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WHERE IS THAILAND IN THE DEVELOPMENT OF E-COMMERCE?

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Abstract

The phenomenal growth of the Internet and e-commerce has changed the landscape of the economy and the way business is conducted. For developing countries like Thailand, e-commerce is the opportunity to improve its trade efficiency and facilitate its integration into the global economy. After the Asian financial crisis in 1997, Thailand was left with massive debts and high bankruptcy rates. The Thai government has taken an active role in promoting e-commerce in response to the crisis. Thai companies that rushed into the game by copying foreign e-commerce business strategies/models mostly failed. One reason for the fail of e-commerce in Thailand was that strategies/models did not import well across disparate cultures. Nonetheless, Thai businesses are now successfully developing their own e-commerce business strategies that fit the needs of the Thai e-commerce business markets. Among them, Thaigems.com has become the world's leading online seller of gems and jewelry with a 90% share of the online market for colored gemstones. Most researchers addressing e-commerce strategies investigate companies in developed countries. There are very few conducting research in developing countries like Thailand. This dissertation uses a case study approach to answer the basic research question: What e-commerce strategies are suitable to Thailand?

Introduction

The phenomenal growth of the Internet and e-commerce since the mid 1990s is fundamentally changing the global economy. Forrester forecasted that by the end of 2002, the total value of global e-commerce would reach $2.3 trillions, and will reach $12.8 trillions by 2006 (UNCTAD, 2002). Today e-commerce allows firms to reach global markets (e.g. Swass, 1996, Kalakota and Whinston, 1996 as cited in Muthitacharoen and Palvia, 2002), to boost sales and cut costs, and to gain efficiency in multiple stages of production and distribution processes (UNCTAD, 2002). Such gains translate into improved competitiveness for firms with higher levels of productivity, and hence raise incomes for the economy as a whole.

Realizing the potential of the Internet and e-commerce, developing countries such as Thailand have committed themselves to Internet technology and the support of e-commerce. According to Kofi Annan, the Secretary-General of the United Nations, "…. E-commerce 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 (UNCTAD, 2002)." In fact, Forrester and UNCTAD forecasted that the total e-commerce value of developing Asia and Pacific in 2002 would be $87.6 billion and would reach $660.3 billion in 2006. This represents a compound annual growth rate (CAGR) of 65.7 per cent, which would be the fastest growth rate among all regions (UNCTAD, 2002).

E-Commerce Development in Thailand

The growth of e-commerce in Thailand is still in its infancy. According to Forester and UNCTAD, the total e-commerce value in Thailand in 2002 is only about $200 million, but it is forecasted to reach $2.9 billion in 2006. This represents the compound annual growth rate of 95.1 per cent. Thailand, whose own financial crisis triggered the Asian financial crisis in 1997, has been aware of the importance of e-commerce and has realized that e-commerce could help Thai businesses boost sales and cut costs, and in return support an economic turnaround from the Asian financial crisis. The Asian financial crisis between 1997 and 1999 left Thailand with massive debt, high bankruptcy rates, and devaluation of its currency. In response, the Thai government has

prioritized national IT development and has taken measures to promote e-commerce. To promote e-commerce among Thai businesses, The Thai government passed e-commerce laws in late 1999 (Asia Computer Weekly, 1999), establishing the Information and Communication Technology (ICT) department to support the country's IT and e-commerce development, and to organize conferences, training programs and exhibitions to enhance the public's awareness of the e-commerce opportunities. In spite of the Thai government's support, Thailand has many others barriers to rapid Internet and e-commerce growth. In 1999, only 1.95 million out of 60 million Thais were credit card holders (Asia Computer Weekly, 1999). In 2000, only 10% of the Thai population had a telephone line, and less than 5% had a personal computer at home (BusinessWorld, 2000). As of 2002, only about 5 per cent of the 61 million Thais were online (Bangkok Post, 2002). Thailand has one of the most expensive leased lines costs for businessmen who want to sell their goods on-line. The price is five times as expensive as in Hong Kong, four times as in Japan, three times as in Singapore, and two times as in Malaysia. The high telecom costs resulted from a monopoly of Thailand's state-run Communication Authority of Thailand (CAT). As a result, only a small number of businesses offer an extranet to their business partners (Asia Computer Weekly, 1999). Not until late in 2000 was CAT slated for privatization, but CAT maintains its monopoly over international connections until 2006 (Far Eastern Economic Review, 2001). Of the three electronic commerce laws passed by Thailand's government in late 1999 (Asia Computer Weekly, 1999), the electronic transactions act did not take effect until early in 2002 (Bangkok Post, 2002).

Thailand's human resource capabilities are also limited. Only 5,000 IT specialists graduate each year (Far Eastern Economic Review, 2001). Foreign language also remains a barrier in advertising products of Thai merchants that want to reach buyers aboard (Bangkok Post, 2002). Regarding Thailand's consumer behavior and culture, Muthitacharoen and Palvia (2002) studied the characteristics of Internet stores' and factors that raise or limit a Thai's acceptance of Internet shopping. The study showed that Thais do much less Internet shopping than Americans. Muthitacharoen and Palvia (2002) explained that an underlying root cause lies in the culture. Internet buying requires higher levels of risk taking and is more impersonal than conventional shopping, while a study by Hofstede (1991) also showed that Thais are high in uncertainty avoidance and are a more collectivist society (Muthitachroen and Palvia, 2002).

These factors create a unique e-commerce business environment that is different from developed countries like the US. Thus foreign e-commerce business strategies or e-commerce models created in the US or in other developed nations might not be suitable to the Thai e-commerce business environment. Despite these concerns, after anxiously watching the rapid development of e-commerce in the United States, Europe, and other parts of the world by storm, many Thai businesses copied foreign e-commerce business strategies or e-business models. As a result, hundreds of dot bombs found themselves without viable business models (Far Eastern Economic Review, 2001). According to Elliott Yuen, Dream Asia Limited's Chief executive officer, "Asian companies must develop their own e-commerce/e-retailing business models which are more suitable to the region's disparate cultures" (Computimes, 2001).

E-Commerce Business Strategy Framework

In order to conduct a successful e-commerce business in Thailand, one needs to be able to create e-commerce business strategies suitable to the Thai business environment and culture. There are many definitions of e-commerce. According to Daniel and Myers (2000), e-commerce is "the use of the Internet or World Wide Web to aid communication or trading either between organizations and individuals or between organizations" (2000, p. 2). As such, e-commerce encompasses not only buying and selling but also the delivery of information, providing customer service before and after the sale, collaborating with business partners, and enhancing productivity within organizations. In other words, e-commerce is a set of web-based transaction-related activities that are part of business processes. Business processes reinforce a firm's business strategies. Boulton (2000) explained that to understand a company's business strategy, