine to promote its e-commerce services at a small cost. Its well-known brand name helped to quickly establish its customer's trusts with its online services. A strong logistic system provided another competitive advantage for Officemate. By having its own delivery service, along with strong logistic partners, Officemate was able to deliver orders on time and control its cost. In addition, Officemate had strong supplier relationships with its

suppliers because they considered the company as one of their biggest retailers. This allowed Officemate to have high bargaining power to negotiate prices, discounts, and credit term.

Research Question 4: What is Officemate's Business Performance?

The intent of this section is to answer the last research question: What was Officemate's e-commerce business performance? Officemate measured its e-commerce performance based on a sale volume for e-commerce services, and also the number of customers using its e-procurement service.

Sales Growth

According to Rerkriengkrai, the average sales growth of Officemate was approximately 20 percent per year. In 2003, total sales were about US $8.75 million. Officemate expected its sales in 2004 to reach 450 million in 2004 and 600 million in 2005. Officemate's e-commerce website began in 1998. Sale revenue from its e-commerce website in 1998 was very low. From 1999 to 2002, e-commerce sales were approximately three percent of the total sales per year. However, when Officemate began its e-procurement service in 2003, sales revenue from online services grew to 10 percent of total sales or US $875,000, compared to US $150,000 in 2002. Officemate expected that sales revenue from online services would reach US $1.13 million in 2004.

Number of E-procurement Clients

From 2003 to 2004, Officemate had an average of one new large organization using an e-procurement service per month.

CHAPTER TWELVE – VALUE SYSTEM[1]

The main focus of this chapter is to identify factors that influence the success of e-commerce in

Thailand and Value Systems (Value). After explaining the business profile and history of Value and its

website operation, the four research questions are discussed:

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies

   engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the

   IT distribution industry in Thailand?

3. What is Value's e-commerce business model?

4. How is Value's business performance?

Value System's Business Profile and History

Value Systems (Value) Co., Ltd. was the leading IT distributor in Thailand. At least one third of

IT products found in all retail stores came from Value (Parnnim, 2002). The chairman and owner of Value

was Narong Intanate, a well-known leading IT entrepreneur in Thailand. Intanate established Value in

1988. The company was originally an IT distributor, representing products from leading IT companies

such as Microsoft, Hewlett-Packard, and Seagate. Its core business strategy was cost leadership. In 1998,

Value signed an agreement with two IT distribution companies, ECS Computer (Singapore) and K.U.

Systems (Malaysia), to form ECS Holdings Company (ECSH). The majority of ECSH was owned by

NatSteel Electronics Public Company (NEL), the fifth largest electronic contract manufacturer in the world.

ECS Holdings became one of the largest distributors of IT products in Southeast Asia with more than

13,000 dealers in its network. Being a part of a regional strategic network allowed Value more bargaining

power with IT companies, and today, Value carries more than 20,000 products, which can be categorized

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[1] Information for this case, unless stated otherwise, is based on interviews conducted on August 31, 2002,
June 9, and July 13, 2004 at Value Systems, and a phone interview on August 2, 2004.

into 10 groups, including application software, management software, notebooks, networks, PCs and workstations, PDAs, peripherals, security, servers, and storage.

According to Somsak Pejthaveeporndej, vice president of Value, after the Asian financial crisis in 1997, the company faced some difficulties in maintaining the same level of profit margin for its IT products. Some products' profit margins, which used to be well over 30 percent, decreased to one or two percent. The company thus decided to reengineer its organization by applying IT to improve the efficiency of its business processes. The company formed an IT team to develop its Sales Information Management 1 (SIM1) system (Figure 12.1). With SIM1, all product and transaction information shared the same database. Value's sales force placed customers' orders through the system and accessed SIM1 to obtain product information such as prices and specification to support customers' inquiries. Products in inventory could be tracked, allowing the company to efficiently manage its inventory. Better sales and inventory information allowed Value's management to more precisely forecast demand for each product. As a result, Value provided better support to clients and at the same times reduced its operating costs.

Pejthaveeporndej noted that Value's management did not understand the full benefit of SIM1 until it was implemented. However, initially SIM1 was not fully integrated into the company's business processes and was only available to Value's offices in Bangkok. In 1999, the second version of SIM, named SIM2, was developed. SIM2 was an Internet-based B2B e-commerce system, which allowed Value's sales branches outside Bangkok and its customers to access the system (Figure 12.2). Value was the first IT distribution company in Thailand to launch and pioneer B2B e-commerce. With SIM2, clients could access product information and place orders through the system directly. Sales personnel around the country were now able to provide accurate product information to customers without first calling the main office in Bangkok.

Pejthaveeporndej described two main problems in implementing SIM2. First, the sales force resisted using the system and were reluctant to promote the system to clients because they thought that they would lose commission fees if clients placed orders through the system directly. Second, the slow and unreliable speed of the Internet was often inconvenient for customers. In addition, Internet access was not available in every area of Thailand at that time. Value addressed the first problem by giving commission fees to sales people when their customers placed online orders. In addition, Value's top management

arranged road trips to visit their sales employees and customers around the country to promote the value of an e-commerce system. Although the first problem was resolved, the latter problem was beyond Value's control.

Besides its distribution business, Value offered pre-sales, post-sales and maintenance support to its customers through two offices in Bangkok and branches in other provinces. Value also provided an enterprise solution service that designed, installed, and implemented e-enabling infrastructures for firms interested in e-commerce. Network infrastructure and network security was another specialty of Value.

In 2001 and 2002, Value was selected by CIO magazine as one of the 'CIO 100 Honorees' for successfully implementing an in-house developed B2B e-business and sales management information system. The National Electronics and Computer Technology Center (NECTEC) also singled out Value as one of the few Thai companies that successfully used e-commerce to increase business opportunities. The Nation Publishing Public Co., Ltd.[2] honored Value as one of the top 1,000 Thai companies in 2002. The company was ranked number one in terms of revenue and number two in term of profits. Value also received a number of awards from its suppliers, including the best performer, the highest growth distributor, and the best marketing program, to name a few.

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[2] The Nation was the leading newspaper in Thailand.

Figure 12.1: Sale Information Management 1 (SIM1)

Off-line Process

Dealers

Call for
- price
- promotion
- goods
- product catalog
- news

Value
Salesman

Next day goods delivery

Warehouse

SIM

(Source: Value System)

Figure 12.2: Sale Information Management 1 (SIM2) and E-commerce System

Real Time Process

Dealers

SIM

Real time
- price   - outstanding invoice
- promotion   - purchase history
- goods   - back order monitoring
- product catalog
- news

Possible same day
goods delivery

Warehouse
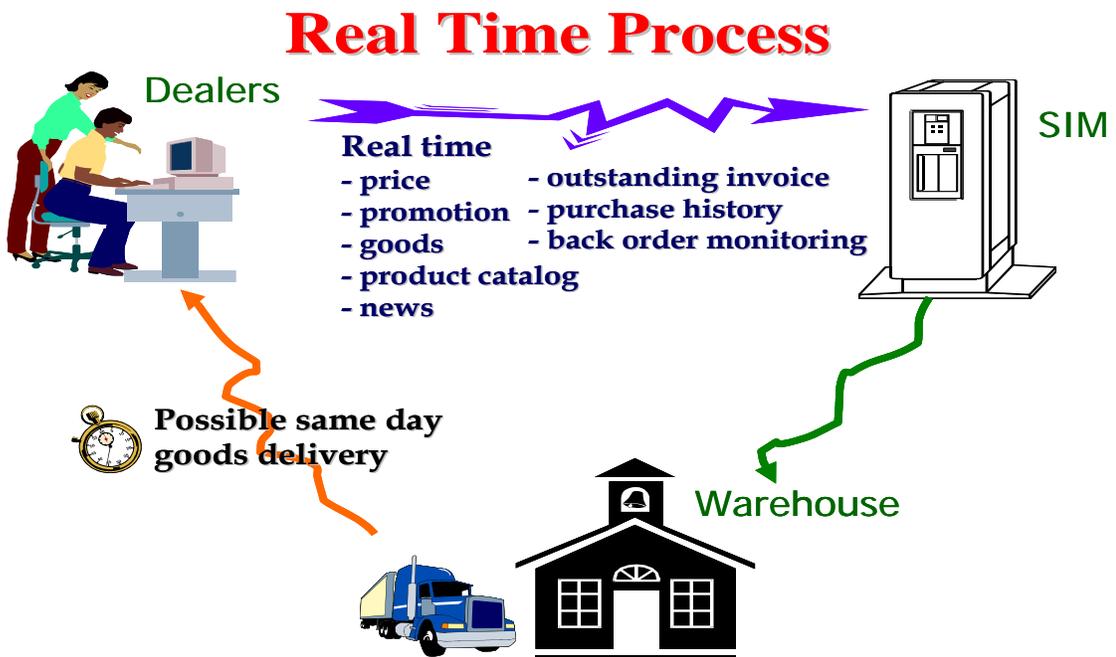
(Source: Value System)

Value's Web Operation

Value's B2B e-commerce website can be found at the URL: http://www.value.co.th. A homepage was available for public view (Figure 12.3). Visitors could find information about Value, its products, retail prices, and maintenance support. An end user was also allowed to submit a request for a price quotation on Value's website. After Value received this request for a price quotation from an end user, the company submitted a price quotation to its dealers (Figure 12.4). An end user could also track the status of Value's maintenance service on the website (Figure 12.5).

Unlike an end user, a dealer was required to access the B2B e-commerce website by using a designated username and password (Figure 12.6). Figure 12.7 shows the welcome page of the B2B e-commerce website. From there, a dealer could access real time product information, order status, outstanding invoices, purchase and payment history, maintenance account, online registration for seminars and training, news and announcements, and online payment. The welcome page showed customer support contact information, current product promotions, seminar & training programs, and a tutorial (Figure 12.7). A product promotion could be searched by brands (Figure 12.8). The website also provided a quick search and an advanced search tool for dealers. Information on each product included a description, a part number, a dealer price, a retail price, and a notice of availability. A full product description was also translated into Thai and available on the website (Figure 12.9).

If a product is selected for order entry, the order entry will show detailed information about the dealer's shipping location and total product price, discount, and tax (Figure 12.10). After an order entry was submitted, Value immediately processed an order. However, an order will not be processed if a vendor does not make payments on time or its outstanding purchases are over its credit line. Each vendor received credit terms, and, thus, did not have to pay immediately after submitting an order. The website allowed a vendor to check the status of its outstanding invoices (Figure 12.11). From there, a vendor had the option to transfer a credit online (Figure 12.11). A vendor could also check the status of its credit transfer (Figure 12.12) and its purchase history on the website (Figure 12.13).

Figure 12.3: Value System's Homepage

(Source: www.value.co.th)

Figure 12.4: Price Quotation Request Page

(Source: www.value.co.th)

Vendor login,
Product search,
Service Policy,
Repair and
maintenance status,
Value service center,
Seminars/events,

Figure 12.5: Repair Status Page

(Source: www.value.co.th)

Figure 12.6: Dealer Log-in Page
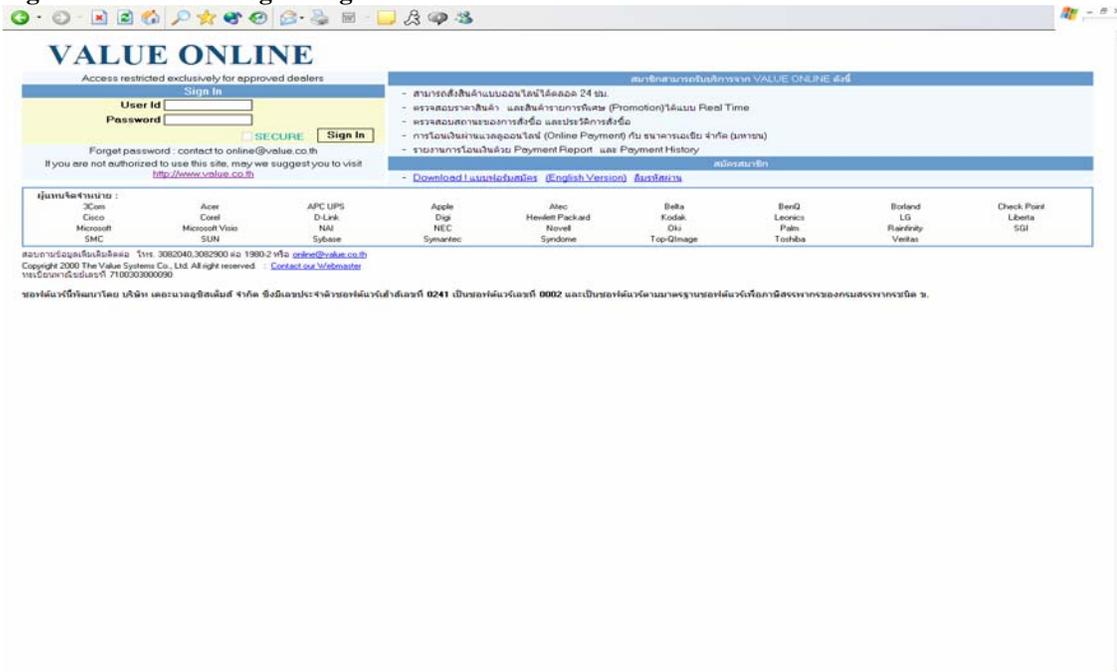
(Source: Value System)

Figure 12.7: Dealer Welcome Page
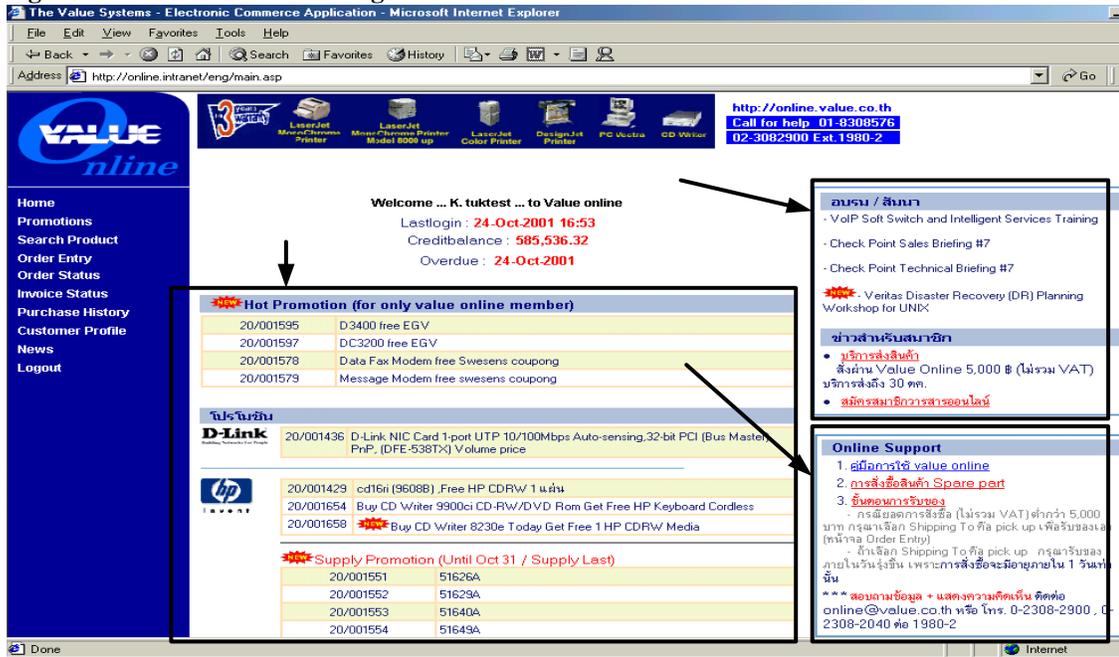
(Source: Value System)

Figure 12.8: Product Search and Product Description
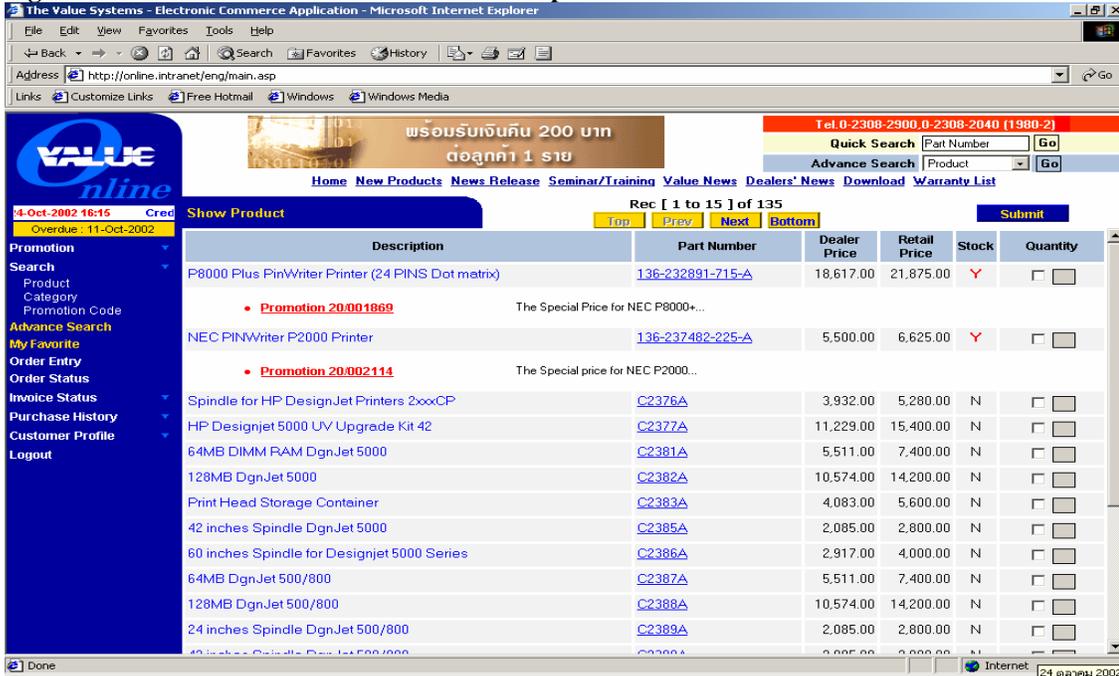
(Source: Value System)

Figure 12.9: Detail Product Description that Value Translated into Thai Language

(Source: Value System)

Figure 12.10: Order Entry

(Source: Value System)

Figure 12.11: Outstanding Invoices and Online Payment

(Source: Value System)

Figure 12.12: Payment/Credit Transfer History

(Source: Value System)

Figure 12.13: Purchase History Page
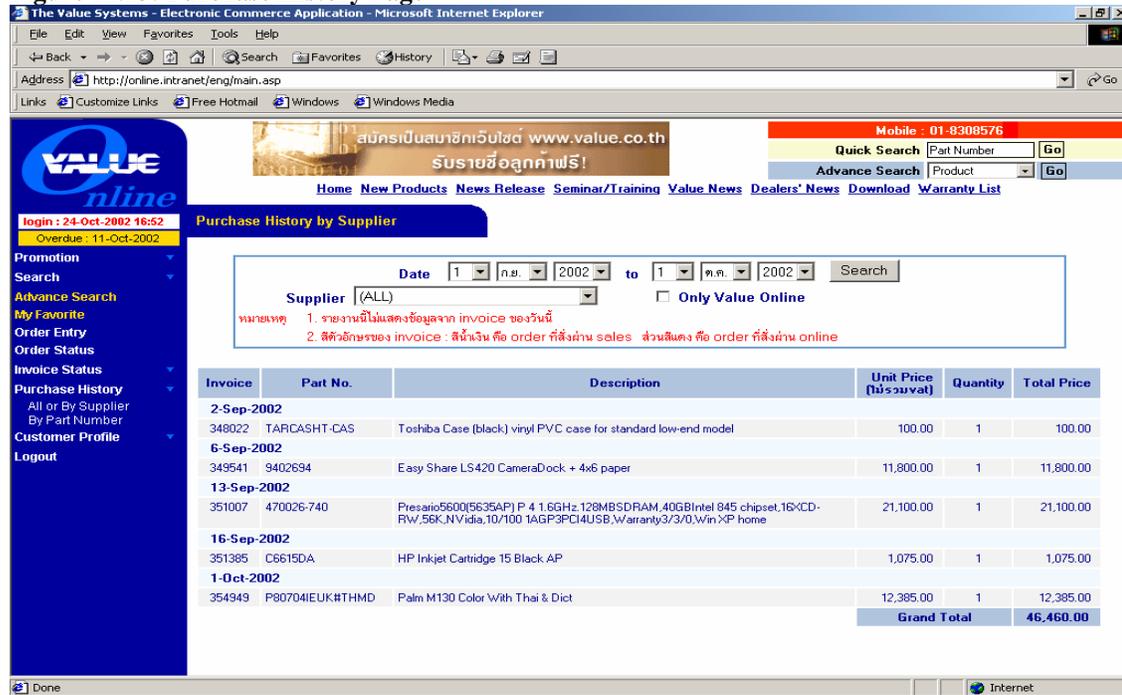
(Source: Value System)

Research Question 1: What are the CSFs for E-commerce in Thailand?

The intent of this section is to answer the first research question: Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Awareness of an Online Service

The majority of Thai consumers and business clients were not yet Internet users. Thus, they lacked an awareness of Thai websites. Vipaporn Ditthaporn, Value's online project manager, explained that an e-commerce venture should not expect clients to spend time looking up a company's website from a search engine. It had to be a company's effort to create an awareness of its website through its various business channels using a range of online and offline media. More importantly, an e-commerce venture must not forget to clearly communicate the value of its online service. Knowing a name, but not having clear reasons to visit/use an online service, would not encourage business activity on a website.

Convenient Web Service

Ditthaporn explained that besides customer awareness, an e-commerce company must be able to deliver a convenient web service to customers. If an online service is too difficult to use or takes an

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unreasonable amount of time to access, search for products, or complete an online transaction, a client will be less likely to change from using traditional purchasing processes to online purchasing processes. For the majority of Thai customers/clients who were not already frequent Internet users, the convenience factor was even more important. Ditthaporn noted that convenience began with the speed of website access. An e-commerce firm must ensure that its web content was fast and easy to download. Products must be easy to find on a website. Online transaction processes, including the online payment system, should be simple. Supap Kerdsumran, an online officer at Value, added that product information and transaction-related information should be available and complete for clients so customers do not have to spend extra time seeking information from sales people or customer service. While it was still necessary to have a customer support by phone or an Internet chat for a Thai customer, a client should be able to find most information on the website without additional support from a company. If a client still requires support from customer service, they must be able to promptly respond to a client. Speed of response played a critical role in business. Otherwise, a company could lose a business opportunity to its competitors.

Competitive Price and Promotion

Kerdsumran noted that an e-commerce venture must be able to consistently offer a competitive price and promotions in order to draw a customer to its website. Ditthaporn explained that besides the convenience of a web service, a company must provide clear value that continually draws both new and existing customers to its website on a regular basis. Thai customers loved to negotiate price and, thus, a competitive price and an on-going promotion program were effective tools that could keep customers coming back to a website. A return customer was especially important to e-commerce in Thailand because the growth of Internet users in the country was still low.

Trust

Ditthaporn added that an e-commerce venture in Thailand must establish a firm basis of trust with its customers. Thai people generally did not feel comfortable about using credit cards to purchase products on the Internet because they often heard media reports of online fraud. Ditthporn suggested that an e-commerce venture must be able to provide online security on its website to protect customers' information. Privacy policy must be clearly stated on a website. More importantly, an e-commerce venture must keep its

promises about product quality and service support as stated on its website. This not only established customer trust in its service, but also brought customers back in the future.

Fast and Reliable Delivery Service

Kerdsumran explained that an e-commerce company should be able to provide a fast and reliable delivery service for clients. Fast and reliable delivery was important for B2C e-commerce, but critical for B2B e-commerce since clients relied on them for their own final products or onward sales to their customers.

Management Support

An e-commerce project would not be successful without a clear vision and strong support from top management. The lack of e-commerce experience and examples of successful e-commerce in Thailand made it difficult for an e-commerce company to have a clear strategic direction and strategy. A company must rely totally on the vision of its top management. Moreover, an e-commerce project may require a considerable investment in IT. It could also take some time to see any return from the investment because the majority of Thai customers and business clients did not fully embrace e-commerce. A poor IT infrastructure in Thailand was another major obstacle for e-commerce development in the country. Thus, without strong support and commitment from top management, an e-commerce project would not survive.

Research Question 2: What are the Key Industry Requirements for E-commerce in the IT Distribution Industry?

The intent of this section is to answer the second research question: What are the key requirements that all e-commerce companies must have in order to enter the IT distribution industry in Thailand? According to Ditthaporn, the factors that were critical to the success of e-commerce in Thailand could also be applied to an e-commerce company within the IT distribution industry in Thailand.

First, an online IT distributor must promote its website to its clients. It was critical to make clients aware of a company's online service and the value of its online service to clients' businesses. Second, a website must be easy to use. Products must be easy to find and information must be rich. Placing online orders and making online payments must be easy and require only few steps. Otherwise, clients would not be willing to change their practice of phone ordering. Third, an online IT distributor must be able to offer competitive prices or online promotional programs that continuously attracted customers to the online

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service. Fourth, the quality of service from an online IT distributor must be the same as, or even higher than, the quality of service from traditional IT distributors in order to build trust with clients. Moreover, a website must be secured in order to protect clients' business information. If an online IT distributor provides an online payment service, that service must be highly secure. Next, an online IT distributor must be able to provide a fast and reliable delivery service. Finally, strong support from management was critical to the success of an online IT distributor because an online project often required clear direction from management and a significant long term investment.

The intent of following section was to investigate other key requirements for an e-commerce company within the IT distribution industry. Five areas of industry requirements needed to be investigated: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

A customer in the IT distribution industry was a dealer (a retailer or a reseller) who bought products directly from a distributor (a wholesaler) such as Value. According to Ditthaporn, the level of competition in the IT market in Thailand was intense. One of the reasons was the fact that the Thai government continuously promoted the use of IT in households, education, and business. As a result, demand for IT products had increased rapidly and IT products became fast-selling products in Thailand. IT products from leading brands flooded the market. Foreign IT companies such as Microsoft, SUN, Hewlett Packard (HP), 3Com, Apple, Cisco, Toshiba, and NEC required strong distributors that could sell products to retailers. Usually a foreign IT company selected one to three distributors to sell its products to ensure widespread market coverage. In many cases, IT companies, such as HP, sold their products directly to dealers and end users making the competition even more intense.

Brand-name Product

Dealer preferred to sell popular brand name IT products because a dealer did not have to concern about the quality of a product. In addition, popular brand name IT products sold fast.

Service Support

A dealer required strong service support from a distributor. Usually a dealer inquired product information including price, availability, and documentation from a distributor. A dealer always negotiated

prices. Moreover, timing was very important to a dealer because it needed the product fast. Thus, a distributor must be able to promptly respond to a dealer with accurate product information.

<p style="text-align:center;">*What are the Competitive Requirements?*</p>

Competitive Selection of Leading-Brand IT Products

There were a number of IT product lines on the market. Each product line had a number of different brands. Distributors generally preferred to carry leading-brand IT products because demand for these products was very high. The larger the selection of leading-brand IT products a company carried, the higher the chance of attracting dealers, and, thus, helping a company's sales force to sell them more easily and faster.

Competitive Price/Promotion

Each IT distributor tried to meet its suppliers' sales goals in order to maintain its dealership. To meet suppliers' sales goals, an IT distributor tried to sell IT products in large volumes. However, there were several distributors selling the same IT products in the market. Therefore, a dealer had high bargaining power when negotiating a price and a promotion. A dealer usually called different dealers to check for a price and a promotion, and choosing the one that made the best offer. As a result, price competition was very high in the market and profit margins for IT products were usually very low. According to Ditthaporn, in some cases, a distributor may not make any profit from selling a particular IT product at all. However, when it met a supplier's sales goal, it received a rebate from the supplier. In other cases, a distributor offered a promotion such as a free IT product when a retailer ordered a qualified volume. Some promotions came directly from the IT suppliers, while others were arranged by the distributor. To be able to offer a competitive price and a variety of promotions, a distributor must be able to maintain a strong relationship with its suppliers.

Product Availability

Usually a dealer did not stock a large number of IT products because IT products became outdated quickly. Thus, when a dealer needed to order IT products, the distributor must have them on hand so they could deliver them quickly to the dealer. Failing to have an IT product available, a distributor would easily lose an order to competitors.

<p style="text-align:center;">306</p>

Fast and Reliable Delivery

When a dealer placed an order, it usually needed to receive the product within a short period of time because it did not carry a large inventory of IT products. Therefore, the distributor must be able to provide a delivery timeframe for a dealer. Thus, a distributor must have a fast and reliable logistic system/network.

What are the Technical Requirements?

IT-based Back-end System

An IT-based back-end system played a critical role in facilitating the business processes of an online IT distributor. An effective IT-based back-end system allowed an online IT distributor to manage its inventory and helped the sales force provide prompt service response to customers.

What are the Resource Requirements?

A Competitive Sales Force

A dealer usually contacted a sales person directly for product information, and also negotiated the price with them. When a dealer was familiar with a particular sales person, they often return to the same person. Thus, a company's sales force played a critical role in developing a long term relationship with a dealer. The sales force must provide a prompt response to a dealer, be knowledgeable about products and know each dealer well in order to provide the right price and promotion to the customer. More importantly, the sales force must have a strong service mind. A distributor must also have enough sales personnel to support dealers effectively.

What are the Industry Regulation Requirements?

N/A

Research Question 3: What is Value's E-commerce Business Model?

The intent of this section is to answer the third research question: What was Value's e-commerce business model? To answer this question, the following components of an e-commerce business model needed to be discussed:

Market Segmentation and Targeting

Value's main target for its e-commerce service was a retailer placed frequent small orders. They did not conduct price negotiations with sales personnel because their orders were small in volume, but they

needed orders to be processed and delivered quickly. Usually, they were small-to-medium-size enterprises or dealers located in non-metropolitan provinces. The goal of its e-commerce service was to reduce the operating costs and increase the productivity of their sales force. By freeing up some of the sales force's time and effort, they gain a sales force had more time to focus on larger accounts and find new clients.

<div align="center">Value Proposition</div>

The main value of Value's e-commerce service was its convenience. A dealer could easily search for product information, complete online transactions, and check order status and outstanding invoices.

<div align="center">Resources and Capabilities</div>

According to Ditthaporn, the main resources of Value were its sales forces and capital resources. Value had well over 60 sales personnel distributed around the country. This sales force had a strong knowledge of IT products and were trained to provide effective support to dealers. As an IT distributor, Value must have IT products on hand at all times, which required the company to carry a significant cash balance. In addition, Value heavily invested in the development of its SIM2 system.

Value's core capabilities were based on its abilities to offer large leading-brand IT products, provide strong customer service support, minimize its operating costs, and develop a strong in-house IT team to develop and maintain the SIM2 system.

<div align="center">Activity Configuration</div>

The company's e-commerce business activities were comprised of two major sets of activities: the main e-commerce activities (sales and marketing, inbound logistics, operations, outbound logistics, after-sales services) and the supporting e-commerce activities (firm infrastructure, human resource, R&D, procurement). Only the core activities of Value's e-commerce business model will be discussed in the following section.

<div align="center">Operations</div>

N/A

Sales

Value had two sales offices in Bangkok and seven sales offices in other provinces with over 60 sales personnel. They served approximately 2,500 vendors around the country. Each sales force was assigned the care of the vendors in his/her market segment. Every day the sales force received a number of

phone calls from its vendors. The sales force also accessed the online system, SIM2, to check the profile of each vendor including its outstanding invoices and credit lines. At the same time, the sales force accessed SIM2 to check product information, including prices and availability. However, since Value carried a large number of products, a product price may occasionally not be updated fast enough. When a vendor wanted to place a large order and needed to negotiate a price, the sales person always called headquarters in Bangkok to check the most recent price. After a vendor placed an order, it was entered through the online system. For a vendor that had a small order, a sales person usually did not offer a discount or a promotion to a vendor. In such cases, a vendor could simply access its online account and placed the order directly through the Internet channel.

Value still gave a commission to the sales person when a vendor in his/her segment placed an online order. Thus, the sales force encouraged his/her vendors to use the online service because it freed up their time for other customers.

According to Ditthaporn, it was a major challenge for Value to encourage vendors to place orders through the Internet channel because Thai people loved to negotiate prices. Ditthaporn referred it as the "Old Habit Dies Hard" problem. Kerdsumran explained that even though a vendor knew that it would probably not receive a discount or a promotion because its order was too small, it still wanted to talk with a sales person on the phone. Despite the fact that the cost of a long distance call may be higher than the discount, a vendor hoped that by talking with a sales person directly, they would have a chance of receiving a discount or a promotion. Ditthaporn explained further that vendors did not want to change this practice. Instead of placing an order on the Internet directly, they thought it would be easier to make one call and had a sales person take care of the rest.

Marketing

Product.

Value's product strategy was to carry a large number of leading-brand IT products, a total of well over 20,000 IT products. Each product and its complete information were available through Value's B2B e-commerce channel. In addition, a vendor could download a product's supporting material from Value's website.

Price.

Value's online product prices were the same as those available offline.

Place.

Value tried to ensure that its B2B e-commerce website was easy for a vendor to use. A vendor could find product information, check current promotions, place an online order, check outstanding invoices, made an online payment or transfer credit, and check its purchasing history. The website was also designed to monitor a vendor's activities. Thus, Value could assist a vendor whenever it had problems using the online service. According to Ditthaporn, a vendor who used the website for the first time often called Value to confirm whether it correctly used the website and the order was successfully submitted. Value called a vendor who had not completely submitted orders to complete them when necessary. Value's online officer also called each vendor to survey its online service so Value could continue to improve its website to make it easier and faster for a vendor to use.

Promotion.

To encourage vendors to use its online service, Value paid for the Internet access of its vendors. Moreover, Value tried to continually offer discounts and a variety of promotions to a vendor that ordered through its website. These discounts and promotions were not available to offline vendors. However, the ability to offer discounts and promotions depended on Value's promotion budgets during a particular period, the level of competition for a particular product, and the support from Value's IT suppliers.

Outbound Logistics

Value delivered merchandise to vendors throughout the country. Value tried to expedite delivery for online orders, and while products from an offline order are usually shipped on the next business day, Value tried to ship products from an online order within the same business day.

After-sales Services

Value had authorized repair and maintenance shops around the country allowing a vendor and a consumer to send faulty IT products purchased from Value to these nearby repair shops. A vendor and a consumer could also track the repair and maintenance status of their products on the Value's website.

Value provided a variety of IT seminars and training sessions for dealers and end users. Value's website allowed dealers and end users to register for a seminar/training session online. Value also regularly

provided training sessions for its online service for both new and existing vendors. According to Ditthaporn, Value found that many vendors suddenly stopped placing online orders when the employee who was in charge of placing orders left. If the owner does not know how to use the website, he/she simply let a new employee place orders with the sales force by telephone instead. To encourage them to return to using the online service, Value must provide training for them. Value offered not only an online tutorial, but also training sessions at its main office in Bangkok for existing vendors and new vendors.

Value used its website to provide product support materials to a vendor. A vendor often requested product material from a sales person. In the past, a sales person would send this material by fax, which cost the sales force time and the company money. Now the sales force tried to encourage vendors to download supporting materials from its website. According to Ditthaporn, as a result the company could save a considerable amount of money each year from reduced long distance call expenses.

Procurement

The SIM2 system was integrated throughout Value's main business functions including its front-end B2B e-commerce website, and inventory, sales, marketing, and accounting functions. This allowed Value to not only monitor the turnover of each product in its inventory, but also to gain insights into the sales of each product. Value used these data to more accurately forecast the market demand for each product.

R&D

Value invested approximately US$250,000 in SIM2 and its B2B e-commerce system, using an in-house IT department that developed and maintained the SIM2 system and the B2B e-commerce website.

Partner Network

N/A

Revenue Sources

Value's e-commerce revenue came mainly from vendors, although in many cases some revenue was also generated from its IT suppliers' rebates.

Competitive Strategies

One of Value's main competitive advantages came from its extensive product selection from a wide range of leading IT suppliers. IT suppliers selectively chose IT distributors with strong vendor

networks and successful sales records. Thus, only a few IT distributors could be agents for IT suppliers. Value carried well over 20,000 IT products, which attracted a large number of vendors to purchase IT products from Value. In addition, the fact that Value was the leading IT distributor and had a strategic alliance with ECS Holdings Company gave Value a strong bargaining position power with IT suppliers, and, thus, allowed Value to offer competitive prices to its vendors.

Another competitive advantage that Value had was its capability to maintain low operating costs. Profit margins for most IT products were very low due to the intense price competition in the IT market. To be able to compete with price and still maintain a profit, Value must keep its operating costs as low as possible. Sales activity was a major operating cost for IT distributors. To sell more of its products, an IT distributor needed an effective sales force that served IT dealers around the country. Previously, telephone and fax were the main channels of communication, and thus also one of the major operating expenses. Value used SIM2 to increase the productivity of its sales force and at the same time reduce its operating costs. SIM2 allowed the sales force to serve vendors better and faster. The B2B e-commerce website, which was closely integrated with SIM2, helped serve vendors, especially small account vendors. A vendor could now obtain product information and other transaction related information/document from Value's website. Thus, Value did not have to increase its sales force as the company grew because now each sales person could serve more vendors than before. In addition, the cost of communication through phone and fax was tremendously reduced. More importantly, transaction-related data gained from the SIM2 system allowed Value to not only understand its vendors better, but also to gain insights about the demand for each IT product. Value could now forecast the demand for each IT product more accurately and, thus, gained better control of its inventory levels. Value's competitors also offered B2B e-commerce services, but according to Ditthaporn, none have really focused on their e-commerce services because they believed that vendors still preferred to place orders through the sales force.

Research Question 4: What is Value's Business Performance?

The intent of this section is to answer the final research question: How was Value's e-commerce business performance? Value measured its e-commerce performance in terms of the number of invoices, a hit log, and its online revenue. Both the number of invoices and its hit log showed Value how its online service could save time and sales force effort in serving dealers. As for online revenue, Ditthaporn noted

that this factor was not the main concern for Value because the goal of a B2B e-commerce was to help its sales force improve their productivity and reduced operating costs.

Number of Invoices

According to Ditthaporn, the number of invoices issued through the website was approximately 30 percent of total invoices. According to Ditthaporn, each online invoice had a small order size.

Hit Log

The hit log provided an indication of activity on the company's website. In 1999, the hit log showed 191,721 hits, in 2000, there were 573,995 hits, in 2001, there were 1,316,011 hits, and in 2002, there were around 2 million hits. This explosive growth was a good indication of the growing acceptance of online service by the company's customer base.

Online Sales

According to Ditthaporn, the average online sales comprised approximately 10 percent of the company's total sales each year. Thus, online sales grew from approximately US $5 million in 1999, to $8.30 million in 2000, to $10 million in 2001, to $11 million in 2002, and to $13.2 million in 2003.

CHAPTER THIRTEEN – INDIVIDUAL CASE ANALYSES

This chapter provides an analysis of the nine individual cases. First, the characteristics of each case are briefly compared. Next, each case analysis is analyzed using the four research questions that drive this dissertation.

1. Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the industry?

3. What is the company's e-commerce business model?

4. How is the company's business performance?

Characterizing the Cases

The design of this multiple case study company follows two logics: literal replication and theoretical replication. To accommodate these replication designs, all of the cases in this study are successful for-profit e-commerce ventures from different industries in Thailand. In addition, this study uses a following 2x2 matrix to select nine successful Thai e-commerce ventures based on their business focus and business format (Figure 13.1). An e-commerce company's business focus focuses on either the end customer (business-to-customer, or B2C) or another business (business-to-business, or B2B). As for the business format, an e-commerce company's main sales revenue comes from either an online or traditional business channel.

Figure 13.1: 2x2 Matrix

These e-commerce companies are:

1. HotelThailand.com – an online tourism company.

2. Thaigems.com – an online gemstone company.

3. Tohome.com – an online retail store.

4. ThaiTicketMaster.com (TTM) – an entertainment ticket distributor company.

5. Naiin.com – an online bookstore.

6. Siam Cement (SCG) – a building material product distribution company.

7. Pantavanij – an e-procurement marketplace company.

8. Officemate – a stationary and office supply company.

9. Value System – an IT product distribution company.

<center>Case 1: HotelThailand.com</center>

The following section provides a discussion of the first case: HotelThailand.com.

HotelThailand.com is the online-dominated-channel B2C e-commerce (Figure 13.2).

Figure 13.2: HotelThailand.com
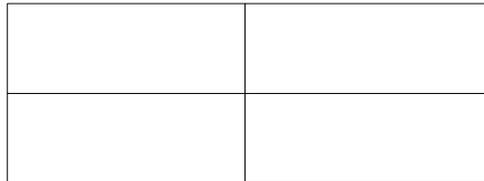
<center>*RQ1: What are the CSFs for E-commerce in Thailand?*</center>

Understanding Thai Customers

The lack of understanding of online behavior of Thai customers results in a significant barrier to entry into the online market in Thailand.

Online shopping trust and convenience.

There are two main issues surrounding the online behavior of Thai customers: trust and convenience. For Thai customers, these two issues seem to go head to head. Consumers do not feel comfortable with online shopping because they are concerned about online security and unknown websites.

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The major concern of foreign customers is also whether unknown foreign websites can be trusted. In addition, conventional shopping in Thailand is more convenient than online shopping.

Customer service.

The major role of customer service is to provide additional methods of phoning and faxing orders to a firm as an alternative to online ordering. The phone and fax order alternatives through customer service work well for both Thai and foreign customers. By allowing Thai customers to communicate with customer service to process orders, they not only perceive the shopping to be convenient, but also build trust in the shopping experience. Thai customers also require personal service, as they enjoy negotiation to receive better business offers. This encourages customers to return and feel more comfortable in making repeat online orders in the future.

Industry Knowledge

E-commerce ventures need to understand the role of involved parties, such as suppliers and customers, in their business models and the limitations of e-commerce implementation in their industries.

Business relationship development.

For Thais, relationships lead to personal favors, and personal favors lead to better business offers. E-commerce in Thailand is still in its early stage of development, and, thus, has many obstacles such as limited understanding of the potential for e-commerce and the lack of infrastructure. Strong business relationships not only help e-commerce ventures to overcome e-commerce limitations, but also allow e-commerce ventures to develop competitive advantages over competitors.

First Mover Advantage

The e-commerce first movers have advantage over their competitors in term of having stronger brand names, gaining customer trusts, and developing strong vendor relationships. First movers can enjoy less competition and continue accumulating knowledge in e-commerce. By the time competitors enter, the first movers can still enjoy a large market share and customer base while new competitors are trying to determine how to implement e-commerce in the industry.

Qualified Personnel

Thailand lacks qualified personnel and management with knowledge and experience in e-commerce-related technology and business. They are valuable resources who contribute to the success of e-commerce, but can only be afforded by large companies.

Supporting Business Processes and IT

E-commerce ventures need to design business processes that support the requirements of the industry. IT should be used to integrate business processes to make them more effective and efficient. Well designed business processes allow Thai e-commerce ventures to reduce expenses and provide better service to customers.

RQ2: What are the Key Industry Requirements for E-commerce within the Online Tourism Industry in Thailand?

The following section provides the analysis of industry requirements for an e-commerce within the online tourism industry based on five areas of industry requirements: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Trustworthy websites.

The main concern of both Thai and foreign customers is the trustworthiness of unknown e-commerce websites. An online tourism company must be able to deliver not only good service before-and-after a sale, but also provide a website that can secure customer information.

Good customer services.

Service is at the heart of the tourism industry. Thus, travelers expect e-commerce ventures to be responsive to their inquiries and provide them good service before and after they travel.

A large selection of hotels/resorts.

Foreign customers want to find a hotel/a resort website that has large numbers of hotels/resorts that may fit their needs, including the budgets and desired locations.

Room availability.

Customers want a room to be available when they make a reservation. Since there are number of online travel agencies that provide room reservation for the same hotel/resort, customers could simply make a reservation through a website that has a room available.

Broad travel-related services.

For convenience, travelers are looking for other traveling-related services on the travel provider's website. These services may include airport pick-up services, a car rental services, tours, or airline ticketing.

Rich content.

Foreign travelers are looking for websites that provide both travel-related services and useful information about hotels/resorts. First time customers are not familiar with unknown foreign online travel agencies and, thus, are more likely to compare information between websites to find providers with the best information about hotels/resorts and other travel-related activities.

What are the Competitive Requirements?

In the online travel industry in Thailand, there are seven competitive requirements.

Competitive price.

Customers are looking for competitive prices. First time customers not familiar with room rates in Thailand try to compare prices between websites to make sure that they are reasonable prices.

Domain knowledge.

Due to the intense competition within the online travel industry, coupled with the unique characteristics of the travel industry in Thailand, competitors without in-depth knowledge of the online travel industry in Thailand are more likely to fail.

Supplier relations.

Besides business volume, suppliers also consider the relationships that they have with these agencies. Agencies that have strong relationships with suppliers usually receive lower rates, extra room quotas, and special packages from time to time. Hotels/resorts also pay extra attention in taking care of these agencies' customers.

Competitive first mover.

The first movers already have an established customer base that will return to use their service in the future. This allows first movers to continue building business volume, and, thus, continue receiving low room rates from their vendors.

Competitive responsiveness.

Due to the competitive nature of the online tourism industry in Thailand, there is no room for mistakes. The growing number of new foreign competitors has increased the pressure for management to be alert and to be able to adjust strategies and tactics quickly. Web designs and search tactics must be monitored and adjusted daily.

Competitive search strategy (website promotion/advertising).

Website promotions through high rankings search engines are a competitive requirement. These promotions occur daily, which is very expensive. Small competitors must also compete for search engine rankings to make sure customers find their websites first.

What are the Resource Requirements?

Capital investment.

Capital investment is the major resource requirement that allows online travel agencies to establish a long-term competitive position. The major costs of online travel agencies are the costs of technology, operating, and website promotion through search engine ranks.

IT personnel.

Personnel with technical experience in e-commerce are lacking in Thailand, particularly in the online tourism industry.

What are the Technical Requirements?

E-commerce system with supporting back-end operation.

The structure of backend operating has to be designed and adjusted to serve critical areas of the e-commerce business. Using IT within backend business processes, companies can not only process online transaction quickly and, thus, improve its customer services, but also reduce operating costs.

Trust

HotelThailand.com provides secured online reservation and payment systems. HotelThailand.com provides information about the company and its services to ensure that customers will have confidence in its online services.

Convenient Website

HotelThailand.com designs its websites to be simple and easy for customers to search for hotels/resorts that fit their preferences and budgets. It provides plenty to hotel/resort information that can only be found on its website, such as detailed pictures of hotel/resort rooms and locations. To accommodate travelers, the website also provides other travel-related services such as an airport pick-up services, car rental services, in-country tours, and airline ticketing services.

Great Service

By keeping customers happy, they are more likely to return in the future. Hotlines, devoted reservation teams, strong relationships with vendors, a large selection of hotels/resorts, and a variety of other travel-related services all contributed to its delivery of superior services to customers.

A Large Hotel/Resort Selection

The company's e-commerce business model is to expand product selections provides synergy for market expansion and customer development strategies. By directly accessing local markets, HotelThailand.com provides a wider range of local hotels/resorts than is available through wholesalers. To accomplish this model, the company not only builds connection with large hotel/resort wholesalers, but also has its own hotel/resort-recruiting team that travels to almost every tourist destination and recruits local hotels/resorts. Unlike HotelThailand.com, other competitors are limited to the selection of hotels/resorts from their suppliers. HotelThailand.com replicates its strategies in the Philippines and Dubai. By recruiting hotels/resorts that other competitors do not have, HotelThailand.com can charge premium prices. At the same time, customers are happy because they have more options to find reservations and services that fit their special preferences and budgets.

Supplier Relationship

Hotels/resorts and wholesalers have a great deal of power in the supply chain. HotelThailand.com tries to develop and maintain strong relationship with its vendors to ensure that it will continue to receive low room rates and other favors from its vendors. HotelThailand.com's sales and reservation teams maintain vendor relationships by frequently visiting them.

Market expansion

By accessing hotels/resorts through wholesalers, HotelThailand.com can offer reservation for hotels/resorts in countries around the world. Thus, it has developed sub-websites to serve different country market segments. This model allows HotelThailand.com to identify high demand market segment opportunities with low competition without much effort and investment in these markets.

Asian Customer Target

HotelThailand.com targets all customer segments. By using this multi-market model, HotelThailand.com has diversified away from the intense competition in the Thai market, and created revenue streams from less competitive market segments.

<p align="center">RQ4: What is HotelThailand.com's Business Performance?</p>

Table 13.1 shows the business performance of HotelThailand.com using different measurements. The researcher observed that the only performance measurements that HotelThailand.com used on a regular basis were revenue and profit. Overall, the business performance of HotelThailand.com had improved over the last 4 years. Even though the growth rate of its revenue has been decreasing due to the increasing competition, the number of online reservations and inquiries, and the number of completed transactions have been increasing tremendously. It also has high market share and a large customer base. These statistics supports the conclusion that HotelThailand.com's business model has been successful in supporting its e-commerce business strategies.

Sale Revenue Growth

It is obvious that the sales growth of HotelThailand.com has increased rapidly, especially from 1999 to 2000. One possible reason is that HotelThailand.com changed its business model from that of an online agent to an online travel agency. This allowed HotelThailand.com to gain control over its pricing strategies and promotion strategies. Its main source of revenue now comes from direct customer sales.

However, the percentage increase of sale revenues from 2000 to 2001, 2001 to 2002, and 2002 to 2003 were 67 percent, 60 percent, and 50 percent, respectively. While revenues have continued to grow, the revenue growth rates are slowing each year. One possible reason is that the number of both foreign and Thai competitors has been increasing each year.

Market Share

HotelThailand.com's Internet market share is based on information provided by major hotels/resorts and wholesalers and was available only in 1999 and 2003. Again, the market share of HotelThailand.com has been growing from 1 percent in 1999 to about 25 percent of the local market share.

Actual Website Success

As for the level of website visits that are consummated in actual reservations, HotelThailand.com tracks the percent of completed transaction from the total received online reservation and inquiries. In 1999, the level of website orders was about 10 percent of 4,000 to 5,000 online reservation inquiries per month. In 2003, the level of website orders was about 20 percent of 8,000 to 10,000 online reservation inquiries per month. The level of website orders had grown 4 times from 1999 to 2003.

Repeat Business

HotelThailand.com estimated that the level of repeat business was about 60 percent.

Table 13.1: HotelThailand.com's Business Performance

Performance Measurements	Year 1999	2000	2001	2002	2003
Sale revenue Growth (US $)*	$25,000	$750,000	$1.250 million	$2 million	$3 million
Internet market share	2 percent	N/A	N/A	N/A	20-30 percent
Level of website visit consummated	400-500 reservations/ month	N/A	N/A	N/A	1600-2000 reservations/month
Level of repeat business sales	N/A	N/A	N/A	N/A	60 percent

*US $1 is equal to 40 baht.

Findings

Figure 13.3 shows how the four research questions (Q1-Q4) are systematically tied together. The first half of the figure shows eight components of HotelThailand.com's e-commerce business model (Q3). An e-commerce business model explained how an e-commerce company puts pieces of business together to

make money. Based on the previous discussion of HotelThailand.com's eight components of e-commerce business model, the researcher identifies key elements (the bottom part of Q3) that explain how HotelThailand.com addresses CSFs for e-commerce in Thailand (Q1) and the key industry requirements for e-commerce in the online travel industry (Q2). The bottom part of the figure (Q4) shows the business performance of HotelThailand.com.

Represented by links between Q1 and Q2, the researcher finds that the key industry requirements for e-commerce in the online tourism are closely aligned with the CSFs for e-commerce in Thailand. The researcher observed that those key industry requirements that do not address CSFs for e-commerce in Thailand are factors that specifically address the unique condition of the online tourism industry. For example, competitive responsiveness is critical to this industry because the level of competition is very intense. A company must monitor competitors' websites and be able to quickly respond to competitors' strategies, such price decreases or new promotional programs.

Based on these findings, it appeared clear that for HotelThailand.com to be successful, it must meet not only the CSFs for e-commerce in Thailand, but also key industry requirements for e-commerce in the online tourism industry. Table 13.2 shows how HotelThailand.com addresses CSFs for e-commerce in Thailand and key industry requirements for e-commerce in the online tourism industry. These findings are supported by the company's high business performance (Q4).

Figure 13.3: Systematic View of HotelThailand.com Case

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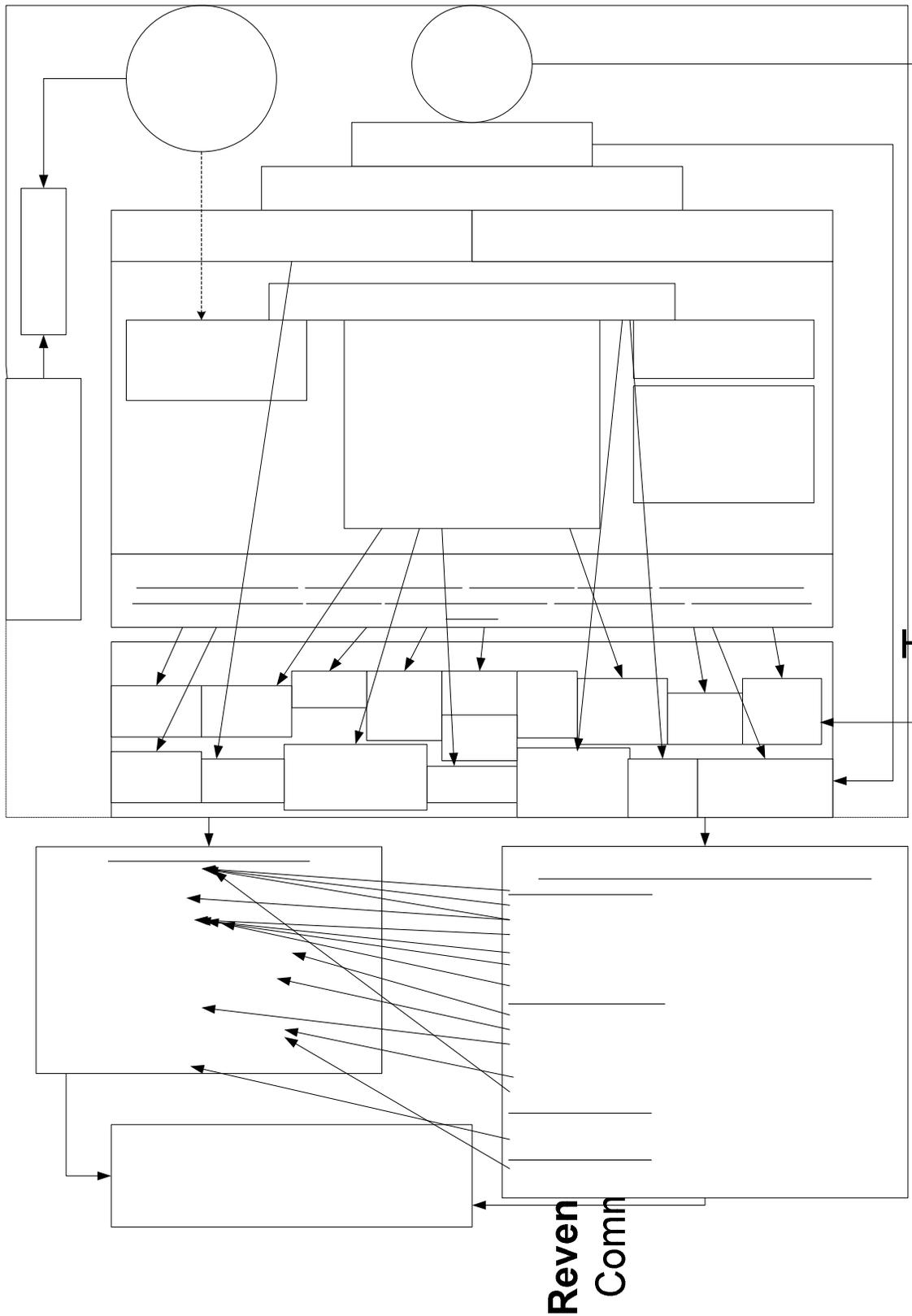
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- Online c
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Table 13.2: The Key Elements of HotelThailand.com's E-commerce Business Model Addressing the CSFs for E-commerce in Thailand and the Key Industry Requirements for E-commerce in the Online Tourism Industry

The CSFs and the key industry requirements for e-commerce	The key elements of HotelThailand.com's e-commerce business model
1. Online shopping trust***	• Excellent customer service (specific teams for individual market segment, phone and e-mail support) • Secured website (SSL and Verified by Visa) • Ability to fulfill orders (availability) • Strong brand
2. Good customer service***	• Excellent customer service teams (specific teams for individual market segment, phone and e-mail support)

3. Convenient website***
  • Rich content**
  • Traveling-related services**
  • Large hotel/resort selection**
	• Easy to use website
	• Rich information about hotels/resorts
	• Value-added services – car rental, airline ticket, airport-pickup, tours
	• Large number of hotels/resorts from wholesalers and directly-recruited hotel/resort
	• Online customer service/support
	• Variety of payment methods
	• Fast access

4. Industry knowledge***	• Owners with strong experience in online tourism industry
5. Business relationship development*** • Supplier relationship**	• Excellent customer service teams (specific teams for individual market segment, phone and e-mail support) • Strong hotel/resort recruiting team • Strong sale team visiting hotels/resorts/wholesalers • First mover advantage (early development of supplier relationship)
6. First mover advantage*	• One of pioneers in the online tourism industry
7. Qualified personnel (IT, sales forces)***	• In-house IT team • Strong customer service team
8. Supporting business processes and IT***	• Strong back-end supporting business processes (customer service, sales, hotel/resort recruiting, etc.)
9. Competitive price**	• Strong relationship with hotels/resorts/wholesalers
10. Room availability**	• Strong relationship with hotels/resorts/wholesalers
11. Competitive responsiveness**	• Number of sub-websites targeting less competitive tourist locations/countries • Variety of promotional programs • Aggressive online/offline advertising
12. Advertising**	• Aggressive online/offline advertising
13. Investment**	• Reinvestment from earnings

The CSFs and the key industry requirements for e-commerce	The key elements of HotelThailand.com's e-commerce business model
	• Personal investment of owners
14. Website and IT-based business processes**	• In-house IT team that develops and maintains websites and information technology system inside organization

*CSF for e-commerce in Thailand, **CSF for e-commerce in the online tourism industry, ***CSF for both e-commerce in Thailand and the online tourism industry.

Case 2: Thaigem.com

The following section will start the discussion of the second case: Thaigem.com. Thaigem.com is the online-dominated-channel B2C e-commerce (Figure 13.4).

Figure 13.4: Thaigem.com

RQ1: What are the CSFs for E-commerce in Thailand?

Trust

Thai customers still do not trust Thai online merchants. Online shopping is new for them and entering credit card numbers on unfamiliar websites is perceived high risk for Thai people. They doubt whether the websites are secured, whether products will be the same as promised, and whether they will deliver on time. Foreign customers, while they feel more comfortable with online shopping, may feel uneasy to completely trust unfamiliar foreign websites. Low price and strong brand can offset the lack of trust, but website convenience and customer service can be used to build customer trust.

Convenient Website

It is critical to have websites that provided all the convenience from accessing to surfing to shopping.

Good customer Support

An e-commerce company must provide good customer support to customers before and after the sale. A company should provide quick response to customers' enquiries about products/service and provide an easy product return process. Good customer support is one way to build customers' confidence in an online service.

Competitive Price

Competitive price is important because Thai people perceive lower prices as the clear product value of online shopping. As for foreign customers, a cheaper price can compensate for the risk of online shopping with an unknown website and the high international shipping costs.

Reliable Delivery

The lack of efficiency of the post office in Thailand makes Thai customers to feel uneasy about ordering products online. They are concerned whether or not products will be delivered in a timely manner and in good condition. Foreign customers are also concerned with how reliable and affordable the delivery service is. A company must be able to let customers know when they should expect products to be delivered. Besides the post office, a company may provide other reliable delivery options to customers.

Strong Brand

A strong brand drew customers to websites. This is important especially for Thailand because Thai people have not yet fully embraced online shopping, and, thus, have low awareness of online brand. A strong brand is also important to build confidence with foreign customers.

Effective Team (Qualified Personnel)

Thailand lacks qualified personnel and it becomes the main obstacles to conducting e-commerce successfully. The third-party application service providers (ASPs) in Thailand that have the capability to develop e-commerce system tended to be expensive. Another type of ASPs provided the same generic e-commerce websites for every type of businesses that is quite affordable. However, both types of ASPs are suited to businesses that do not require frequent updates on products and prices, and still have low business volume. When their business volume grew large, this kind of services is not sufficient to keep up with it needs.

Profit-driven E-commerce Business Model

E-commerce is not simply a website. It is the real business. E-commerce company in Thailand, thus, must develop a feasible e-commerce business model that not only generates sales, but also profit.

RQ2: What are the Key Industry Requirements for E-commerce within the Online Gemstone Industry?

The following section provides the analysis of key industry requirements for an e-commerce within the online gemstone industry based on five areas of industry requirements: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements. .

What are the Customer Requirements?

Convenient website.

An online gems store must be able to a deliver convenient website that is easy to access, easy to find product and information, and easy to make online payments.

Target market.

Customers' gemstone preferences vary from one country to another. Thus, it is critical for an online gem store to understand gemstone preference of each target market in order to find the right gemstone selection to meet those preferences.

Gemstone quality.

It is difficult for customers to choose gemstones by looking at pictures and description alone. Customers take some levels of risk when buying gemstones online. Thus, an online gem store must establish long term trust by delivering gemstones as it promises on its website to customers.

Reliable delivery.

Foreign customers concern whether gemstones will be delivered in a timely manner and good condition. Moreover, they concern about the international shipping cost. An online gemstone company must provide a reliable and affordable delivery service to foreign customers.

Availability.

Usually customers take times to learn about gemstones and jewelries before they buy them. Foreign customers do not want to surprise after they placed online orders that products actually are not available.

Customer support.

Customer support is a key to building customer trust and creating word-of-mouth promotion. The lack of trust seems to be the major obstacle for Thai e-commerce. While online marketing brought customers to visit the websites, the lack of trust can prevent them from shopping at the websites. It is the customer service that can build trust with Thai and foreign customers. Customer services should address important issues like customer support, secured online payment, shipping and the return policy.

What are the Competitive Requirements?

Gemstone industry knowledge.

Although online gem store businesses might be able to access gemstone sources, it is critical that they possess the deep knowledge about gemstones and price negotiation.

Competitive price.

Online gem stores must be able to offer competitive prices. A number of online gem stores, especially ones from Southeast Asia, are able to access gemstone sources and use the Internet to sell directly to customers. Thus, they are able to compete on price.

Competitive online marketing.

Despite a deep knowledge about gemstones and competitive prices, knowing how to compete in the Internet environment is critical to their survival. Online gem stores must possess knowledge of online marketing to draw customers to shop on their websites.

What are the Technical Requirements?

E-commerce system.

With available technology, e-commerce websites are not difficult to create. However, it requires true a understanding of how the gemstone business works in order to develop the back-end system that truly supports the front-end system of e-commerce businesses. This is a difficult task because Thailand still lacks qualified IT personnel who are acquainted with e-commerce technology.

What are the Resource Requirements?

Qualified personnel.

Online gem stores need to have qualified IT, marketing, and management team. Without a qualified IT team, they cannot develop e-commerce systems that support online businesses. Without

qualified and dynamic marketing and management teams, they cannot keep up with the competition. The lack of qualified personnel who have experiences in e-commerce is the problem in Thailand regardless of industry.

Production resource.

Having their own production facilities allows online gem stores to be able to fully control product quality. In addition, for online gem stores that start having large business volume, it is critical for them to have their own production facilities in order to keep up with growing businesses.

Financial resource.

Online gemstone businesses require relatively high levels of investment in technology area, online marketing, and procurement.

What are the Industry Regulation Requirements?

Gemstone import/export regulation.

For online gemstone businesses that target foreign customers, they need to be able to understand and comply with rules and regulations for gemstone exporting.

RQ3: What is Thaigem.com's E-commerce Business Model?

Disintermediary Model

Thaigem.com takes advantage of the inefficiency in the supply chain in the gemstone industry by using the Internet to bypass layers of gem traders, and, thus, sell gemstones directly to customers. This, coupled with its ability to access gemstone sources and to maintain low operating costs, and its knowledge in gemstones and price negotiations, gave Thaigem.com a competitive edge over traditional retail stores.

Large Gemstone Selection

Thaigem.com offers a large gemstone selection. The ability to access gem sources from around the World gives Thaigem.com a competitive edge. While competitors may have certain types of gemstones and/or jewelry, Thaigem.com offers more than 500 types of gemstones and jewelry and has more than 1.6 million individual items in inventory. Thus, customers can find, on one web site, any type of gemstones by shape, weight, clarity, and color at low prices.

Great Service

While price is one of Thaigem.com's competitive advantages, old and new customers are drawn to

Thaigem.com because of its service. Since customers doubt the trustworthiness of foreign websites,

Thaigem.com focused on developing its websites and services to address major concerns of foreign buyers.

It developed convenient websites with detailed product information, 24-hour customer support, secured-

online payment, 24- to 72-hours FedEx delivery, a US$15 flat rate shipping fee, and a 30-day money back

guarantee. The decision to use reputable third party service providers for online payments and delivery

service not only frees Thaigem.com from services that are not in its core capabilities, but also gives

confidence to customers about those services. The strong brand of Thaigem.com is based on its word-of-

mouth marketing strategy and reputation for low price, quality of merchandise, and good service.

Strong In-house IT Capability

Qualified personnel that have experience in e-commerce in general and online the gemstone

business in particular are not easy to find in Thailand. The lack of qualified IT personnel prevents other

Thai gem traders from successfully developing e-commerce systems. The lack of a qualified management

team with experience in e-commerce business prevents them from successfully developing e-commerce

strategies. Thaigem.com, however, successfully managed to develop its in-house IT capabilities as it grew.

In addition, being the first mover allowed the Thaigem.com's management team to gain a deeper

experience in competing online.

RQ4: What is Thaigem.com's Business Performance?

Table 13.3 summarizes Thaigem.com's business performance.

Table 13.3: Thaigem.com's Business Performance

	Year 1999	**2000**	**2001**	**2002**	**2003**	**2004**
Sales Revenue*	N/A	US $1 million	US $4.25 million	US $13.75 million	US $15 million	US $19.5 million
Profit	25 percent of sales					
Market Share	90 percent of online market shares					
Repeat Businesses	Well over 50-60 percent					
Company Size	3	100	200	700	500	600

*US $1 is equal to 40 baht.

Sales Revenue

Thaigem.com's sales have been rapidly increasing at an average rate of 147 percent over the 5-years period. However, in 2003, sales increased only 9 percent and the number of employee dropped from 700 to 500. Thaigem.com did not explain the reason. According to Tipparat, the number of online competitors had been increasing, but the online gemstone industry still has a lot of room for everyone. Merrill Lynch estimated that by 2005, a quarter of the world's estimated US$8 billion in annual gem sales would be conducted online (24, 2001). Today, Thaigem.com has the largest online gemstone market share. With between 50 and 60 percent returning customers, Thaigem.com keeps growing. Thus, increasing competition has not yet had a major impact on Thaigem.com's business performance.

Profit

Thaigem.com's average profit was 25 percent of the sales revenue each year.

Market Share

It is difficult for Thaigem.com to determine the size of its market share because no one ever measures this factor. However, based on the number of major competitors, level of competition in the market, and its sales growth, Thaigem.com believes that it always maintained 90 percent of the online market share.

Repeat Business

Thaigem.com tracks its customer profiles and their purchasing history. The company finds that the average number of return customers is about 50-60 percent each year.

Company Size

The size of the company also tells the growth of the company's business. The number of employees peaked at 700 in 2002. However, the number of employees was decreased to 500 in 2003. One possible reason is that the company moved some parts of its operation to Bangkok and, thus, caused some employees to leave the company. Another reason is that the company tried to control its operating costs by reducing the number of employees. The number of employees, however, increased to 600 in 2004 in response to its business growth.

Findings

Figure 13.5 shows how the four research questions (Q1-Q4) are systematically tied together. The first half of the figure shows eight components of Thaigem.com's e-commerce business model (Q3). The e-commerce business model shows how an e-commerce company puts its business together to make money. Based on the previous discussion of Thaigem.com's e-commerce business model, the researcher identified those key elements (the bottom part of Q3) that explain how Thaigem.com addresses CSFs for e-commerce in Thailand (Q1) and the key industry requirements for e-commerce in the online gemstone industry (Q2). The bottom part of the figure (Q4) shows Thaigem.com's business performance.

Represented by links between Q1 and Q2, the researcher finds that the key industry requirements for e-commerce in the online gemstone business are closely aligned with the CSFs for e-commerce in Thailand. The researcher observed that the key industry requirements that do not address CSFs for e-commerce in Thailand are related to the specific condition of the online gemstone industry. For example, gemstone import/export regulations are critical to the online gemstone industry because each country has different import regulations that an online gemstone business must follow.

Based on these findings, for Thaigem.com to be successful, it must meet not only meet the CSFs for e-commerce in Thailand, but also the key industry requirements for e-commerce in its industry. Table 13.4 shows how HotelThailand.com addresses CSFs for e-commerce in Thailand and key industry requirements for the online gemstone industry. These findings are supported by the company's high business performance (Q4).

Figure 13.5: Systematic View of Thaigem.com Case

Figure 13.5: Systematic View of Thaigem.com Case

Q3

Customer: Foreign customers

Supplier: Gemstone mines, Gemstone traders

Target Market: Foreign customers, especially North America and Japan

Value Proposition: Large gemstone selection with competitive price and great service

Resources: IT personnel, Online marketing team, Large investment

Capabilities: Gemstone source access, In-house IT, Great service, Low operation cost, Gemstone knowledge

Activity Configuration

Production Gems cutting plants located in Chantaburi province

R&D In-house IT team that developed and maintained the website, Located servers in the US

Human Resources Local Chantaburi employees

Inbound logistics: Access directly to gem trading markets and gem mines

Sales & Marketing Largest gemstone selection About 5-15% lower than retail prices Convenient website (product search and rich content, Third-party online payment service) Aggressive online advertising through leading search engine Customer Testimonial Variety of promotion programs Secured payment methods

Outbound logistics: Fed-Ex (flat rate, 24-48 hours guarantee)

Customer Service: 24/7 customer service Online chat 30-days return policy Fed-Ex return

Competitive Strategy

Competitive price, Ability to access gemstone sources, Low operation cost, Disintermediary, Online marketing strategy, Convenient website, Strong brand, Rich information, Customer profiles, Large inventory, Excellent service, Flat-rate Fed-Ex delivery, Large gemstone selection, Strong In-house IT team

Key Elements within Thaigem.com's E-commerce Business Model that Address CSFs

Low procurement cost and low operation cost | Ability to access gemstone sources | Convenient website | Competitive price | Fast access | Strong brand | Online/Offline advertising | Strong online marketing team | Strong in-house IT team | Excellent service | Flat-rate Fed-Ex delivery

Large investment | Disintermediary model | Rich information | Customer profiles

Gemstone production | Retained earning | Large inventory | Inventory system | Variety of payment methods | Largest online gemstone selection | Strong gemstone industry knowledge | Secured online payment | Foreign customers

Q1 CSFs for E-commerce in Thailand
Trust
Convenient website (easy access, easy search, rich content, online-payment, etc.)
Good customer support
Competitive price
Reliable delivery
Strong brand
Effective team (qualified personnel working in an e-commerce venture)
Profit-driven e-commerce business model

Q2 CSFs for an E-commerce the Online Gemstone Industry
Customer requirements:
Customer support
Gemstone quality
Availability
Reliable delivery
Convenient website
Target market
Competitive requirements:
Large gemstone selection
Gemstone industry knowledge
Competitive price
Competitive online marketing (competitors in Thailand lacked this knowledge)
Technical requirements:
E-commerce system (including backend support)
Resource requirements:
Qualified personnel
Gemstone/jewelry production
Financial resource
Regulation:
Gemstone import/export regulation

Q4 **Performance:**
Online sales: US $ 15 million in 2003
Profit: Average 25 percent of sales
Market share: 90 percent
Repeat business: 60 percent
Number of employee: 500 in 2003

Table 13.4: The Key Elements of Thaigem.com's E-commerce Business Model Addressing the CSFs for E-commerce in Thailand and the Key Industry Requirements for E-commerce in the Online Gemstone Industry

The CSFs and the key industry requirements for e-commerce	The key elements of Thaigem.com's e-commerce business model

1. Trust*
   • Customer support***
   • Quality gemstone**
   • Reliable delivery***
   • Secured online payment**
	• Excellent service (24/7 customer service, online chat, 30-days return policy, Fed-Ex return service)
	• Quality gemstones
	• Secured online payment from third party online payment service
	• Strong brand
	• Ability to fulfill orders (availability and delivery - flat-rate Fed-Ex delivery (24-48 hours)

2. Convenient website***
   • Large gemstone selection**
   • Secured online payment**
	• Convenient website (easy to use, easy to search for products, easy payment)
	• Variety of payment methods
	• Large gemstone selection
	• Fast access (servers located in the US)
	• Rich gemstone/jewelry information
	• Online customer support

3. Good customer support***	• Excellent service (24/7 customer service, online chat, 30-days return policy, Fed-Ex return service)
4. Competitive price***	• Disintermediary model • Ability to access gemstone sources • Low procurement cost and low operating costs • Largest online gemstone selection (bought in bulk)
5. Reliable delivery***	• Flat-rate Fed-Ex delivery (24-48 hours)
6. Availability**	• Own products/Manufacturer • Large inventory (bought gemstones in bulk) • Inventory system (monitor and forecast demand of each gemstone)
7. Strong brand* • Competitive online marketing**	• Online/Offline advertising • Excellent service (24/7 customer service, online chat, 30-days return policy, Fed-Ex return service) • Quality gemstones
8. Effective team* • Qualified personnel**	• Strong in-house IT team • Strong online marketing team
9. Profit-driven e-commerce business model*	• Disintermediary model • Ability to access gemstone sources • Low procurement cost and low operating costs • Largest online gemstone selection (bought in bulk) • Foreign customers • Excellent service

The CSFs and the key industry requirements for e-commerce	The key elements of Thaigem.com's e-commerce business model
	• Flat-rate Fed-Ex delivery
10. Target market**	• Foreign customers (North America and Japan) • Customer profiles
11. Gemstone industry knowledge**	• Strong gemstone industry knowledge (owners worked in gemstone industry for many years)
12. E-commerce system**	• Strong in-house IT capability
13. Competitive online marketing**	• Online/Offline advertising
14. Large gemstone selection**	• Ability to access gemstone sources
15. Gemstone/jewelry production**	• Gemstone production (several plants in Chantaburi province)
16. Quality gemstone**	• Gemstone production (quality control)
17. Financial resource**	• Retained earning • Large investment (foreign partners)
18. Gemstone import/export regulation	• Strong gemstone industry knowledge (owners worked in gemstone industry for many years)

*CSF for e-commerce in Thailand, **CSF for an e-commerce within online gem stores in Thailand, ***CSF for both e-commerce in Thailand and online gem stores in Thailand.

Case 3: Tohome.com

The following section analyzes the third case: Tohome.com. Tohome.com is the online-dominated-channel e-commerce B2C (Figure 13.6)

Figure 13.6: Tohome.com

RQ1: What are the CSFs for E-commerce in Thailand?

Trust

Trust plays a critical role in e-commerce in Thailand because Thai customers still distrust online merchants. E-commerce laws are still new and there is often news about online fraud.

Target Markets

The limited number of online consumers and the lack of knowledge about online behaviors of Thai customers makes it difficult for e-commerce ventures in Thailand to select target markets for their products or understand what they are looking for in terms of products and services.

Large Product Selection

A large product selection not only increases the chance that customers will find what they are looking for on the websites, but also provide search convenience for customers.

Customer Relationships

It is critical for Thai e-commerce ventures to develop long term relationship with Thai customers to establish trust and to ensure that they will return in the future.

Convenient Website

Thai e-commerce ventures must be able to deliver convenience on their websites, ranging from search tools to a variety of payment methods.

Industry Knowledge

It is not sufficient for Thai e-commerce ventures to possess only Internet-related technology. They must also possess knowledge of their industries in order to develop the right competitive strategies for their industries.

RQ2: What are the Key Industry Requirements for E-commerce within the Retail Business?

According to Tohome.com, factors that are critical to the success of e-commerce in Thailand are also critical to the success of an e-commerce company within the retail industry. Thus, like any other successful e-commerce companies in Thailand, an e-commerce company in the online retail industry must be able to deliver trust, choose the right target markets, offer a large product selection, develop strong relationships with customers, provide convenient websites, and have strong knowledge/experience in the online retail industry. The intent of the following section is to discuss other factors that are critical to the success of e-commerce within the retail industry based on five areas of industry requirements: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Large popular product selection.

Customers preferred shopping with companies that have not only a large product selection but also updated products so they can find what they looked for in one place.

Good services.

Since Thai customers do not trust online merchants, reliable before and after customer services provided by online retailers are critical in order to create customer trust.

Variety of delivery methods.

For Thai customers, one major concern is that they do not receive products immediately. Another concern is whether a product would be delivered in a good condition and a timely manner. Thus, an online merchant must be able to provide a reliable delivery to customers. In addition,

Availability.

A customer does not want to be informed that a product is not available after he/she spent time placing an online order. In addition, since Thai customers are not major online shoppers and they still lack trust on online merchants, they would feel suspicious whether his/her credit is charged or credited back.

What are the Competitive Requirements?

Strong supplier relationship.

Since competitive prices are the first customer requirement, retailers must be able to deliver this factor. Retailers must have good relationships with suppliers in order to lower the cost of merchandise. The larger the supplier volume, the lower the cost to the retailer.

Competitive prices.

Since retail merchandise is the same from one store to another, customers use price as one of their buying decision criteria. Thus, an online retailer must be able to offer competitive prices to customers.

What are the Technical Requirements?

IT operations.

When an online retailer's business volume grows to a certain level, outsourcing IT is not an option. Online retailers must be able to develop in-house IT capabilities to create and maintain e-commerce systems to support front-end and back-end e-commerce operations.

What are the Resource Requirements?

    Qualified people (IT, merchandising, and sales).

    Qualified personnel in IT are critical to the online retail business. However, retail businesses in general must also have qualified personnel in critical areas such as merchandising and customer service.

What are the Industry Regulation Requirements?

    Pricing.

    Suppliers partially controlled the pricing of merchandise in the marketplace, ensuring that prices do not fall below certain price points.

<center>*RQ3: What is Tohome.com's E-commerce Business Model?*</center>

Customer Targets

    Tohome.com saw the general inefficiency of the supply chain in the retail industry. Unlike big cities in Thailand, remote provinces in Thailand have limited product selection and availability. In addition, while online shopping is not totally embraced by Thai people, the number of online customers in Thailand continues to grow. Tohome.com recognized the opportunity to use the Internet to reach customers in remote provinces and Thai customers in foreign countries. It also targets online customers in Thailand who prefer the convenience of online shopping to traditional shopping.

Brand Development

    Tohome.com realized that the majority of online customers in Thailand distrust online merchants. To encourage them to shop at its websites and return in the future is a major challenge. Tohome.com develops its brand based on not only competitive prices and a large product selection, but also excellent services. It also advertises its brand through different community websites and conventional advertising media.

Low Prices

    Since Tohome.com does not have a physical retail store, its costs are lower. In addition, it uses IT to improve the efficiency of its operations. These factors allow the company to provide lower cost merchandise. Moreover, as the growing business increases the volume of supplier orders, it lowers the cost of merchandise even more. Overall these factors allow Tohome.com to offer lower prices to customers and

still enjoy profitable margins. Competitive prices make the buying decision easier. At the same time, first-time customers use competitive prices to lower the risk of online shopping with Tohome.com.

Market Research

With limited knowledge about potential online buyers in Thailand and what they are looking for in terms of products and services, Tohome.com lowers its risk of choosing the wrong products by surveying the market first. It chooses products that sell well in the market already to ensure that there is a demand for its products. At the same time, it collects customer profiles on its websites to understand what type of products customers are looking for.

Product and Service Variety

Tohome.com expands its product selections to meet the needs of its customers. Knowledge gained from its market research and website profiles guides Tohome.com to improve its services by delivering more convenient websites, offering a variety of payment methods, providing more reliable shipping, and by improving customer support after sales.

Easy Payments

One service that was developed as a result of understanding its customers is the easy payment method. Tohome.com discovered that a significant number of its customers could not afford making full payment for high-priced merchandise like cell phones and laptop computers. They preferred making a series of payments. Tohome.com developed an easy payment programs using mobile phones, ATMs, and money transfer systems to aid customers who do not have credit cards or simply do not feel comfortable using credit cards for online shopping. Having a variety of payment methods allows Tohome.com to target a wider potential market for online shoppers.

Customer Verification

To reduce its risk of online customer fraud, Tohome.com uses phone support to verify customers and ensures that the customers' profiles, including names, credit card owners, and shipping address, are real.

Targeted Promotions

Since Tohome.com's customer profiles are varified, Tohome.com's develops specific promotional programs for its targeted customers and sends e-mails directly to them.

Online Sale Revenue and Return Customer Rating

Table 13.5 summarizes Tohome.com's business performance.

Table 13.5: Tohome.com's Business Performance

	Year 1999	*2000*	*2001*	*2002*	*2003*	*2004*
*Sales**	N/A	US $250,000	N/A	N/A	US $1.25 million	US $1.75 million
Repeat Businesses	Well over 50 percent					

*US $1 is equal to 40 baht.

Tohome.com's sales volume has grown steadily over the past 6 years. It also has customer return ratings of over 50 percent, which indicates that customers are satisfied with Tohome.com's products and services. In the earlier years of operation, fifty percent of sales came from the phone channel, but more recently, the sales from the phone channel dropped to 20 percents as website sales grew. This indicates that Tohome.com's customers feel more comfortable and trust Tohome.com online self-service.

Findings

Figure 13.7 shows how the four research questions (Q1-Q4) are systematically tied together. The first half of the figure shows how the eight components of Tohome.com's e-commerce business model (Q3) address the CSFs for e-commerce in Thailand (Q1) and the key industry requirements for e-commerce in the online retail industry (Q2). The bottom part of the figure (Q4) shows the business performance of Tohome.com.

Represented by links between Q1 and Q2, the researcher finds that the key industry requirements for e-commerce in the online retail industry are closely aligned with the CSFs for e-commerce in Thailand. The researcher observed that key industry requirements that do not address CSFs for e-commerce in Thailand are factors related to the specific condition of the online retail industry. For example, a competitive price is critical in the online retail industry because retail products such as CDs, books, digital cameras, cell phones, are easily found in traditional retail stores and online retail stores. Thus, Thai customers are well informed in term of prices. Thai customers love to bargain, but they cannot bargain with

online shopping. Moreover, the majority of Thai customers still has not adopted online shopping practices and does not trust online merchants. However, competitive prices can satisfy the bargaining behavior of Thai customers and shows the value of online shopping which compensates for the risks in online shopping.

Based on these findings, for Tohome.com to be successful, it had to meet not only the CSFs for e-commerce in Thailand, but also the key industry requirements for e-commerce in the online retailing industry. Table 13.6 shows in detail how Tohome.com addressed CSFs for e-commerce in Thailand and the key industry requirements for e-commerce in the online retail industry. These findings are supported by the company's high business performance (Q4).

Figure 13.7: Systematic View of Tohome.com Case
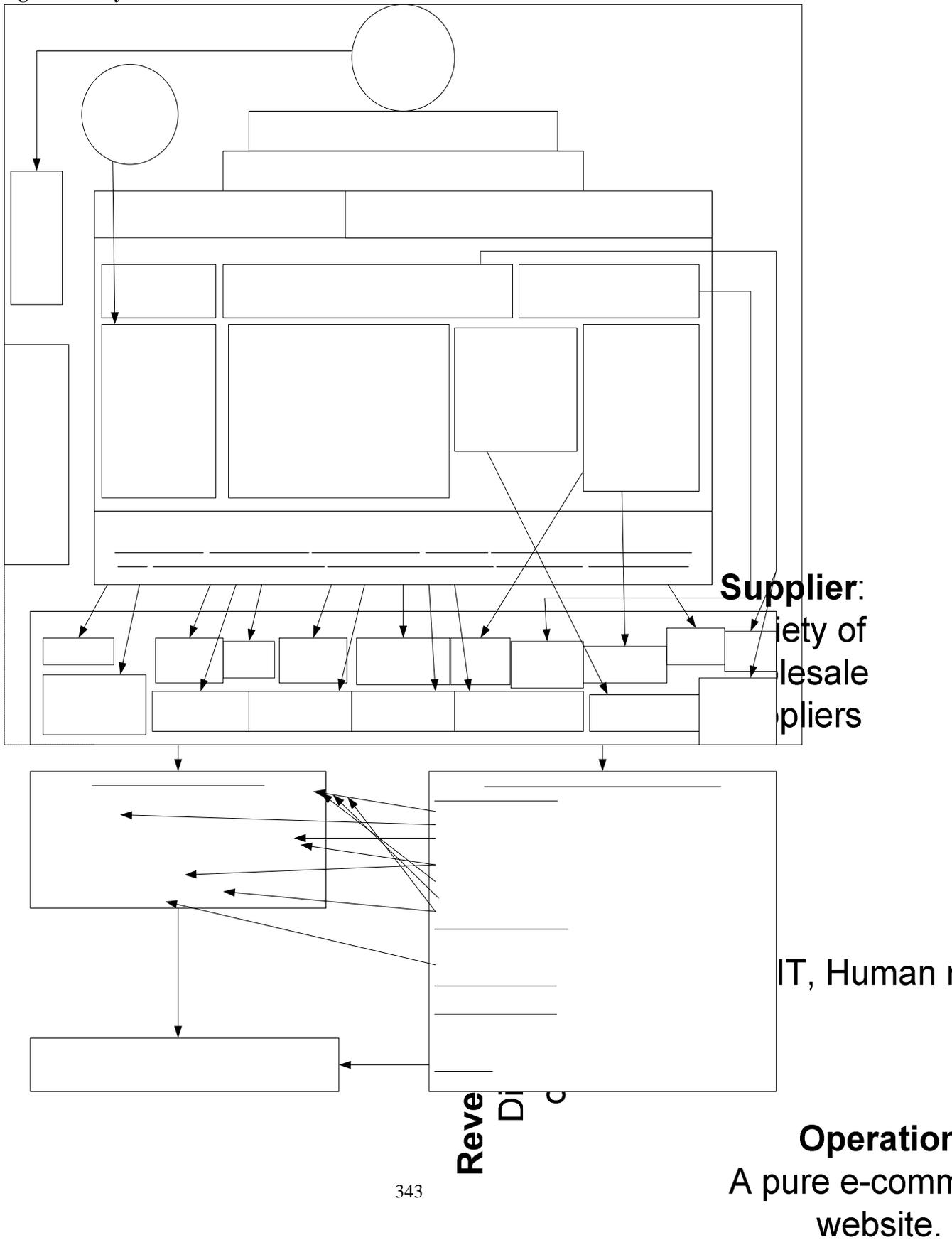
Table 13.6: The Key Elements of Tohome.com's E-commerce Business Model Addressing the CSFs for E-commerce in Thailand and the Key Industry Requirements for E-commerce in the Online Retail Industry

The CSFs and the key industry requirements for e-commerce	The key elements of Tohome.com's e-commerce business model
1. Trust***	• Strong brand (Online/Offline advertising) • Large customer base (word-of-mouth advertising) • Excellent customer service, e.g. phone support regarding products and shipping, secured website, privacy policy • Brand name products • Secured online payment (SSL and Verified by Visa) • Ability to fulfill orders (availability and delivery)
2. Right target & understand online consumer behavior***	• Frequent Internet users • Customer profiles • Market research (e-mail & phone survey)
3. Convenient website***	• Easy-to-use website • Variety of payment methods • Large product selection • Variety of delivery methods • Complete product information • Online customer support • Fast access
4. Large product selection***	• Large popular product selection • Human resources (Merchandising team)
5. Customer relationship (service)***	• Excellent customer service, e.g. phone support regarding products and shipping, secured website, privacy policy
6. Industry knowledge***	• Human resources (Merchandising team) • Owner with strong experience in the retail industry
7. Low price**	• Large popular product selection (volume) • Low operating costs • Strong relationship with suppliers
8. Delivery**	• Variety of delivery methods (the post office and a messenger delivery)
9. Availability**	• Strong relationship with suppliers • Inventory control (IT-based inventory control)
10. Strong relationship with suppliers**	• Large popular product selection (volume) • Large customer base (volume)
11. In-house IT operating**	• In-house IT team
12. IT personnel, customer service, and merchandising team**	• In-house IT team, strong customer service team, and strong merchandising team

*CSF for e-commerce in Thailand, **CSF for retail businesses in Thailand, ***CSF for both e-commerce in Thailand in general and online/offline retail businesses in Thailand in particular.

Case 4: Siam Cement (SCG)

The following section analyzes the forth case: Siam Cement (SCG). SCG is the online-dominated-channel e-commerce B2B (Figure 13.8).

Figure 13.8: Siam Cement (SCG)

RQ1: What are the CSFs for E-commerce in Thailand

Efficient Internet-related Infrastructure and Convenience of Web Service.

E-commerce ventures must be able to provide convenient web services to online customers. Website access must be fast. A website must be easy to use so customers do not have to rely on customer service. A variety of convenient payment methods must be available. This can be a challenge in Thailand because there are Internet infrastructure-related factors that e-commerce companies cannot fully control or improve. For example, Thailand lacks reliable Internet access and has a limited number of banks that can provide online payment systems. Despite this condition, e-commerce ventures must carefully choose reliable Internet service providers and a variety of payment methods to build confidence and to provide convenience to customers.

Trust

Thai customers do not trust Thai online merchants. E-commerce ventures must establish their brands, provide clear information about the company and its policies, and have a strong security system. In addition, they must be able to deliver promised products and services.

Awareness of E-commerce Value and Internet-related Skill

Thai businesses have low awareness of e-commerce value and low Internet usage. E-commerce ventures must have clear value of their online services. At the same time, they must be able to clearly

articulate how e-commerce services will improve or benefit clients' businesses. They must also be able to provide necessary training to business clients to improve their Internet usage skills.

Efficient Logistics

Thailand also lacks an efficient logistic infrastructure. Delivery is an important part of e-commerce. Without an efficient logistic system, e-commerce ventures may not be able to maintain service levels, control distribution cost, and develop customers' trust.

Efficient Back-end Operation

Thai businesses often lack efficient back-end operations. This can be a major obstacle for e-commerce businesses to process a large number of online transactions effectively and be responsive to customers. Customers want to know product availability, receive order confirmations, check their order status, and track their shipments. Without efficient back-end operations, companies will not be able to provide these basic services in a timely manner.

Management Support

A B2B e-commerce project usually requires a large and long term investment. It is also risky because it always involves business process changes and integration with IT systems. Without a strong support and commitment from top management, an e-commerce project will not be carried out successfully.

RQ2: What are the Key Industry Requirements for E-commerce within the Cement and Building Material Distribution Industry?

According to Cement Thai, factors that are critical to the success of e-commerce in Thailand are also critical to the success of e-commerce within the cement and building material distribution industry. An online distributor must be able to deliver convenience of web service to dealers, choose the best possible Internet-related service providers, create an awareness of e-commerce value to its dealers, build dealers' confidence in online services, and provide the necessary training to develop its dealers' Internet skills. In addition, a company must have an efficient logistic system to deliver products to dealers in a timely manner. It also needs to have an efficient back-end system to efficiently support large online transaction. Moreover, a company must have strong support and commitment from its top management in order to develop and executed an e-commerce project successfully. The following section analyzes other factors

that are critical to the success of e-commerce within the cement and building material distribution industry based on five areas of industry requirements: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Dealer support.

Dealers expect to receive sales and marketing support from manufacturers so they can compete with other dealers in the same areas.

Availability.

Dealers do not try to stock large volume of cement and building material products due to a high inventory cost. However, they need to have products available at all time to sell to sub-dealers and construction contractors. Thus, they want manufactures to always have products available and delivered to them as quick as possible.

What are the Competitive Requirements?

Large product selection.

Dealers want to carry products from a manufacturer that provides a large product selection because they can better meet a variety of customer needs.

Competitive product positioning.

Generally, most cement and building material products are not highly differentiated. To compete, however, a manufacturer must try to position its products differently than its competitors.

Competitive price.

Generally, the quality of cement and building material products from different manufacturers is about the same. Thus, the majority of manufacturers try to compete on price.

Dealer network.

A stronger and larger network of dealers allows an online distributor to expand its market coverage and guaranteed that manufacturers' products can sell better than competitors'.

Competitive sales force.

A sales force provides service and develops relationships with dealers. Competitive sales forces must be able to help dealers develop sales and marketing strategies in their areas.

Logistics.

Competitive logistics allows e-commerce ventures to distribute products to dealers in a timely manner and keeps distribution costs down.

What are the Technical Requirements?

IT-based back-end operation.

The role of IT in enterprise resource planning (ERP) and e-commerce is increasingly important in the distribution industry as manufacturers implement them to improve operating, sales, marketing, and supply chain activities.

What are the Resource Requirements?

Human resources (sales force).

Sales forces are still necessary even when using e-commerce or a call center.

What are the Industry Regulation Requirements?

The anti-trust law.

The anti-trust law prevents the exclusive-dealer practice in this industry.

<center>RQ3: What is SCG's E-commerce Business Model?</center>

Strong Dealer Support

SCG's goal is to build a strong dealer network. Without a strong dealer network, cement and building material manufacturers are not able to sell their products to customers. SCG focuses on limited number of dealers to ensure that it can provide strong sales and marketing support to them. Usually, manufacturers use their sales force to support dealers, but the sales force's time and effort is spent mostly on dealer transactions and paper work. SCG, on the other hands, uses its e-commerce system to simplify the work of its sale agents. Dealers place orders through the system by themselves. SCG's sale agents are now able to spend their time and effort providing dealers better sales and marketing support. Dealers are satisfied with such support, even though they have to place online orders by themselves. This, in return, allows SCG to build even stronger relationships with their dealers.

Convenience

SCG gives dealers' new responsibility by developing convenient websites that offer well-over 50,000 products from which dealers can order. Dealers can now see descriptions and pictures of every

product on SCG's websites. SCG continues improving its websites to fit the needs of its dealers. It developed an online price quotation request system so dealers can request larger credit lines or discounts for large construction projects. Dealers can also check and track their orders, and even create sale reports. SCG also uses the call center to receive household material products. They are less convenient to order online because they have so many varieties and, thus, take more time for dealers to find them.

IT Investment and Training

SCG implements an EDI system with dealers before they can use its Internet-based e-commerce. Dealers, thus, become familiar with using IT in placing online orders. However, the e-commerce system is different and requires them to develop new Internet-related skills. SCG provides training at its headquarters for dealers. It also provides online training so dealers can learn from their locations. To expedite the online transition process, SCG provides everything from computers to Internet access for its dealers.

The Back-up

Since Internet access in Thailand still lacks efficiency and reliability, SCG uses two different Internet service providers in case one fail. SCG has a backup system to keep its e-commerce site running. SCG also has a call center to receive phone orders when dealers have problem accessing the Internet.

Customer Insight Analysis

One of the most powerful competitive advantages derives from its e-commerce system is the ability to collect online transaction data. These data, once analyzed, provide insights about its different markets and locations. This information allows SCG to develop marketing strategies that fit different markets.

Logistics

An efficient logistic system is critical to providing efficient delivery to dealers. SCG has a strong distribution system. It has four main hubs located in four key regions of Thailand. Its extensive network of strategic transportation carriers distributes products to these hubs, with local carriers delivering these products to dealers in each region. The logistic system is fully integrated with its ERP system, which connects with its websites, call center, and manufacturers. Orders are efficiently consolidated by the system to reduce the cost and time of distribution.

Full Integration

The customer insight analysis and online services, like order tracking, cannot be implemented without a back-end system that is fully integrated with the websites. SCG uses the ERP system as its back-end system. The ERP connects the call center, manufacturers, CTL, and its dealers. Order information, for example, is collected when dealers submit online orders or phone orders.

RQ4: What is SCG's Business Performance?

Online Revenue Growth

Table 13.7 summarized SCG's online revenue.

Table 13.7: SCG's Online Revenue

	Year 2000	**2001**	**2002**	**2003**
Online revenue (in million)*	US $475	US $550	US $625	US $695
Percent of total revenue	62	65	72	72
Total revenue (in million)*	US $762.5	US $847.5	US $867.5	US $967.5

* US $1 is equal to 40 baht.

The growth of online revenue jumped from 65 percent to 72 percent of total revenue from 2001 to 2002 because SCM aggressively pushed its dealers to place online orders rather than using the call center. However, in 2003, online revenue remained at 72 percent of total revenue because certain types of products, especially house-hold material products, were more suited for order through the call center.

Growth of E-commerce Orders

Table 13.8 summarizes SCG's e-commerce orders. It took SCG over 10 years to reach 59 percent of online orders through its EDI system. The average growth rate for online orders through the EDI system from 1997 to 1999 was about 3.61 percent. The growth rate for online order through the Internet-based e-commerce system from 2000 to 2003 was about 5.2 percent. It took SCG 3 years to reach 72 percent for online orders. This indicates the improved performance of its Internet-based e-commerce system.

Table 13.8: SCG's E-commerce orders

	Year 1997	1998	1999	2000	2001	2002	2003
Percent of online orders	55	56	59	62	65	72	72

Findings

Figure 13.9 shows how the four research questions (Q1-Q4) are related. The first half of the figure shows the eight components of SCG's e-commerce business model (Q3). The researcher has identified how the key elements (the bottom part of Q3) explain how SCG e-commerce business model addresses the CSFs for e-commerce in Thailand (Q1) and the key industry requirements for e-commerce in the cement and building material distribution industry (Q2). The bottom part of the figure (Q4) shows the business performance of SCG's e-commerce business.

As shown by the links between Q1 and Q2, the key industry requirements for e-commerce in the cement and building material distribution industry are closely aligned with the CSFs for e-commerce in Thailand. The researcher also observed that key industry requirements that do not address CSFs for e-commerce in Thailand are factors that relate to the specific condition of the industry. For example, a dealer network is critical to the cement and building material industry because manufacturers and distributors do not sell products directly to consumers. They sell products to dealers. Thus, to ensure market coverage, a manufacturer or a distributor must build a strong network of dealers. Moreover, anti-trust laws restrict exclusive dealer practices in the industry.

Based on these findings, for SCG to be successful, it appeared clear that SCG must meet not only the CSFs for e-commerce in Thailand, but also key industry requirements for e-commerce in its industry. Table 13.9 details how SCG addressed CSFs for e-commerce in Thailand and key industry requirements for e-commerce in the cement and building material distribution industry. The findings are supported by the company's high business performance (Q4).

Figure 13.9: Systematic View of SCG Case

Suppli...
Siam...
Cemen...
manufac...
rs

...g material...
...keting team...
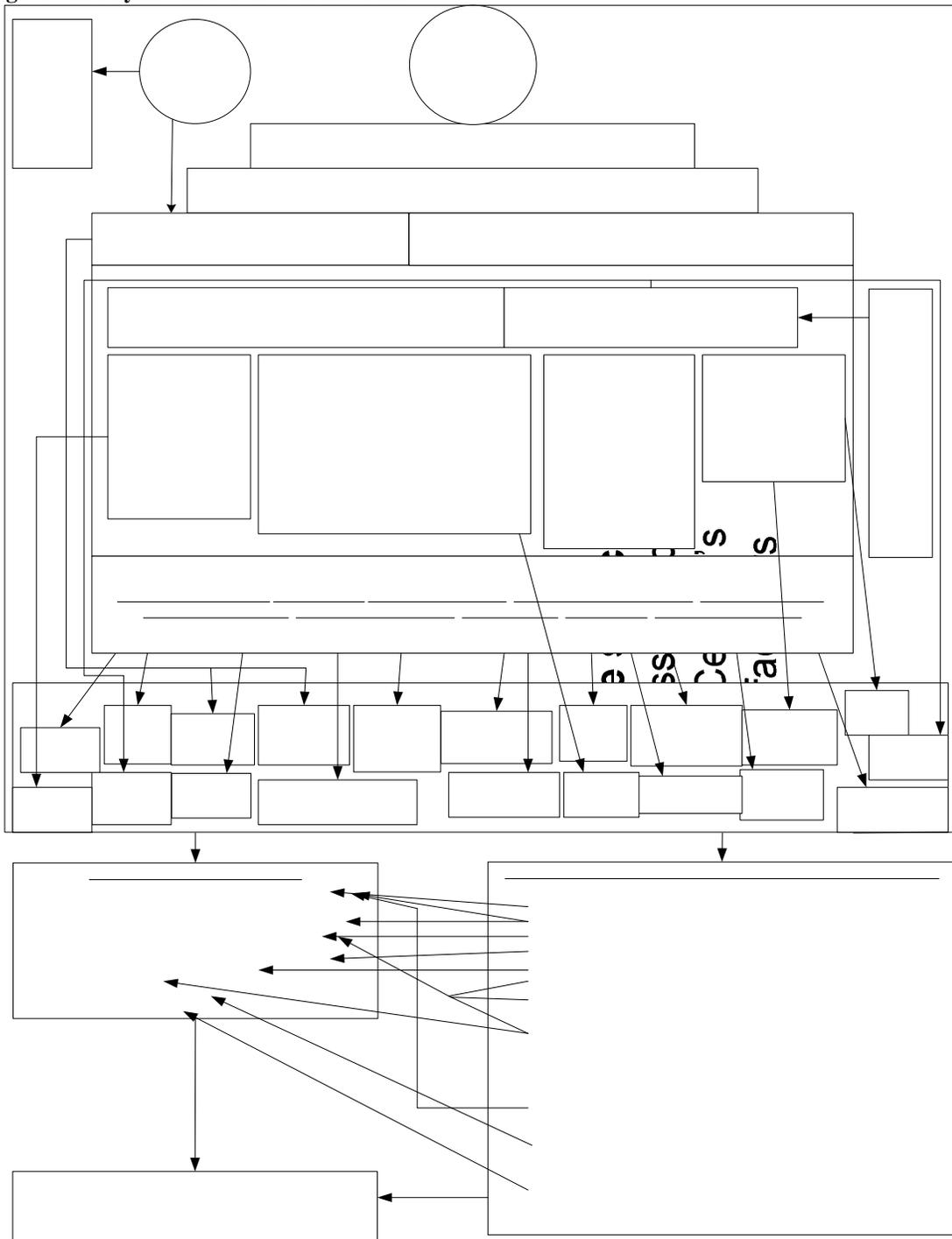
Fully integrate...
including E-c...

Inbound logis...
- Products
  procureme...
  through an...

Table 13.9: The Key Elements of SCG's E-commerce Business Model Addressing the CSFs for E-commerce in Thailand and the Key Industry Requirements for E-commerce in the Cement & Building Material Distribution Industry

The CSFs and the key industry requirements for e-commerce	The key elements of SCG's e-commerce business model
1. Convenience of web service*** • Large product selection**	• Convenient e-commerce website • Large product selection • Online payment • A call center (customer support) • Fast access
2. Efficient Internet-related infrastructure (speed)***	• IT investment for dealers • Efficient back-up systems (2-3 Internet service providers)
3. Trust (service, clear service policy, brand, delivery)***	• Strong reputation • IT investment for dealers (service) • E-commerce system training (service) • Highest quality brands • Strong logistic network (delivery) • Secured online payment (SSL) • Ability to fulfill orders (availability and delivery)
4. Awareness of e-commerce value***	• Market Insight Analysis report for dealers • Excellent marketing support by sales forces
5. Internet-related skill***	• E-commerce system training
6. Efficient logistics***	• Strong logistic network (delivery)
7. Availability**	• Own products/Manufactures • Large inventory • Inventory control system (as a part of the ERP system)
8. Efficient back-end operating*** • IT-based back-end operating**	• Fully integrated ERP system (e-commerce website, logistics, sales, marketing, inventory, manufacturers)
9. Dealer support**	• Convenient e-commerce website • Excellent marketing support by sales forces • Market Insight Analysis report for dealers
10. Dealer network**	• Strong exclusive dealer and sub-dealer network
11. Competitive product positioning**	• Highest quality brands (positioning as higher quality than competitors')
12. Competitive price**	• Premium prices • Own products/Manufacturers
13. Sales forces**	• Strong sale teams using Market Insight Analysis report to help dealers in each market segment • Sale teams help promote an online service
14. Management support***	• Strong management support from top management of SCG from the beginning

The CSFs and the key industry requirements for e-commerce	The key elements of SCG's e-commerce business model
15. Anti-trust law**	• Excellent marketing support by sales forces (maintain strong dealer relationship without forcing exclusive dealership)

*CSF for e-commerce in Thailand, **CSF for an e-commerce within the Cement & Building Material Distribution Industry in Thailand, ***CSF for both e-commerce and Cement & Building Material Distribution Industry in Thailand.

Case 5: Pantavanij

The following section will analyze the fifth case: Pantavanij. Pantavanij is the online-dominated-channel e-commerce B2B (Figure 13.10).

Figure 13.10: Pantavanij

RQ1: What are the CSFs for E-commerce in Thailand?

Feasible E-commerce Business Model

E-commerce is a business. Simply having websites does not mean that it will be successful. E-commerce ventures must have a feasible business model and possess knowledge of not only Internet-related technology and online business, but also the industry and business in which they competed.

Demand-lead E-commerce

Before conducting online business in Thailand, a company needs sufficient online demand for its products/services. This means that companies must understand the current stage of e-commerce development in Thailand, understanding the behavior of Internet users and limited availability of credit card holders. These factors affect the demand for e-commerce.

Clear Value Proposition

Due to limited e-commerce awareness and its value for Thai businesses, e-commerce ventures must be able to clearly articulate the value of their services to their clients.

Management Support

B2B e-commerce involves some levels of process change and system integration. This requires senior management support or involvement in the redesign of processes. Thus, e-commerce ventures must convince the top management of their clients of the value of e-commerce to their businesses and gain their full support.

Performance Measurement

E-commerce in Thailand was at its early stage of development. Factors like inefficiency of Internet infrastructure and low numbers of online buyers contribute to failures of e-commerce in Thailand. To reduce such risks, e-commerce ventures must track performance in areas critical to their success.

Alternative Solutions for Inefficient E-commerce-related Infrastructure

Thailand lacks efficiency in its e-commerce-related infrastructure including the speed and reliability of Internet connection, expansive Internet access, and the lack of trust in online payment, security, and delivery. Even though some of these factors are outside the control of an e-commerce venture, companies must still find alternative solutions to overcome or avoid these obstacles in order to deliver convenience and trust to customers.

RQ2: What are the Key Industry Requirements for E-commerce within the E-Procurement Industry?

Pantavanij noted that factors critical to the success for e-commerce in Thailand are also critical to the success of e-commerce within the e-procurement industry. Thus, e-procurement/e-auction companies must have a feasible e-procurement and e-auction business model. It must also ensure that its target buyers have adequate demand to draw sellers to trade on e-procurement or e-auction platforms. An e-procurement or e-auction company must clearly articulate the service value that is offers to customers, in order to gain support from their company's management in adopting e-procurement/e-auction processes for their organizations. An e-procurement company must also monitor the performance of its employees in term of strategic procurement/sourcing knowledge. In addition, an e-procurement or e-auction company must identify inefficient e-commerce-related infrastructure issues that may impact the quality of e-procurement

services to customers, and, thus, find alternative solutions. The following section will discuss other factors that are critical to the success of e-commerce within the e-procurement industry based on five areas of industry requirements: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Cost saving.

E-procurement customers, especially buyers, expect to reduce their procurement cost through either e-purchasing or e-auctions.

Process improvement.

Customers seek to reduce redundant procurement processes through the use of e-procurement. New e-procurement processes must be fast, easy, and transparent.

What are the Competitive Requirements?

Know-how.

The value-added services of an e-procurement provider help clients improve their procurement processes. This often involves more than just technical capability. An e-procurement provider must have the knowledge to procure different products/services. It should be able to assist clients in choosing the right products/services from the right suppliers at the best prices.

Power buyers.

Suppliers seek e-procurement services that provide access to potential buyers. Thus, an e-procurement service provider must recruit potential buyers for their services.

Large number of suppliers.

Buyers seek an e-procurement provider that can recruit a large pool of qualified suppliers.

Reputation.

Thai merchants still lack awareness and knowledge of e-procurements. They seek service providers who can deliver what they promise. Thus an e-procurement provider with long list of successful services can assure clients of its capability to help clients improve their procurement processes and reduce their procurement costs.

Competitive service fees.

Buyers and sellers often select e-procurement providers, especially e-auctions, based on service fees. The majority of e-auction service providers, thus, compete by cutting their service fees.

What are the Technical Requirements?

B2B e-procurement system.

B2B E-procurement service providers must have e-commerce websites that serve online trading between buyers and suppliers. E-purchasing services also require a provider to be able to integrate technical systems of clients with the company's.

What are the Resource Requirements?

Human resources.

Human resources play critical role in articulating values of e-procurement to clients, assisting clients in choosing the right products/services from qualified suppliers/sellers at the best possible price, and integrating the clients' systems with those of the company.

What are the Industry Regulation Requirements?

Government certified e-auction service provider.

E-auction service providers that intend to provide services to state agencies must be certified by the Thai government.

RQ3: What is Pantavanij's E-commerce Business Model?

Buyer-centric E-marketplace Model

Pantavanij recruited the six largest conglomerates as its initial buyers of e-purchasing purchasing/e-auction services. These buyers had a large number of suppliers for the purchase of indirect goods and services, which, in turn, were required to use Pantavanij's e-procurement services. By focusing on large buyers first, Pantavanij successfully created a critical mass, necessary for the success of any e-marketplace. Pantavanij now has a large number of suppliers offering different products/services. This, in turn, attracts new potential buyers to join Pantavanij.

Awareness

Pantavanij knows that the majority of Thai merchants still lack understanding of the e-procurement concept and its value to their businesses. The company, thus, uses sales and marketing teams

to promote its services to Thai merchants. The key is to create awareness of the value of its service to their clients.

Marketplace Websites

Pantavanij has powerful e-procurement websites that provide e-purchasing and e-auction services. The online processes are easy, fast, and transparent. The websites offers clients paper-less procurement processes. Transaction-related documents are also available for clients on its websites. Suppliers can also analyze a buyers' purchasing pattern, which can help suppliers better manage their inventories.

Value-added Services

Even though technical aspects of e-procurement services are important to the success of Pantavanij, the company tries to position itself as a knowledge-based organization. While technology can provide a competitive advantage, Pantavanij realized that e-procurement technology was becoming a commodity with few barriers to entry. E-auction technology, for example, is not difficult to develop and does not require any technical integration between service providers and clients. Thus, the market is already saturated with competitors. However, Pantavanij's first-mover position in the e-procurement marketplace in Thailand allowed it to gain expertise in procurement practices long before its competitors. Its knowledge in procuring different products/services, process integration, process changes and strategic sourcing allows the company to create value-added services that can assist buyers/suppliers/sellers beyond simply providing an Internet-based procurement tool. E-auction competitors, on the other hands, cannot offer these value-added services because they do not have the required knowledge. Ultimately Pantavanij differentiates its services from competitors who compete only on the basis of price.

Reputation

Pantavanij promotes its reputation by providing to a number of clients. The company is trusted because it has the six most well-known companies as its founders, and has a long list of successful services.

RQ4: What is Pantavanij's Business Performance?

E-Procurement Transaction Volume

Table 13.10 summarizes Pantavanij's total value of online transaction revenue.

Table 13.10: Pantavanij's Online Transaction Volume

	Year - Mid 2000-2001	**2002**	**2003**	**2004**	**2005 (expected)**
Total Online Transaction Volume (in Million)*	US $6.5	US $98.4	US $360.7	US $365	US $500
E-auction	N/A	60	55	40	N/A
E-purchasing	N/A	40	45	60	N/A

* US $1 is equal 40 baht.

The average growth rate of total online transaction volume from year 2000 to 2004 is approximately 561 percent. During years 2002 and 2003, the transaction volume from an e-auction services dominated the online transaction volume. However, in 2004, e-purchasing services began to dominate the online transaction volume. In addition, online transaction volume grew only 1.2 percent from the year before. There are two reasons for this change. First, competition in the e-auction market became more intense because competitors cut their service fees in order to be selected by auction originators, which was dominated by the public sector.

Pantavanij does not want to compete on price. Instead, its strategy is to differentiate its service from others with value-added e-auction services. Second, Pantavanij focuses on the private sector as its target of e-purchasing services. An e-purchasing service takes some times to grow due to the fact that the service requires process changes and technical integration. However, Pantavanij expected the transaction volume in an private e-purchasing market to grow even larger in 2005. As for the e-auction market, Pantavanij believes that the number of e-auction service providers competing on price alone will decrease as customers seek more value-added services.

Revenue Growth

Table 13.11 summarizes Pantavanij's revenue.

Table 13.11: Pantavanij's sale revenue

	Year - Mid 2000-2001	**2002**	**2003**	**2004**	**2005**
Total sale Revenue*	>US $25,000	US $500,000	US $ 2.5 million	N/A	N/A

*US $1 is equal to 40 baht.

Findings

Figure 13.11 shows how the four research questions (Q1-Q4) are related. The first half of the figure shows the eight components of Pantavanij's e-commerce business model. The researcher then describes the key elements (the bottom part of Q3) of Pantavanij business model that address the CSFs for e-commerce in Thailand (Q1) and the key industry requirements for e-commerce in the e-procurement industry (Q2). The bottom part of the figure (Q4) shows the business performance of Pantavanij.

Represented by links between Q1 and Q2, the researcher finds that key industry requirements for e-commerce in the e-procurement industry are closely aligned with the CSFs for e-commerce in Thailand. The researcher also found that key industry requirements that that do not address CSFs for e-procurement/e-auctions in Thailand relate to the specific condition of those industries. For example, know-how is critical to the e-procurement industry because competitors must know how to re-engineer customers' purchasing processes and know how to integrate the customers' purchasing systems with the competitors' e-procurement systems. An e-procurement company must also be able to connect customers to strategic suppliers. Another example is that the Thai government requires e-auction service providers that trade with Thai government agencies to be certified for their e-auction processes and service quality.

Based on these findings, for Pantavanij to be successful, it must meet both the CSFs for e-commerce in Thailand, and the CSFs for the e-procurement/e-auction industries. Table 13.12 shows in detail how Pantavanij addressed CSFs for e-commerce in Thailand and the key industry requirements fore e-commerce in the e-procurement industry. These findings are supported by the company's high business performance (Q4).

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Figure 13.11: Systematic View of Pantavanij Case

Q3

Supplier:
Seller companies trading on Pantavanij's e-procurement /e-auction system

Customer:
Large organizations

Target Market:
Large organizations (buyers) that procured a large volume of products/services to use in their organization and sellers that wanted to trade on e-procurement / e-auction system

Value Proposition:
Procurement cost reduction and procurement process improvement

Resources:
IT investment and Knowledge employees

Capabilities:
Had expertise in strategic procurement/sourcing, Developed e-procurement system, and Offered e-auction service

Activity Configuration

Production:
E-procurement service
  Integration of a seller/buyer's purchasing process/system with Pantavanij' e-procurement system
  E-catalog development for a seller
E-auction services
  Preparation of Request for qualifications (RFQs) for auction originators
  Sourcing sellers/buyers
  E-auction invitation and E-auction arrangement

R&D:
E-procurement software from CommerceOne and In-house IT team

Customer Service:
  Purchasing analysis report to maximize a buyer's overall supply chain management
  Purchasing pattern report for sellers
  E-auction training

Sales & Marketing:
Strong knowledge sales team that was capable of articulating clear value of the service (Educational marketing strategy)
Value-added e-procurement and e-auction service (expertise in strategic procurement/sourcing, e-payment, and logistics)
Free e-procurement service for buyers
Well over 110 large buyers with consolidated buying volume per year on e-procurement service (6 of them are the largest conglomerates in Thailand)
Large number of sellers on e-procurement service
Strong reputation in transparent e-auction service

Competitive Strategy
6 largest conglomerates in Thailand as buyers, First mover advantage, High quality service, Strong knowledge in strategic procurement/sourcing, Value-added services, Strong knowledge sale team, Strong reputation, Easy-to-use website

Key Elements of Pantavanij.com's E-commerce Business Model that Address Overall CSFs

Buyers: 6 largest conglomerates in Thailand

Strong knowledge in strategic procurement/ sourcing

Cost saving and purchasing process improvement

Easy-to-use website

High quality service

Value-added service (logistics)

Partnership with AT Kearney

Large pool of sellers

Strong knowledge sale team

Balance-score card

Government certified e-auction provider

Auction problem solution: fax and on-site facility

Strong reputation in transparent e-auction services

Strong IT team (e-procurement)

Fast access

Powerful E-procurement / E-auction software

Q1 CSFs for E-commerce in Thailand
Clear value proposition
Management support
Feasible e-commerce business model
Demand-leaded e-commerce (target customers have sufficient demand of a product/service)
Performance measurement
Alternative solutions for inefficient e-commerce-related infrastructure

CSFs for an E-commerce in the E-procurement Industry **Q2**
Customer requirements:
  Cost saving
  Procurement/Purchasing process improvement
  Management support
  Alternative solutions for inefficient e-commerce-related infrastructure (trust, convenience, order fulfillment)
Competitive requirements:
  Know-how (Strategic procurement/sourcing)
  Power buyers
  Large number of suppliers
  Reputation
  Competitive service fees
  Performance measurement
Technical requirements:
  B2B e-procurement system
  Alternative solutions for inefficient e-commerce-related infrastructure (convenience)
Resources requirements:
  Knowledge employees, IT team
Regulation:
  Government certified e-auction service providers

Q4 **Performance:**
  Online transaction volume: US $ 365 million in 2004 (e-procurement and e-auction)
  Revenue: US $2.5 million in 2003

ces:
ing values
bidders on
-auction

Table 13.12: The Key Elements of Pantavanij's E-commerce Business Model Addressing the CSFs for E-commerce in Thailand and Key Industry Requirements for E-commerce in the E-procurement Industry

The CSFs and the key industry requirements for e-commerce	The key elements of Pantavanij's e-commerce business model
1. Clear value proposition* • Cost saving** • Procurement/purchasing process improvement**	• Cost saving and purchasing process improvement (key values of e-procurement/purchasing in this industry) • Strong knowledge sale team (ability to clearly articulate value of e-procurement/e-auction to customers) • Strong knowledge in strategic procurement and sourcing
2. Management support (customer side)***	• Strong knowledge sale team (ability to clearly articulate value of e-procurement/e-auction to customers) • Cost saving and purchasing process improvement (clear value proposition)
3. E-commerce business model* • Power buyers** • Large number of suppliers**	• Buyers – 6 largest conglomerates in Thailand as the founders of Pantavanij • Sellers – large pool of sellers (new and existing suppliers of 6 largest conglomerates)
4. Demand-leaded e-commerce* • Power buyers**	• Buyers – 6 largest conglomerates in Thailand as the founders of Pantavanij • Cost saving and purchasing process improvement (clear value proposition)
5. Performance measurement***	• Balance score card (Pantavanij used this method to measure the performance of its employees)
6. Alternative solution for inefficient e-commerce related infrastructure***	• Easy to use website/e-auction website • Large number of suppliers/buyers • Fast access • High quality service (onsite customer support for e-procurement customers) • Strong brand/reputation (Trust)
7. Know-how**	• Strong knowledge in strategic procurement and sourcing • Strong IT team • Partnership with AT Kearney • Powerful e-procurement / e-auction software
8. Reputation**	• Buyers – 6 largest conglomerates in Thailand as the founders of Pantavanij • High quality service • Government certified e-auction service provider (one of the first two companies in Thailand) • Strong reputation in transparent e-auction service
9. Competitive service fee**	• High quality service (Pantavanij's e-auction service does not compete with

The CSFs and the key industry requirements for e-commerce	The key elements of Pantavanij's e-commerce business model
	service fee, but it positions its service as high quality transparent e-auction service) • Strong knowledge in strategic procurement and sourcing (value-added service)
10. B2B e-procurement system**	• Powerful e-procurement / e-auction software
11. Knowledge employee and IT team**	• Strong knowledge in strategic procurement and sourcing • Strong IT team • Strong knowledge sale team
12. Government certified e-auction service providers**	• Government certified e-auction service provider (one of the first two companies in Thailand)

*CSF for e-commerce in Thailand, **CSF for an e-commerce within the e-procurement industry in Thailand, ***CSF for both e-commerce and e-procurement industry in Thailand.

Case 6: Thaiticketmaster.com (TTM)

The following section will analyze the sixth case: Thaiticketmaster.com (TTM). TTM is the traditional-dominated-channel B2C e-commerce (Figure 13.12).

Figure 13.12: Thaiticketmaster.com

RQ1: What are the CSFs for E-commerce in Thailand?

Trust

A Thai e-commerce venture must develop a customers' confidence in its online services. Firms must have clear policies for online services, privacy, and security. Good service plays a major role in building online trust with customers. Firms also need an online security system sourced from well-known security service providers to guarantee online transactions.

E-commerce Business System (Back-end System)

Thai e-commerce ventures must understand that e-commerce is a business, not just a website. Thai merchants must design and develop supporting business processes for their e-commerce business.

Convenient Website

An e-commerce company must design a website that is easy for customers to use. Customers should find product and service and related information easily. A variety of payment methods must be available to meet customers' preferences. An online payment system must be easy and require only few steps to complete.

Website Promotions (Advertising)

Thai e-commerce ventures must aggressively promote their websites to create awareness among Thai customers about e-commerce businesses. Online merchants require both online and offline advertising. Traditional offline advertising is more effective in reaching potential customers since the number of web surfers in Thailand is still small.

Unique Products/Services

Thai online merchants still lack knowledge of what types of products/services Thai customers are willing to purchase on the Internet. Products/services that Thai customers can conveniently buy or access through traditional channels are difficult to sell on the Internet. Thus, unique high-demand products/services that are hard to find or access through traditional offline channels increase the chance that customers will purchase them from online merchants.

In-house IT Capability

To keep up with increasing online transaction, an e-commerce company should have in-house IT capability. With in-house IT capability, a company can rapidly update its e-commerce system and content of the website such as product information and new promotional program.

Dynamic Team Work

Dynamic team work is critical to the companies' ability to quickly respond to the dynamic environment of e-commerce.

According to TTM, factors that are critical to the success of e-commerce in Thailand are also critical to the success of e-commerce within entertainment ticket distribution industry. That means that an online ticket distributor must develop trust with customers through high quality service and online security. A company must develop a supporting back-end system that integrates its website with online transaction processing and provide the best customer service. A website must be convenient for customers to use and to make online reservations. A company must also have strong in-house IT capabilities to develop and maintain its website and back-end system. Sale teams require a strong service orientation to serve customers on the phone, in kiosks, or at concert venues. Moreover, an entertainment ticket is considered a unique product because it is provided by a particular online entertainment ticket distributor. Online advertising is not critical for an online ticket distributor because the ticket distributor is promoted along with the concert/event. The following section analyzes other factors that are critical to the success of e-commerce within the entertainment ticket distribution industry based on five areas of industry requirements: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Strong ticket distribution channels.

Concert/event promoters want to reach the mass market. At the same time, consumers want to buy ticket from channels that are most convenient to them.

Convenient website with a seat selection service.

A website must be easy for a customer to use. Ticket reservations must be easy to obtain. A variety of payment methods are required to address different needs. In addition, Thai consumers want to be able to select their seats when they purchase their concert/event tickets. Thus, a company must provide a seat selection service along with its online ticket reservation service.

Availability.

Tickets should be available online like they are available at other distribution outlets.

Trustworthy and responsive services.

Concert/event promoters want to ensure that a ticket distributor provides good services to customers, and also accurately collect money from sales. Any problems that occur during ticket selling must be responsively addressed in a timely manner.

What are the Competitive Requirements?

Risk management.

Thai banks protect their customers, not the online merchant. Thai customers can refuse a credit card payment after they receive their tickets. Thus, an online ticket distributor must develop a payment model that protects itself from online fraud.

Competitive service fees/commissions.

Ticket distributors compete on service fees/commissions.

Supplier relationships.

Besides the quality of service and service fees, a concert/event promoter selects a ticket distributor based on its existing relationship. Strong supplier relationships mean that a ticket distributor works well with the promoter. This creates loyalty and prevents a promoter from switching to another ticket distributor.

Industry knowledge (value-added service).

A concert/event promoter expects a ticket distributor to provide great service and strong distribution channels, in addition to having in-depth industry knowledge that helps a promoter plan and implement a concert/event production, like identifying a location, setting ticket prices, and designing and producing the tickets.

What are the Technical Requirements?

Online ticket distribution system.

An online ticket distributor must have an online distribution system that allows customers to make ticket reservation and seat selection. Moreover, a system must be able to integrate with other ticket distribution channels to prevent the 'ticket hunting' problem. The online system should also be secured to protect customer information.

What are the Resource Requirements?

Human resources (sales forces).

Ticket distribution services are labor intensive. Skillful sales teams are required to provide good service to customers, and accurately collect money for promoters.

What are the Industry Regulation Requirements?

Sole ticket distributor.

After a concert/event promoter selects a ticket distributor for a particular concert/event, customers can only buy tickets for that concert/event from the selected ticket distributor.

RQ3: What is TTM's E-commerce Business Model?

The Web Channel

The key requirement of entertainment ticket distribution is to access the mass market. TTM realizes that at this stage of e-commerce development in Thailand, the Internet channel cannot reach the mass market in Thailand. Thus, its goal is to use the Internet channel to support the traditional distribution channel – the ticket outlet. TTM uses its websites to provide concert/event information to consumers. Although the sales volume from Internet sales is still small, compared to retail outlets or call centers, web sales volume is slowly but steadily growing. According to Aiemrithkrai, TTM expects the sales volume of its web channel will grow as the younger generation increases its buying power.

Unified Online Ticket Distribution System

All of TTM's distribution channels are fully integrated with its online ticket distribution system. It allows customers who bought tickets from outlets or a call center, for example, to have access to the same online system as the web channel. The online system allows customers to purchase the same tickets regardless of channels or outlet locations. No other competitors in the marketplace employ this level of information integration.

Variety of Payment Models

TTM offers a variety of payment methods for each distribution channel. In using the web channel, customers can either pay by credit cards, or they can pay at the Counter Service. This payment model allows TTM to target both credit card holders and non-credit card customers.

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Risk Management

One of TTM's critical success factors is its ability to manage the risk of online transaction fraud. Thai bank policies for online transactions do not protect online merchants if web customers deny the credit card charge. TTM, thus, developed a model that protects the company from losing money. Historically, when web customers picked up their tickets, they had to show copies of their credit card and personal ID. Once TTM implemented the *Verified by Visa* service, it created a non-refundable online payment policy. Customers can now pick up tickets at concert/event venues by just showing their credit cards and personal IDs. TTM also has a risk management team that monitors online transactions to ensure that involved parties are confirmed, like banks and the Visa company.

Value-added Services

TTM has knowledge in concert/event production. Thus, it can assist promoters in areas such as ticket pricing, stage production, venue location, and seat arrangements. These value-added services in combination with its strong distribution channels allows TTM to charge a premium price for its services.

Strong Business Connections

TTM has relationship with the key people in the entertainment industry. This allows TTM to create strong business connections with a number of concert/event promoters.

RQ4: What is TTM's Business Performance?

Online Revenue Growth

Table 13.13 summarizes TTM's tickets sales through its web channel.

Table 13.13: TTM's Online Revenue

	Year 2000	**2001**	**2002**	**2003**
Total number of tickets sold	> 300,000	500,000	800,000	1,000,000
Total number of web tickets sold	< 30,000	50,000	80,000	150,000
Percent	< 10	10	10	15

Findings

Figure 13.13 shows how the four research questions (Q1-Q4) are related. The first half of the figure shows eight components of TTM's e-commerce business model (Q3). Based on the previous discussion of TTM's e-commerce business model, the researcher identifies how key elements (the bottom part of Q3) address the CSFs for e-commerce in Thailand (Q1) and the key industry requirements for e-commerce in the entertainment ticket distribution industry (Q2). The bottom part of the figure (Q4) shows the business performance of TTM.

The links between Q1 and Q2 show how the key industry requirements for e-commerce in the entertainment ticket distribution industry are aligned with the CSFs for e-commerce in Thailand. The researcher also observed that key industry requirements that do not address CSFs for e-commerce in Thailand are factors that relate to the specific condition of the industry. For example, supplier relationship is critical to an online ticket distributor because it creates promoter loyalty.

Based on these findings, it appeared clear that for TTM to be successful, it must meet not only the CSFs for e-commerce in Thailand, but also key industry requirements for e-commerce in its industry. Table 13.14 shows how TTM addressed CSFs for e-commerce in Thailand and key industry requirements for e-commerce in the entertainment ticket distribution industry in detail. These findings are supported by the company's business performance (Q4).

Figure 13.13: Systematic View of TTM Case

Q3

Customer: Concert/event audiences

Supplier: Concert/event promoters

Revenue sources: Concert/event promoters

Partner Network: Samart Corporation - Internet service provider

Target Market: Online customers with credit cards - 20-40 age range

Value Proposition: Variety of distribution channels, Convenient for customers to purchase tickets from near-by locations and the website

Resources: IT, Human resources, managers with strong experience in concert/event production

Capabilities: Distribute tickets to mass customers, Real-time ticket reservation system, Expertise in concert/event production

Activity Configuration

R&D The TTM website and the real-time ticket reservation system

Sales Expertise in concert/event production Sole ticket distributor for a concert/event

Marketing Variety of distribution channels - kiosks and the website Variety of payment methods - credit card, money transfer, ATM, mobile phone payment Secured online payment Picky-back promotion strategy - a promoter promoted TTM's website along with its concert

Outbound logistics Ticket delivery at a concert venue, kiosks, or by a messenger

Customer Service: Strong customer service team (a call center and kiosks) Phone service Money return policy for a cancel concert/ticket

Competitive Strategy

Variety of distribution channels, Convenient website, In-house IT capability, Strong relationship with promoters, Variety of concert/event tickets, Strong brand

Key Elements of TTM's E-commerce Business Model that Address Overall CSFs

Strong relationship with promoters

Sole ticket distributor

The online ticket distribution system

Convenient website with seat selection service

Variety of payment methods

Secured online payment

Strong in-house IT team

Variety of distribution channels

Fast access

Premium service fee

Strong brand

Variety of concert/event tickets

Value added service: Expertise in concert/event production

Strong customer service team

Q1 **CSFs for E-commerce in Thailand**
Trust (security and service)
E-commerce business system (back-end operation)
Convenient website
Website promotion (advertising)
Unique product/service
In-house IT capability
Dynamic teamwork

CSFs for an E-commerce in the Ticket Distribution Industry
Q2
Customer requirement:
  Trustworthy and responsive service
  Convenient website (with seat selection service)
  Strong ticket distribution channels
  Availability
Competitive requirement:
  Risk management
  Competitive service fees/commissions
  Supplier relationship
  industry knowledge (value-added service)
Technical requirement:
  Online ticket distribution system
Resource requirement:
  Human resources (sale forces at points of sale)
  In-house IT team
Industry regulation:
  Sole ticket distributor

Q4 **Performance:** Number of tickets sold on the website: 15% of the total 1 million tickets sold in 2003.

**Table 13.14: The Key Elements of TTM's E-commerce Business Model Addressing the CSFs for E-commerce in Thailand and the Key Industry Requirements for E-commerce in the Entertainment Ticket Distribution Industry**

The CSFs and the key industry requirements for e-commerce	The key elements of TTM's e-commerce business model

1. Trust*
   • Trustworthy and responsive service**
   • Online ticket distribution system (with online security)**
	• Strong customer service/support (a call center)
	• Secured online payment (SSL, Verified by Visa, ticket pickup with a personal IT and credit card)
	• Strong brand (a concert/event promoter promotes TTM's website along with its event/concert)
	• Ability to fulfill orders (availability and delivery)

2. E-commerce business system (back-end operating)* • Online ticket distribution system**	• The online ticket distribution system (TTM's website, other distribution channels, and backend system are fully integrated with the online ticket distribution system)
3. Convenient website***	• Convenient website with seat selection service • Variety of concert/event tickets • Variety of payment methods • Variety of distribution channels (easy to receive tickets at near by locations or concert venues) • Fast access • Detailed information of concerts/events • Strong customer service/support (a call center)
4. Website promotion (advertising)*	• Strong brand (a concert/event promoter promotes TTM's website along with its event/concert)
5. Unique products/services* • Sole ticket distributor**	• Sole ticket distributor (customers can find tickets of a particular concert/event only at TTM)
6. In-house IT capability***	• Strong in-house IT team

7. Dynamic team work*
   • Human resources (sales forces)**
   • In-house IT team**
	• Strong customer service team
	• Strong in-house IT team

8. Strong ticket distribution channel**	• Variety of distribution channel (website, kiosks, mobile)
9. Availability**	• Strong relationship with concert promoters • Variety of concert/event tickets • The online ticket distribution system (TTM's website, other distribution channels, and backend system are fully integrated with the online ticket distribution system)
10. Risk management**	• Secured online payment (SSL, Verified by Visa, ticket pickup with a personal IT and credit card)

The CSFs and the key industry requirements for e-commerce	The key elements of TTM's e-commerce business model
11. Competitive service fees/commissions**	• Premium service fee (TTM positions itself as high quality service – variety of distribution channels, online reservation service, strong customer service, etc.)
12. Supplier relationship**	• Strong relationship with promoters (TTM provides great service and management knows a lot of people in the entertainment industry)
13. Industry knowledge (value-added service)**	• Expert in concert/event production
14. Online ticket distribution system**	• Convenient website with seat selection service • The online ticket distribution system

*CSF for e-commerce in Thailand, **CSF for an e-commerce company within the entertainment ticket distribution industry in Thailand, ***CSF for both e-commerce in Thailand and the entertainment ticket distribution industry in Thailand.

Case 7: Naiin.com

The following section analyzes the seventh case: Naiin.com. Naiin.com is an example of the traditional-dominated-channel B2C e-commerce (Figure 13.14).

Figure 13.14: Naiin.com

RQ1: What are the CSFs for E-commerce in Thailand?

Right Products/Services

Thai online merchants must carefully select products/services that fit their e-commerce business model. At the same time, they must select products/services that fit Thai consumer behavior at this stage of e-commerce development in Thailand.

Trust

Thai online merchants must address issues that cause Thai customers to resist online shopping. Customer services with a human touch, clear service policies, and secured online transactions are critical to attract online customers.

Convenience

Thai online merchants must develop convenient websites that are easy for Thai customers to use. Customers should find products and information easily on a website. The ordering processes should be easy for customers to follow. Different payment methods should be available so customers can choose a method that they feel comfortable using. Customer support on the website, such as FAQ and chat functions, should be available to support customers when they need help.

Large Product Selections

Large product selections increase the chance that Thai customers will find what they are looking for and decide to purchase it online. Otherwise, an online merchant must have unique products/services that cannot be easily found elsewhere.

Strong Brand

A strong brand helps create customer awareness for a website. It also give customers confidence in using a website's services. Aggressive online and offline promotions are necessary for an online merchant to build its brand.

Supporting IT and Business Processes

An online merchant must be ready to fulfill online orders. This means that a company needs to have more than just an e-commerce website. It must design and develop supporting IT and backend business processes that support its e-commerce business model.

RQ2: What are the Key Industry Requirements for E-commerce within the Online Bookstore Industry?

The following section analyzes the factors that are critical to the success of e-commerce within the online bookstore industry based on five areas of industry requirements: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Large book/magazine selections.

Like retail bookstores, customers want a wide selection of books and magazines when they visit online bookstores. Online bookstores either try to compete on product variety, or new releases, especially for popular books, to draw customers to their websites.

Availability.

Customers go online to purchase books or magazines due to its convenience. Lack of availability causes online customers to search other websites or visit retail stores instead.

Product/service information.

Customers usually want to read book excerpts and/or customers' reviews before making buying decision. Moreover, Thai customers also want to know about online service policies, security for online transactions, payment methods, and delivery times. This information is especially important for first time customers who lack confidence in online shopping.

Convenience.

Despite the shopping convenience and availability of books/magazines in Thailand, Thai customers expect online shopping to be as convenient as conventional shopping. A website must be easy to use. Products and related information must be easy to find. Order processing must be intuitive and fast. Payment methods must be available to meet a customers' purchasing preference.

Speed of delivery.

Customers also expect online bookstores to deliver books/magazines within a reasonable time frame.

Customer support.

Thai customers, especially first-time customers, expect real-time customer support to help them with online shopping processes. Real-time customer support can build a customer's confidence to shop online.

Secured online transactions.

Thai customers are nervous about the security of online transactions. They want online merchants to be trustworthy and have secured online transaction services in place.

What are the Competitive Requirements?

Competitive brand name.

Major book publishers/distributors take advantage of strong brands to promote their websites. Strong brands not only create awareness, but also create customers' trust and confidence in using their online services.

Competitive prices.

There are a number of e-commerce ventures that sell newly released and popular books from a variety of publishers. They often lower prices to attract customers.

What are the Technical Requirements?

Secured e-commerce website and IT-based back-end system.

Online bookstores must have e-commerce systems that offer secured online transactions. Moreover, efficient back-end systems must support the online transactions. For example, book businesses also require effective inventory systems to manage large selections of books. IT plays an important role in providing effective inventory systems that help keep costs down, and, at the same time, allow companies to process orders in a timely manner.

What are the Resource Requirements?

Human resources (sale support).

To effectively provide support to online customers, sales support personnel must have substantial knowledge of books/magazines, as well as skills at using their website.

What are the Industry Regulation Requirements?

N/A

RQ3: What is Naiin.com's E-commerce Business Model?

Amarin's goal was to establish Naiin.com as a new distribution channel with less competition. However, once Naiin.com realized that many Thai customers never purchased products on the Internet, it expanded its goal to also attract new customers to use its online information services. Amarin tries to convert web visitors into first time buyers. When visitors make their first online purchase, Amarin tries to fulfill their online orders quickly and build trust so they will return in the future. The following describes key areas of Naiin.com's e-commerce business model.

Owned Books/Magazines

Since it is a publisher, a printer, and a distributor, Amarin owns its products and also carries other publishers' books. This factor allows Naiin.com to have a variety of marketing strategies. It is able to offer a large selection of Amarin's books, as well as books from other publishers'. This increases the chance that customers will find their desired books and purchase them via the website. It also offers lower prices than Naiin retail bookstores to encourage customers to purchase online. Shipping is free when an order is over US $12.50.

Convenience

Naiin.com provides an easy-to-navigated website. Books and magazines are easy to find using its search engine. It also provides detailed information, including covers, excerpts, customer reviews, the service policy, shipping and exchange policy and information about transaction security. This information gives customers confidence in its online services. Naiin.com also provides a book order service. Naiin.com may not make a profit from this service, but provide this service to encourage customers to purchase from its websites while building its customers' trust.

Customer Support

Naiin.com tries to make customers feel comfortable when placing orders through its website. It provides customer phone support and MSN chat support. Moreover, order confirmation e-mails are sent to customers after their credit card numbers are verified by banks. Another e-mail confirmation is sent to customers after orders are shipped from the warehouse. To maintain customer satisfaction, customer support makes phone calls to customers when orders are delayed longer than 2 days.

Online and Offline Cooperating

One of the key success factors of Naiin.com is its cooperation with Amarin and Naiin retail bookstores. Amarin discovered that by integrating its e-commerce operating processes, Naiin.com gained Amarin capabilities Amarin without having to develop them. Naiin.com integrated its e-commerce system with Naiin retail bookstore's inventory system. At the same time, Naiin.com separated its inventory team from the bookstore. Its team monitors online orders, takes books/magazines from the warehouse, and ships them to customers. The integrated system and separated inventory team allows Naiin.com to respond to online orders in a timely manner. By using the strength of Naiin's retail bookstore, Naiin.com gained a

critical capability and avoids making mistakes in the critical areas like inventory management. Moreover, Naiin.com now develops its marketing strategies in coordination with the Naiin retail bookstore. For example, Naiin.com applies Naiin's national promotion programs. At the same time, Naiin retail bookstore tries to promote Naiin.com to its store customers. With Naiin and Amarin's strong brands, Naiin.com has gained the confidence and trust of online customers. Books/magazines can also be exchanged at any Naiin retail bookstore if they are damaged during shipping. This model has proven to be effective and its online sales grew rapidly.

RQ4: What is Naiin.com's Business Performance?

Online Revenue Growth

Table 13.15 summarizes Naiin.com's online sales revenue. The growth of online revenue increased by 37 percent in 2004, compared to 4.9 in 2003. During this time the company began to coordinate online and offline inventory processes and marketing strategies.

Table 13.15: Naiin.com's Online Sale Revenue

	Year 2002	2003	2004
Online sale revenue index	100	104.9	143.8
Percent increase	0	4.9	37

Findings

Figure 13.15 shows how the four research questions (Q1-Q4) are interrelated. The first half of the figure shows eight components of Naiin.com's e-commerce business model (Q3). Based on the previous discussion of Naiin.com's e-commerce business model, the researcher identifies the key elements (the bottom part of Q3) that explain how Naiin.com addresses the CSFs for e-commerce in Thailand (Q1) and the key industry requirements for e-commerce in the online bookstore industry (Q2). The bottom part of the figure (Q4) shows the business performance of Naiin.com.

The links between Q1 and Q2 represent how the key industry requirements for e-commerce in the online bookstore industry are aligned with the CSFs for e-commerce in Thailand. The right products/services factor is the CSF for e-commerce in Thailand that is not aligned to any key industry requirements. Even though there is no key industry requirement that is aligned to this CSF, the fact that

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books/magazines are suitable products sold on the Internet indirectly addresses this factor. In addition, the researcher observed that key industry requirements for the online bookstore industry that do not address CSFs for e-commerce in Thailand related to specific condition of the industry. For example, competitive prices were critical in attracting customer to an online bookstore because there were numerous websites in Thailand that used price as their competitive strategy to sell books and magazines.

Based on these findings, it appeared clear that for Naiin.com to be successful, it had to meet both the CSFs for e-commerce in Thailand and the key industry requirements for e-commerce in its industry. Table 13.16 shows in detail how Naiin.com addressed CSFs for e-commerce in Thailand and the key industry requirements for e-commerce in the online bookstore industry. These findings are supported by the company's business performance (Q4).

Figure 13.15: Systematic View of Naiin.com Case
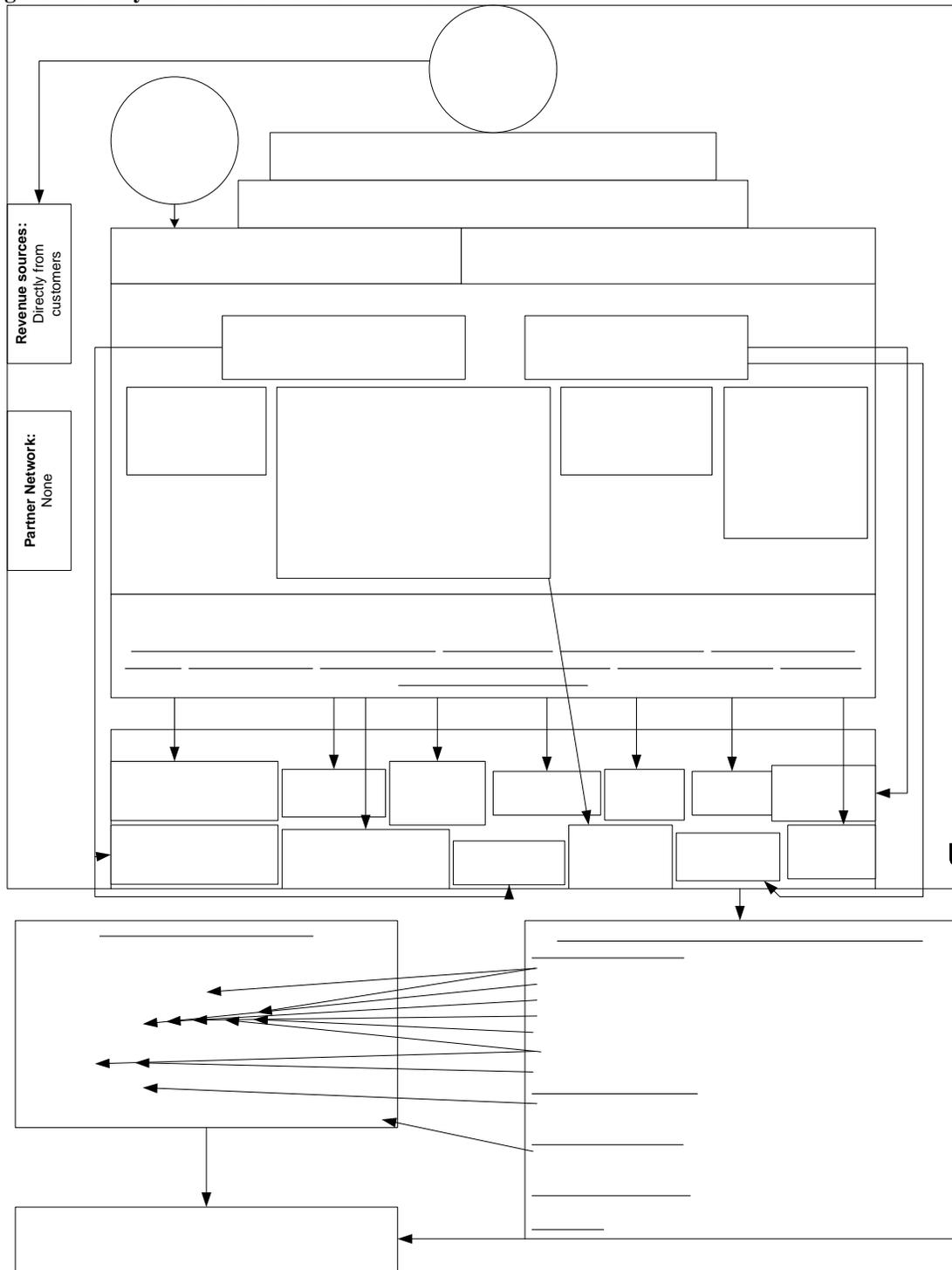
Table 13.16: The Key Elements of Naiin.com's E-commerce Business Model Addressing the CSFs for E-commerce in Thailand and the Key Industry Requirements for E-commerce in the Online Bookstore Industry

The CSFs and the key industry requirements for e-commerce	The key elements of Naiin.com's e-commerce business model
1. Right product/service*	• Own books and magazines
2. Large product selection***	• Own books and magazines • Large book and magazine selection (carry other publisher books as well)

3. Trust*
   • Strong brand (under Amarin and Naiin bookstore)***
   • Customer support**
   • Secured online payment**
   • Speed of delivery**
	• Strong brand (under Amarin and Naiin bookstore)
	• Excellent customer support (phone and chat)
	• Secured online payment (SSL and Verified by Visa)
	• Ability to fulfill order (availability and delivery)

4. Convenience***	• Convenient website • Easy to use website • Rich content • Large book/magazine selection • MSN chat support • Variety of payment methods
5. Strong brand***	• Strong brand (under Amarin and Naiin bookstore) • Coordination of online and offline promotional strategies
6. Supporting IT and business processes***	• In-house IT capability • Integrating critical processes of the retail bookstore business • Coordinated online and offline marketing strategies
7. Availability**	• Owned books and magazines • Integrating critical processes of the retail bookstore business (inventory system)
8. Rich content of book/magazine**	• Rich content of book and magazine (Book excerpts, customers' review, price, publishers)
9. Speed of delivery**	• Separated operating team from the Naiin book business (this leads to fast order processing, and, thus, fast delivery) • Integrating critical processes of the retail bookstore business (inventory system) • Post office and a messenger delivery service
10. Customer support**	• Excellent customer support (Phone and MSN Chat Support)
11. Secured online transaction**	• Secured online payment (SSL and Verified by Visa)
12. Competitive price**	• Lower online price • Own books and magazines • Low operating costs

The CSFs and the key industry requirements for e-commerce	The key elements of Naiin.com's e-commerce business model
13. Human resources (strong customer service team, in-house IT team)**	• Excellent customer support • In-house IT capability

*CSF for e-commerce in Thailand, **CSF for an e-commerce within the online bookstore industry in Thailand, ***CSF for both e-commerce in Thailand and the online bookstore industry in Thailand.

Case 8: Officemate

The following section analyzes the seventh case: Officemate. Officemate represents the

traditional-dominated-channel B2B e-commerce (Figure 13.16).

Figure 13.16: Naiin.com

RQ1: What are the CSFs for E-commerce in Thailand?

Right Products/Services

Choosing the wrong products/services can cause e-commerce failure. At the current stage of e-commerce development in Thailand, not all types of products/services are suitable for e-commerce because Thai customers do not embrace online shopping at the same level as in developed countries. In addition, online shopping poses a high risk of uncertainty caused by questionable quality of products and services and online fraud.

Website Promotion

The majority of Thai customers still lack awareness of e-commerce websites. To build traffic to a website, it is necessary for an e-commerce venture to advertise its website in both online and offline media. Different promotional programs are also vital to attracting return visitors.

Awareness of E-commerce Value

Thai business clients also lack awareness and knowledge of the value of e-commerce to their businesses since the number of Thai companies using e-commerce is still low. To succeed, an e-commerce venture must be able to consult or clearly articulate the value of its e-commerce service to clients.

Convenient Website

For Thai customers, shopping at retail stores is a convenient process. Placing orders through a call center is even more convenient. To draw customers onto a website, an e-commerce venture must be able to develop a website that is easy to use and that requires only a few steps for a customer to complete online shopping. If an online shopping is less convenient than traditional shopping, it will be difficult to attract customers to return to a website. For Thai business clients, e-commerce services still pose high risks, requiring drastic changes in their existing business processes and a long term commitment with an e-commerce service provider. Successful e-commerce requires flexible websites that are simple to use. The system must be able to be customized to fit clients' existing business flows, or require only minor changes from clients.

In-house IT Capability

An in-house IT capability allows a company to develop an e-commerce system that fits its clients' specific needs and maintains high quality services. Outsourcing e-commerce development to a third party developer is expensive. Once outsourced, a company loses flexibility in adapting its service to meet its customers' needs.

Reliable Logistics System

Customers expect online orders to be delivered in a timely manner. Business clients have even higher expectations for orders being delivered on time and in good condition. Thus, a B2B e-commerce business requires a reliable delivery service to maintain service quality and control delivery costs.

Trust

As explained earlier, the majority of Thai businesses still lack knowledge and experience in using e-commerce services. Therefore, they consider it a risky venture and may not be willing to change their business process to adapt to e-commerce. In the event a company does engage in e-commerce, the service

provider's reputation, past service quality, record of e-commerce service success, and in-house IT capabilities are important factors in determining what provider a company will use.

Management Support

With few examples of successful e-commerce in Thailand, an e-commerce company must rely on a clear vision and the support of executives and managers in providing clear strategies.

RQ2: What are the Key Industry Requirements for E-commerce within the Stationery Industry?

According to Officemate, factors that are critical to the success of e-commerce in Thailand are also critical to the online stationery industry. First, stationery and office supply products are suitable for online sales because they are convenience iteams rather than core business components. Business customers, however, require convenience in purchasing. Second, an online stationery company must establish trust with its business customers. Third, an online stationery company must aggressively promote its website to target customers. Forth, a company must be able to clearly articulate the value of its e-commerce service to customers' businesses. Fifth, an online stationery website must be easy for customers to use. Sixth, a company must have an in-house IT capability to develop and maintain a website. Seventh, an online stationery company must be able to provide reliable delivery to business customers. Last, strong support from management is also critical to the success of an online stationery company. The following section describes other factors that are critical to the success of e-commerce within the stationery industry based on five areas of industry requirements: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Large product selections.

Customers expect stationery retail stores to offer a large variety of product selections.

What are the Competitive Requirements?

Competitive speed of delivery.

Unlike a retail stationery store, a catalog business must overcome delayed product delivery with fast and predictable delivery schedules.

Competitive product availability.

Since clients order stationery and office supplies in large volumes and expect rapid delivery, competitors must always have available products.

Competitive price.

Business clients buy stationery and office supplies in large volumes and expect prices to be competitive. They require a discount and/or better credit terms.

What are the Technical Requirements?

IT-based back-end system.

An online stationary retailer needs an efficient back-end system to support its online business. An efficient back-end system, such as an integrated IT-based inventory system, helps a retailer update product information and process online orders quickly.

What are the Resource Requirements?

A strong sales force.

A sales force plays an important role in building long term relationships with business clients. Business clients prefer to deal with a sales force that they know well because they feel that they will receive special service and, at the same time, feel comfortable in negotiating prices.

What are the Industry Regulation Requirements?

N/A

RQ3: What is Officemate's E-commerce Business Model?

Right Target Markets

Officemate has taken several years to convert the majority of its business customers from call center to website orders. Officemate now targets small organizations or temporary customers for online orders, since they do not require price negotiations. Once a company's order volumes increase, a call center becomes the preferred mode of order placement because it provides a company the chance to negotiate prices and discounts or establish credit terms. E-commerce websites, thus, play an important role in reducing the work load of a call center. For e-procurement services, the goal is attract large organizations that usually place large order volumes per year through a call center. Through the e-procurement system,

Officemate avoids price negotiations for every order, which frees up a call center's time. More importantly, large organizations, especially international firms, prefer this service.

Convenient Web Services

Convenient e-commerce services are the center of Officemate's e-commerce business model. Its slogan is "Make Things Easier". Officemate's e-commerce website is easy to use. Its "My Favorite" function allows return customers to quickly and easily repeat similar product orders from the past. As for its e-procurement services, its website is easy to use and requires only a few steps to complete orders. More importantly, a client's purchasing department no longer needs to consolidate employee orders, look for better prices, or prepare reports.

IT-based Back-end System

Officemate's Intranet system integrates its main business processes, including inventory, a call center, and sales and marketing. This allows Officemate to update product information quickly and accurately, and process online orders rapidly.

Product Selection

One of Officemate's strengths is its large product selection. Its product selection is relatively difficult for other stationary retailers to replicate. By using this strength in its e-commerce service, Officemate attracts customers to its website because they can find almost every type of stationery product of every leading brand.

Speed of Delivery

One e-commerce weakness, compared to traditional shopping channels, is the delay of product delivery. Officemate has an advantage with its network of delivery service. Thus, it can deliver products to online customers in a timely manner.

Competitive Prices

While Officemate admits that it does not have the lowest prices in the market, its product prices are still competitive. Its large customer base and its large business volume allow Officemate to receive low prices from suppliers, and, in turn, it to offer competitive prices to its customers.

Excellent Service

Officemate's e-commerce website is easy to use and provides convenience for a client's purchasing department. With less than seven steps, a client can create an online PO. The purchasing department no longer has to consolidate orders or prepare monthly purchasing reports, since the system provides these. Moreover, the system does not require any integration with a client's IT system. The system can also be customized to fit a client's existing purchasing requirements. Thus, a client can save procurement cost and time.

In-house IT

An in-house IT team ensures that Officemate has the capability to develop and maintain its e-commerce services, and in turn, provide great service to its customers.

Promotion

Officemate advertises its e-commerce services though its catalogs, monthly magazine, and on its delivery car. Thus, advertising costs are very low but highly effective.

RQ4: What is Officemate's Business Performance?

Online Sales Growth

Table 13.17 summarizes Officemate's online sales growth. Sale revenues from its e-commerce website in 1998 were very low. From 1999 to 2002, Officemate's sale revenue from the website accounted for only two percent of the total sales per year. Sales revenues from online services jumped to 10 percent of total sales in 2003 after Officemate began offering e-procurement services to large organizations.

Table 13.17: Officemate's Online Sales Growth

	Year 1998	1999	2000	2001	2002	2003	2004	2005
Total Sales (in million)*	US $2.86	US $3.58	US $4.48	US $5.6	US $7	US $8.75	US $11.25	US $15
Online sales (in million)*	N/A	US $0.11	US $0.13	US $0.17	US $0.21	US $0.88	US $1.13	N/A
Percent of total sales	N/A	2%	2%	2%	2%	10%	10%	N/A
Percent growth of online sales	0	N/A	18%	30%	24%	319%	28%	N/A

* US $1 is equal to 40 baht.

Recruiting E-procurement Clients

Officemate added one new large organization per month from 2003 to 2004. Each large organization has several hundred employees ordering stationery and office supplies worth several hundred thousands dollar per year from Officemate.

Findings

Figure 13.17 shows how the four research questions (Q1-Q4) are related. The first half of the figure shows how the eight components of Officemate's e-commerce business model address the CSFs for e-commerce in Thailand (Q1) and the key industry requirements for e-commerce in the online stationary industry (Q2). The bottom part of the figure (Q4) shows the business performance of Officemate.

The links between Q1 and Q2 show how the key industry requirements for e-commerce in the stationary industry are aligned to the CSFs for e-commerce in Thailand. While having the right product/service is not listed as a key industry requirement for this industry, stationary and office supplies were the right products for e-commerce in Thailand. The researcher observed that key industry requirements for e-commerce in the online stationary industry that did not address CSFs for e-commerce in Thailand are factors that related to the specific condition of the industry. For example, a competitive price is critical to the online stationary industry because business customers always buy products in large quantity, and, thus, they want prices to be competitive and negotiable.

Based on these findings, it appeared clear that for Officemate to be successful, it had to meet not only the CSFs for e-commerce in Thailand, but also the key industry requirements in the stationary industry. Table 13.18 shows in detail how Officemate addressed CSFs for e-commerce in Thailand and the key industry requirements for e-commerce in the online stationary industry. These findings are supported by the company's business performance (Q4).

**Figure 13.17: Systematic View of Officemate Case**
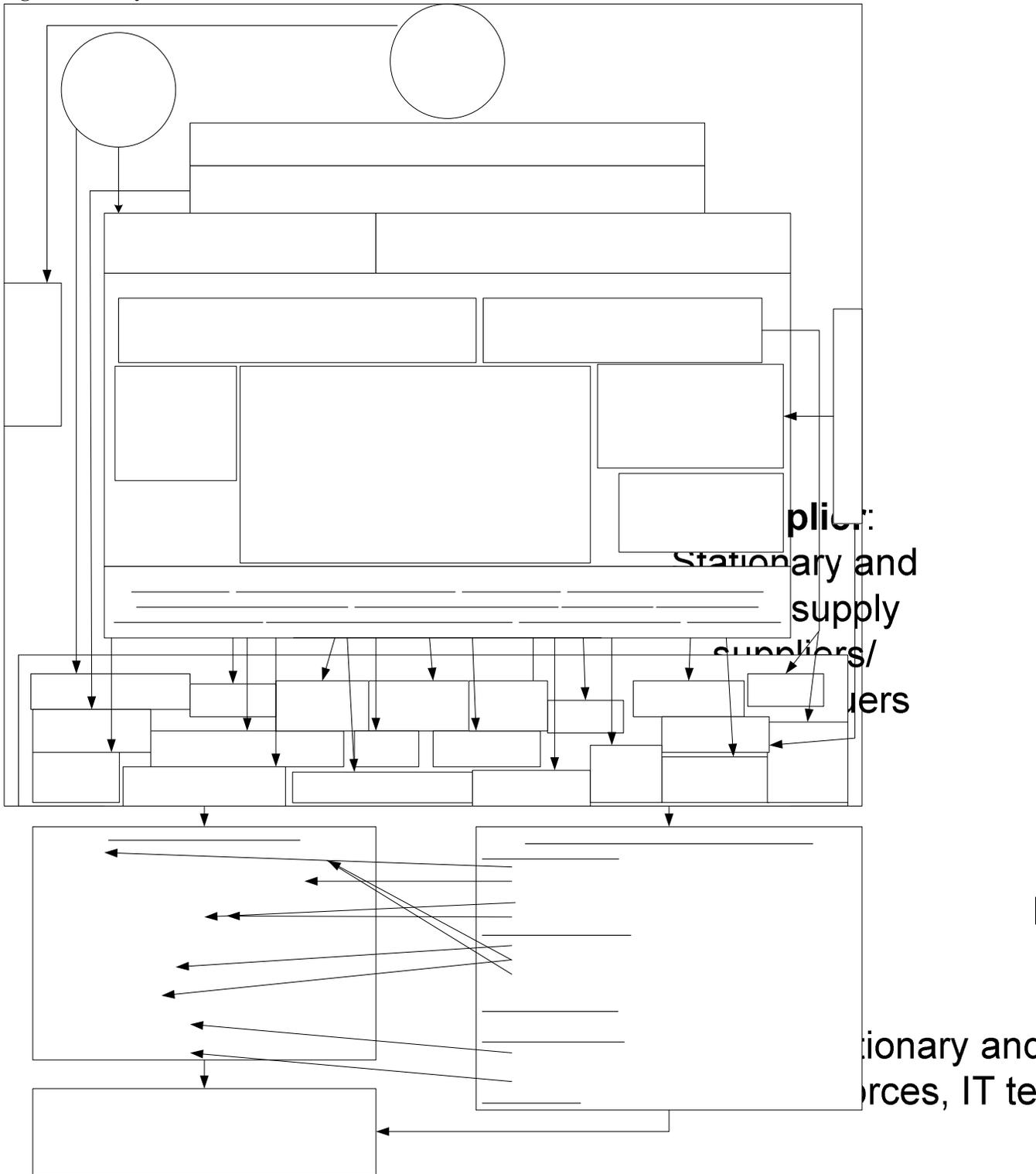
Table 13.18: The Key Elements of Officemate's E-commerce Business Model Addressing the CSFs for e-commerce in Thailand and the key industry requirements for e-commerce in the online stationary industry

The CSFs and the key industry requirements for e-commerce	The key elements of Officemate's e-commerce business model
1. Trust***	• Strong reputation of Officemate • Existing clients of an e-procurement service (business credit) • Strong telemarketing team (well over 40 employees using an Intranet system to provide accurate product information to customers) • In-house IT capability • Ability to fulfill orders (availability and delivery) • Secured online payment (SSL)
2. Client's awareness of e-commerce Value***	• A strong sale team that have strong knowledge in e-procurement and ability to articulate clear value of a service to customers
3. Convenient website***	• Easy to use e-commerce website (with 'My Favorite' feature) • Easy to use e-procurement website (with customized processes to fit client's purchasing flow, only six steps for each involved user to complete an order) • Large stationery and office supply selection (8,000 stationery and office supply product lines) • Strong telemarketing team (well over 40 employees using an Intranet system to provide accurate product information to customers) • Variety of payment methods • Detailed product specification • Fast access
4. Right products/services***	• Stationery and office supply products
5. Website promotion*	• Advertising on Officemate's existing media (catalog, monthly magazine, and delivery car)
6. Logistic system***	• Strong in-house delivery service (50 cars and 14 motorcycles) • A network of logistic partners (delivering products to other provinces)
7. In-house IT capability***	• Strong in-house IT team (well over 10 IT employees developing and maintaining an e-commerce website and a e-procurement system)
8. Management support***	• Clear strategic direction for Officemate' s e-commerce services from top management
9. Large product selection**	• Large stationery and office supply selection (8,000 stationery and office

The CSFs and the key industry requirements for e-commerce	The key elements of Officemate's e-commerce business model
	supply product lines)
10. Product availability**	• Large inventory • Strong inventory system that monitored inventory turnover
11. Competitive price**	• Competitive price • Bargaining power with manufacturers (strong relationship with suppliers)
12. IT-based inventory system**	• IT-based inventory system that virtually connected to an Intranet system
13. Human resources (sales force)**	• Strong telemarketing team (well over 40 employees using an Intranet system to provide accurate product information to customers)

*CSF for e-commerce in Thailand, **CSF for an e-commerce company within the stationery industry in Thailand, ***CSF for both e-commerce and stationery industry in Thailand.

Case 9: Value System

The following section analyzes the ninth case: Value System. Value is the traditional-dominated-

channel B2B e-commerce (Figure 13.18).

Figure 13.18: Value System

RQ1: What are the CSFs for E-commerce in Thailand?

Awareness of Online Service

The majority of Thai consumers and business clients lacked awareness of Thai websites since they

were not Internet users. E-commerce firms had to aggressively promote their websites and the value of their

online services through various business channels using both online and offline media. In addition, they

needed to clearly communicate the value of their online services to target customers.

Convenient Web Service

The majority of Thai customers/clients are not frequent Internet users and lack familiarity with online shopping. To convince such novices to use an online service, a web service had to be fast and easy to use. Product information and transaction-related information had to be complete and easy to find so clients could avoid the time required to contact customer service personnel.

Competitive Price and Promotion

An e-commerce business requires a clear value proposition to attract Thai customers to a website. Because Thai customers are enjoyed bargaining, it takes added amenities, such as convenience, competitive prices and promotional programs to draw them to visit and revisit a website.

Trust

An e-commerce business had to establish trust with Thai customers. A website had to be secured to protect customers' information. Privacy policies had to be clearly stated on the website. More importantly, firms had to deliver its promised product and service quality.

Fast and Reliable Delivery Service

A fast and reliable delivery was critical to e-commerce, especially a B2B markets where clients often relied on online orders final products or resale products for its own customers. Thus, delivery timing was critical for a business client.

Management Support

The lack of e-commerce experience and successful examples of e-commerce in Thailand made it difficult for an e-commerce company to develop a clear strategic direction and strategy. The lack of an efficient Internet-related infrastructure and the low Internet user base in Thailand made it even more challenging for e-commerce firms. Thus, without a clear vision, strong support and commitment from top management, an e-commerce project would not likely survive.

RQ2: What are the Key Industry Requirements for E-commerce within the IT Distribution Industry?

According to Value, factors that are critical to the success of e-commerce in Thailand are also critical to success within the IT distribution industry in Thailand. First, an online IT distributor had to create awareness for its website and the value proposition of its online service to clients. Second, it had to create a convenient website that was easy for clients to use. Third, an online IT distributor had to offer

competitive prices and a variety to online promotional programs to attract clients to its website. Forth, a company had to be able to deliver high quality services to build customer trust. A website had to be secured to protect clients' information. Fifth, e-commerce firms had to provide a fast and reliable delivery service. Last, strong support from management was critical to the success of an online IT distributor because e-commerce projects required clear direction from management with long term investment commitments. The intent of following section is to discuss other factors that are critical to the success of e-commerce within the IT distribution industry based on five areas of industry requirements: customer requirements, competitive requirements, industry regulation and standards, resource requirements, and technology requirements.

What are the Customer Requirements?

Brand-name product.

A dealer wants to sell popular brand name IT products because they are easy to sell. Moreover, a dealer does not have to be concerned about a quality.

Service support.

A dealer requires strong before-and-after service support from an IT distributor. An IT distributor must be quick to respond to a dealer. Moreover, it needs to have strong knowledge about each IT products so it can promptly provide the right information to a vendor.

What are the Competitive Requirements?

Competitive selection of leading-brand IT products.

An IT distributor must offer a number of leading-brand-name IT products to address high demand in the market. Moreover, the larger the selection of leading-brand IT products, the higher the chance that its dealers will purchase multiple products.

Competitive price/promotion.

Competition within the IT market is very intense. Leading IT distributors carry similar IT products. Thus, their customers have alternative sources of products, which give them high bargaining power. IT distributors, thus, offer low prices or offer a variety of promotions to their customers.

Product availability.

Since IT products become outdated quickly, dealers do not stock large numbers of IT products. At the same time, the demand of IT products is very high. Thus, a dealer requires products to be available when it places an order. The IT distributor must, therefore, have IT products on hand at all time.

Fast and reliable delivery.

As with product availability, a dealer requires a product to be delivered as soon as possible after placing an order. Therefore, a distributor must have a fast and reliable logistic system/network to ensure fast delivery of products to dealers.

What are the Technical Requirements?

IT-based back-end system.

An online IT distributor carries a wide variety of IT products and has a number of dealers to serve. Fast service is a critical to success. An IT-based back-end system is needed to help facilitate the business processes of an IT distributor in order to manage its products effectively and serve dealers better.

What are the Resource Requirements?

A competitive sales force.

A sales force plays a critical role in building strong relationships with dealers. A sales force must have strong knowledge in IT products and know each dealer well because dealers prefer to place orders with a familiar sales person.

What are the Industry Regulation Requirements?

N/A

<div align="center">

RQ3: What is Value's E-commerce Business Model?

</div>

Sales Support

The goal of Value's B2B e-commerce service is to increase the productivity of its sales force and to reduce its operating costs. A vendor can now access its website to check product information, download supporting documents, and place online orders. A sales force, thus, has more time to serve dealers in such areas as price negotiations. At the same time, communication expenses for phones and faxes are reduced.

Right Target

Value does not expect that all dealers will use its B2B e-commerce service because vendors prefer the sales force to provide the service. Moreover, dealers want to negotiate prices or promotions with sales personnel. Thus, Value targets those vendors who value fast service and do not like waiting on the phone to talk with a sales person. These vendors are often SMEs or small retailers. Such vendors need products to be delivered quickly. Usually their orders are small, and, thus, do not need to negotiate prices.

Large IT Product Selection

One of Value's competitive advantages is the fact that it carries a large selection of leading-brand-name IT products which gives Value's B2B e-commerce website a large selection of IT products.

Convenient Websites

The goal of Value's B2B e-commerce service is to help its sales force assist vendors. Thus, the website must be convenient for a vendor to use, making it easy to find product information. Online order processes are fast and easy. The website also allows vendors to check the status of their orders, to check outstanding invoices, to make online payments, and to check their order history.

Full Integration

Value integrates its SIM2 system with all main business processes from inventory to sales to accounting and to marketing. The B2B e-commerce website is also integrated with SIM2, and thus, Value can process online orders quickly. More importantly, transaction-related data can be used to assist management in decision making, improved demand forecasting, and provide more efficient inventory control.

Discount and Promotion

To build traffic for a website and to encourage vendors to use its online service, Value tries to offer discounts or variety of promotions for its IT products. These discounts and promotions are exclusive to online customers.

Strong Logistics

Value has its own delivery service. Thus ,vendors trust that products purchased online will be delivered in a timely manner.

Number of Invoices

The number of invoices issued through its website is approximately 30 percent of Value's total

invoices. Most invoices are for small orders.

This indicates that such vendors want quick delivery over price negotiation. Such venders are mostly SME

or small retailers in provinces outside Bangkok.

Hit Log

Value's hit log grew from 191,721 in 1999 to almost 2 million in 2002. This indicates the growing

number of vendors using the online service and/or the growing usage rate by vendors using the online

service.

Online Sales

Table 13.19 summarizes Value's online sale revenue.

Table 13.19: Value's Online Sale Revenue

	Year 1999	**2000**	**2001**	**2002**	**2003**
Online revenue (in million)*	US $5	US $8.30	US $10	US $11	US $13.2
Percent of total revenue	10	10	10	10	10
Total revenue (in million)*	US $50	US $83	US $100	US $110	US $132

* US $1 is equal to 40 baht.

Findings

Figure 13.19 shows how the four research questions (Q1-Q4) are related. The first half of the

figure shows the eight components of Value's e-commerce business model (Q3). At the bottom part of Q3,

the researcher shows how Value addresses CSFs for e-commerce in Thailand (Q1) and the key industry

requirements for e-commerce in the IT distribution industry (Q2). The bottom part of the figure (Q4) shows

the business performance of Value.

Links between Q1 and Q2 shows how key industry requirements for e-commerce in the online IT

distribution industry are closely aligned with the CSFs for e-commerce in Thailand. The researcher also

observed that key industry requirements for e-commerce in the IT distribution industry that do not address

CSFs for e-commerce in Thailand are factors that relate to the specific condition of the online IT industry.

For example, competitive selection of brand name IT products are critical to e-commerce in the IT

distribution industry because such IT products have high demand in the market and, thus, must be available

to dealers who want to sell these products to their end users.

Based on these findings, it appeared clear that for Value to be successful, it had to meet both the

CSFs for e-commerce in Thailand, and the key industry requirements fore e-commerce in the IT

distribution industry. Table 13.20 shows in detail how Value addressed CSFs for e-commerce in Thailand

and the key industry requirements for e-commerce in the IT distribution industry. These findings are

supported by the company's business performance (Q4).

Figure 13.19: Systematic View of Value System Case

Q3

Supplier:
IT suppliers/
manufacturers

Customer:
IT dealers

Target Market:
IT dealers that had small orders and wanted speed of the service

Value Proposition:
Convenience of website, large IT product selection, fast delivery, and great online support

Resources:
Sale forces, In-house IT, Investment, Management support

Capabilities:
Develop and maintain e-commerce system and SIM2 system, Offer large IT product selection

Activity Configuration

Procurement:
SIM2
Accurate demand forecast

R&D:
E-commerce website and SIM2

Sales:
Sale goals set by suppliers
Using the website and SIM2 to support sale activities

Marketing:
Large IT product selection (over 20,000 IT products)
Convenient website (search tool, complete product information, 'My Favorite' function, outstanding invoices, and only payment)
Website promotion by sale forces (still received commission and reduced work load)
Variety to promotion programs on the websites

Outbound logistics:
In-house delivery service

Customer Service:
Phone sale support
Complete production information/document on the website
IT seminars
Online training
Onsite training

Competitive Strategy
Large IT product selection, SIM2, Competitive price and variety of online promotional programs, Convenient websites, Secured online payment, Strong reputation, Accurate demand forecast, Fast delivery service, Strong management support (goal and investment), Strong online customer support

Key Elements of Value's E-commerce Business Model that Address Overall CSFs

Strong relationship with suppliers

Strong website promotion from sale forces

Commitment in IT investment

Road-trip arranged by Value management

Agents of number of leading IT products

Clear vision of e-commerce

Strong sale force team

Complete product information

Variety of online exclusive discounts and promotions

Well over 20,000 IT products

Easy-to-use website

SIM2

Large brand name IT product selection

Competitive price

Strong reputation

Accurate demand forecast

Secured online payment

Fast access

Value's fast delivery service

Customer support (a call center)

Q1   CSFs for E-commerce in Thailand
Awareness of a web service (website promotion, clear value proposition)
Convenient web service
Competitive price
Online promotion
Trust
Fast and reliable delivery service
Management support

CSFs for an E-commerce in the IT Distribution Industry   Q2
Customer requirements:
    Awareness of a web service (website promotion, clear value proposition)
    Convenient web service
    Trust
    Brand name IT products
    Service support
Competitive requirements:
    Competitive selection of leading brand name IT products
    Competitive price/promotion
    Product availability
    Fast and reliable delivery
Technical requirements:
    IT-based back-end system
Resources requirements:
    Human resources (competitive sale forces)
    Management support
Regulation: None

Performance:
Q4 Online invoices: 30 percent of total invoices
Hit log: 2 million times in 2002
Online sales: US $13.2 million in 2003 (10 percent of total sales)

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Table 13.20: The Key Elements of Value's E-commerce Business Model Addressing the CSFs for E-commerce in Thailand and the Key Industry Requirements for E-commerce in the IT Distribution Industry

The CSFs and the key industry requirements for e-commerce	The key elements of Value's e-commerce business model
1. Awareness of an e-commerce service***	• Strong website promotion from the sales forces • Road trips arranged by Value management
2. Convenient website***	• Easy-to-use website with complete supporting online service (search tool, online ordering function with 'My Favorite' tool, outstanding invoice function, online payment function, order history function, online tutorial function) • Complete product information • Large brand-name IT product selection (quality IT products) • Secured online payment (SSL) • Customer support (a call center) • Fast access
3. Competitive price and promotion***	• Variety of online exclusive discounts and promotions (provided by IT suppliers and/or Value) • Strong relationship with suppliers • Low operation cost (SIM2)
4. Fast and reliable delivery***	• Value's fast delivery service (In-house delivery service with a network of logistics providers)

5. Trust***
  • Service support**
  • Brand-name IT products**
  • Fast and reliable delivery***
	• Strong reputation
	• Customer support (a call center)
	• Large brand-name IT product selection (quality IT products)
	• Ability to fulfill orders (availability and Value's fast delivery service)
	• Secured online payment (SSL)

6. Strong management support***	• Clear vision of e-commerce • Commitment in IT investment • Road trips arranged by Value management
7. Brand-name IT products**	• Agents of number of leading IT suppliers
8. Service support**	• Strong online support • Strong sales force team
9. Competitive selection of IT products **	• Agents of number of leading IT suppliers • Well over 20,000 IT products
10. Product availability**	• Inventory control system (as a part of the SIM2) • Accurate demand forecasting
11. IT-based back-end system**	• SIM2
12. Human resource (sales forces)**	• Strong sales force team (well over 60 sales forces using SIM2 and B2B e-commerce website to support sale service, Strong knowledge of IT products)

*CSF for e-commerce in Thailand, **CSF for IT distribution Industry in Thailand, ***CSF for both e-commerce and IT distribution Industry in Thailand.

Analysis of Findings

Based on the analysis of these nine successful e-commerce companies in Thailand, the researcher finds that each e-commerce company met all key industry requirements for e-commerce of its industry. Table 13.21 summarizes all key industry requirements for e-commerce of a specific industry from nine case study company companies. The researcher also finds that key industry requirements for e-commerce in each industry were closely aligned with the CSFs for e-commerce in Thailand. From table 13.21, all bullets without a shade highlight are key industry requirements for e-commerce of a specific industry that are closely assigned with the CSFs for e-commerce in Thailand. However, it is found that key industry requirements for e-commerce of a specific industry that did not address CSFs for e-commerce in Thailand were factors that relate to the specific condition of that industry. From table 13.21, all bullets with a shade highlight are key industry requirements for e-commerce in each industry that do not address CSFs for e-commerce in Thailand. For examples, investment is found to be a key industry requirement for e-commerce in an online tourism industry because there are number of foreign competitors that put a large capital investment on its e-commerce system, which allows them to effectively respond to a large number of online transactions and lower their operation cost. Strong industry knowledge is a key industry requirement for e-commerce in the online gemstone industry because an online merchant must be able to access gemstone sources, select right gemstones, and pay right prices. A competitive price is found to be a key industry requirement for e-commerce in several industries. In an entertainment ticket distribution industry, for instance, ticket distributors try to lower their service fees in order to attract concert/event promoters. A sales force is found to be a key industry requirement for e-commerce in both a stationery industry and an IT distribution industry because the majority of customers still prefer placing orders with a sales force. In addition, since customers always develop strong relationship with a sales force, a sales force is a perfect tool that an e-commerce company uses to promote its e-commerce service and articulate a value of an online service to customers' businesses.

Thus, it appeared clear that for an e-commerce firm in Thailand to succeed, it has to meet both the CSFs for e-commerce in Thailand, as well as the key industry requirements for e-commerce in its industry.

Table 13.21: The Key Industry Requirements for E-commerce Relating to Specific Conditions of Industries

The Key Industry Requirements for e-commerce of a specific industry in Thailand	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	Cementhai	Pantavanij	Officemate	Value System
Customer Requirements									
1. **Trust worthy websites**	✓	*	✓	✓	*	✓	*	✓	✓
2. **Secured online transaction**	*	*	*	*	✓	✓	*	*	*
3. **Risk management**				✓					
4. **Good customer service/support**	✓	✓	✓	✓	✓	✓	*	✓	*
5. **Internet-related skill (training)**						✓			
6. **Availability**	✓	✓	✓	✓	✓	✓		✓	✓
7. **Logistics/delivery**		✓	✓	✓	✓	✓		✓	✓
8. **Gemstone quality**		✓							
9. **Convenient website**	*	✓	✓	✓	✓	✓	*	✓	✓
10. **Rich content**	✓				✓				
11. **Traveling-related services**	✓								
12. **Awareness of e-commerce value**						✓	*	✓	✓
13. **Cost saving**							✓		
14. **Procurement/purchasing process improvement**							✓		
15. **Alternative solutions for inefficient e-commerce-related infrastructure****							✓		
Competitive Requirements									
16. **Target market**		✓	✓						
17. **Product positioning**						✓			
18. **Competitive online marketing**		✓							
19. **Large product selection** • **Power buyers (large number of buyers)** • **Large number of suppliers** • **Sole ticket distributor**	✓	✓	✓	✓	✓	✓	✓	✓	✓
20. **Brand name IT product**									✓
21. **Competitive product/service price**	✓	✓	✓	✓	✓	✓	✓	✓	✓
22. **Strong ticket distribution channel**				✓					
23. **Advertising/promotion**	✓	*	*	*	*	*	✓	✓	✓
24. **Management support** • **Domain knowledge**	✓	✓	✓	✓		✓	✓	✓	✓
25. **Supplier relationship**	✓		✓	✓					
26. **Strong dealer network**						✓			
27. **Competitive first mover advantage**	✓								

The Key Industry Requirements for e-commerce of a specific industry in Thailand	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	Cementhai	Pantavanij	Officemate	Value System
28. Competitive responsiveness	✓								
29. Know-how (strategic procurement/sourcing)							✓		
30. Performance measurement							✓		
Resources Requirements									
31. Investment	✓	✓							
32. Gemstone production		✓							
33. IT personnel	✓	*	✓	✓			✓	✓	
34. Qualified personnel		✓					✓		
35. Strong customer service team		*	✓		✓				
36. Strong merchandising team			✓						
37. Strong sales force				✓		✓		✓	✓
Technical Requirements									
38. E-commerce system with supporting back-end operation	✓	✓		✓	✓	✓	✓	✓	✓
Regulations									
39. Gemstone import/export regulation		✓							
40. Government certified e-auction service provider							✓		
41. Price regulation			✓						
42. Anti-trust law						✓			

✓ These factors are identified directly by the case study company companies that they are key requirements of their industries.

* These factors are not identified directly by the case study company companies that they are key requirements of their industries, but based on their explanation, these factors are the main reasons that influence other key industry requirements. For example, trust is the reason behind order fulfillment (delivery), customer service, online security, and brand name (brand name advertising). Convenient website is the reason behind Internet connection, and large product selection.

Summary of In-case Analyses

This chapter has provided a discussion of the research questions within each case company.

Conclusion of the findings will be presented in the conclusion chapter.

CHAPTER FOURTEEN – CROSS CASE ANALYSES

Continuing the nine individual case analyses discussed in the previous chapter, this chapter will analyze each research question with respect to the findings across nine case study companies.

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that all e-commerce companies must have in order to enter the industry?

3. What is the company's e-commerce business model?

4. How is the company's business performance?

Each question will be answered by both generalizing across the sample and using case-specific examples where necessary.

Research Question 1 – What are the CSFs for E-commerce in Thailand?

The intent of the first research question was to identify CSFs for e-commerce in Thailand. Each case company was selected because of its success and status as an expert in e-commerce in Thailand. Each company was asked to identify CSFs for e-commerce in Thailand regardless of the industry. The first research question was as follow:

Research question 1: Regardless of industry, what are the critical success factors relevant to all companies engaged in e-commerce in Thailand?

Table 14.1 summarizes all CSFs for e-commerce in Thailand regardless of industry. To accommodate the comparison across the 2x2 matrix, these CSFs for e-commerce in Thailand are categorized under the CSFs for e-commerce derived from the literature as outlined in Table 2.3. Table 14.2 defines each categorization of CSF for e-commerce derived from the literature. The last column of table 14.2 also shows what CSFs for e-commerce in Thailand fit into each categorization of CSFs for e-commerce from the literature.

It was obvious that some CSFs for e-commerce from the case study companies, such as trust, convenient website, management support, delivery, fit well with the categories found in the literature, and thus requires little explanation. Other factors, however, differed from the literature or fit into several categories, and, thus, require explanation.

First, the strategic business formulation category refers to the processes that create an e-commerce business model, its strategic goals, value proposition, market position, and business plan. Thus, an e-commerce business model, demand-driven e-commerce market, clear value proposition, and awareness of e-commerce value factors fit into this category. The awareness of e-commerce value factors means that a company not only has a clear value proposition, but also has the capability of clearly articulating its e-commerce value to its customers.

Second, the performance measurement factor indicates that a company monitors critical areas of its e-commerce business to ensure that it stays competitive. Thus, this factor fits well with the category that refers to constant reevaluation of the e-commerce business model and tactics.

Table 14.1: The CSFs for E-commerce in Thailand Regardless of an Industry

The CSFs for E-commerce in Thailand	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
1. Trust	✓	✓	✓	✓	✓	✓		✓	✓
2. Customer service/support	✓	✓	✓						
3. Convenient website	✓	✓	✓	✓	✓	✓		✓	✓
4. Industry knowledge	✓		✓						
5. IT infrastructure	✓				✓				
6. Business relationship development	✓								
7. First mover advantage	✓					✓			
8. Supporting back-end operation	✓			✓	✓	✓			
9. Qualified personnel	✓	✓			✓				
10. Competitive price		✓							✓
11. Delivery/logistics		✓				✓		✓	✓
12. Strong brand/advertising/website promotion		✓			✓			✓	✓

The CSFs for E-commerce in Thailand	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
13. E-commerce business model		✓					✓		
14. Target market			✓						
15. Large product selection			✓		✓				
16. Type of product				✓	✓			✓	
17. In-house IT capability	✓	✓		✓				✓	
18. Speed on Internet connection						✓			
19. Awareness of e-commerce value						✓		✓	✓
20. Clear value proposition							✓		
21. Management support						✓	✓	✓	✓
22. Performance measurement							✓		
23. Alternative solutions for inefficient e-commerce-related infrastructure							✓		
24. Promotional programs									✓

Third, the target market category involves not only choosing the right market segment, but also understanding it. Thus, the target market factor and understanding online behavior of the target factor fit well within this category.

Forth, the IT infrastructure factor falls into the e-commerce-related infrastructure category because it refers to choosing the right Internet service providers (ISP) in Thailand. The choice of ISP affects an e-commerce company's capability to provide rapid Internet access and reliability of Internet connection to business clients.

Next, the customer relationship management category relates to creating relationships with customers through tools, technologies, and procedures. Thus, customer service and customer training for Internet-related skills fall into this category.

Last, the factor for finding alternative ways to overcome inefficiency of infrastructure in Thailand is required in providing online services to Thai customers. This factor derives from the absence of a proper infrastructure and legal framework necessary to support e-commerce. Thus, it fits into several CSF

categories, including e-commerce-related technologies, convenient websites, order fulfillment, customer relationship management, and trust.

Table 14.3 matches the CSFs for e-commerce found through the nine case study companies with those found in the literature. Not all case study companies explicitly identified online security, brand name recognition/reputation, customer relationship management, and order fulfillment as CSFs for e-commerce in Thailand. However, every case company that identified trust as a CSF explained that several critical sub-factors contributed to the trust factor, including quality of customer service/support, online security, brand name recognition/reputation, and ability to fulfill orders. In addition, while the choice of product and Internet connection are not directly selected as CSFs for e-commerce in Thailand, every case company explained that a large product selection provided search convenience for customers. The speed of accessing a website also leads to website convenience. The researcher, therefore, added these factors as CSFs for e-commerce in Thailand. Based on the in-case analysis chapter, table 14.3 identifies factors (ones with a round bullet) that are addressed by a case company but were not explicitly identified as CSFs for e-commerce in Thailand.

Table 14.2: The CSFs for E-commerce and Definitions

The CSFs for E-commerce from the Literature	Definitions	The CSFs for E-commerce from Nine Case Study Companies (Table 14.1)
1. Strategic business formulation	Processes in which an e-commerce company chooses or creates an e-commerce business model, strategic goal, value proposition, market positioning, and business planning.	✓ E-commerce business model ✓ Clear value proposition ✓ Awareness of e-commerce value
2. Constant reevaluation of e-commerce business model and tactics	Processes in which an e-commerce company constantly reevaluates and updates its e-commerce business model and its online strategies/tactics.	✓ Performance measurement
3. Target market	Selection of target customers and market segmentation and/or niche market.	✓ Target market
4. Convenient website	Issues that deliver the best experience of the website to a visitor. These issues range from speed of accessing a website, desirable interfaces, value-added content, search tool, ease of navigation, simple online transaction processes involving few steps.	✓ Convenient website ✓ Alternative solutions for inefficient e-commerce-related infrastructure
5. E-commerce-related technologies	Technologies that provide online security and allow a company to quickly respond to opportunities and threats.	✓ IT Infrastructure ✓ Speed of Internet connection ✓ Alternative solutions for inefficient e-commerce-related infrastructure
6. Marketing and Sales	Issues involving to either one or more of online product, price, and promotion strategies.	✓ Competitive price ✓ Strong brand/advertising/website promotion ✓ Large product selection ✓ Type of product ✓ Promotional programs
7. Customer relationship management	All the tools, technologies and procedures to manage, improve, or facilitate sales, support, and related interactions with customers, prospects, and business partners throughout the enterprise.	✓ Customer service/support ✓ Internet-related skill ✓ Business relationship
8. Order fulfillment	Issues involving the availability of	✓ Delivery/logistics

The CSFs for E-commerce from the Literature	Definitions	The CSFs for E-commerce from Nine Case Study Companies (Table 14.1)
	products and logistical system that allows a company to efficiently deliver products to customers in a timely manner.	✓ Alternative solutions for inefficient e-commerce-related infrastructure
9. Qualified human resources	Qualified personnel carrying out the development of e-commerce system and/or e-commerce project/strategy.	✓ Qualified personnel ✓ In-house IT capability
10. Outsourcing/partnership/alliance	Third parties that help run parts of a company's e-commerce business processes/functions.	None
11. Information/product/service flow improvement	Issues involving the improvement of a company's flow of information/product/service from a front-end (a website) to a back-end operation of an e-commerce business or the improvement of information/product/service flow between organizations.	✓ Supporting back-end operation
12. Management support	Issues involving industry knowledge, support and commitment from top management in term of strategic direction and investment for an e-commerce project.	✓ Management support ✓ Industry knowledge
13. Trust	Issues that deliver trusting belief in an e-commerce company. These issues involve company characteristics such as reputation and brand recognition, website characteristics such as privacy and security of a website, and the interaction such as quality of service.	✓ Trust ✓ Alternative solutions for inefficient e-commerce-related infrastructure
14. First mover Advantage	The speed which an e-commerce company establishes its business on the Internet.	✓ First mover advantage
15. Financial Control	The ability to manage capital investment in an online business.	None

Table 14.3: The CSFs for E-commerce under the Categories from the Literature

The CSFs for E-commerce	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Strategic business formulation									
Business model selection	○	✓	○	○		○	✓	○	○
Clear strategic goal									
Value proposition	○	○	○	○	○	✓	✓	✓	✓
Market positioning	○	○	○	○		○	○	○	
Business planning									
Constant reevaluation of e-commerce model and web strategy	○	○	○	○	○	○	✓	○	○
Target market	○	○	✓	○	○	○	○	○	○
• **Geographic market segmentation**									
• **Niche focusing**									
Convenient website	✓	✓	✓	✓	✓	✓	✓	✓	✓
Technology-related issues									
• **Internet connection**	*	*	*	*	*	✓	✓	*	*
• **Flexibility and scalability**									
• **Security**	*	*	*	*	*	*	*	*	*
Marketing and Sales									
• **Choice of products**	○	○	○	✓	✓			✓	
• **(Large production selection/Unique product selection)**	*	*	✓	*	✓	*	*	*	*
• **Competitive price**	○	✓	○		○				✓
• **Brand name**	*	✓	*	*	✓	*	*	✓	✓
• **Promotional programs**	○	○	○		○			○	✓
• **Sales force role**	○			○		○	○	○	○
Customer relationship management	✓	✓	✓	*	*	✓	*	*	*
Order Fulfillment	*	*	*	*	*	*	*	*	*
• **Delivery**	○	✓	○	○	○	✓		✓	✓
• **Availability**	○	○	○	○	○	○		○	○
Qualified human resources	○	○	○	○	○	○		○	○
• **IT personnel**	✓	✓	○	✓	○	○		✓	○
Outsourcing/Partnership/Alliance	○	○		○		○	○	○	○
Information/products/service-flow improvement									
• **Inter-organization flow**									
• **Intra-organization flow**	✓	○	○	✓	✓	✓		○	○
Management Support					○	✓	✓	✓	✓
• **Domain knowledge**	✓	✓	○	○					
• **Commitment**	○	○	○	○	○	○	○	○	○

The CSFs for E-commerce	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Trust	✓	✓	✓	✓	✓	✓	✓	✓	✓
First mover advantage	✓	○	○	○		✓	○	○	○
Financial control	○	○							

✓   CSF that is directly identified by a case company
*   CSF that is indirectly identified by a case company
○   A factor that is addressed by a case company, but It was not identified as a CSF for e-commerce in Thailand

The following section analyzes the CSFs for e-commerce by using the 2x2 matrix (Figure 14.1)

for comparison and contrast of analyses. As shown in Figure 14.2, there are nine dimensions of analyses.

Figure 14.1: 2x2 Matrix

Figure 14.2: Nine Dimensions of 2x2 Matrix Analyses
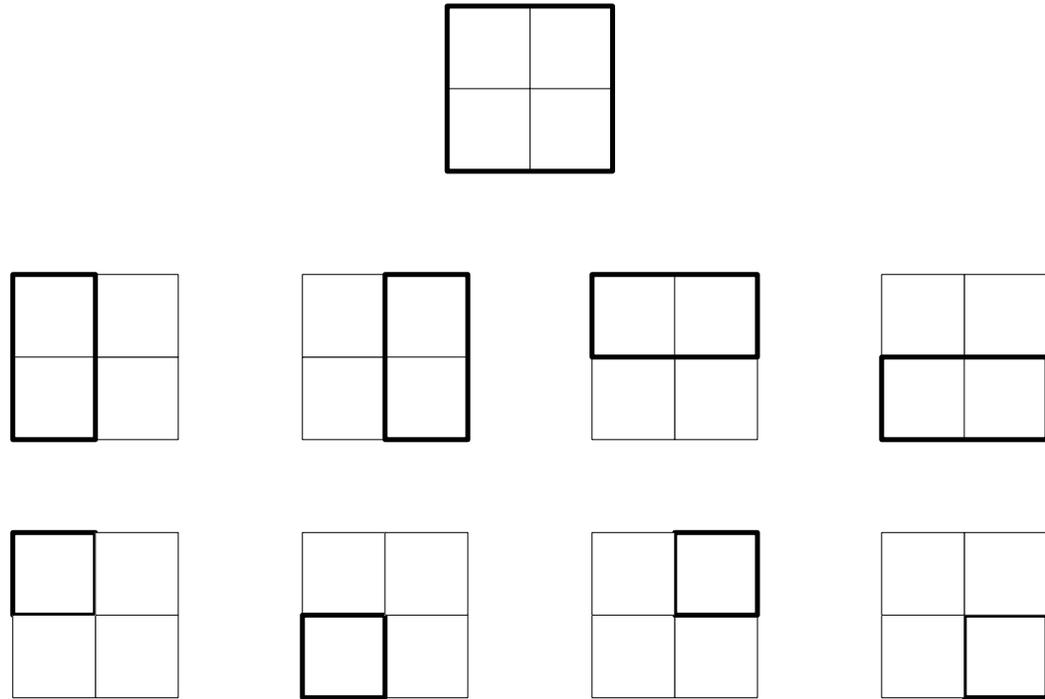
The researcher will discuss each dimension of the 2x2 matrix in the following order: (1) the whole 2x2 matrix, (2) the B2C dimension, (3) the B2B dimension, (4) the online-dominated channel dimension, (5) the traditional channel dimension, and (6-9) each of the four quadrants of the matrix. The discussion moves from the global discussion to the smaller subsets of the matrix. CSFs for e-commerce found in a larger dimension also exist in a smaller dimension and need not be discussed again. Only CSFs that are unique to each subset will be further discussed.

Based on Table 14.3, a limited number of categories of CSFs for e-commerce in Thailand were identified by all case study companies. To be considered a CSF for e-commerce in Thailand in each dimension of analysis, a factor had to be selected by at least two case study companies[1] in each quadrant of the matrix.

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[1] It was required at least two case studies in each involved quadrant of a dimension because the first quadrant of the 2x2 matrix has three case studies (HotelThailand.com, Thaigem.com, and Tohome.com), while other quadrants have only two case studies.

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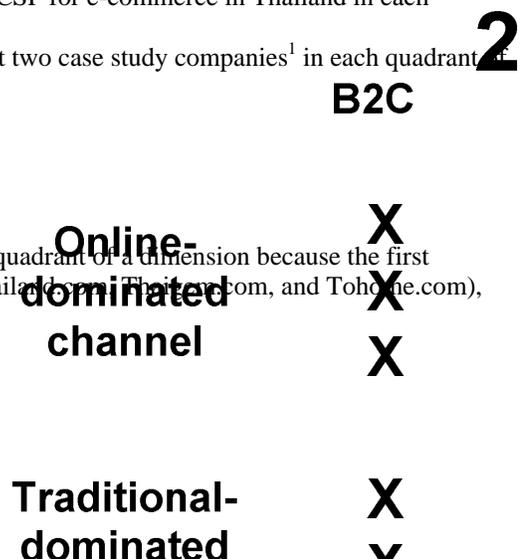
Dimension One: Global Analysis (2x2 Matrix)

Based on Table 14.3, Table 14.4 summarizes CSFs for e-commerce in Thailand.

Table 14.4: The CSFs for E-commerce in Thailand

The CSFs for E-commerce	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
1. Convenient website	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. E-commerce-related Technology (Internet connection and online security)	*	*	*	*	*	✓	✓	*	*
3. Online marketing (Large product selection and brand name)	*	✓	✓	*	✓	*	*	✓	✓
4. Customer relationship management (customer service)	✓	✓	✓	*	*	✓	*	*	*
5. Order fulfillment	*	✓	*	*	*	✓	*	✓	✓
6. Trust	✓	✓	✓	✓	✓	✓	✓	✓	✓

Convenient websites.

Convenient websites were found to be critical for the success of e-commerce in Thailand because the majority of Thai customers often compared the convenience of traditional shopping with that of online shopping. In Thailand, shopping is easy because there are number of conventional shopping malls, super stores, convenient stores, and news stands. A news stand, for example, sells almost everything from books/magazines, to cell phones, to food. Moreover, Thailand has a reputation for great hospitality and great service. Thai people have a culture of providing service and receiving service. Thus, online shopping that requires self-service is not appealing to Thai consumers. This does not mean that online shopping is not possible in Thailand although such a lifestyle change takes time. Meanwhile, Thai e-commerce ventures must develop websites that provide the highest level of convenience to Thai customers. Convenience begins with the ease of website access. Websites must be easy to use and offer large product selections. Content must be relevant to the target customers' interests. Products and services and related

information must be easily found on the website. In addition, online transaction processing must be easy and require only a few steps to complete. Customer service and contact information must be available and easy to find on the website so Thai customers can easily obtain company assistance.

Like Thai consumers, Thai business clients want convenience with web services. A business client traditionally places orders face-to-face through a sales person or through a phone or fax. These processes are easy and quick. Therefore, to convince a business client to change his/her traditional ordering processes to self-service online ordering processes is not an easy task. Online ordering processes take more time, and require a client to learn and get used to using these new processes. Thus, to convince a client to use an online service, an online merchant must be able to deliver a website that provides as much convenience as possible. For example, a website must be downloaded quickly. Products must be easy to find. Online transaction processes must be simple and have only a few steps. Other value-added services such as creating sale reports and downloading product documents should also be available to support a client.

E-commerce-related technologies (Internet connections and online security).

E-commerce-related technologies, especially Internet connections and online security, play critical roles in the success of an e-commerce firm in Thailand. The convenience of a website starts from the minute a customer tries to access a website. While the quality of an Internet connection cannot be totally controlled by an online merchant, an online merchant must ensure that it selects the most reliable lease line from available Internet service providers and uses a web server technology that can support heavy online traffic. As for online security, with the increasing frequency of online fraud, the major concern of Thai customers is whether an online merchant is trustworthy and has the capability to protect their credit card information from hackers. Moreover, Thai customers lack trust in Thai e-commerce-related laws. They do not trust that relatively new laws can protect them after online fraud occurs. Thus, a successful online merchant in Thailand must be able to provide a secured website that can protect their information from hackers. More importantly, a company must provide security information on its website even though the majority of Thai customers lack the knowledge of online security techniques and procedures. Thus, a company must ensure that its website security information is explained in a clear and easy-to-understand manner.

Similar to Thai consumers, business clients want to be able to access a website quickly. Otherwise, they would rather place an order directly with a sales person via a phone or fax. In addition, business customers are sensitive about the security of their information, and expect an online merchant to protect their information.

Online marketing (large product selections and advertising).

Online marketing also plays a critical role in the success of an e-commerce in Thailand. It was found that the focus of online marketing is on brand name recognition/reputation and choice of products. As for brand name recognition, Thai customers are not heavy Internet users, and, thus, lack awareness of specific e-commerce websites. To build traffic to a website, a company must be able to aggressively promote its website through both online and offline channels. A strong brand name helps a company to build trust with Thai customers. Since the majority of Thai customers still lack trust of unfamiliar online merchants, especially an online merchant that does not have a brick-and-mortar store front. A strong brand name can give Thai customers confidence about an online merchant.

Regarding choice of products, a large product selection or a unique product offering will attract Thai customers to a website. Due to the convenience of traditional shopping in Thailand, it was easy for Thai customers to find common products at a number of traditional retailers. To attract Thai customers to a website, the website must provide a similar level of convenience by offering a large product selection so Thai customers are more likely to find a product on one website without having to visit other websites. Moreover, if an online merchant can offer products that are not easily found in traditional retail stores or competing websites, Thai customers will have no choice but to shop with the online merchant.

Customer relationship management.

Customer relationship management is found to be critical to the success of e-commerce in Thailand. Case study companies tried to build strong relationships with customers through excellent before-and-after sales service/support. As previously discussed, Thai culture is about providing service and receiving service. Thus, good service can make Thai customers feel more comfortable in shopping online. Moreover, by providing good customer service, Thai customers begin to build not only trust with an online merchant, but also develop loyalty to a website in bringing customers back in the future.

As for business clients, the researcher observed that exiting relationship between an online merchant and its clients help facilitate the adoption and successful implementation of an e-commerce system. For online-dominated B2B e-commerce, an online merchant's service often requires certain levels of systems integration with its clients' systems and/or requires clients to change some of their business practices, such as purchasing processes. In many cases, integration requires a client to share trading information with the online merchant or with other clients using the same e-commerce system. These requirements pose high risks to clients. The existing relationship with an online merchant, however, gives clients assurance about the trustworthiness of an online merchant and its quality of service. Nevertheless, not all online-dominated channel B2B e-commerce firms have existing relationships with clients. In such cases, an online merchant tries to establish trust with clients by providing strong customer service/support.

Order fulfillment.

One of the major concerns of Thai customers when they shop online is whether a product is actually available and will be delivered in good condition in a timely manner. While the Thai post office is often used for delivery, the researcher found that Thai customers do not have much confidence in the post office. When a delivery is delayed or causes damage to a product, a customer blames the online merchant and immediately loses trust in the online merchant.

Business clients also desire assurance that products are available and will be delivered on time. For many business clients, products are used as raw materials or are resold to the clients' own customers. If products are not delivered as scheduled, it may cause clients to lose business. For B2B e-commerce in Thailand, delivery service can be a major challenge because of the inefficiency of the logistics infrastructure. The Thai post office lacks the capability of serving large-scale business deliveries. Moreover, third party logistics providers in Thailand are also expensive, and only large B2B organizations can afford their services. Thus, it was critical for online merchants to develop a delivery model that can provide a reliable service to customers or business clients.

Trust.

The researcher observed that trust plays the most critical role in the success of e-commerce in Thailand. While CSFs for e-commerce include security, customer relationship management, brand name recognition, and order fulfillment factors, these are key elements used in Thai e-commerce to establish trust

with Thai customers. One of the main obstacles that prevent Thai people from shopping online is their lack of trust in online shopping. They are afraid of online fraud from hackers and/or from the online merchant itself. They do not have confidence that e-commerce-related laws in Thailand can protect them when they become victims of online fraud. They also lack confidence in the quality of service from unfamiliar online merchant. To encourage Thai people to shop on a specific website, Thai e-commerce merchants must address the lack of trust issue.

For business clients, some e-commerce services often require certain levels of systems integration, process change, and shared business information. However, the majority of Thai businesses have limit knowledge and experience in using e-commerce services. Without knowledge and understanding of e-commerce services, such requirements post high risk to business clients. Thus, before business clients commit themselves to using an online service, they consider several factors, including the reputation of an online merchant, the quality of service/support, and even existing relationships. These factors help clients determine whether they can trust the online merchant.

Dimension Two (B2C E-commerce)

Based on Figure 14.2, the second dimension is B2C e-commerce. B2C e-commerce is a subset of the global analysis (Figure 14.3). Table 14.5 lists the CSFs for B2C e-commerce, which are also the CSFs for e-commerce in Thailand (Table 14.4).

Figure 14.3: Second Dimension – B2C E-commerce
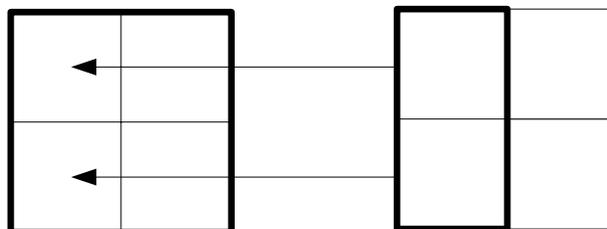
Table 14.5: The CSFs for B2C E-commerce

The CSFs for E-commerce	Hotelthailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com
1. **Convenient website**	✓	✓	✓	✓	✓
2. **E-commerce-related Technology** **(Internet connection and online security)**	*	*	*	*	*
3. **Online marketing** **(Large product selection and brand name)**	✓	*	*	✓	*
4. **Customer relationship management** **(Customer service)**	✓	✓	✓	*	*
5. **Order fulfillment**	*	✓	*	*	*
6. **Trust**	✓	✓	✓	✓	✓

Dimension Three (B2B E-commerce)

Based on Figure 14.2, the third dimension is B2B e-commerce. B2B e-commerce is a subset of the global analysis (Figure 14.4). Table 14.6 lists the CSFs for B2B e-commerce of which the shaded portion identifies two unique CSFs for B2B e-commerce (a clear value proposition and management support) that differ from CSFs for e-commerce in Thailand (Table 14.4).

Figure 14.4: Third Dimension – B2B E-commerce
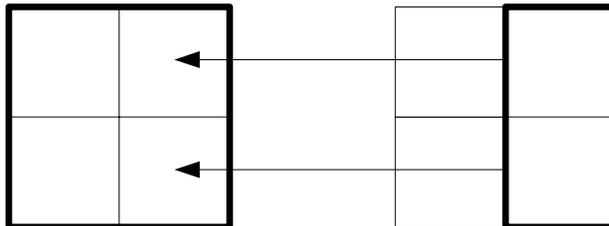
Table 14.6: The CSFs for B2B E-commerce

The CSFs for E-commerce	SCG	Pantavanij	Officemate	Value System
1. **Strategic Business Formulation** (Clear value proposition)	✓	✓	✓	✓
2. **Convenient website**	✓	✓	✓	✓
3. **E-commerce-related Technology** (Internet connection and online security)	✓	✓	*	*
4. **Online marketing** (Large product selection and brand name)	*	*	✓	✓
5. **Customer relationship management** (Customer service)	*	✓	✓	✓
6. **Order fulfillment**	✓	*	✓	✓
7. **Management support**	✓	✓	✓	✓
8. **Trust**	✓	✓	✓	✓

Strategic business formulation.

A business client will hesitate to change its traditional business practices to online practices unless they see the clear value of online services to its business. This value proposition could be, for examples, cost saving or business process improvement. For example, a business client traditionally places orders with a sale person directly or through a phone or fax communication. This is considered easy and quick. More importantly, clients can negotiate price with a sales person. To convince a business client to change his/her traditional ordering processes to self-service online ordering processes is not an easy task. Self-service takes more time, and requires a client to learn and get used to new processes. Moreover, since a small number of merchants offer e-commerce services, online ordering is not a standard business practice in Thailand. For a client has to place online orders with only a few online merchants, and still perform traditional order processing with other brick-and-mortar merchants, a client must see a clear value of the online service to its business. Furthermore, the researcher observed that clear value propositions alone are not enough to convince a client to use a web service. It requires that the online merchant have the capability to clearly articulate the value of its online service to the client's business.

Management support.

t was found that strong support from top management is critical to the success of B2B e-commerce in Thailand. With a limited number of qualified personnel with experience in e-commerce in Thailand, an

e-commerce project is usually initiated by top management who has a strong vision of the potential for e-commerce. Without a strong vision and support from top management, e-commerce projects tend to simply follow market trends. Such efforts typically result in a static catalog-based website offering no strategic value to a company's business. Despite the fact that top managers may have neither strong knowledge nor experience in e-commerce, their positions often expose them to e-commerce activities in developed countries. More importantly, their industry knowledge and experience allows them to successfully adapt what they know about e-commerce to the e-commerce-related infrastructure in Thailand, and, thus, develop a business model that works in their industry.

Dimension Four (Online-dominated Channel E-commerce)

Based on Figure 14.2, the forth dimension is the online-dominated channel e-commerce. An online-dominated channel e-commerce is a subset of the global analysis (Figure 14.5). Table 14.7 lists the CSFs for an online-dominated channel e-commerce. The shaded portion in the table 14.7 highlights a unique CSF for an online-dominated channel e-commerce (management support) that differs from CSFs for e-commerce in Thailand (Table 14.4).

Figure 14.5: Forth Dimension – Online-dominated Channel E-commerce
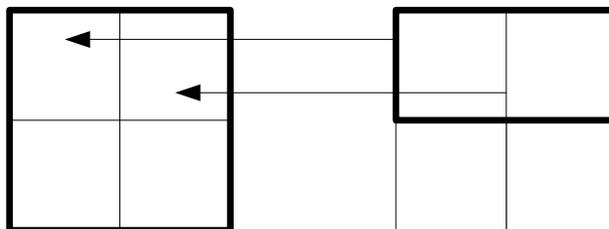
Table 14.7: The CSFs for Online-dominated Channel E-commerce

The CSFs for E-commerce	HotelThailand.com	Thaigem.com	Tohome.com	SCG	Pantavanij
1. **Convenient website**	✓	✓	✓	✓	✓
2. **E-commerce-related Technology (Internet connection and online security)**	*	*	*	✓	✓
3. **Online marketing (Large product selection and brand name)**	✓	✓	*	*	*
4. **Customer relationship management (Customer service)**	✓	✓	✓	*	*
5. **Order fulfillment**	✓	*	✓	*	✓
6. **Management Support (Domain knowledge)**	✓	✓	*	✓	✓
7. **Trust**	✓	✓	✓	✓	✓

Management support.

Management support was found to be critical to the success of online-dominated channel e-commerce. As an online-dominated channel e-commerce firm, sales revenue comes mainly from the online channel. Thus, the success of an online channel is critical to the success of a company as a whole. Many companies in Thailand still lack qualified human resources with experience in e-commerce business. Thus, top management's experience and knowledge of the industry, the e-commerce-related infrastructure in Thailand, e-commerce-related technology, and even customers' behavior play critical roles in guiding a company to develop an e-commerce business model and to compete successfully in its industry. In some cases, when e-commerce processes/systems impact a company's existing business processes, top management must promote the value of e-commerce and support the implementation of e-commerce processes/systems across the organization in order to avoid internal resistance to change.

Dimension Five (Traditional-dominated Channel E-commerce)

Based on Figure 14.2, the fifth dimension is traditional-dominated channel e-commerce. Traditional-dominated channel e-commerce is a subset of the global analysis (Figure 14.6). Table 14.8 lists the CSFs for traditional-dominated channel e-commerce, which are the same as CSFs for e-commerce in Thailand (Table 14.4).

Figure 14.6: Fifth Dimension – Traditional-dominated Channel E-commerce
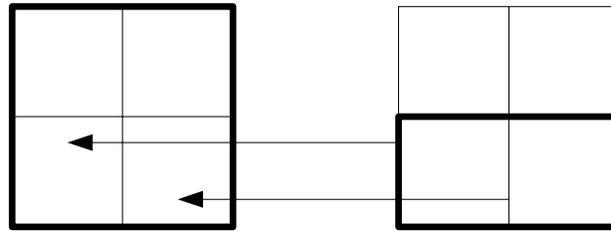
Table 14.8: The CSFs for a Traditional-dominated Channel E-commerce

The CSFs for E-commerce	Thaiticketmaster.com	Naiin.com	Officemate	Value System
1. **Convenient website**	✓	✓	✓	✓
2. **E-commerce-related Technology (Internet connection and online security)**	*	*	*	*
3. **Online marketing (Large product selection and brand name)**	*	✓	✓	✓
4. **Customer relationship management (Customer service)**	*	*	*	*
5. **Order fulfillment**	✓	✓	*	*
6. **Trust**	✓	✓	✓	✓

Dimension Six (Online-dominated Channel B2C E-commerce)

Based on Figure 14.2, the sixth dimension is online-dominated channel B2C e-commerce. Online-dominated channel B2C e-commerce is a subset of the global analysis, the second dimension (B2C e-commerce), and the forth dimension (online-dominated channel e-commerce) (Figure 14.7). Table 14.9 lists the CSFs for online-dominated channel B2C e-commerce. The shaded portion in Table 14.9 highlights a unique CSF for online-dominated channel B2C e-commerce (qualified IT personnel) that differs from CSFs for e-commerce in Thailand (Table 14.4), B2C e-commerce (Table 14.5), and online-dominated channel e-commerce (Table 14.7).

Figure 14.7: Sixth Dimension - Online-dominated Channel B2C E-commerce

B2C
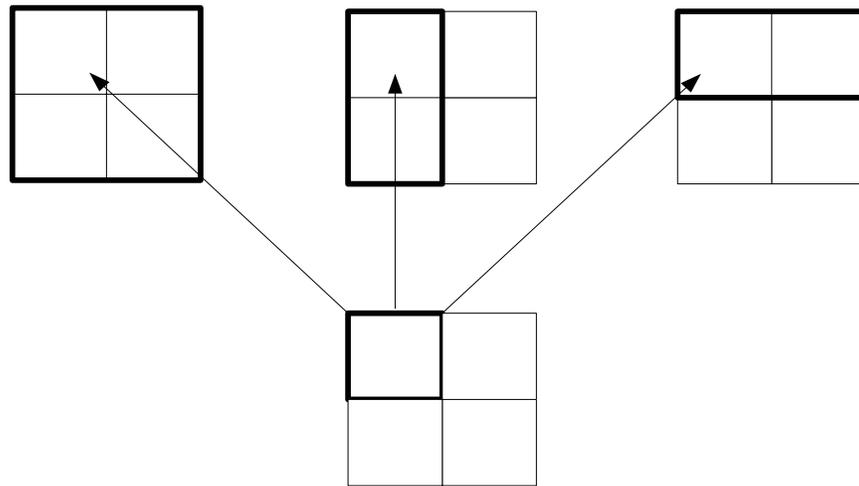
Table 14.9: The CSFs for an Online-dominated Channel B2C E-commerce in Thailand

The CSFs for E-commerce	HotelThailand.com	Thaigem.com	Tohome.com
1. Convenient website	✓	✓	✓
2. E-commerce-related Technology (Internet connection and online security)	*	*	
3. Online marketing (Large product selection and brand name)	*	✓	
4. Customer relationship management (customer service)	✓	✓	✓
5. Order fulfillment	*	*	*
6. Qualified human resources (IT personnel)	✓	✓	
7. Management support	✓	✓	
8. Trust	✓	✓	✓

Online-dominated channel

X
X
X

Traditional-dominated channel

X
X

Qualified human resources.

It was found that qualified human resources, especially IT personnel, are critical to the success of online-dominated channel B2C e-commerce in Thailand. E-commerce in Thailand is in the early stage of development, and, thus, lacks sufficient qualified IT personnel in the e-commerce market. While qualified

IT personnel are highly sought after by e-commerce companies, this is especially critical to online-dominated B2C e-commerce firms that are newly established. Unlike established companies, they lack the capital resources to hire qualified IT personnel, which become critical to their success.

Dimension Seven (Traditional-dominated Channel B2C E-commerce)

Based on Figure 14.2, the seventh dimension represents traditional-dominated channel B2C e-commerce. A traditional-dominated channel B2C e-commerce is a subset of the global analysis, the second dimension (a B2C e-commerce), and the fifth dimension (a traditional-dominated channel e-commerce) as shown in Figure 14.8. Table 14.10 lists the CSFs for online-dominated channel B2C e-commerce. The shaded portion in Table 14.10 highlights a unique CSF for a traditional-dominated channel B2C e-commerce (Information/product/service-flow improvement) that differs from CSFs for e-commerce in Thailand (Table 14.4), B2C e-commerce (Table 14.5), and traditional-dominated channel e-commerce (Table 14.8).

Figure 14.8: Seventh Dimension – Traditional-dominated Channel B2C E-commerce
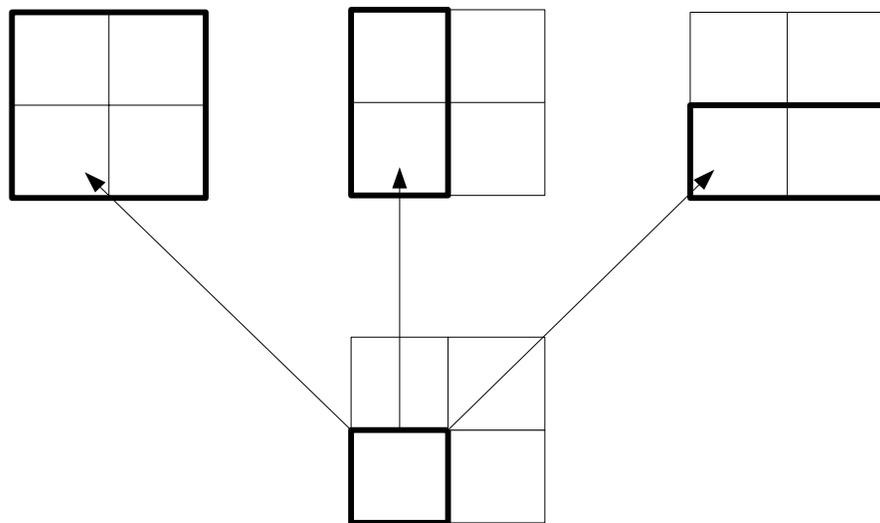
Table 14.10: The CSFs for a Traditional-dominated Channel B2C E-commerce in Thailand

The CSFs for E-commerce	Thaiticketmaster.com	Naiin.com
1. **Convenient website**	✓	✓
2. **E-commerce-related Technology (Internet connection and online security)**	*	*
3. **Online marketing (Large product selection and brand name)**	*	✓
4. **Customer relationship management (customer service)**	*	*
5. **Order fulfillment (Delivery)**	*	*
6. **Information/product/service-flow improvement (supporting back-end system)**	✓	✓
7. **Trust**	✓	✓

Information/product/service flow improvement.

The researcher found that a number of Thai e-commerce ventures believed that a website was e-commerce. The lack of understanding/knowledge about e-commerce causes Thai e-commerce ventures to ignore back-end systems that support e-commerce. Good supporting back-end operation allows an e-commerce company to effectively respond to the front-end system or website that serves customers over the Internet. It also allows a company to streamline its online order and fulfillment processes. It was found that supporting back-end operation is critical to the success of traditional-dominated channel B2C e-commerce in Thailand. One possible explanation is that the online business volume was still small for traditional-dominated channel B2C e-commerce. The main focus of these e-commerce companies was still on its traditional channels. In order to fulfill online orders and provide good online service to customers without investing extra effort and resources on the online channel, it is critical for these companies to use their existing back-end operations to support their e-commerce.

Dimension Eight (Online-dominated Channel B2B E-commerce)

Based on Figure 14.2, the eighth dimension represents online-dominated channel B2B e-commerce. An online-dominated channel B2B e-commerce is a subset of the global analysis, the third dimension (a B2B e-commerce), and the forth dimension (an online-dominated channel e-commerce) as shown in Figure 14.9. Table 14.11 lists the CSFs for online-dominated channel B2B e-commerce, which are the same as CSFs for e-commerce in Thailand (Table 14.4), B2B e-commerce (Table 14.6), and online-dominated channel e-commerce (Table 14.7).

Figure 14.9: Eighth Dimension – Online-dominated Channel B2B E-commerce
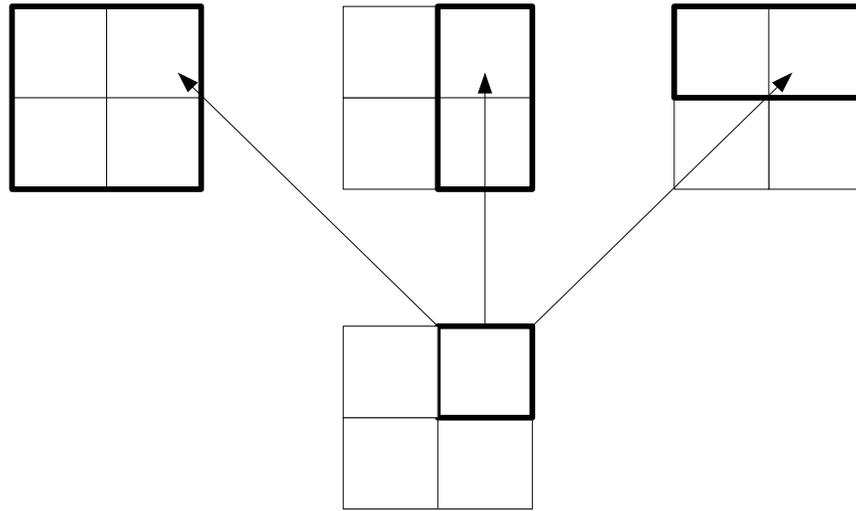
Table 14.11: The CSFs for an Online-dominated Channel B2B E-commerce in Thailand

The CSFs for E-commerce	SCG	Pantavanij
1. **Strategic business formulation (Value proposition)**	✓	
2. **Convenient website**	✓	✓
3. **E-commerce-related Technology (Internet connection and online security)**	✓	
4. **Online marketing (Large product selection and brand name recognition)**	*	*
5. **Customer relationship management (Customer service)**	✓	*
6. **Order fulfillment**	✓	*
7. **Management support**	✓	*
8. **Trust**	✓	✓

Dimension Nine (Traditional-dominated Channel B2B E-commerce)

Based on Figure 14.2, the ninth dimension represents traditional-dominated channel B2B e-commerce. Traditional-dominated channel B2B e-commerce is part of the global analysis, the third dimension (a B2B e-commerce), and the fifth dimension (a traditional-dominated channel e-commerce) as shown in Figure 14.10. Table 14.12 shows CSFs for traditional-dominated channel B2B e-commerce, which are the same as CSFs for e-commerce in Thailand (Table 14.4), B2B e-commerce (Table 14.6), and traditional-dominated channel e-commerce (Table 14.8).

Figure 14.10: Ninth Dimension – Traditional-dominated Channel B2B E-commerce

B2C
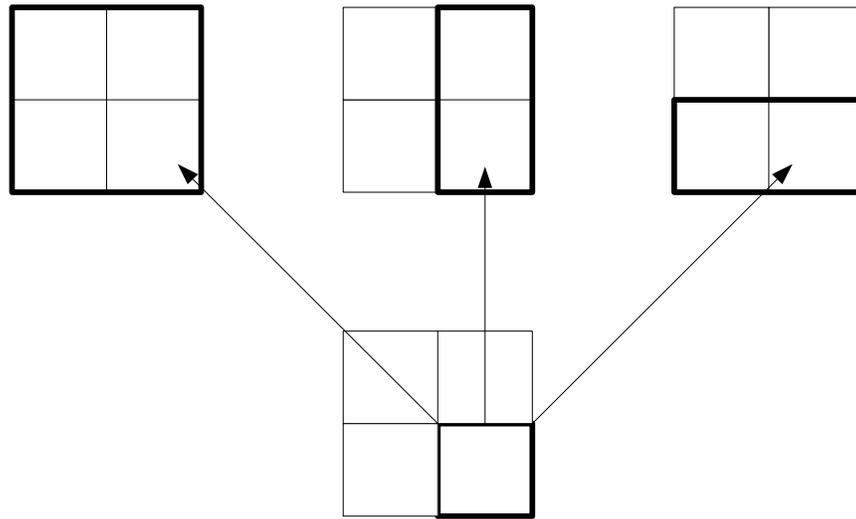
Table 14.12: The CSFs for Traditional-dominated Channel B2B E-commerce in Thailand

The CSFs for E-commerce	Officemate	Online-dominated channel
1. **Strategic business formulation** (Value proposition)	✓	✓
2. **Convenient website**	✓	✓
3. **E-commerce-related Technology** (Internet connection and security)	*	
4. **Online marketing** (Large product selection and brand name recognition)	*	*
5. **Customer relationship management** (Customer service)	*	*
6. **Order fulfillment (Delivery)**	✓	✓
7. **Management support**	✓	
8. **Trust**	✓	

Traditional-dominated channel

Analysis of Findings – Research Question 1

Figure 14.11 shows the CSFs for e-commerce found in each dimension of a 2x2 matrix. First,

qualified human resources was found to be critical to the success of online-dominated channel B2C e-

commerce firms because Thailand lacked qualified IT personnel with experience in e-commerce systems

development. In 2002, a NECTEC[2] study of IT personnel requirements in Thailand revealed that Thailand

was short of IT personnel in every area, including telecommunication, database, and e-commerce ("*Internet*

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[2] National Electronics and Computer Technology Center

User Profile", 2003). In 2002, the total number of IT personnel in Thailand was approximately 78,000. Of this number, only 3,605 or 4.6 percent were web programmers and webmasters. The same study also found that existing IT personnel lacked quality and skill. Another NECTEC report revealed that Thailand had 6,460 websites in 2002 ("*Internet User Profile*", 2003). Due to the country's low economic growth, the study predicted that the number of IT personnel would likely reach 122,110 by 2007. If web programmers and webmasters increased at the same rate, they would increase to 5,617 in 2007. Based on the NECTEC study, it was clear that qualified IT personnel with experience in e-commerce systems development were in high demand. This factor is critical to online-dominated channel B2C e-commerce ventures because they are usually start-up companies with limited capital resources to hire qualified IT personnel with skill and experience in e-commerce.

Figure14.11: A 2x2 Matrix and the CSFs for E-commerce in Thailand
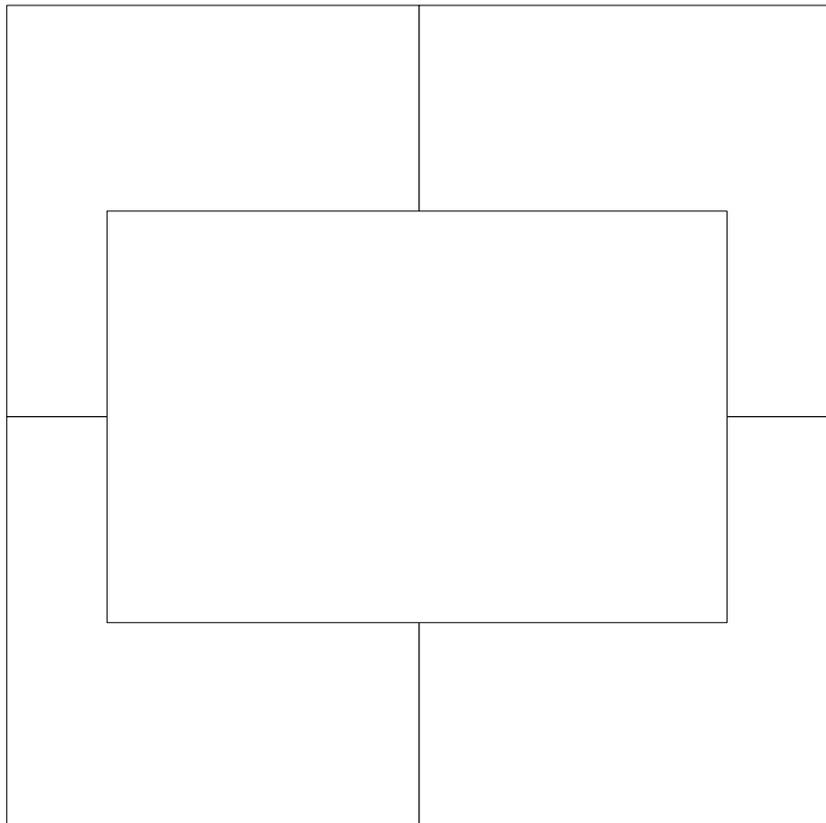
Second, management support was critical to the success of online-dominated channel e-commerce and B2B e-commerce. The finding from the within-case analysis also indicated that successful e-commerce in Thailand must address critical success factors for e-commerce in Thailand, as well as the key requirements of its industry. This finding also raises the need for personnel or a team that possesses strong industry experience and knowledge to carry out e-commerce business successfully. Since Thailand still lacks qualified human resources with experience in the areas of e-commerce business, the role and skills of managers are central to carrying out e-commerce businesses successfully. A company relies on top management's industry experience and e-commerce knowledge to guide the development of an e-commerce business model that fits both industry requirements and the current stage of e-commerce development in Thailand. Moreover, an e-commerce project often requires changes in business processes or the way a company does businesses. Top management plays a critical role to promoting and supporting the implementation of e-commerce systems across organizations, and overcoming resistance to change within the organization. While management support seems critical to the success of all e-commerce companies, the study does not suggest that it was critical to the success of traditional-dominated channel B2C e-commerce.

Third, a clear value proposition was found to be critical to the success of B2B e-commerce. Unlike consumers who go online shopping for pleasure, business clients will not adopt online services unless they perceive clear value for their businesses, such as improving business processes or lowering administrative costs. This finding is supported by the report of B2B e-commerce in Asia-Pacific conducted by IDC[3]. According to Richardson, the author of the report, the major driver of B2B adoption is the lowering of administrative costs for buying and selling activities (Mahoney, 2001). Jacobson added the need to reduce the cost of doing businesses as a key benefit in driving the adoption of B2B (Mahoney, 2001).

Having a clear value proposition was critical, as was the ability to articulate such value to business clients. Business clients that are large enterprises or international corporations in Thailand are more likely to have knowledge in e-commerce. Thus, it would not be challenge for an e-commerce firm to convince them the value of an online service to their businesses. However, the majority of Thai businesses are small-

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[3] IDC is the premier global market intelligence and advisory firm in the information technology and telecommunications industries

to-medium enterprises (SMEs), which are more likely to lack understanding and awareness of e-commerce. According to ACTETSME[4], Thailand had more than 850,000 SMEs which represented over 90 percent of the total enterprises in Thailand. A Price Waterhouse Coopers study of SME Electronic Commerce in Asia Pacific in 1999 showed that one of the inhibitors to the adoption of e-commerce for SMEs from the low GNP economics countries such as Thailand such companies from low GNP countries like Thailand was the limitation of understanding and awareness of e-commerce (*APEC's SME*, 1999). Another inhibitor was that such companies were not convinced of the benefits of e-commerce to their organizations due to the lack of success stories in their countries (*APEC's SME*, 1999). Thus, it is challenge for B2B e-commerce firms in Thailand to have not only clear value of their online service, but also ability to clearly articulate such value to such business clients.

Forth, it was also found that a supporting back-end operation was critical to the success of traditional-dominated channel B2C e-commerce firms. A well-designed back-end operation helps an e-commerce firm effectively respond to the front-end system or e-commerce website. It helps streamline online orders and the fulfillment processes. However, since the number of online consumers is still limited, it was critical for a traditional-dominated channel B2C e-commerce firm to use its existing back-end operation to support an e-commerce business in order to lower the operating costs of the online channel.

Next, this study reveals six main common CSFs for e-commerce in Thailand. These factors include convenient websites, e-commerce-related technologies (Internet connection and online security), online marketing (large product selection and brand name recognition), customer relationship management, order fulfillment, and trust. However, the researcher observed that convenient website and trust are actually core CSFs that require support by other factors as shown in Figure 14.12.

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[4] ACTETSME is the APEC Center for Technology Exchange and Training for Small and Medium Enterprises

Figure 14.12: Relationship among the CSFs for an E-commerce Companies in Thailand
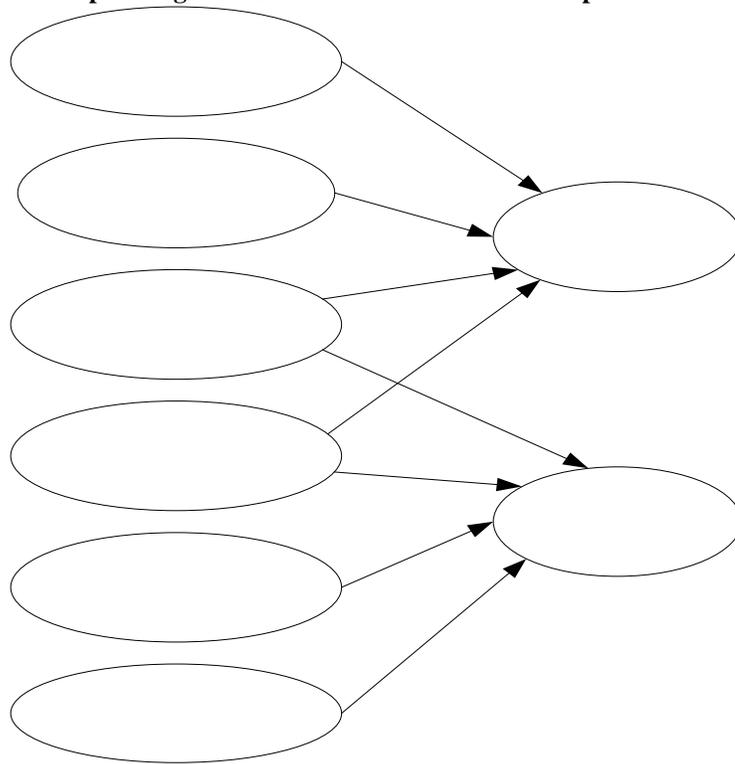
Regarding the convenient website factor, due to the convenience of traditional shopping in Thailand, the majority of Thai customers still prefer traditional shopping to online shopping. Thai business clients also prefer placing orders directly with sale personnel through phone, fax, or in person because it was easy and quick. Direct communication also allows for price negotiations. The researcher observed that the major advantage of traditional shopping in Thailand is customer service. Thai customers love to receive good customer service when they shop as do business clients when placing orders directly through sale personnel. This kind of behavior is embedded within the Thai culture and can be best explained by Hofstede (1991)'s national culture dimension. According to Hofstede (1991), Thailand receives 64 on the 100-point scale of the power distance index (PDI)[5]. In short, the power distance is indicative of a high level of inequality within a society (Hofstede, 1991). Hofstede explained that this inequality is not necessarily forced upon the population, but rather accepted by the society as a part of its cultural heritage. This helps

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[5] With the PDI of 64, Thailand is ranked 21, which is considered very high compared to other countries. Compared to Thailand, the US received 40 of PDI. It was ranked at number 38.

explain why service plays an important role in Thai businesses. Thai consumers and Thai business clients enjoyed the feeling of receiving service from a sales force. Online shopping and online service, however, is a self-service process. Hofstede (1991) also gave Thailand 20 on the 100-point scale of the individualism index (IDV)[6]. In brief, individualism is the extent to which members of society look after their own interests rather than those of the group. A low score, as Thailand has, indicates that Thai society is more collectivist than individualist. Internet shopping, compared to traditional shopping, is more individualistic and impersonal. This helps explain why online shopping is not popular in Thailand.

To encourage Thai consumers to shop at a website or business clients to adopt an online service, an online merchant must be able to provide a convenient website. A website name must be easy to recognize. Thai customers still lack awareness of Thai e-commerce websites because they are inexperienced in Internet use. They are unlikely to spend time on a search engine to find a Thai website at this stage of e-commerce development. Instead, online merchants must promote their brand names through different online and offline media in order to reach their target customers. Websites must then be easy to navigate. Products and information must be easy to find. Online transaction processing must be easy and require only a few steps. A large product selection not only attracts customers to a website, but also provides product search that is convenient for customers. Moreover, an online merchant must be able to deliver customer service that creates interaction between the customers and the company. This convenience must begin from the moment that a customer begins trying to access the website. The choice of Internet connection also affects the speed in which a customer can access a website. An online merchant must try to find the best available Internet connection providers to ensure that Thai customers can access the website rapidly.

These findings are supported by the Internet user profile of Thailand[7] described by NECTEC in 2003. Its survey revealed and ranked the reasons that prevent respondents[8] from online shopping (Table

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[6] With the DVI of 20, Thailand is ranked 20, which is considered low compared to other countries. Compared to Thailand, the US received 91 of DVI. It was ranked at number 1.

[7] The survey received 21,049 responses from Thai Internet users.

[8] Out of 20,376 participants of this survey question, 4,263 participants (20.9 percent) made online purchase at least once, and 16,113 participants (79.1 percent) never made an online purchase. The survey, however, asked participants who never bought a product online to choose 1-3 reasons that prevented them from online shopping.

14.13). The highlighted items in Table 14.13 show that half of the top ten findings cause inconvenience for online shoppers. Approximately 52 percent of respondents said that they cannot see or feel products before they buy. About 34 percent of respondents said that web processes are too complicated. Approximately 17 percent of respondents do not have credit cards. About 13 percent of respondents do not want to wait for delivery. Approximately nine percent of respondents lack awareness of Thai websites.

Table 14.13: Reason against Internet Purchase in Thailand

Reason against Internet Purchase	Frequency	Percent
1. Can't see/feel products	8,319	51.6
2. Don't trust merchandisers	7,660	47.5
3. Not interested	5,466	33.9
4. Processes are too complicated	5,007	31.1
5. Don't want to reveal credit card number	4,560	28.3
6. Don't have credit card	2,753	17.1
7. Concern for loss/damage	2,673	16.6
8. Don't want to wait for delivery	2,020	12.5
9. Expensive	1,499	9.3
10. Don't know websites for shopping	1,377	8.5
11. Don't want to buy import products	789	4.9
12. No interesting products	636	3.9
13. Others	229	1.4

(Source: Internet User Profile of Thailand 2003, p.79)

The survey also revealed and ranked perceived problems concerning the Internet in Thailand (Table 14.14). Some of these problems cause inconvenience for online shoppers. For 59 percent of respondents, the slow speed of the Internet is the number one problem concerning the Internet in Thailand. Approximately 19 percent of respondents perceived difficulty in finding a website and believed that the network was unreliable.

Table 14.14: Perceived Problems Concerning the Internet in Thailand[9]

Perceived Problems	Frequency	Percent
1. Speed	12,421	59.0
2. Virus	9,614	45.7
3. Junk mail	6,262	29.7
4. Pornography	4,556	21.6
5. Expenses	4,304	20.4
6. Web Search (Difficult to find a website)	4,003	19.0
7. Network reliability	3,905	18.6
8. Data integrity	3,883	18.4
9. Language	3,584	17.0
10. Impolite/inappropriate content	3,133	14.9
11. Lack of law for web-based business transaction	2,506	11.9
12. Hacking	2,174	10.3
13. Commercial use of Internet	1,319	6.3
14. Digital divide	804	3.8
15. Social Isolation	758	3.6
16. Cultural Dominance	756	3.6
17. Others	193	0.9

(Source: Internet User Profile of Thailand 2003, p.70-71)

Regarding the need for trust, Thai consumers do not trust online merchants that are unfamiliar to them. They are concerned with the capability of online merchants to fulfill orders as promised. Thai customers frequently hear about online fraud, which undermines their confidence in the Internet. At the same time, they do not have confidence in Thailand's legal system or trust in Thai banks to protect them from online fraud. They are concerned with the trustworthiness of online merchants and their capability to protect their information from outsiders. For Thai customers, online purchasing is still considered a high risk process. The lack of trust prevents them from online shopping or from adopting online services.

Trust also plays a critical role in providing online service to business clients. For business clients, the risk of using an online service is high because some e-commerce services require certain levels of system integration or process change. In many cases, a business client has to commit itself to the service of a single online merchant. With limited knowledge and understanding of e-commerce businesses, Thai business clients want to ensure that the online merchant is capable of delivering high quality online services including fulfilling orders, delivering products online, providing great customer support, and offering a secure website. The lack of trust in an online merchant and its online shopping process can also be explained by Hofstede (1991)'s uncertainty avoidance index (UAI). Hofstede (1991) gave Thailand 64 out

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[9] Based on 21,049 respondents.

of 100-point scale of the UAI[10]. In brief, uncertainty avoidance indicates the society's low level of tolerance for uncertainty. In an effort to minimize or reduce this level of uncertainty, society tries to control everything in order to eliminate or avoid the unexpected. As a result of this high uncertainty avoidance characteristic, the society does not readily accept change and is risk averse. Online shopping or online service requires new behaviors that could be considered as risk-taking. With the increasing number of online fraud news, online shopping or online service is perceived as a high risk-taking process.

In order to establish trust, brand name recognition, online security, order fulfillment, and customer relationship management becomes critical to the success of e-commerce in Thailand. Brand name recognition not only helps Thai customers to find a website easier, but also builds customer confidence in the presence and trustworthiness of the online merchant. Online security gives Thai customers a piece of mind that their information will be protected. More importantly, it was the quality of an online merchant's service that establishes long term trust with customers. An online merchant must be able to deliver quality of the products/services as promised on its website. In addition, products should be available and delivered in a timely manner. At the same time, customer relationship management using responsive before-and-after sale service/support helps establish a customers' trust in the online merchant's service quality. Strong service quality, in turn, helps establish an online merchant's strong reputation to customers.

This finding is also supported by the same study from NECTEC. It showed that the lack of trust in an online merchant was ranked as the second most critical reason preventing Thai customers from online purchasing. Table 14.13 shows that 48 percent of respondents lacked trust in online merchants. The survey also showed that 28 percent of respondents were uncomfortable revealing credit card numbers. About 17 percent of respondents distrusted delivery services. They were concerned about loss and damage of products during the delivery.

The NECTEC survey also revealed problems relating the Internet in Thailand (Table 14.14). Approximately 46 percent of respondents were concerned about viruses. About 12 percent of respondents felt that there were insufficient laws protecting web-based business transactions. About 10 percent of respondents identified the hacking as a problem. The same study by Price Waterhouse Coopers also

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[10] With the UAI of 64, Thailand is ranked at number 30, which is considered very high compared to other countries. Compared to Thailand, the US received 43 of DVI. It was ranked at number 46.

revealed that trust and confidence were major inhibitors to the adoption of e-commerce by SMEs in low

GNP countries like Thailand ("*APEC's SME*", 2002). Security, legal concerns, and liability issues were all

identified as critical concerns for SMEs. The study explained that the lack of knowledge about online

security technologies and the inadequate legal infrastructure for e-commerce were major barriers to SME

adoption of an online service.

Research Question 2 – What are the Key Industry Requirements for an E-commerce in Thailand?

The intent of the second research question was to identify key industry requirements for an e-

commerce company in Thailand. Each case company company was asked to identify key requirements of

an e-commerce company in five areas. The second research question and its sub-research questions are as

follow:

Research question 2: What are key requirements that all e-commerce companies must have in

order to enter the industry?

2.1.   What are product/service values that customers look for in the industry?

2.2.   What are product/service values that competitors offer in the industry?

2.3.   What are the Industry regulation and standard?

2.4.   What are resources required by any e-commerce companies in the industry?

2.5.   What are technologies required by any e-commerce companies in the industry?

The ultimate goal of the second research question was to identify those key industry requirements

within each dimensions of a 2x2 matrix (Figure 14.2). The researcher will replicate the analysis approach

used in the first research question. The researcher will discuss the 2x2 matrix in the following order: (1) the

whole 2x2 matrix, (2) the B2C dimension, (3) the B2B dimension, (4) the online-dominated channel

dimension, (5) the traditional channel dimension, and (6 to 9) each individual quadrant of the 2x2 matrix.

The discussion moves from the global discussion to the smaller subsets of the matrix. Key

industry requirements for e-commerce found in a larger dimension also exist in a smaller dimension and

need not be repeated in discussions. Only key industry requirements that are unique to each subset will be

further discussed. However, as found in the in-case analysis chapter, some key industry requirements for e-

commerce companies are closely aligned with CSFs for e-commerce in Thailand. Based on this finding,

those key industry requirements that aligned to CSFs for e-commerce in Thailand, as discussed in the

analysis of research question one, have already been discussed in the previous section and will not be

repeated. Only key industry requirements that have not been previously discussed will be included in this

analysis. This approach allows the researcher to not only avoid repeating prior discussions, but also clearly

identifies unique key industry requirements for each dimension of a 2x2 matrix.

Table 14.15 shows the key requirements for e-commerce companies using the five key industry

requirement categories included in this study. To be considered as a key industry requirement for e-

commerce, a factor must be selected by at least two case study companies[11] within each quadrant involved

in the dimension of analysis.

Table 14.15: The Key Industry Requirements for E-commerce in Thailand from Nine Case Study Companies

The Key Industry Requirements for E-commerce in Thailand	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Customer Requirements									
1. **Trust worthy websites**	✓	*	✓	✓	*	✓	*	✓	✓
2. **Secured online transaction**	*	*	*	*	✓	✓	*	*	*
3. **Risk management**				✓					
4. **Good customer service/support**	✓	✓	✓	✓	✓	✓	*	✓	*
5. **Internet-related skill (training)**						✓			
6. **Availability**	✓	✓	✓	✓	✓	✓		✓	✓
7. **Logistics/delivery**		✓	✓	✓	✓	✓		✓	✓
8. **Gemstone quality**		✓							
9. **Convenient website**	*	✓	✓	✓	✓	✓	*	✓	✓
10. **Rich content**	✓				✓				
11. **Traveling-related services**	✓								
12. **Awareness of e-commerce value**						✓	*	✓	✓
13. **Cost saving**							✓		
14. **Procurement/purchasing**							✓		

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[11] It was required at least two case studies in each involved quadrant of a dimension because the first quadrant of the 2x2 matrix has three case studies (HotelThailand.com, Thaigem.com, and Tohome.com), while other quadrants have only two case studies. However, there is another two exceptions.

The Key Industry Requirements for E-commerce in Thailand	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
process improvement									
15. Alternative solutions for inefficient e-commerce-related infrastructure**							✓		
Competitive Requirements									
16. Target market	✓	✓	✓						
17. Product positioning						✓			
18. Competitive online marketing		✓							
19. Large product selection • Power buyers (large number of buyers) • Large number of suppliers • Sole ticket distributor	✓	✓	✓	✓	✓	✓	✓	✓	✓
20. Brand name IT product									✓
21. Competitive product/service price	✓	✓	✓	✓	✓	✓	✓	✓	✓
22. Strong ticket distribution channel				✓					
23. Advertising/promotion	✓	*	*	*	*	*	*	✓	✓
24. Management support • Domain knowledge	✓	✓	✓	✓		✓	✓	✓	✓
25. Supplier relationship	✓		✓	✓					
26. Strong dealer network						✓			
27. Competitive first mover advantage	✓								
28. Competitive responsiveness	✓								
29. Know-how (strategic procurement/sourcing)							✓		
30. Performance measurement							✓		
Resources Requirements									
31. Investment	✓	✓							
32. Gemstone production		✓							
33. IT personnel	✓	*	✓	✓			✓	✓	
34. Qualified personnel		✓					✓		
35. Strong customer service team		*	✓		✓				
36. Strong merchandising team			✓						
37. Strong sales force					✓		✓	*	✓	✓
Technical Requirements									
38. E-commerce system with supporting back-end operation	✓	✓		✓	✓	✓	✓	✓	✓
Regulations									
39. Gemstone import/export		✓							

The Key Industry Requirements for E-commerce in Thailand	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
regulation									
40. **Government certified e-auction service provider**							✓		
41. **Price regulation**			✓						
42. **Anti-trust law**						✓			

✓   These factors are identified directly by the case study companies that they are key requirements of their industries.

*   These factors are not identified directly by the case study companies that they are key requirements of their industries, but based on their explanation, these factors are the main reasons that influence other key industry requirements. For example, Trust is the reason behind order fulfillment (delivery), customer service, online security, and brand name (brand name advertising). Convenient website is the reason behind Internet connection, and large product selection.

Dimension One: Global Analysis (2x2 Matrix)

Based on Table 14.15, Table 14.16 lists the key industry requirements for e-commerce companies in Thailand. Except for competitive price requirement and supporting back-end operation, other key industry requirements for an e-commerce in Thailand were covered in the analysis of research question one (Table 14.4). Thus, only competitive price and back-end support systems need to be discussed here.

Competitive price.

It was found that price is commonly used by e-commerce companies to compete within the industries studied in Thailand. In the online tourism industry, most online competitors had a similar selection of hotels/resorts. Thus, online tourism companies tried to compete with low price to attract customers. Moreover, Thai customers love to negotiate price, and, thus, an online tourism company that targets Thai customers must offer low prices to attract Thai customers. The online gemstone industry bypasses gemstone wholesalers and retailers, and, thus, is able to offer much lower prices than gem and jewelry retailers. In the retail industry in Thailand, online retailers try to encourage Thai customers to make online purchases by offering competitive prices. Since Thai customers love bargains, competitive prices can be used to compensate for the lack of trust in online merchants and to overcome the fear of online shopping. After customers have a positive experience in online shopping with an online merchant, they are

more likely to return to the online merchant in the future. As for the ticket distribution industry, a concert promoter sets the ticket prices, not the online ticket distributor. However, an online ticket distributor competes with other ticket distributor with a service fee/commission fee charged to the promoter. For the online bookstore industry, books and magazines can be found in any number of convenient stores or news stands. Thus, competitive price is a major tool for an online bookstore to attract Thai customers. An online bookstore has the advantage of lower operating costs, and, thus, is able to offer competitive prices. For the cement and building material distribution industry, products are usually similar from one manufacturer to another. So, competition is often based on price. Moreover, a dealer often buys products in large quantities and requires discounts from a manufacturer in order to compete with other dealers. For the e-procurement industry, due to the increasing number of e-auction service providers in Thailand, competitors have begun to lower their service fees to compete. For the stationary industry, there are both stationery wholesalers and retailers in the market. Moreover, stationery and office supply products are similar. Thus, retailers and business clients that always buy stationery products in bulk have bargaining power to negotiate prices. Thus, it was common that the majority of stationery wholesalers and retailers compete on price.

Table 14.16: The Key Industry Requirements for an E-commerce in Thailand

The Key Industry Requirements for an E-commerce in Thailand	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Customer Requirements									
1. **Trust worthy websites**	✓	*	✓	✓	*	✓	*	✓	✓
2. **Secured online transaction**	*	*	*	*	✓	✓	*	*	*
3. **Good customer service/support**	✓	✓	✓	✓	✓	✓	*	✓	*
4. **Convenient website**	*	✓	✓	✓	✓	✓	*	✓	✓
Competitive Requirements									
5. **Large product selection** • **Power buyers (large number of buyers)** • **Large number of suppliers** • **Sole ticket distributor**	✓	✓	✓	✓	✓	✓	✓	✓	✓
6. **Competitive product/service price**	✓	✓	✓	✓	✓	✓	✓	✓	✓
7. **Advertising/promotion**	✓	*	*	*	*	*	*	✓	✓

The Key Industry Requirements for an E-commerce in Thailand	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Technical Requirements									
8. **E-commerce system with supporting back-end operation**	✓	✓		✓	✓	✓	✓	✓	✓

Table 14.17: Comparison of the CSFs for E-commerce in Thailand and the Key Industry Requirements of an E-commerce in Thailand

The CSFs for e-commerce in Thailand (Table 14.4)	The key industry requirements of an e-commerce in Thailand (Table 14.16)
1. Convenient website	• Convenient website • Large product selection • Advertising/promotion
2. E-commerce-related Technology (Internet connection and online security)	• Secured online transaction
3. Online marketing (Large product selection and brand name recognition)	• Competitive online marketing • Large product selection • Advertising/promotion
4. Customer relationship management	• Good customer service/support
5. Trust	• Trustworthy website • Advertising/promotion • Good customer service/support

E-commerce system with a supporting back-end operation.

It was found that a supporting back-end operation is one of the key technical requirements of these industries. E-commerce systems integrated with a supporting back-end operation can serve large business volumes effectively because online orders are quickly and accurately processed. It can quickly update product information such as price, specification, and availability. Such systems integration allows customers to be better served because they can provide transaction-related information, such as order confirmations, product availability, and shipping information, to customers.

The researcher observed that integrated e-commerce systems are critical to companies with large volumes of online orders and/or companies that offer large product selections. For examples, both Thaigem.com and HotelThailand.com target foreign customers. They have large business volumes. At the same time, Thaigem.com competes by offering a large gemstone selection. HotelThailand.com offers a

large hotel and resort selection. The business volume of Tohome.com continues to increase. It also offers large product selection. Naiin.com offers large book and magazine selection. Thaiticketmaster serves a large number of customers at a time during each period of ticket sales. SCG (Siam Cement) serves a large number of vendors. At the same time, it offers a large selection of cement and building material products. Pantavanij.com has a large pool of buyers and suppliers that offer a variety of products/services through its e-marketplace website. Officemate also offers a large selection of stationery and office supply products. Value offers a large selection of IT products.

However, each industry has its own unique business operation. For example, a gems store business does not operate like a tourism business. While front-ends or websites of an online gems store and an online tourism service may have similar functions, such as a shopping cart and online payment functions, their supporting back-end systems are not the same. Thus, it is critical for each e-commerce company to develop a supporting back-end system that is well designed to not only support its website, but to also fit the value chain and operating requirements of its industry.

Dimension Two (B2C E-commerce)

Based on figure 14.2, the second dimension is B2C e-commerce. The B2C e-commerce dimension is a subset of the global analysis (Figure 14.13). The shaded items shown in table 14.18 highlight two unique key industry requirements of a B2C e-commerce differ from the key industry requirements for e-commerce in Thailand (Table 14.16). These unique key industry requirements for a B2C e-commerce are availability and logistics/delivery. However, both of these requirements match the CSFs for a B2C e-commerce in Thailand (Table 14.6). Table 14.19 shows key industry requirements of a B2C e-commerce that are aligned to CSFs for a B2C e-commerce in Thailand. Thus, these key industry requirements need not be discussed again.

Figure 14.13: Second Dimension – B2C E-commerce
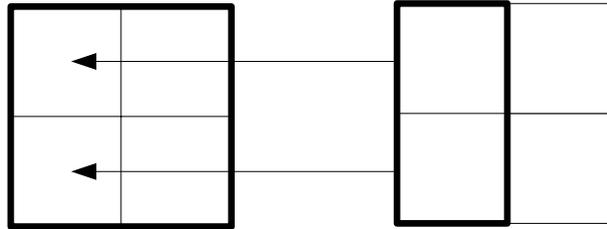
Table 14.18: The Key Industry Requirements for a B2C E-commerce in Thailand

The Key Industry Requirements for a B2C E-commerce in Thailand	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com
Customer Requirements					
1. **Trust worthy websites**	✓	*	✓	✓	*
2. **Secured online transaction**	*	*	*	*	✓
3. **Good customer service/support**	✓	✓	✓	✓	✓
4. **Availability**	✓	✓	✓	✓	✓
5. **Logistics/delivery**		✓	✓	✓	✓
6. **Convenient website**	*	✓	✓	✓	✓
Competitive Requirements					
7. **Large product selection** • **Power buyers (large number of buyers)** • **Large number of suppliers** • **Sole ticket distributor**	✓	✓	✓	✓	✓
8. **Competitive product/service price**	✓	✓	✓	✓	✓
9. **Advertising/promotion**	✓	*	*	*	*
Technical Requirements					
10. **E-commerce system with supporting back-end operation**	✓	✓		✓	✓

Table 14.19: Comparison of the CSFs for a B2C E-commerce in Thailand and the Key Industry Requirements of a B2C E-commerce in Thailand

The CSFs for a B2C e-commerce in Thailand (Table 14.4)	The Key industry requirements of a B2C e-commerce in Thailand (Table 14.18)
1. Convenient website	• Convenient website • Large product selection • Advertising/promotion
2. E-commerce-related Technology (Internet connection and online security)	• Secured online transaction
3. Online marketing (Large product selection and brand name recognition)	• Competitive online marketing • Large product selection • Advertising/promotion
4. Order fulfillment	• Availability • Logistics/delivery
5. Customer relationship management	• Good customer service/support
6. Trust	• Trustworthy website • Advertising/promotion • Availability • Logistics/delivery • Good customer service/support

Dimension Three (B2B E-commerce)

Based on figure 14.2, the third dimension is B2B e-commerce. The B2B e-commerce dimension is a subset of the whole 2x2 matrix (Figure 14.14). The shaded items in table 14.20 highlight three unique key industry requirements of a B2B e-commerce that differ from key industry requirements for e-commerce in Thailand (Table 14.16). These unique key industry requirements for a B2B e-commerce are awareness of e-commerce value, management support, and strong sales force. However, it was found that awareness of e-commerce value and management support matches the CSFs for a B2B e-commerce in Thailand (Table 14.6). Table 14.21 shows key industry requirements of a B2B e-commerce that are aligned to CSFs for a B2B e-commerce in Thailand. Thus, strong sales force is the only unique key industry requirement for a B2B e-commerce.

Figure 14.14: Third Dimension – B2B E-commerce
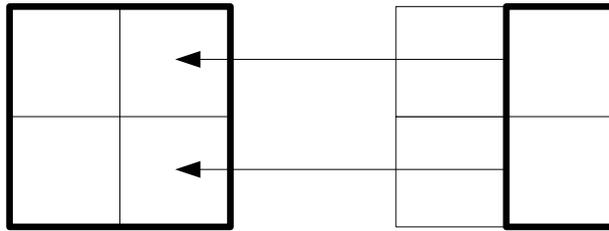
Table 14.20: The Key Industry Requirements for a B2B E-commerce in Thailand

The Key Industry Requirements for a B2B E-commerce in Thailand	SCG	Pantavanij	Officemate	Value System
Customer Requirements				
1. **Trust worthy websites**	✓	*	✓	✓
2. **Secured online transaction**	✓	*	*	*
3. **Good customer service/support**	✓	*	✓	*
4. **Convenient website**	✓	*	✓	✓
5. **Awareness of e-commerce value**	✓	*	✓	✓
Competitive Requirements				
6. **Large product selection** • **Power buyers (large number of buyers)** • **Large number of suppliers** • **Sole ticket distributor**	✓	✓	✓	✓
7. **Competitive product/service price**	✓	✓	✓	✓
8. **Advertising/promotion**	*	*	✓	✓
9. **Management support** • **Domain knowledge**	✓	✓	✓	✓
Resources Requirements				
10. **Strong sales force**	✓	*	✓	✓
Technical Requirements				
11. **E-commerce system with supporting back-end operation**	✓	✓	✓	✓

Table 14.21: Comparison of CSFs for a B2B E-commerce in Thailand and Key Industry Requirements of a B2B E-commerce in Thailand

The CSFs for a B2B e-commerce in Thailand (Table 14.6)	The key industry requirements of a B2B e-commerce in Thailand (Table 14.20)
1. Strategic Business Formulation (Clear value proposition)	• Awareness of e-commerce value
2. Convenient website	• Convenient website • Large product selection • Advertising/promotion
3. E-commerce-related Technology (Internet connection and online security)	• Secured online transaction
4. Online marketing (Large product selection and brand name recognition)	• Competitive online marketing • Large product selection • Advertising/promotion
5. Customer relationship management	• Good customer service/support
6. Management support	• Management support, domain knowledge
7. Trust	• Trustworthy website • Advertising/promotion • Good customer service/support

Strong sales force.

It was found that a sales force plays a critical role in the success of B2B e-commerce companies in their industries. Before having an e-commerce channel, a sales force provides the tool to reach business clients and build strong relationships. After having an e-commerce channel, the role of a sales force is even more important. The researcher observed that a sales force is able to promote an e-commerce service of the company to business clients. The sales force must be able to clearly articulate the value of online services to its clients. A sales force must encourage clients to use an online service. In the cement and building material product distribution industry, a strong dealer network is critical to the success of cement and building material product companies. A sales force is used to build strong relationships with dealers. SCG, for example, encourages dealers to place orders through its online service by themselves. They are willing to adopt an online service because the sales force is then freed from routine work. SCG uses its sales force to open new markets for dealers and provide marketing support to dealers. In an e-procurement industry, the majority of business clients in Thailand are SMEs. SMEs in Thailand still lack knowledge and understanding of e-commerce in general and e-procurement in particular. Both Pantavanij and Officemate use their sales forces to promote their e-procurement services. The sales force must be able to clearly articulate the meaning of e-procurement and how an e-procurement service can benefit the clients'

businesses. In the IT distribution industry, dealers still prefer placing orders through the sales force because

the process is easy and quick. Dealers also want to negotiate prices and promotions with the sales force.

Value, however, uses its online system to support its sales force in providing better service to dealers. The

sales force tries to encourage small-account dealers to place orders through an online system because its

sales force does not generally provide discounts or promotions for small orders. It was also faster for

dealers to place orders through an online service because they do not have to wait on phone lines to speak

with sale personnel.

Dimension Four (Online-dominated Channel E-commerce)

        Based on figure 14.2, the forth dimension is online-dominated channel e-commerce. An online-

dominated channel e-commerce dimension is a subset of the 2x2 matrix (Figure 14.15). Table 14.22 shows

the key industry requirements of an online-dominated channel e-commerce. The shaded items in the table

14.22 highlights management support as a unique key industry requirements of an online-dominated

channel e-commerce that differs from key industry requirements for e-commerce in Thailand (Table 14.16).

However, management support also matches the CSF for an online-dominated channel e-commerce in

Thailand (Table 14.7). Table 14.23 shows key industry requirements of a B2B e-commerce that are aligned

to CSFs for a B2B e-commerce in Thailand.

Figure 14.15: Forth Dimension – Online-dominated Channel E-commerce
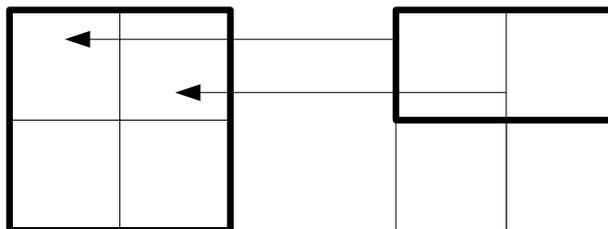
Table 14.22: The Key Industry Requirements for an Online-dominated Channel E-commerce in Thailand

The Key Industry Requirements for an Online-dominated Channel E-commerce in Thailand	HotelThailand.com	Thaigem.com	Tohome.com	SCG	Pantavanij
Customer Requirements					
1. **Trust worthy websites**	✓	*	✓	✓	*
2. **Secured online transaction**	*	*	*	✓	*
3. **Good customer service/support**	✓	✓	✓	✓	*
4. **Convenient website**	*	✓	✓	✓	*
Competitive Requirements					
5. **Large product selection** • **Power buyers (large number of buyers)** • **Large number of suppliers** • **Sole ticket distributor**	✓	✓	✓	✓	✓
6. **Competitive product/service price**	✓	✓	✓	✓	✓
7. **Advertising/promotion**	✓	*	*	*	*
8. **Management support** • **Domain knowledge**	✓	✓	✓	✓	✓
Technical Requirements					
9. **E-commerce system with supporting back-end operation**	✓	✓		✓	✓

Table 14.23: Comparison of the CSFs for an Online-dominated Channel E-commerce in Thailand and the Key Industry Requirements of an Online-dominated Channel E-commerce in Thailand

The CSFs for an online-dominated channel e-commerce in Thailand (Table 14.7)	The key industry requirements of a online-dominated channel e-commerce in Thailand (Table 14.22)
1. Convenient website	• Convenient website • Large product selection • Advertising/promotion
2. E-commerce-related Technology (Internet connection and online security)	• Secured online transaction
3. Online marketing (Large product selection and brand name recognition)	• Competitive online marketing • Large product selection • Advertising/promotion
4. Customer relationship management	• Good customer service/support
5. Management support	• Management support, domain knowledge
6. Trust	• Trustworthy website • Availability • Logistics/delivery • Advertising/promotion • Good customer service/support

Dimension Five (Traditional-dominated Channel E-commerce)

Based on Figure 14.2, the fifth dimension is traditional-dominated channel e-commerce. A traditional-dominated channel e-commerce dimension is a subset of the 2x2 matrix (Figure 14.16). The shaded item in Table 14.24 highlights two unique key industry requirements of traditional-dominated channel e-commerce that differ from key industry requirements for e-commerce in Thailand (Table 14.16). These unique key industry requirements are availability and logistics/delivery. However, these two requirements match the CSFs for a traditional-dominated channel e-commerce in Thailand (Table 14.8). Table 14.25 shows key industry requirements of a B2B e-commerce that are aligned to CSFs for a B2B e-commerce in Thailand.

Figure 14.16: Fifth Dimension – Traditional-dominated Channel E-commerce
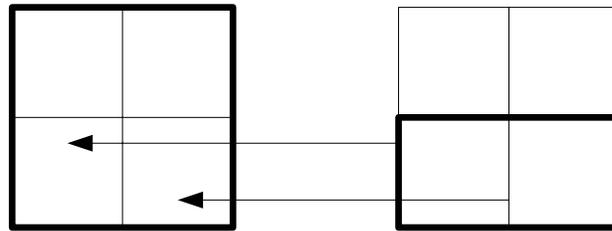
Table 14.24: The Key Industry Requirements for a Traditional-dominated Channel E-commerce in Thailand

The Key Industry Requirements for a Traditional-dominated Channel E-commerce in Thailand	Thaiticketmaster.com	Naiin.com	Officemate	Value System
Customer Requirements				
1. **Trust worthy websites**	✓	*	✓	✓
2. **Secured online transaction**	*	✓	*	*
3. **Good customer service/support**	✓	✓	✓	*
4. **Availability**	✓	✓	✓	✓
5. **Logistics/delivery**	✓	✓	✓	✓
6. **Convenient website**	✓	✓	✓	✓
Competitive Requirements				

The Key Industry Requirements for a Traditional-dominated Channel E-commerce in Thailand	Thaiticketmaster.com	Naiin.com	Officemate	Value System
7. **Large product selection** • **Power buyers (large number of buyers)** • **Large number of suppliers** • **Sole ticket distributor**	✓	✓	✓	✓
8. **Competitive product/service price**	✓	✓	✓	✓
9. **Advertising/promotion**	*	*	✓	✓
Technical Requirements				
10. **E-commerce system with supporting back-end operation**	✓	✓	✓	✓

Table 14.25: Comparison of the CSFs for a Traditional-dominated Channel E-commerce in Thailand and the Key Industry Requirements of a Traditional-dominated Channel E-commerce in Thailand

The CSFs for a Traditional-dominated channel e-commerce in Thailand (Table 14.8)	The key industry requirements of a Traditional-dominated channel e-commerce in Thailand (Table 14.24)
1. Convenient website	• Convenient website • Large product selection • Advertising/promotion
2. E-commerce-related Technology (Internet connection and online security)	• Secured online transaction
3. Online marketing (Large product selection and brand name recognition)	• Competitive online marketing • Large product selection • Advertising/promotion
4. Customer relationship management	• Good customer service/support
5. Order fulfillment	• Availability • Logistics/delivery
6. Trust	• Trustworthy website • Availability • Logistics/delivery • Advertising/promotion • Good customer service/support

Dimension Six (Online-dominated Channel B2C e-commerce)

Based on Figure 14.2, the sixth dimension is online-dominated-channel B2C e-commerce. An online-dominated channel B2C e-commerce is subset of the first dimension (the whole 2x2 matrix), the second dimension (a B2C e-commerce), and the forth dimension (an online-dominated channel e-commerce) (Figure 14.17). The shaded items in the Table 14.26 highlight four unique key industry

requirements of an online-dominated channel B2C e-commerce that differ from key industry requirements for e-commerce in Thailand (Table 14.16), key industry requirements for B2C e-commerce (Table 14.18), and key industry requirements for online-dominated channel e-commerce (Table 14.22). These unique key industry requirements for online-dominated channel B2C e-commerce are target market, supplier relationship, investment, and IT personnel. However, the IT personnel requirement matches the CSF for an online-dominated channel B2C e-commerce in Thailand (Table 14.9). Table 14.27 shows key industry requirements of an online-dominated channel B2C e-commerce that are aligned to CSFs for an online-dominated channel B2C e-commerce in Thailand. Thus, only target market, supplier relationship, and investment need be discussed here.

**Figure 14.17: Sixth Dimension - Online-dominated Channel B2C E-commerce**
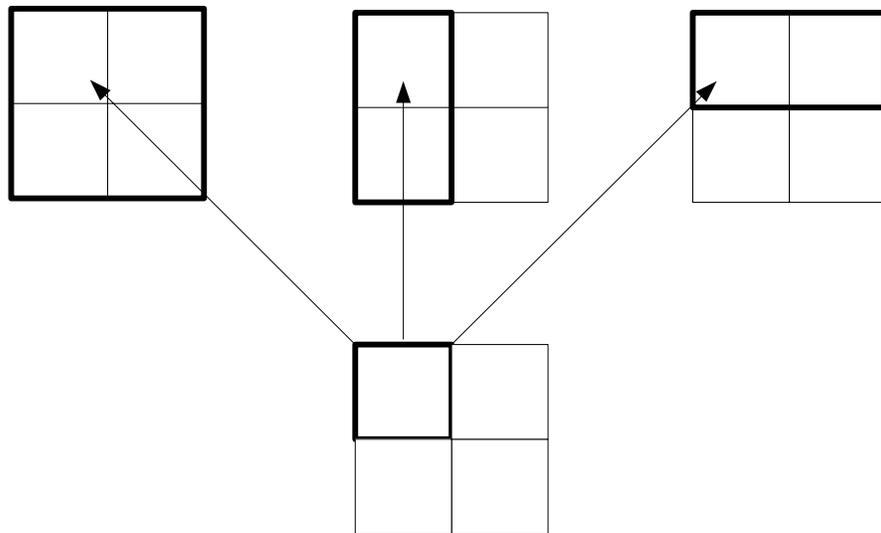
Table 14.26: The Key Industry Requirements for an Online-dominated Channel B2C E-commerce in Thailand

The Key Industry Requirements for an Online-dominated Channel B2C E-commerce in Thailand	HotelThailand.com	Thaigem.com	Tohome.com
Customer Requirements			
1. **Trust worthy websites**	✓	*	✓
2. **Secured online transaction**	*	*	*
3. **Good customer service/support**	✓	✓	✓
4. **Availability**	✓	✓	✓
5. **Logistics/delivery**		✓	✓
6. **Convenient website**	*	✓	✓
Competitive Requirements			
7. **Target market**		✓	✓
8. **Large product selection** • **Power buyers (large number of buyers)** • **Large number of suppliers** • **Sole ticket distributor**	✓	✓	✓
9. **Competitive product/service price**	✓	✓	✓
10. **Advertising/promotion**	✓	*	*
11. **Management support** • **Domain knowledge**	✓	✓	✓
12. **Supplier relationship**	✓		✓
Resources Requirements			
13. **Investment**	✓	✓	
14. **IT personnel**	✓		✓
Technical Requirements			
15. **E-commerce system with supporting back-end operation**	✓	✓	

Table 14.27: Comparison of the CSFs for an Online-dominated Channel B2C E-commerce in Thailand and the Key Industry Requirements of an Online-dominated Channel B2C E-commerce in Thailand

The CSFs for an online-dominated channel B2C e-commerce in Thailand (Table 14.9)	The key industry requirements of a online-dominated channel B2C e-commerce in Thailand (Table 14.26)
1. Convenient website	• Convenient website • Large product selection • Advertising/promotion
2. E-commerce-related Technology (Internet connection and online security)	• Secured online transaction
3. Online marketing (Large product selection and brand name recognition)	• Competitive online marketing • Large product selection • Advertising/promotion
4. Customer relationship management	• Good customer service/support
5. Order fulfillment	• Availability • Logistics/delivery

The CSFs for an online-dominated channel B2C e-commerce in Thailand (Table 14.9)	The key industry requirements of a online-dominated channel B2C e-commerce in Thailand (Table 14.26)
6. Qualified human resources	• IT personal
7. Management support	• Management support, domain knowledge
8. Trust	• Trustworthy website • Availability • Logistics/delivery • Advertising/promotion • Good customer service/support

Target market.

Having a clear target market is critical for e-commerce companies in Thailand that rely on online sale revenue as their main source of income. The majority of Thai customers are not online buyers yet. Without a clear target market, an online-dominated channel B2C e-commerce could easily fail. Tohome.com, an online retailer, for example targeted Internet users in Thailand first. By advertising its website through popular web communities, such as Panthip and Sanook, it successfully attracted Thai Internet users to its website. Thaigem.com, an online gemstone retailer, knew that the Thai market was too small and that Thai customers were not used to buying gemstones on the Internet. Thus, it targeted markets in foreign countries like North America and Japan.

Supplier relationship.

Business relationships play a critical role in Thai business. Strong supplier relationships allow an e-commerce company to offer better product selections, better prices, better promotions, and/or better service to customers. In the online tourism industry, strong relationships with hotels/resorts and wholesalers allowed an e-commerce firm to obtain better hotel/resort selections, larger room quotas, and better after-sales service provided by the hotels/resorts. In the retail industry, strong supplier relationships allow online retailers to have stronger negotiating power, which leads to better prices and promotions for customers. This condition is critical because the majority of Thai customers are still reluctant to shop online. To encourage Thai customers to shop online, e-commerce companies must be able to offer broad product selections, better prices, and better service than what customers can obtain at retail stores.

Investment.

While an online-dominated channel B2C e-commerce may not have the cost of operating physical retail stores, the cost of e-commerce operations is not cheap. Qualified IT personnel are highly sought after by e-commerce firms in Thailand, and thus e-commerce firms must be able pay top salaries to hire them. An e-commerce company must continually invest in maintaining and updating its e-commerce systems. Online marketing activities, including advertising through search engines, are also expensive. Moreover, some industries require large investments to acquire material resources or products. In the online gemstone industry, Thaigem.com, for example, invests heavily in gemstone procurement to ensure that it has products available at all times. In the online tourism industry, Hotelthailand.com, for example, spends a lot of money on both online and offline advertising. Its operating costs are also high because it relies on strong customer service support. Investment is especially critical to online-dominated B2C e-commerce companies because they are more likely to be start-up companies. Moreover, their only revenue source is from online sales, which may take several years before it can generate large revenue streams.

Dimension Seven (Traditional-dominated Channel B2C E-commerce)

Based on Figure 14.2, the seventh dimension is traditional-dominated-channel B2C e-commerce. A traditional-dominated channel B2C e-commerce is a subset of the first dimension (the whole 2x2 matrix), the second dimension (a B2C e-commerce), and the fifth dimension (a traditional-dominated channel e-commerce) (Figure 14.18). Table 14.28 shows key industry requirements of a traditional-dominated channel B2C e-commerce. It was found that key industry requirements of a traditional-dominated channel B2C e-commerce are the same as key industry requirements for e-commerce in Thailand (Table 14.16), key industry requirements for a B2C e-commerce (Table 14.18), and key industry requirements for a traditional-dominated channel e-commerce (Table 14.24).

Table 14.28: The Key Industry Requirements for a Traditional-dominated Channel B2C E-commerce in Thailand

The Key Industry Requirements for a Traditional-dominated Channel B2C E-commerce in Thailand	Thaiticketmaster.com	Naiin.com
Customer Requirements		
1. Trust worthy websites		
2. Secured online transaction	*	✓
3. Good customer service/support		
4. Availability	*	✓
5. Logistics/delivery	✓	✓
6. Convenient website	✓	✓
Competitive Requirements		
7. Large product selection	✓	✓
• Power buyers (large number of buyers)		
• Large number of suppliers		
• Sole ticket distributor		
8. Competitive product/service price	✓	✓
9. Strong ticket distribution channel	✓	
10. Advertising/promotion	*	*
Technical Requirements		
11. E-commerce system with supporting back-end operation	✓	✓

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Dimension Eight (Online-dominated Channel B2B E-commerce)

Based on figure 14.2, the eighth dimension is online-dominated-channel B2B e-commerce. An online-dominated channel B2B e-commerce is a subset of the first dimension (the whole 2x2 matrix), the third dimension (a B2B e-commerce), and the forth dimension (an online-dominated channel e-commerce) (Figure 14.19). Table 14.29 shows key industry requirements of online-dominated channel B2B e-commerce. It was found that key industry requirements of an online-dominated channel B2B e-commerce are the same as key industry requirements for e-commerce in Thailand (Table 14.16), key industry requirements for a B2B e-commerce (Table 14.20), and key industry requirements for an online-dominated channel e-commerce (Table 14.22).

Figure 14.19: Eighth Dimension – Online-dominated Channel B2B E-commerce
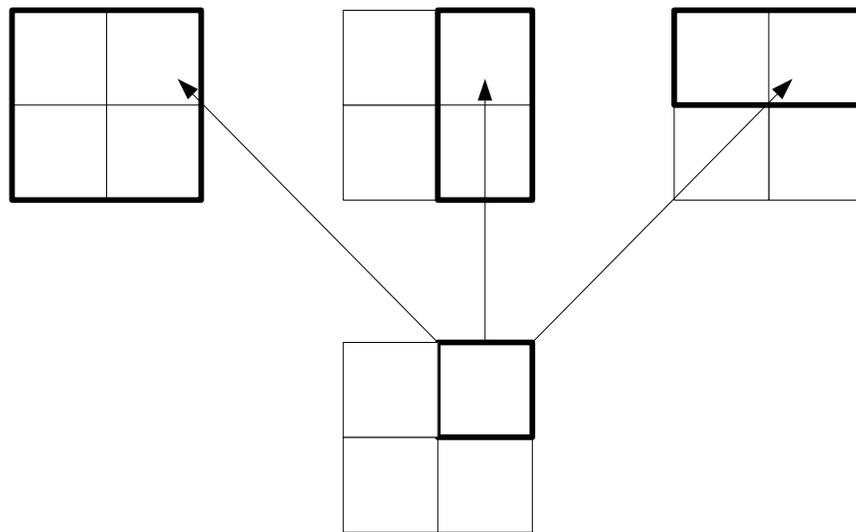
Table 14.29: The Key Industry Requirements for an Online-dominated Channel B2B E-commerce in Thailand

The Key Industry Requirements for an Online-dominated Channel B2B E-commerce in Thailand	SCG	Pantavanij
Customer Requirements		
1. **Trust worthy websites**	✓	*
2. **Secured online transaction**	✓	*
3. **Good customer service/support**	✓	*
4. **Convenient website**	✓	*
5. **Awareness of e-commerce value**	✓	*
Competitive Requirements		
6. **Large product selection** • **Power buyers (large number of buyers)** • **Large number of suppliers** • **Sole ticket distributor**	✓	✓
7. **Competitive product/service price**	✓	✓
8. **Advertising/promotion**	*	*
9. **Management support** • **Domain knowledge**	✓	✓
Resources Requirements		
10. **Strong sales force**	✓	*
Technical Requirements		
11. **E-commerce system with supporting back-end operation**	✓	✓

Dimension Nine (Traditional-dominated Channel B2B E-commerce)

Based on Figure 14.2, the ninth dimension is traditional-dominated-channel B2B e-commerce. A traditional-dominated channel B2B e-commerce is a subset of the first dimension (the whole 2x2 matrix), the third dimension (a B2B e-commerce), and the fifth dimension (a traditional-dominated channel e-commerce) (Figure 14.20). Table 14.30 shows key industry requirements of a traditional-dominated channel B2B e-commerce. It was found that key industry requirements of a traditional-dominated channel B2B e-commerce are the same as key industry requirements for e-commerce in Thailand (Table 14.16), key industry requirements for a B2B e-commerce (Table 14.20), and key industry requirements for a traditional-dominated channel e-commerce (Table 14.24).

Figure 14.20: Ninth Dimension – Traditional-dominated Channel B2B E-commerce
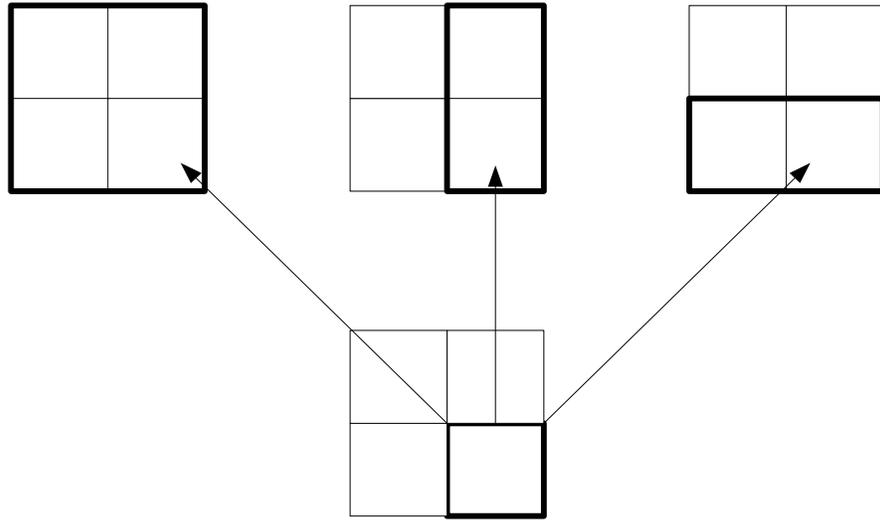
B2C

Table 14.30: The Key Industry Requirements for a Traditional-dominated Channel B2B E-commerce in Thailand

Online-dominated channel

X
X
X

Traditional-dominated channel

X
X

The Key Industry Requirements for a Traditional-dominated Channel B2B E-commerce in Thailand	Official	Value System
Customer Requirements		
1. Trust worthy websites	✓	✓
2. Secured online transaction	✓	✓
3. Good customer service/support		✓
4. Availability	✓	✓
5. Logistics/delivery		
6. Convenient website	✓	✓
7. Awareness of e-commerce value	✓	✓
Competitive Requirements		

8. Large product selection
  • Power buyers (large number of buyers)
  • Large number of suppliers
  • Sole ticket distributor
	✓	✓

9. Competitive product/service price	✓	✓
10. Advertising/promotion	✓	✓
11. Management support • Domain knowledge	✓	✓
Resources Requirements		
12. Strong sales force	✓	✓
Technical Requirements		
13. E-commerce system with supporting back-end operation	✓	✓

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Analysis of Findings – Research Question 2

Figure 14.21 shows all key industry requirements for e-commerce in Thailand found in each dimension of the 2x2 matrix. Based on Figure 14.21, key industry requirements for e-commerce that are not highlighted are aligned with all CSFs for e-commerce in Thailand (Figure 14.11). Key industry requirements that are highlighted are requirements that relate to specific industries in Thailand.

First, it was found that a competitive price is a key industry requirement for e-commerce in Thailand. When a competitive price is a critical success factor in an industry, an e-commerce company must be able to offer competitive prices to both online and brick-and-mortar firms. The researcher observed that at this stage of e-commerce development in Thailand, the majority of Thai customers do not feel comfortable shopping on the Internet. As for business clients, they do not feel any pressure to adopt online services, such as procuring products online. Competitive offers including lower prices or online exclusive promotional programs are often used as the main tool to encourage Thai customers to try online shopping or an online service. Since Thai customers love to bargain, a competitive price can compensate for the lack of trust in an online merchant. Thus, regardless of price competition within an industry, a competitive price is important for all e-commerce companies in Thailand. However, competitive price goes beyond the CSFs for e-commerce in Thailand. One possible reason is that even though a competitive price is important, it is not a tool to build trust and long-term relationships with Thai customers. If an e-commerce company fails to fulfill its orders and provide good before-and-after sales service/support, a Thai customer will immediately lose trust with an online merchant. During its beginning, Tohome.com guaranteed the lowest product price in the market in order to attract Thai customers to its website. While competitive price may attract first time online buyers, Tohome.com's ability to fulfill orders and provide excellent before-and-after service caused customers to return. Return customers are critical to the success of e-commerce in Thailand because the number of Thai customers who shop online is still low. This may explain why competitive price is important, but not critical to the success of e-commerce in Thailand.

Second, it was found that a supporting back-end operation is a key technical requirement of industries. A well designed back-end operation can help in processing online orders quickly and accurately. It allows a company to be highly responsive to online customers. In addition, for companies that offer large product selections or ones that have to update product information frequently, a well-designed supporting

back-end system allows rapid and accurate updates of product and service information on the website. However, different industries have different types of business operations. Thus, a supporting back-end operation must be designed to not only support the website but to also fit the business operations of the particular industry.

Figure 14.21: A 2x2 Matrix and Key Industry Requirements for E-commerce in Thailand
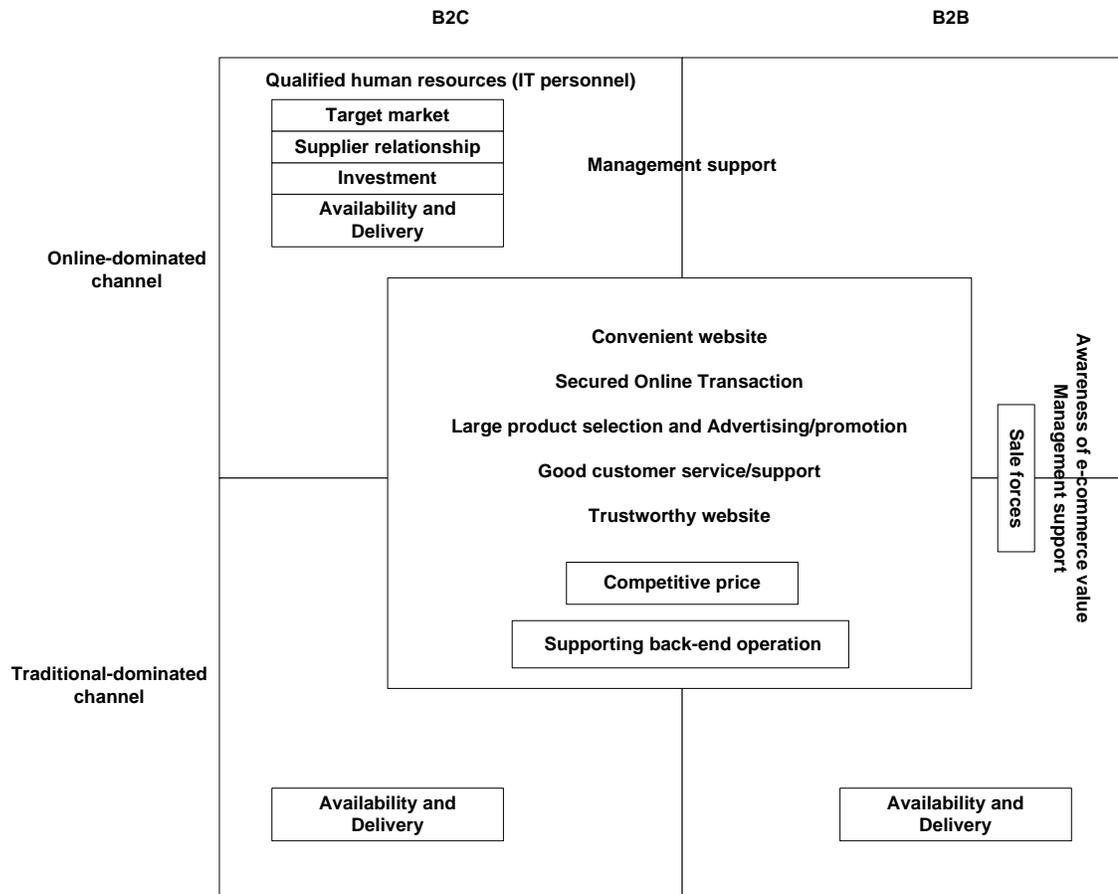
Third, in Thailand, business relationships play an important role in all industries. A sales force is critical to receiving orders from clients, and to building business relationships. When a company uses e-commerce to reach business clients, the role of the sales force is not diminished but gradually changes. It takes time for the majority of business clients in Thai industries to adopt online services. They still prefer a sales force to an online service because of its convenience and personal service from the sales force. Thus, the role of the sales force remains important even after a company introduces an online service. More

importantly, a company can use its sales forces to promote an e-commerce service to clients. A sales force with a clear understanding of e-commerce service can clearly articulate its value to clients. A sales force can also use an e-commerce system to provide improved service to clients, or to reduce the amount of routine work so additional time can be spent providing better service to clients.

Forth, it was found that availability and delivery are key industry requirements for all dimensions of a 2x2 matrix except online-dominated channel B2B e-commerce. However, the first research question identifies availability and delivery as CSFs for e-commerce under the order fulfillment factor. Availability and delivery are not aligned to the order fulfillment factor in the online-dominated channel B2B e-commerce dimension because one case company, Pantavanij, did not include both factors as key industry requirements in the e-procurement industry. Since e-procurement companies provide technology or a platform on which buyers and sellers trade, availability and delivery of physical merchandises are not industry requirements. However, when Pantavanij was asked to identify CSFs for e-commerce in Thailand regardless of industry, it listed trust as critical to the success of e-commerce in Thailand. One way to overcome the lack of trust is to ensure that a company can fulfill orders. Thus, the order fulfillment factor is selected as one of CSFs for e-commerce in Thailand, although availability and delivery are not completely aligned to the order fulfillment factor across the 2x2 matrix.

Fifth, having a clear target market, supplier relationships, and investment are key industry requirements for online-dominated channel B2C e-commerce companies. Since the number of online customers in Thailand is still low and an online channel is the main channel of their sale revenue, it is critical for online-dominated channel B2C e-commerce companies to have clear target market. Clear target markets are required to attract sufficient numbers of online customers in order to generate enough income to sustain an online business.

The supplier relationship requirement plays a critical role in Thai businesses. Strong relationships with suppliers allows a company to improve its product selection, obtain better prices, and offer better services to customers than competitors. This aids online-dominated channel B2C e-commerce firms in attracting Thai customers to their websites. However, since many online-dominated channel B2C e-commerce are start-up companies without established supplier relationships, establishing such relationships rapidly can provide a competitive advantage over the competitors.

With regard to investment requirements, an e-commerce business operation is not cheap. Without other revenue sources, an online-dominated channel B2C e-commerce could be in trouble in sustaining its business. A company must be able to find major sources of investment capital to keep the business operating before major profits can be obtained from its online business in future years.

Research Question 3 – What is the E-commerce Business Model?

The intent of the third research question was to identify how an e-commerce company addresses CSFs for e-commerce in Thailand and CSFs for its e-commerce industry (key industry requirements for an e-commerce company) in Thailand. While the third research question uses an e-commerce business model framework, the framework is not meant to be verified, but to capture several aspects of an e-commerce business model in order to understand how a company addresses key industry requirements for e-commerce in Thailand. The third research question and its sub-questions are as follow:

Research question 3: What is the company's e-commerce business model?

3.1.   Who is the company's target customers and what is your market segment?

3.2.   What products/services and values associated with products/services that the company delivers to the customers?

3.3   What capabilities the company needs to have/develop to deliver those products/services and promised values?

3.4.   What resources the company uses to create and deliver products/services and promised value?

3.5.   What are the set of connected e-commerce business activities the company performs to create products/services and promised values?

    3.5.1.   What are the set of main e-commerce business activities (marketing and sales, inbound logistics, operations, outbound logistics, after-sales services) involved in delivering products/services and promised values, and how?

    3.5.2.   What are the set of supporting e-commerce business activities (firm infrastructure, human resource management, R&D, procurement) involved in delivering products/services and promised values, and how?

3.6.   Who provides the main activities needed to create value products or services?

3.7.   What is the company's revenue model?

    3.7.1.   Where do the company's revenues come from?

    3.7.2.   Where do the company's profits come from?

3.8.   Based on the company's e-commerce business model, what areas/functions of the

business model that allows the company to outperform competitors?

Since the intent of this third research question was to understand how a company addresses CSFs and key industry requirements for e-commerce in Thailand, it was more suitable to analyze the third research question by CSFs and key industry requirements found in the first and second research questions than by analyzing the third research question by its sub-questions.

Based on Figures 14.11 and 14.21, Table 14.31 lists CSFs and key industry requirements for e-commerce in Thailand from different dimensions of the 2x2 matrix. Factors 1 through 11 are CSFs for e-commerce and aligned key industry requirements. Factors 12 through 18 are key industry requirements that do not address CSFs for e-commerce. The following section discusses the key elements that the nine case study companies used to address each of these 18 CSFs and key industry requirements for e-commerce in Thailand. Case-specific examples will be used when necessary.

Table 14.31: The CSFs and TheKey Industry Requirements for E-commerce

The CSFs and The Key Industry Requirements	B2C		B2B	
	Online	Tradition	Online	Tradition
1. Convenient website • Internet connection	✓	✓	✓	✓
2. Large product selection	✓	✓	✓	✓
3. Online security • Secured online transaction	✓	✓	✓	✓
4. Brand name recognition • Advertising/promotion	✓	✓	✓	✓
5. Customer relationship management • Good customer service and support	✓	✓	✓	✓
6. Order fulfillment	✓	✓	✓	✓
7. Trust	✓	✓	✓	✓
8. Management support	✓		✓	✓
9. Clear value proposition • Awareness of e-commerce value			✓	✓
10. Qualified human resource (IT personnel)	✓			
11. Supporting back-end operation		✓		

The CSFs and The Key Industry Requirements	B2C		B2B	
	Online	Tradition	Online	Tradition
Key Industry Requirements				
12. **Competitive price**	✓	✓	✓	✓
13. **Supporting back-end operation**	✓	✓	✓	✓
14. **Availability and Delivery**	✓	✓		✓
15. **Sales force**			✓	✓
16. **Target market**	✓			
17. **Supplier relationship**	✓			
18. **Investment**	✓			

Convenient Website

Based on the in-case analysis chapter's discussion of key elements addressing a convenient website factor (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.32 summarizes these critical elements.

Table 14.32: The Key Elements Addressing a Convenient Website Factor

Convenient website	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Easy to use website	✓	✓	✓	✓	✓	✓	✓	✓	✓
Large product selection	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internet connection	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rich content	✓	✓	✓	✓	✓	*	*	✓	✓
Variety of payment methods	✓	✓	✓	✓	✓	✓		✓	✓
Online customer support	✓	✓	✓	✓	✓	✓	*	✓	✓
Variety of delivery methods			✓	✓	✓				

*Do not have enough information

Easy-to-use website.

It was found that every case company tried to ensure that its website was customer friendly. Since all case study companies carried large product selections on their websites, they tried to ensure that their websites were well organized so customers could find products and information quickly and easily.

Tohome.com, Thaigem.com, Naiin.com, and Value, for example, carried large numbers of products and offered different product categories.

For websites that provided online transaction processes, their shopping cart processes were simple and required only a few steps to complete an online transaction. SCG and Value monitored their vendors' activities on the websites to learn how they used the websites in order to make improvements for ease of use. Tohome.com randomly called customers to learn how it needed to improve the website. SCG, Pantavanij, and Value provided an online tutorial to teach first time users how to use online services effectively.

Large product selections.

Large product selections not only attract Thai customers to a website, but also provide them search convenience. Customers know that they can find a product on a website without spending time to check many websites. Thaigem.com offers well over 500 gem types and lists over 1.6 million individual gem stones and jewelry items. Customers know that they can find every kind of gemstone at Thaigem.com. Tohome.com was well-known by Thai customers as the website where they can find almost any popular products in the marketplace from books to CDs to electronic products, such as digital cameras, cell phones, and laptops. The website draws Thai customers to check product prices, specifications, and other product information.

Internet connection.

Slow speed Internet connections were one of the main problems that prevented Thai customers from shopping online or using online services. While this factor cannot be fully controlled by e-commerce companies, some case study companies showed that they tried to minimize such inconvenience by choosing the at least most reliable Internet connection providers. In the event that one connection fails, these companies will have another connection to back up their online service. Thaigem.com and Tohome.com located their servers in the US because the speed of Internet connection was faster and the connection was more reliable. Thaiticketmaster.com located its server at Samart Corporation, one of the leading Internet service providers in Thailand. They also tried to ensure that their websites were designed and developed in the way that can be downloaded quickly. They also used server technologies that supported large Internet access volume.

Rich content.

One of factors preventing Thai customers from shopping online was that they could not see/feel products. Thus, complete product information had to substitute for the lack of seeing/feeling real products. It was found that every case company provided detailed product/service information on their websites. Thaigem.com, for example, provided detailed information and specifications for every gemstone. Value makes detailed IT product information and specifications available on its website so vendors can check information without calling a sales person for product information, which, in return, helped reduce the workload of the sales force.

Variety of payment methods.

Thailand still lacks a large number of credit card holders and the majority of Thai credit card holders do not feel comfortable using their cards online. It was found that almost every case company offers a variety of payment methods. Tohome.com is an excellent example for this subject. It offers a variety of payment methods, including credit card payment, money transfers through banks, money transfers through ATMs, mobile payments, pay at delivery, easy pay with a credit company, and a third party bill payment method. A wide variety of payment methods not only provides online shopping convenience to Thai customers, but it also widens the opportunity to reach a larger base of Thai customers. The researcher observed that B2C e-commerce seems to have more variety of payment methods than B2B e-commerce. A business client usually has credit terms and, thus, does not make immediate payment. A money transfer through a local bank is a conventional method of payment. All B2B e-commerce case study companies try to provide payment convenience by offering an online money transfer service. However, Thai banks are not virtually connected. Money can only be transferred online when business clients have accounts with the same bank as the B2B e-commerce firm. At present, Bank of Asia is the only bank in Thailand that provides an online money transfer service. If clients do not have an account with Bank of Asia, they have to open a new account with the bank. This creates some inconvenience for the client. Another method of payment is by credit card payment.

Online customer service/support.

Almost every case company provides several convenient ways for Thai customers to reach them when they have a problem using a website or online services. Three of the most common online customer

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service/support tools are FAQ, e-mail, and call centers. The researcher observed that a call center plays a critical role in Thailand's e-commerce. Since the majority of Thai customers still lack experience and skill in online shopping and online services, they often call a company for immediate assistance. Many check the product information and then call a company to place orders because they distrust the online transaction processes. First time customers often call Naiin.com to assist them in the book/magazine search and shopping cart process. First-time online clients often use a call center to ensure that their online orders were processed completely. Value also monitors the website activities of clients. Value calls clients to assist them when it observes that they did not thoroughly complete the shopping process. Another online support method was the online chat. Naiin.com used the MSN chat to help reduce the call volume from online customers. Thaigem.com provided an online chat service so foreign customers did not have to pay international calls when needing help in using the website.

Variety of delivery methods.

This critical element was not found across all the case study companies. All B2B e-commerce case study companies had their own in-house logistics system to ship products to customers directly. Almost every B2C e-commerce case company, with the exception of Thaigem.com and HotelThailand.com, used the Thai post office as their means of delivering products to customers. Thaigem.com used FedEx for its international deliveries, and HotelThailand.com was able to deliver its travel services online. The rest of B2C e-commerce case study companies offered a messenger delivery service for Thai customers who wanted to receive products fast.

Internet Connection

This critical element was already discussed as part of the convenient website factor.

Large Product Selection

This critical element was already discussed as part of the convenient website factor.

Online Security

Based on the discussion of the online security factor in the in-case analysis chapter (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.33 summarizes its key elements.

Secured Socket Layer (SSL).

The majority of case study companies used SSL technology to guarantee their secured online transaction service. Thaigem.com used online payments from third party service providers such as Paypal. Paypal is known to provide a secure online payment service.

Table 14.33: The Key Elements Addressing an Online Security Factor

Online security	B2C					B2B			
	Online		Tradition			Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Secured Socket Layer (SSL)	✓		✓	✓	✓	✓	*	✓	*
Verified by Visa	✓		✓	✓	✓				

* Do not have enough information

Verified by Visa.

It was found that most of B2C e-commerce case study companies also provided the Verified by Visa service. Well over 80 percent of credit cards in Thailand are Visa Cards. This service protects customers from unauthorized credit card users. However, B2B e-commerce case study companies preferred paying through a conventional money transfer method.

Brand Name Recognition (Advertising/Promotion)

Based on the discussion of the brand name recognition factor in the in-case analysis chapter (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.34 summarizes these critical elements.

Table 14.34: The Key Elements Addressing a Brand Name Recognition Factor

Brand name recognition (Advertising/promotion)	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Offline advertising/promotion	✓	✓	✓	✓	✓	✓	✓	✓	✓
Online advertising/promotion	✓	✓	✓		✓				

Offline advertising.

Thai customers still lack awareness of Thai websites. Thus, website advertising is critical to e-commerce in Thailand because it helps create awareness for Thai people. By frequently seeing/hearing advertising of a website, awareness helps reduce the risk of the unknown with an online merchant. Since the majority of Thai customers are not heavy Internet users, offline advertising through conventional media such as posters, brochures, magazines, radio, and television advertising are effective in reaching the majority of potential customers. This finding is consistent across all case study companies.

HotelThailand.com created co-promotional programs with Citibank. Its website name and its service appeared in a Citibank's promotional brochure. TTM depended on its concert promoters to advertise its website along with their concerts/events. By associating their brand names with established organizations, they established Thai customers' trust as an trustworthy online merchant. The researcher observed that all case study companies with strong brand names before having an online channel took advantage of their brands to promote their online service to their existing customer bases. They used their sales force and their exiting media to promote their online services. SCG and Value, for example, used their sales force to promote their online services. Officemate advertised its online services through its catalogs, monthly magazines, and delivery cars. Amarin advertised Naiin.com through Naiin's bookstores.

Online advertising.

It was found that most case study companies that promoted their websites through the online channel were in B2C e-commerce. B2B e-commerce firms used their existing offline client bases and,

therefore, did not rely on online advertising. While offline advertising can reach the majority of Thai customers, online advertising can reach a higher market potential of online shoppers. Thaigem.com and HotelThailand.com advertise their websites through leading search engines. Naiin.com and Tohome.com promote their websites through banner advertising and popular web communities such as Phantip and Sanuk.

Customer Relationship Management

Based on the discussion of the customer relationship management factor in the in-case analysis chapter (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.35 summarizes this critical element.

Table 14.35: The Key Elements Addressing a Customer Relationship Management Factor

Customer relationship management	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Customer service/support	✓	✓	✓	✓	✓	✓	✓	✓	✓

Customer service/support.

It was discussed in the convenient website factor that online customer service/support allows customers to reach a company when they have a problem using a website or online service. Beyond the convenience factor, customer service/support is used to create a customers' trust. As discussed in the first research question, compared to conventional shopping, online shopping or online service is more individualistic and impersonal. In addition to increasing amounts of online frauds and the weak e-commerce laws in Thailand, online shopping requires new behaviors or process changes. All these situations and requirements pose high risks for online customers. Customer service/support can be used to minimize the impersonal aspects of online shopping by adding a human touch to it. Tohome.com made a welcome call after a first-time customer placed an order on its website. A first-time customer usually feels

anxious after placing an online order with an unfamiliar online merchant. A welcome call allows Tohome.com to get feedback about its website service and, thus, start developing a relationship with its customer. By providing good customer service, a company can lower a customers' perceived risk of online shopping. Naiin.com, for example, called a customer when it knew that an order might be delayed, giving the customer the choice of waiting or canceling the order.

Order Fulfillment

Based on the discussion of the order fulfillment factor in the in-case analysis chapter (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.36 summarizes these critical elements.

Table 14.36: The Key Elements Addressing an Order Fulfillment Factor

Order fulfillment	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Availability									
Own products/manufacturers		✓			✓	✓			
Strong supplier relationship	✓		✓	✓					
Large inventory		✓				✓		✓	✓
Demand forecasting and inventory control system		✓	✓			✓		✓	✓
Delivery									
Post office and/or third party delivery service providers		✓	✓		✓				
Messenger delivery service			✓	✓	✓				
In-house logistics with a network of logistics providers						✓		✓	✓

Own products/manufactures.

It was found that some case study companies are manufacturers of merchandise who have full control over the availability of their products. For examples, SCG's cement and building material products came from its manufacturers. Naiin.com was one a leading book/magazine publishers and a leading books/magazine distributor in Thailand. Thus, it had full control over its stock's availability.

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Strong relationship with suppliers.

Some case study companies simply relied on having a strong relationship with suppliers to ensure that they made products available for customers. HotelThailand.com, for example, relied on its strong relationships with hotels/resorts and wholesalers to ensure they obtained a large room quota. HotelThailand.com often requested extra rooms from hotels/resorts during the high traveling seasons.

Large inventories.

Some case study companies stocked a large number of products to ensure that they could fulfill delivery to their customers in a short time period. For examples, both Officemate's retail customers and Value's vendors resold products to their customers. They did not tend to carry a large number of products in stock due to high inventory costs, but relied on their suppliers to have products available. Otherwise, they ordered products from competing suppliers. Thaigem.com's foreign customers were concerned with the timing of international shipments. Thus, Thaigem.com used FedEx to ship products to customers around the world. The shipments were guaranteed to arrive within 24-72 hours. In order to make this shipping model work, Thaigem.com always maintained a large number of gemstones in inventory.

Demand forecasting and inventory control system.

Several case study companies used an IT-based inventory control system to monitor their product turnover. Data from an inventory system and sales allowed them to precisely forecast the demand of each product, and, thus, sufficiently stock or manufacture products in response to demand. It precisely forecasted demand for only those products and stocks products that sold fast. While Value had to stock large numbers of IT products, accurate forecasting and knowing exactly what it had on hand helped the company effectively control its inventory.

Post office and/or third party delivery service providers.

It was found that most of B2C e-commerce case study companies used the post office to deliver product to Thai customers around the country, except for Thaigem.com which used FedEx to deliver products to foreign customers.

Messenger delivery service.

Even though Thai customers lacked trust in the Thai post office, the B2C e-commerce case study companies lacked a better option. Some B2C e-commerce case study companies offered a messenger delivery service, but they only provided such a service to customers in Bangkok and near-by vicinities.

In-house logistics with a network of logistics providers.

All B2B e-commerce case study companies, except for Pantavanij, had their own delivery service with a strong network of logistics providers. This allowed them to deliver products to their customers/vendors around the country. All B2B e-commerce case study companies were large established companies in Thailand. They successfully developed their delivery systems with strong networks of logistics partners that could ship products around the country. However, the researcher observed that B2C e-commerce companies in Thailand did not have such delivery systems since they were expensive, required time to develop, and required high sales volumes.

Trust

Based on the discussion of the trust factor in the in-case analysis chapter (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.37 summarizes these critical elements. It was found that the key elements addressing the trust factor included online security, brand name recognition, customer service/support, and order fulfillment. These elements have been discussed in prior sections.

Table 14.37: The Key Elements Addressing a Trust Factor

Trust	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Online security	✓		✓	✓	✓	✓	✓	✓	✓
Brand name recognition	✓	✓	✓	✓	✓	✓	✓	✓	✓
Customer service/support	✓	✓	✓	✓	✓	✓	✓	✓	✓
Order fulfillment	✓	✓	✓	✓	✓	✓		✓	✓

Management Support

Based on the discussion of the management support factor in the in-case analysis chapter (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.38 summarizes these critical elements.

Table 14.38: The Key Elements Addressing a Management Support Factor

	B2C					B2B			
	Online			Tradition		Online		Tradition	
Management support	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Strong domain knowledge	✓	✓	✓	✓			✓		
Senior management involvement						✓	✓	✓	✓

Strong domain knowledge.

Strong industry knowledge played a critical role in the success of almost every B2C e-commerce case company. Kogen had worked within the gemstone industry long before he started Thaigem.com. Thaweedej worked with one of HotelThailand.com's current competitors for several years before he started HotelThailand.com. Wongvibulsin worked in the retail industry as a consultant before he started Tohome.com. Aiemrithikrai worked with BEC Tero for several years before he began to work for TTM. This supported the finding from the in-case analysis that a successful e-commerce company must meet not only CSFs for e-commerce in Thailand, but also CSFs for e-commerce in its specific industry (key industry requirements). This means that e-commerce management must have in-depth knowledge of its industry in order to meet those key industry requirements. Although all B2B e-commerce case study companies did not identify this element explicitly, the fact that they were successfully established companies within their industries supports this finding.

Senior management involvement.

The involvement of senior management played a critical role in carrying out a company's e-commerce project successfully. Top management of SCG were engaged in the company's reorganization

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and initiated the replacement of its EDI system. The owner of Value saw the strong potential of IT in

providing his company a competitive advantage over his competitors. He initiated the e-commerce project

and promoted the system within the organization and to his vendors. Moreover, even though this element

was not found in all B2C e-commerce case study companies, their owners or top managers were the people

who began their e-commerce businesses and obviously were the drivers of such investments. While

Naiin.com did not identify management support as a CSF and key industry requirements, its e-commerce

business was under the direct supervision of Utakapan, the managing director, who championed this

business.

Clear Value Proposition (Awareness of E-commerce Value)

Based on the discussion of the clear value proposition factor in the in-case analysis chapter (Table

13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.39 summarizes this critical element.

Table 14.39: The Key Elements Addressing a Clear Value Proposition Factor

| **Clear value proposition (Awareness of e-commerce value)** | **B2C** | | | | | **B2B** | | | |
| | **Online** | | | **Tradition** | | **Online** | | **Tradition** | |
	HotelThailand.com	**Thaigem.com**	**Tohome.com**	**Thaiticketmaster.com**	**Naiin.com**	**SCG**	**Pantavanij**	**Officemate**	**Value System**
Sales force role						✓	✓	✓	✓

Sales force role.

It was critical for a B2B e-commerce business to provide clear value from its online service. More

importantly, sales personnel had to clearly articulate such value to business clients. Since SMEs in Thailand

still lacked awareness, knowledge and understanding of e-commerce, online services would fail if the value

proposition could not convince clients to adopt the online service. The sales force was critical in all B2B e-

commerce case study companies to educate clients about e-commerce and how an e-commerce service

could benefit their clients' businesses. For examples, Pantavanij used its knowledgeable sales force to

promote its e-procurement service directly to its clients' top management. Pantavanij called this approach

"education marketing." Value used its sales forces around the country to help promote its e-commerce service to vendors.

Qualified Human Resources (IT Personnel)

Based on the discussion of the qualified human resource (IT personnel) factor in the in-case analysis chapter (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.40 summarizes this critical element.

Table 14.40: The Key Elements Addressing a Qualified Human Resources (IT Personnel) Factor

Qualified human resources (IT personnel)	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
In-house IT capability development	✓	✓	✓						

In-house IT capability development.

It was discussed earlier that Thailand lacks qualified human resources in IT with experience in e-commerce systems development. An online-dominated channel B2C e-commerce firm, which was typically a start-up company, often lacked the needed capital to attract qualified IT personnel. All B2C e-commerce case study companies faced this problem from the beginning. Thaigem.com used a third party IT developer, but the company was not satisfied with this service. Finally the company hired Tipparat. Tipparat then started developing an in-house IT capability by training local Chantaburi employees, who had some IT education. Tohome.com also used an application service provider, but eventually it could not keep up with its growing business volume. Thus, Tohome.com hired IT personnel and began developing an in-house IT capability.

Competitive Price

Based on the discussion of key elements addressing a competitive price factor in the in-case analysis chapter (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.41 summarizes these critical elements.

Table 14.41: The Key Elements Addressing a Competitive Price Factor

Competitive price	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Strong supplier relationship	✓		✓					✓	✓
Low operating costs		✓	✓		✓				✓
Own products/Manufacturer		✓			✓	✓			
Premium price positioning				✓		✓	✓		
Disintermediary		✓							

Strong supplier relationships.

It was discussed earlier that the product availability factor can be achieved through strong supplier relationships. Strong supplier relationships also give a company more bargaining power that allows special discounts to be passed on to customers.

Low operating costs.

Low operating costs can also allow an e-commerce company to deliver lower prices than its competitors. For examples, the majority of Thaigem.com's employees are from Chantaburi. Its cheap labor costs are passed on as lower product prices. Tohome.com did not have a traditional retail store, and, thus, had lower operating costs than brick-and-mortar retailers. Value used SIM2, its e-commerce system, to keep its operating costs lean.

Own products/manufacturer.

This element was discussed under the order fulfillment (availability) factor. As manufacturers, Thaigem.com, Naiin.com and SCG had more flexibility in offering competitive prices than competitors that were not manufacturers.

Premium price positioning.

Case study companies like TTM, SCG, and Pantavanij positioned their products/services at higher quality levels than competitors', and, thus, changed higher prices.

Disintermediary.

It was also found that Thaigem.com bypassed a number of middlemen in its industry by using e-commerce to sell gemstones directly to customers. Thus, it passed on lower prices to customers.

Supporting Back-end Operation

Based on the discussion of the supporting back-end system factor in the in-case analysis chapter (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.42 summarizes this critical element.

Table 14.42: The Key Elements Addressing a Supporting Back-end Operation Factor

| Supporting back-end operation | B2C | | | | | B2B | | | |
| | Online | | | Tradition | | Online | | Tradition | |
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
System integration	✓	✓	✓	✓	✓	✓	✓	✓	✓

System integration.

To create a back-end operation that can effectively support an e-commerce website, the back-end operation must be designed or adjusted to an e-commerce website in order to process online transactions and customer inquiries quickly. For examples, SCG uses an ERP system to integrate its e-commerce

website with other operations throughout the organization. Value used its SIM2 to integrate its e-commerce

website with other operations throughout its organization. Integration allows SCG

and Value to process online transactions quickly. The researcher observed that the integration did not

always have to be IT-based integration. It was more important that back-end operations be designed to

respond to the e-commerce business. For example, Naiin.com's back-end operation is not a fully IT-based

integration. The company only integrated the e-commerce website with its central inventory system.

However, the company established a separated business unit to process online orders at the warehouse so

online orders could be processed faster.

Availability and Delivery

Key elements addressing availability and delivery factors were already discussed in the order

fulfillment factor.

Sales Force

This factor was already discussed in the clear value proposition factor.

Target Market

Based on the discussion of the target market factor in the in-case analysis chapter (Table 13.2,

13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.43 summarizes these critical elements.

Table 14.43: The Key Elements Addressing a Target Market Factor

| Target market | B2C | | | | | B2B | | | |
| | Online | | | Tradition | | Online | | Tradition | |
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Customer profile	✓	✓	✓						
Market research (e-mail & phone survey)			✓						

Customer profile.

It was found that a customer profile is the most common method used by the online-dominated channel B2C case study companies to address the target market factor. For example, Tohome.com asks customers to register before they made an online purchase. This profile contained information, such as demographic and preferred online products. Tohome.com used its customer profiles to understand its target markets and tried to find products that met their preferences.

Market research.

It was also found that Tohome.com conducted periodic market research. Based on its customer profiles, the company randomly surveyed customers by phone or e-mail.

 Supplier Relationship

This factor was already discussed in addressing the availability factor and the competitive price factor.

Investment

Based on the discussion of the investment factor in the in-case analysis chapter (Table 13.2, 13.4, 13.6, 13.9, 13.12, 13.14, 13.16, 13.18, 13.20), Table 14.44 summarizes these critical elements.

Table 14.44: The Key Elements Addressing an Investment Factor

Investment	B2C					B2B			
	Online			Tradition		Online		Tradition	
	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
Retained earning	✓	✓							
Partners/investors	✓	✓							

Retained earning.

It was found that one of the major sources of capital investment for online-dominated channel B2C case study companies came from their retained earnings.

Partners/investors.

Another source of capital investment for these companies came from their investors or business partners. The researcher observed that it usually takes an e-commerce firm several years before it begins to make large profits. Meanwhile, companies must continue investing in several areas, such as marketing, stock, and system maintenance and update, in order to keep up with its growing business volume. Retained earnings alone are often not enough. Thus, they had to get money from business partners/investors.

Analysis of Findings – Research Question 3

Figure 14.22 summarizes how the case study companies address CSFs and key industry requirements for e-commerce in Thailand. Based on this finding, Figure 14.11, 14.21, and 14.22 can be used as best practice frameworks that address CSFs and industry key requirements for e-commerce firms in Thailand operating in different dimensions of the 2x2 matrix.

Based on these critical elements, the researcher observed that there are several factors that the case study companies were not able to fully address or control. First, the case study companies tried to address the Internet connection factor by finding the best available Internet service providers. Even so, they had little control over the quality of the Internet connection in which was still poor Thailand. While the reliability and speed of the Internet connection in Thailand has been improving, the monopolization of the Communications Authority of Thailand (CAT) in Thailand delayed Internet improvement and kept Internet connection costs high. All 18 Internet Service Providers (ISPs) in Thailand had to obtain licenses from CAT, which required a free 32 percent interest in a provider's capital stock (Prud'homme and Chira-aphakul, 2005). This means that ISPs have to come up with an extra 32 percent in capital funds. This situation affects ISPs' service prices and the size of its Internet bandwidth (speed of the Internet connection) which had different prices. As a consequence, Thailand had one of the most expensive leased lines for online merchants. The price of leased lines in Thailand was five times as expensive as in Hong Kong, four times as in Japan, three times as in Singapore, and two times higher than in Malaysia.

Figure 14.22: Key Elements Addressing CSFs and Key Industry Requirements for E-commerce in Thailand

Industry knowledge

Senior management involvement
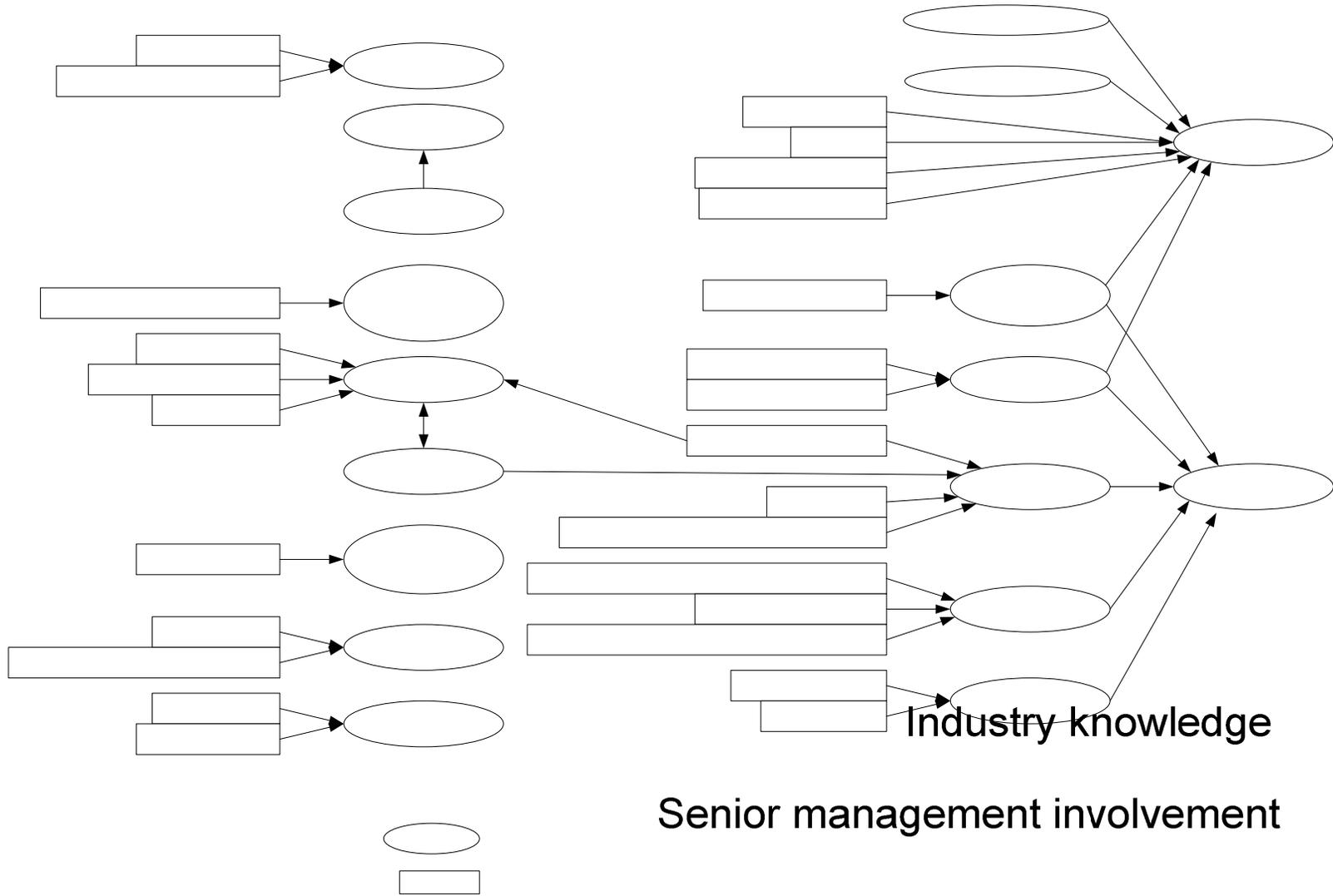
For instance, the retail price for a 50 KM 2 Mbps leased line was about USD $1,875 per month for Bangkok and nearby provinces (Sophastienphong, 2001). High Internet costs meant that less than 15 percent of small and medium-sized enterprises, which constituted a massive 90 percent of Thailand's industrial capacity, took their businesses online (Crispin, 2000).

Second, while the case study companies also tried to build customer trust, they could not overcome the lack of confidence in Thailand's e-commerce laws and regulations. At present, Thailand lacked the legal framework necessary to support e-commerce. The Thai government had endorsed the Electronic Transaction Act (ETA) (Table 14.45), which came into effect in early 2002. However, four e-commerce-related laws were still on the agenda ("*E-commerce A Slow Awakening*", 2005) (Table 14.45). Two of them were the Data Protection Bill, which addressed the misuse of personal data, and the Computer Crime Bill, which recognized what constituted a computer crime. With both laws still inactive, Thai customers lacked the confidence needed to shop online or use online services.

Third, aside from the lack of a proper Internet infrastructure and legal framework, Thailand also lacks qualified IT personnel who had the knowledge and understanding of e-commerce development. As a result, the researcher observed that the online-dominated channel B2C case study companies had difficulty in finding qualified IT personnel. Personnel with strong knowledge and experience were low in number and were more likely to be working with large organizations, not small start-up companies. Thaigem.com found Tipparat by chance. HotelThailand.com did not have a strong in-house IT capability in the beginning. Since the majority of Thai businesses are considered SMEs, most e-commerce firms in Thailand face the same difficulty of finding qualified IT personnel.

Table 14.45: E-commerce Laws in Thailand

E-commerce Laws in Thailand	Aims
1. Electronic Transaction Acts (ETA)	Addressing transactions taking place by the Internet, and recognize electronic signatures as valid and binding signatures
2. Universal Access Bill	Promoting and supporting the development of a proper information infrastructure throughout Thailand
3. Data Protection Bill	Protecting of personal data of individuals from the misuse of their personal information
4. Computer Crime Bill	Clarifying what constitutes a computer crime, which includes, unauthorized access, interception of data, fraud, reproduction of a protected computer program
5. Electronic Funds Transfer Bill	Establishing security procedures for electronic fund transfers

Research Question 4 – Business Performance

The intent of research question four is to identify the resulting business performance of the case study companies. The forth research question and its sub-research questions are as follow:

Research question 4: What is the company's business performance?

4.1.   How does the company measure the business performance, and what performance measurements the company uses?

4.2.   How is the growth of the company's profit from the first year of operation until now?

4.3.   How is the growth of the company's sales leads generated as a result of the website from the first year of operation until now?

4.4.   How is the growth of the company's revenue generated directly from the website from the first year of operation until now?

4.5.   How is the growth of the company's market share from the first year of operation until now?

The intent of sub-research question 1 is to identify what performance measurement a company used. It was possible that a company's performance measures different from those proposed in sub-research question 2-4. Table 14.46 shows performance measurements used in the nine case study companies.

Table 14.46: Performance Measurements of the Case study companies

Performance measurements	HotelThailand.com	Thaigem.com	Tohome.com	Thaiticketmaster.com	Naiin.com	SCG	Pantavanij	Officemate	Value System
1. Profit	✓	✓							
2. Sales	✓	✓	✓		✓	✓		✓	✓
3. Revenue							✓		
4. Market share	✓	✓							
5. Completed online transaction	✓								
6. Repeated online business	✓	✓	✓						
7. Size of a company		✓							
8. Online orders						✓			
9. Volume of online trading							✓		
10. Volume of ticket sold				✓					
11. Number of E-procurement customers								✓	
12. Hit logs (# of website access)									✓
13. Volume of invoices									✓

Based on the findings, the most consistent performance measurement across nine case study companies was online sale revenue. Therefore, online sales revenues will be compared across the case study companies. TTM did not look at its online sales revenue as a performance measurement because its revenue was the concert promoters' service fees. The performance of its online service was determined by the number of tickets sold through its website, rather than the revenues it generated. Pantavanij's online success was based the revenue and transaction volume of trading on its e-marketplace platform. For these two cases, the researcher will review the success measurement separately.

Table 14.47 shows online sales revenue from seven of the case study companies. In order to compare these sales revenue, an index number is used (Table 14.48). Based on Table 14.48, Figure 14.23 shows the growth of online sale revenues by index numbers. It was clear that online revenues from all seven cases had increased during the last six years.

Table 14.47: Online Sale Revenue from Seven Case study companies

Online sales revenue	Year 1999	2000	2001	2002	2003	2004
HotelThailand.com (US $ million)	$0.025	$0.75	$1.250	$2	$3	N/A
Thaigem.com (US $ million)	N/A	$1	$4.25	$13.75	$15	$19.5
Tohome.com (US $ million)	N/A	$0.25	N/A	N/A	$1.25	$1.75
Siam Cement (US $ million)	N/A	$475	$550	$625	$695	N/A
Naiin.com (Index number)				100	104.9	143.8
Officemate (US $ million)	$0.11	0.13	$0.17	$0.21	$0.88	$1.13
Value System (US $ million)	$5	$8.30	$10	$11	$13.2	N/A

Table 14.48: Online Sale Revenue from Seven Case study companies in an Index Number

Online sales revenue (Index number)	Year 1999	2000	2001	2002	2003	2004
HotelThailand.com	100	3000	5000	8000	12,000	N/A
Thaigem.com	N/A	100	425	1375	1500	1950
Tohome.com	N/A	100	N/A	N/A	500	700
Siam Cement	N/A	100	116	132	146	N/A
Naiin.com				100	104.9	143.8
Officemate	100	118	155	191	800	1027
Value System	100	166	200	220	264	N/A

Figure 14.23: The Growth of Online Sale Revenue from Seven Case study companies in Index Numbers
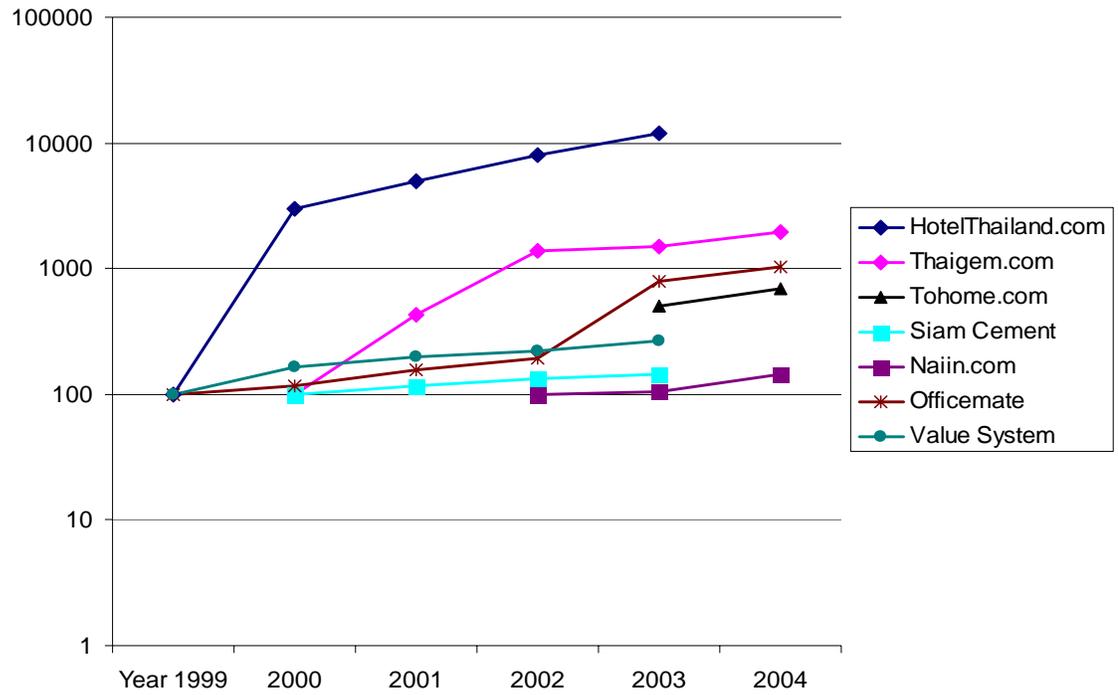

As for TTM, table 14.49 shows the volume of online tickets and corresponding index numbers.

Figure 14.24 shows the growth of online ticket volume by index numbers.

Table 14.49: TTM's Online Ticket Volumes

	Year 2000	2001	2002	2003
Total number of web tickets sold	< 30,000	50,000	80,000	150,000
Index number	100	167	267	500

Figure 14.24: TTM's the Growth of Online Ticket Volumes in Index Numbers
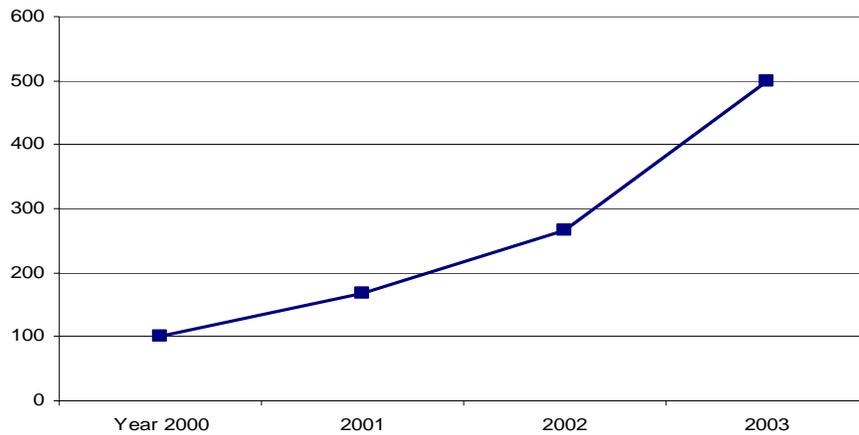
As for the Pantavanij, Table 14.50 shows the volume of online trading and corresponding index numbers. Figure 14.25 shows the growth of online trading volume in index numbers.

Table 14.50: Pantavanij's Total Online Trading Volume

	Year - Mid 2000-2001	2002	2003	2004	2005 (expected)
Total Online Trading Volume (in Million)*	US $6.5	US $98.4	US $360.7	US $365	US $500
Index number	100	1,514	5,549	5,615	7,692

Figure 14.25: Pantavanij's the Growth of Online Trading Volume in Index Numbers
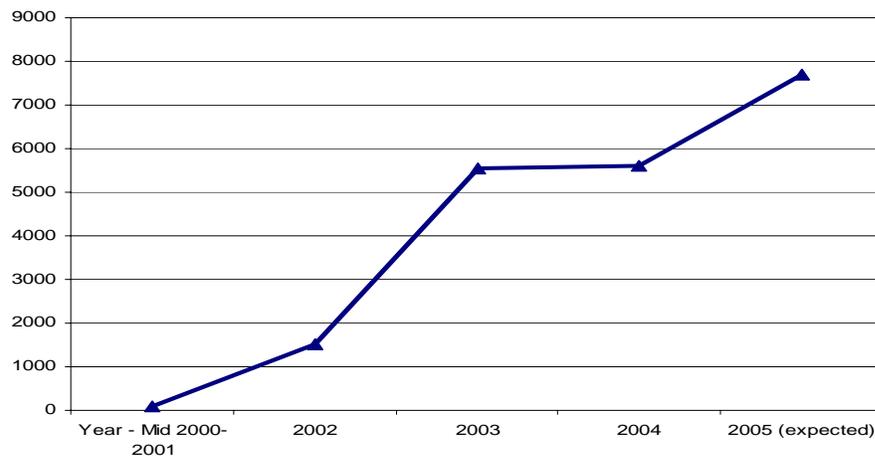
Based on figure 14.22, 14.23, and 14.24, it was clear that the business performance of all nine case study companies had been increasing during the past several years of their e-commerce operation.

The researcher observed that all case study companies still used traditional indicators to measure their e-commerce business performance. However, not all case study companies were willing to reveal their revenue and profit. In addition, most found it difficult to measure their market shares because there was no organization within their industry that tacks this indicator. In some cases, major suppliers could roughly estimate market share based on their sales to other online competitors in the same industry.

Summary of Cross-case Analyses

This chapter has provided a discussion of the research questions across a 2x2 matrix. Conclusion of the findings will be presented in the next chapter.

CHAPTER FIFTEEN – CONCLUSION

The intent of this dissertation was to identify critical success factors (CSFs) for e-commerce in Thailand. The research identified CSFs for e-commerce in Thailand regardless of the industry as well as key industry requirements for e-commerce within a specific industry. The research also explored how a variety of e-commerce business models addressed those CSFs and key industry requirements. In addition, the research assesses the success of firms in its sample. The identification of these CSFs and key industry requirements for e-commerce, and business models developed to address them, help provide for the understanding of how e-commerce ventures in Thailand are successful in achieving their strategies.

The rationale for doing this research was to investigate factors that are critical to the success of e-commerce in Thailand. Specifically, the four main research questions were:

1. Regardless of industry, what are the critical success factors (CSFs) relevant to all companies engaged in e-commerce in Thailand?

2. What are the key requirements that any e-commerce company must have in order to enter the industry?

3. What is the company's e-commerce business model?

4. How is the company's business performance?

The investigation was conducted using a case study methodology. Nine e-commerce companies from nine different industries were studied and analyzed. Semi-structured interviews were conducted with key leaders from each company. These interviews were augmented with additional material gathered from organizational archives, websites, newspaper, and magazines so that a complete picture of the e-commerce business could be developed. A variety of cross-organization analyses were conducted using a 2x2 matrix that addressed traditional and internet based enterprises that focused on business and/or consumer markets.

Conclusions and Propositions

In addition to answering the above research questions, conclusions can be drawn regarding the conduct of e-commerce businesses in Thailand. Based on in-case analyses, successful firms focused their resources and efforts on those factors[1] that they identified as critical to success for e-commerce ventures in Thailand. Such factors were found to be a subset of CSFs for e-commerce identified from the literature. While the researcher observed that the case study companies addressed almost every CSFs for e-commerce found in the literature (Table 14.3), some were more critical than others to the success of Thai e-commerce (Figure 15.1). Thus, the first proposition is developed:

Proposition 1a: CSFs for e-commerce in Thailand are not different from CSFs for e-commerce in developed countries

Proposition 1b: The importance of individual CSFs for e-commerce may differ from developed countries.

Based on the chapter 14, the eight most critical success factors for e-commerce in Thailand across a 2x2 matrix were found to be: convenient websites, trust, Internet connections, online security, large product selections, brand name recognition, customer relationship management, and order fulfillment (Figure 15.2).

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[1] Pantavanij and HotelThailand.com identified order fulfillment (delivery and availability) as a CSFs for e-commerce in Thailand, but order fulfillment is not critical to the success in their service-oriented industries.

**Figure 15.1: The CSFs for E-commerce in Thailand and the Literature**
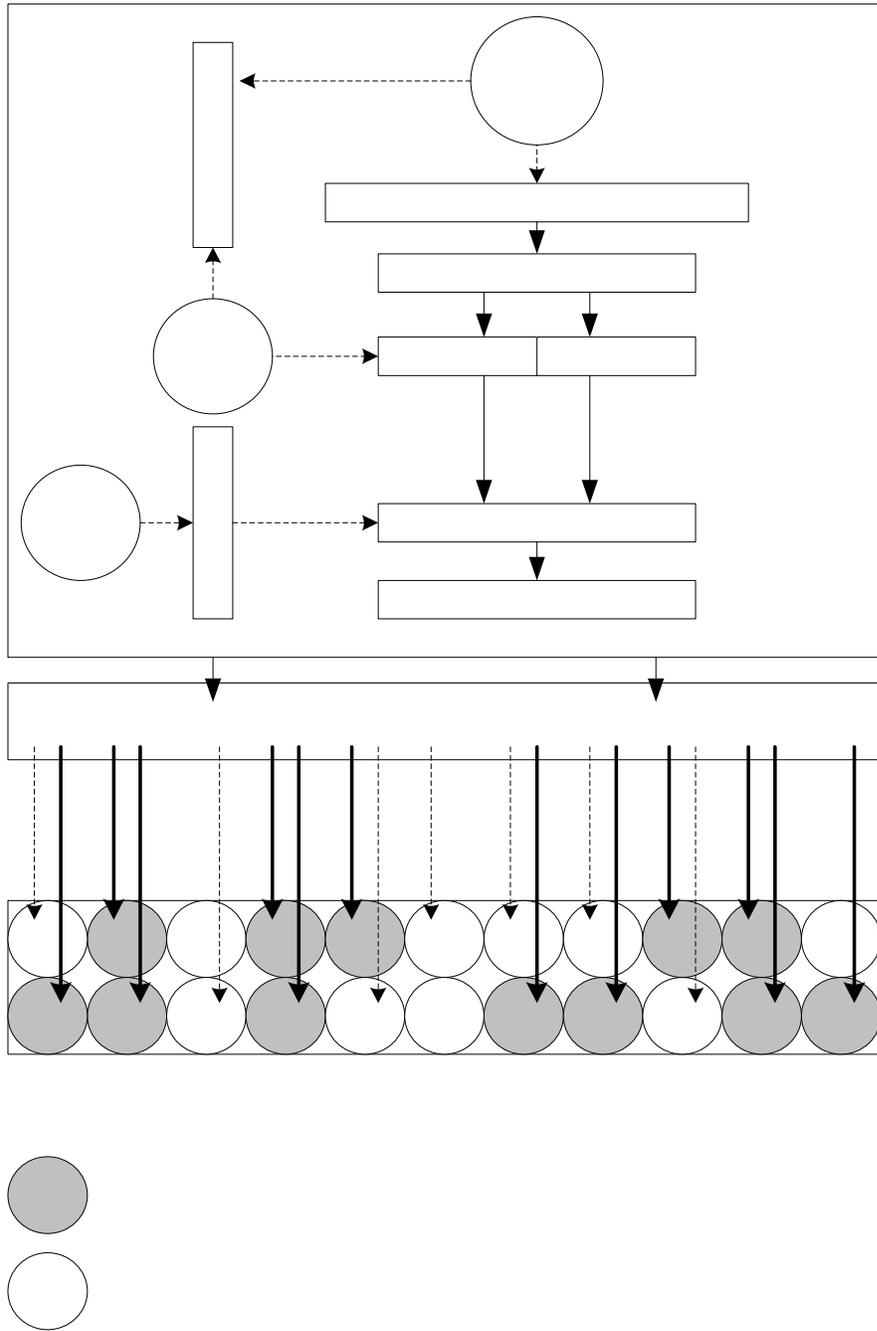
Figure 15.2: The CSFs for E-commerce in Thailand across a 2x2 Matrix
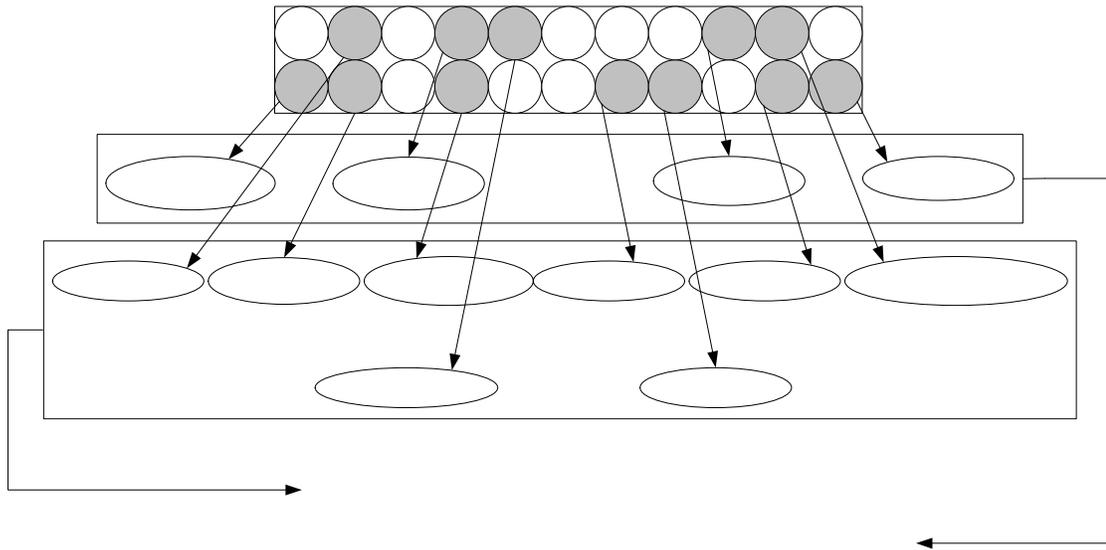
As discussed in the previous chapter, the main reason of having effective and efficient Internet connections, offering large product selections, developing brand name recognition, and building strong customer relationships is to deliver convenient websites. In addition, the main reason of building brand name recognition, providing effective online security, fulfilling orders, and developing customer relationship is to develop customer trust. This findings lead to the second proposition:

Proposition 2a: At the early stage of e-commerce development in Thailand, trust and convenient websites are factors that are most critical to the success of e-commerce.

Proposition 2b: At the present stage of e-commerce development in Thailand, the main purpose of having efficient Internet connections, large production selections, strong brand name recognition, and customer relationship management as CSFs for e-commerce is to deliver convenient website.

Proposition 2c: At the present stage of e-commerce development in Thailand, the main purpose of having strong brand name recognition, online security, efficient order fulfillment, and customer relationship management as CSFs for e-commerce is to develop customer trust.

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The researcher observed that competitive challenge was not the main focus of e-commerce in Thailand since few case study companies had a high level of competition in their markets. HotelThailand.com and Thaigem.com had a relatively high level of competition in their markets as a result of foreign competition. Other firms targeted Thai customers, and, thus, had little online competition. Only a few online rivals competed with them.

The real challenge in conducting e-commerce in the Thai market was convincing Thai customers to shop online or use online services. The majority of Thai customers still hesitated to shop online or use online services due to the relative inconvenience when compared to traditional shopping. Slow Internet connection and low awareness of Thai websites make online shopping/services even less convenient to Thai customers. Thai culture also had a negative influenced on online shopping and services since traditional shopping in Thailand was considered more convenient and provided for more personal relationships and interactions. As explained by Hofstede (1991), Thai people enjoyed receiving personnel service through conventional shopping or when placing business orders. Hofstede (1991) also indicated that Thai people did not feel comfortable with individualistic and impersonal processes such as online shopping/services that required self-service.

The lack of trust also prevented Thai people from shopping online or using online services. Thai customers distrusted online merchants and online shopping/online service processes because Thai laws are insufficient to support e-commerce activities. Hofstede (1991) indicated that Thai people have a low level of tolerance for uncertainty. With the increase of online fraud, online shopping/services were considered high risk activities, and had limited appeal to Thai people.

As a result, the researcher found the Thai culture and inefficient e-commerce-related infrastructure were major barriers to attract Thai people to online shopping/services. All companies in this study focused their resources and efforts first on creating convenient websites and building trust with their customers first. This made factors including convenient websites, trust building, Internet connections, the development of brand name recognition, offering of large product selections, customer relationship management, order fulfillment, and online security all critical to the success of e-commerce in Thailand.

The inefficiency of Thailand's e-commerce infrastructure influenced some of the factors that were critical to the success of e-commerce in specific quadrants of the 2x2 matrix used in this study. In addition,

the limitation of qualified IT personnel affected start-up B2C e-commerce firms. Similarly, the typical

business client for B2B e-commerce, an SME in Thailand, lacked knowledge, awareness and understanding

of e-commerce value to its business. This limitation challenged B2B e-commerce companies to attract

SMEs to use their online services.

Figure 15.3 shows how Thai culture and the inefficiency of its e-commerce-related infrastructure

influence the most critical success factors for e-commerce in Thailand.

Figure 15.3: Influence of Thai Culture and E-commerce-related Infrastructure on the CSFs for E-commerce in Thailand
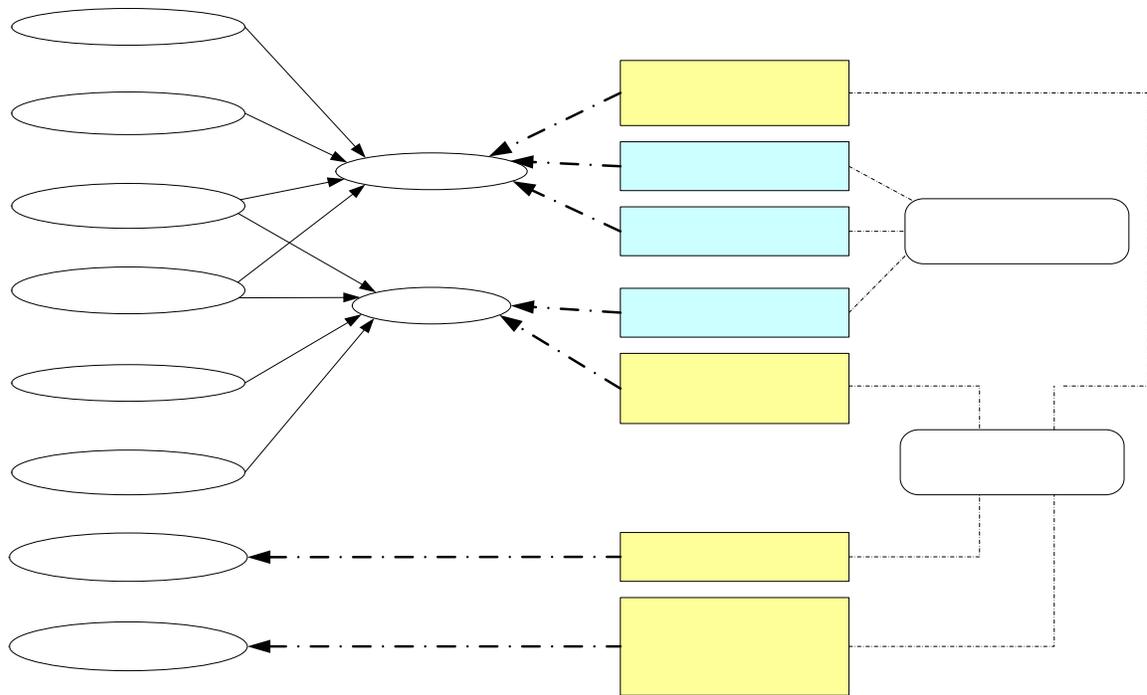
At the present stage of e-commerce development in Thailand, CSFs are affected by improvements

in the e-commerce infrastructure. However, Thai people are also beginning to feel more comfortable with

online shopping and new online business practices. As new influences emerge, CSFs for e-commerce in

Thailand will begin to change. This does not mean that former CSFs are no longer important, but they have

become standard practices in Thailand. These conclusions lead to proposition three:

Proposition 3a: Thai culture of high uncertainty avoidance is the main influence of the lack of trust of e-commerce in Thailand.

Proposition 3b: Thai culture of high power distance and low individualism are the main influences that cause online shopping/service to be less appealed to Thai customers.

Proposition 3c: The lack of qualified IT personnel has more impact on the success of online-dominated channel B2C e-commerce than e-commerce in other quadrants of a 2x2 matrix.

Proposition 3d: The clear value proposition has more impact on the success of B2B e-commerce than other quadrants of a 2x2 matrix.

Proposition 3e: Management support has more impact on the success of online-dominated channel e-commerce and B2B e-commerce than e-commerce in other quadrants of a 2x2 matrix.

Proposition 3f: Supporting back-end operation has more impact on the success of traditional-dominated channel B2C e-commerce than e-commerce in other quadrants of a 2x2 matrix.

Key Industry Requirements for E-commerce

Based on the findings of this research and the conclusions presented in the previous section, a general model for e-commerce in a specific industry in Thailand has been developed. Figure 15.4 shows how CSFs for e-commerce in a specific industry (key industry requirements for e-commerce) are closely aligned to CSFs for e-commerce in Thailand. These findings lead to proposition four.

Proposition 4: For e-commerce in Thailand to be successful, companies must meet not only key requirements of its industry, but also CSFs for e-commerce in Thailand.

Figure 15.4: Relationship between the Key Industry Requirements for E-commerce and the CSFs for E-commerce
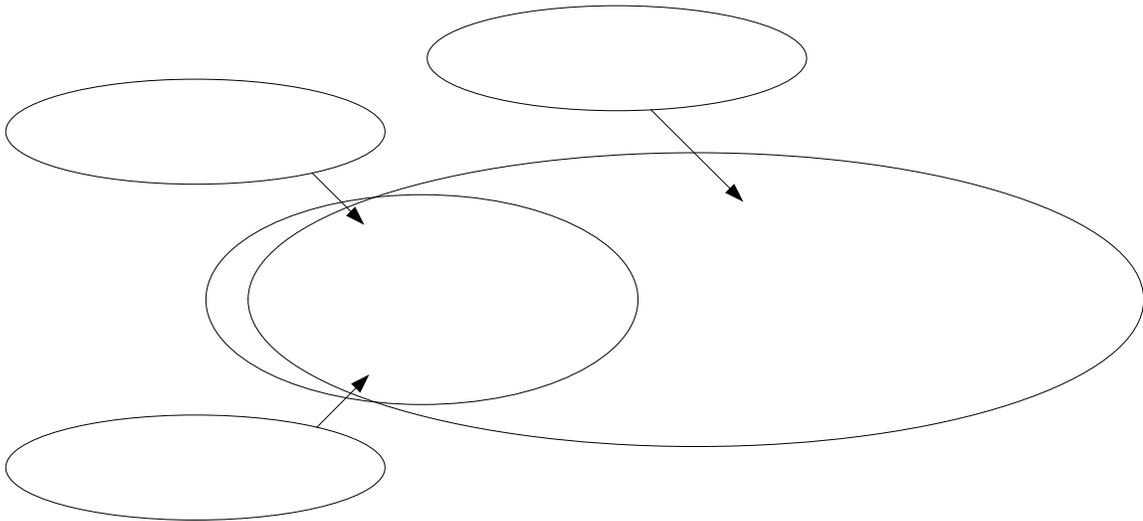
Chapter 14 shows that not all key industry requirements are aligned to CSFs for e-commerce. However, the researcher observes this result happened because of the limitation of a 2x2 matrix and choices of the case companies in this study. For instance, Pantavanij identified that order fulfillment is critical to the success of e-commerce in Thailand, but is not critical to the success in the service-oriented e-procurement market. Thus, Figure 15.4 shows that CSFs for e-commerce in Thailand overlap the key **Thai culture** industry requirements for e-commerce in a specific industry. Based on Figure 15.4, key industry requirements for e-commerce companies in specific industries are also influenced by Thai culture and inefficiency of its e-commerce-related infrastructure. At the same time, they are influenced by their own specific industry conditions.

Figure 15.5 summarizes CSFs for e-commerce in specific industries described in the previous chapters. Factors with one asterisk (*) are key industry requirements that aligned to a CSF. Factors with two asterisks (**) are key industry requirements that relate to specific industry conditions in Thailand. The 2x2 matrix provides a framework for e-commerce ventures within specific industries. Along with the 2x2 matrix, figure 15.6 describes best practices for e-commerce ventures in Thailand.

Figure 15.5: A 2x2 Matrix and the Key Industry Requirements for E-commerce in Thailand

Awareness of e-commerce value*
Management support*

Sale forces**
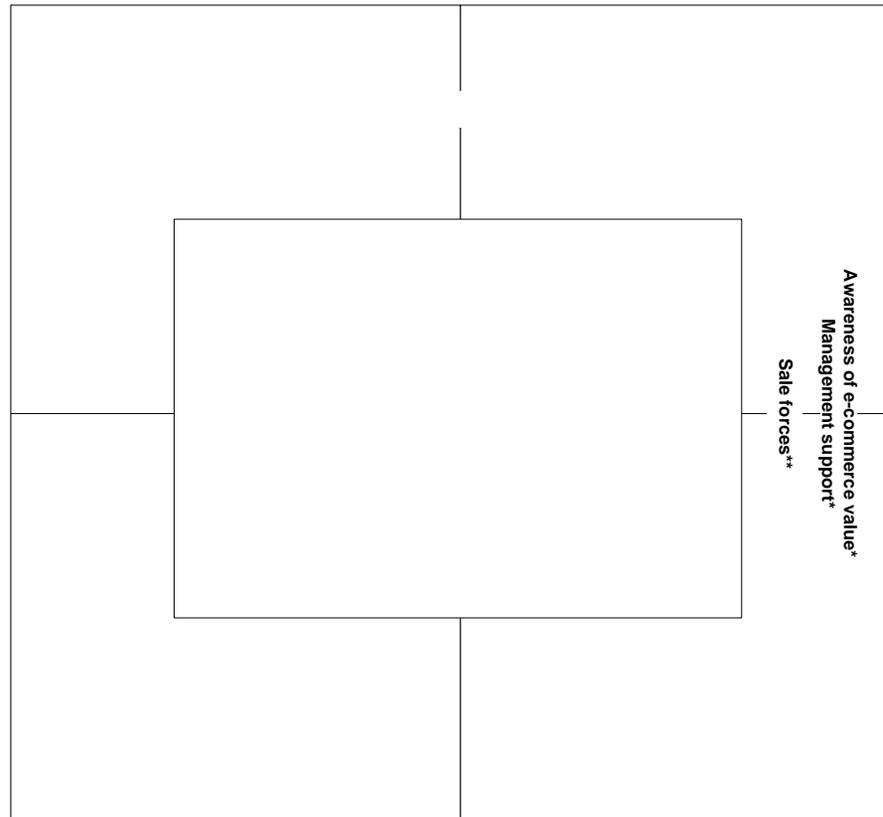
Online-dominated channel

Figure 15.6: Key Elements Addressing CSFs and Key Industry Requirements for E-commerce in Thailand

Industry knowledge

Senior management involvement
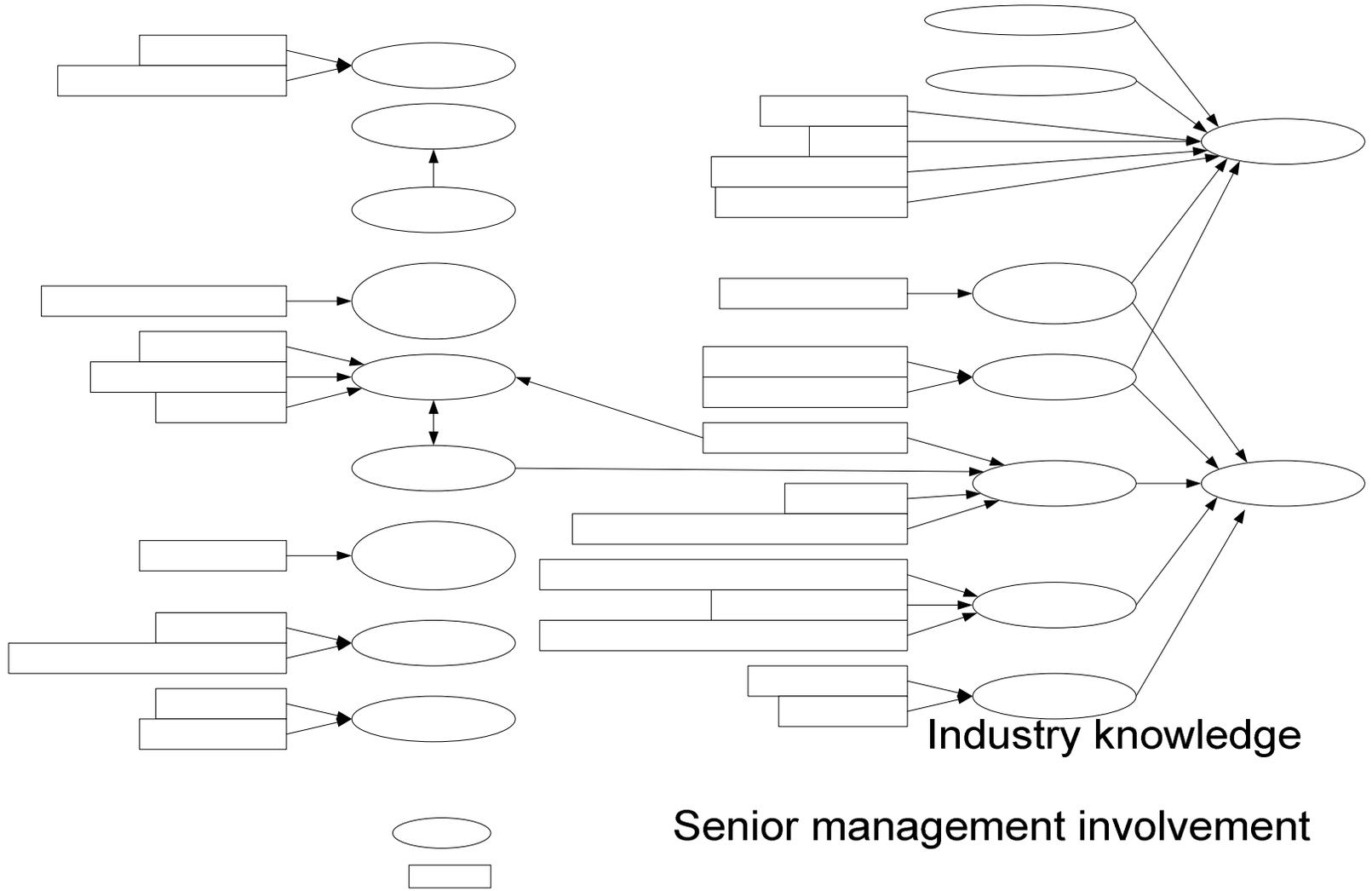
Implications

Given the previous findings, this research has implications for e-commerce practitioners, Thai government, and academic researchers alike.

Implications for E-commerce Practitioners

This research identifies CSFs (Figure 15.5) and best practice guidelines (Figure 15.6) for e-commerce ventures. Key areas that e-commerce ventures need to incorporate into their e-commerce business models include the following.

1. According to several critics and researches, successful e-commerce business models from developed countries have not been successfully implemented in developing countries. There are a limited number of developing country successful e-commerce ventures that start-ups can emulate. This research provides frameworks and best practice guidelines for e-commerce ventures in Thailand. Should a Thai e-commerce company follow example the example of successful e-commerce business models from developed countries, it must also understand the influences of Thai culture and e-commerce-related infrastructure in Thailand, and customize its imported e-commerce business model to fit the Thai culture and business environment.

2. Thailand also lacks information and research about the online behavior of Thai customers. While the case study companies in this research faced these problems, they worked hard to understand their customers by collecting customer profiles and conducting market research to get to know their customers. The researcher observes that these practices were unique to the firms studied, and was seldom found with other Thai online businesses. To be successful, it is critical that a Thai e-commerce venture conducts such practices to better understand its target markets and, determine appropriate products/services offered within its business model.

3. One of the main requirements of an e-commerce business in Thailand is to build customer trust. Based on the research findings, several elements must be addressed in order to establish trust with Thai customers. Online security and brand name recognition can establish short-term trust. While these practices are important, long term trust with Thai customers requires e-commerce companies to deliver what is promised in term of product/service quality. Thus,

order fulfillment and customer relationship management are core elements for establishing long term trust with Thai customers.

4. It is important that Thai e-commerce ventures incorporate "human touch" service/support into their e-commerce business models. A call center and online chat were two common practices found in the research cases. Even though such services may create high operating costs, the human touch is critical in providing a more personal and less individualistic e-commerce service while building relationships with customers. Moreover, first time customers prefer to place orders directly with customer service or sales personnel.

5. The researcher found two interesting key elements (practices) that were missing from e-commerce in developed countries: a variety of payment methods and delivery methods. First, since credit card holders in Thailand are still few in number and Thai people do not trust online merchants and online shopping/service processes, the Thai research sites used a variety of payment methods from money transfers to ATMs, to pay on delivery, to mobile phone payment (payment through a cell phone), to third-party-bill-payment services. These methods allowed customers to choose a method that fit their comfort level and experience. While some of these methods are less convenient than online credit card payments, they allowed Thai customers to shop online without worrying about online fraud. At the same time, the research sites were able to widen their target markets by attracting customers that did not use credit cards for online shopping. Second, since product delivery was one of the many online shopping concerns of Thai customers, several sites offered messenger delivery services to expedite delivery. Several B2B sites also developed in-house delivery services to overcome the inefficiency of alternative delivery systems in Thailand.

6. While the 2x2 matrix framework may be applied to developing countries, UNCTAD found that inefficient e-commerce-related infrastructures are common among developing countries. As for the national culture, there are a number of developing countries with similar of Hofstede's cultural dimensions. Table 15.1 shows examples of developing countries that have similar cultural dimensions. For example, China had higher PDI and lower IDV than Thialand. It means that personal service is important to Chinese people. In addition, China is a

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collectivist society and, thus, impersonal and individualistic websites would not <u>do</u> well in

China. Mexico has a much higher UAI than Thailand, which means that trust would play a

very important role in its e-commerce activities.

Table 15.1: Examples of Hofstede's Cultural Dimensions in Developing Countries

Country	Power Distance Index (PDI)	Country	Individualism Index (IDV)	Country	Uncertainty Avoidance Index (UAI)
Thailand	64	Philippines	32	Thailand	64
Brazil	69	Mexico	30	Ecuador	67
India	77	Malaysia	26	Czech Republic	74
Indonesia	78	Thailand	20	Brazil	76
China	80	China	20	Venezuela	76
Mexico	81	Indonesia	14	Columbia	80
Malaysia	104	Venezuela	12	Mexico	82

(Source: www.geert-hofstede.com)

Implications for the Thai Government

As discussed in the cross-case analysis, several critical success factors are based on the

inefficiency of the e-commerce-related infrastructure in Thailand. To expedite the development of e-

commerce, the Thai government must take the initiative to improve the following areas.

1. Thai government must expedite the privatization of the Communication Authority of Thailand

    (CAT). As long as CAT fully controls the telephone lines in Thailand, all Internet service

    providers (ISP) will pay high prices to obtain licenses. By privatizing CAT, it will encourage

    competition in term of price and quality of Internet connection in the market, and thus

    encourage customer usage.

2. E-commerce laws can boost public confidence in e-commerce businesses. However, the Thai

    government's inability to complete its five e-commerce laws has delayed progress in

    ecommerce activities. The Thai government must expedite the development of its legal

    framework in order to facilitate the development of e-commerce activities.

3. The Thai government must provide incentives to increase the number of IT specialists in Thailand. The government should adopt measures to improve the IT education system to produce high quality IT specialists, not just greater numbers.

4. To encourage e-commerce businesses in Thailand, the Board of Investment (BOI) must improve the incentives (tax and other incentives) for e-commerce businesses. Small-to-medium size enterprises (SMEs), which constitute the majority of Thai businesses, lack IT personnel and resources, and the knowledge and understanding of e-commerce businesses. BOI and other related-government agencies, such as NECTEC, must improve the awareness and understanding of e-commerce for Thai businesses by providing training, seminars, and documents about e-commerce success stories, e-commerce business models, and e-commerce-related technologies.

Implications for Academics and Researchers

This research used CSFs for e-commerce found in developed countries as the basis for comparing and identifying CSFs for e-commerce in Thailand. The researcher used a 2x2 matrix to analyze findings across nine case studies. The resulting 2x2 matrix framework and best practice guidelines for CSFs and key industry requirements for e-commerce in Thailand led to four recommendations for further research (Figure 15.7):

1. To solidify and confirm the 2x2 framework of CSFs for e-commerce in Thailand, further investigation is required using quantitative research methods.

2. In order to better generalized results, the 2x2 matrix framework should be applied to other developing countries that have similar e-commerce-related infrastructure and national cultures as Thailand using both qualitative and quantitative research methods.

3. Best practices in other developing countries should be investigated in order to develop guidelines for e-commerce ventures in developing countries.

4. While the researcher observed that CSFs for e-commerce in Thailand were similar to those in developed countries, priorities were found to be different. CSFs for e-e-commerce in Thailand are influenced heavily by the Thai culture and its inefficient infrastructure. Thus, other countries priorities for CSFs may be different from Thailand's. To identify these differences,

comparison studies between CSFs for e-commerce in Thailand and other countries are

needed.

Figure 15.7: Future Research Recommendations
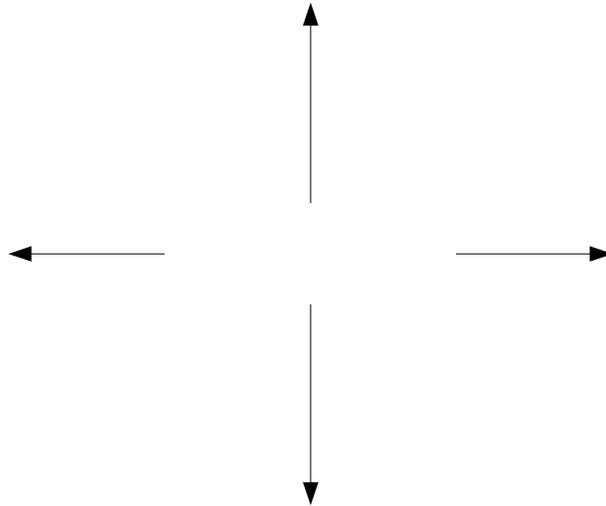
Limitations

This research should help readers understand the potential issues associated with the conduct of e-commerce in Thailand.

1. By investigating nine case studies from different industries, a wide range of CSFs for e-commerce in Thailand were identified. In contrast, the study of nine different industries makes it difficult to generalize key industry requirements across the 2x2 matrix. Requirements for other industries may not be included in this framework. For example, competitive price and supporting back-end operation were missing from this analysis. At the same time, it may miss other such factors.

4) Comparison study o

2. Even though the 2x2 matrix facilitated the comparison and analysis of the nine research sites, it has some limitations. First, the focus of the 2x2 matrix (B2C and B2B target markets compared with online-dominated and traditional-dominated channels of delivery) does not work well for firms using multiple formats. For example, Thaigem.com and Officemate sell their products to both business clients and consumers. This made it difficult to determine performance by cell, allowing sales revenue as the only common measure. Thaigem.com's B2B sales revenue has been growing faster than B2C sales. When B2B sales surpass B2C sales, Thaigem.com will become classified as an online-dominated channel B2B e-commerce firm. In addition, there is a thin line between online-dominated channels and traditional-dominated channels. It was found that most firms included both online and offline channels in their business models. To classify them into the 2x2 matrix, the researcher had to use sale revenue as the criterion. Once classified, only one format was considered. Furthermore, the 2x2 matrix did not differentiate product-oriented industries from service-oriented industries. The research showed that an e-commerce firm within a service-oriented industry, such as Pantavanij, has a unique set of key industry requirements. Since it provides service, delivery and availability factors were not necessarily part of the e-procurement industry. However, it was categorized in the same quadrant as Cementhai, which represents a product-oriented industry. As a consequence of these differences, delivery/logistics and availability were not found to be critical in this quadrant.

3. For future research, the following adjustments should be made to the matrix:

   a. The 2x2 matrix should be applied separately to product-oriented case studies or service-oriented industry.

   b. The analysis of CSFs for e-commerce should be analyzed by industry. However, this methodology requires a large sample within each industry. This may not be possible for developing countries like Thailand because there are a limited number of firms within each industry.

Summary

The focus of this research was to investigate e-commerce in Thailand in order to identify CSFs for e-commerce. The research questions sought to identify CSFs for e-commerce, regardless of industry, to identify the key industry requirements for e-commerce, to investigate e-commerce business models in order to understand how e-commerce companies address CSFs, and to assess the success of e-commerce companies in the sample.

Through the use of a case study methodology, nine e-commerce companies were investigated. It was found that CSFs for e-commerce in Thailand include convenient websites, Internet connections, large product selections, brand name recognition, online security, customer relationship management, order fulfillment, and trust. It was also found that the reason of having efficient and effective Internet connection, providing large product selections, developing brand name recognition, and building customer relationships is to deliver convenient websites. In addition, the main reason for having strong brand name, providing online security, fulfilling orders, and developing customer relationship is to develop customer trust. In recognizing how these factors became critical to the success of e-commerce in Thailand, it was found the Thai culture and its inefficient e-commerce infrastructure were central influences. As for key industry requirements, competitive price and supporting back-end operation were two critical success factors for e-commerce across all industries. Further analysis, using the 2x2 matrix, resulted in more detailed findings relating to CSFs and best practices. Factors such as the variety of payment and delivery methods were found to be unique to Thai e-commerce. In addition, it was found that the Thai government needs to address issues relating to its inefficient e-commerce infrastructure, such as deregulation of CAT, establishment of comprehensive e-commerce law, improving the availability of qualified IT personnel, and promotion e-commerce among Thai businesses.

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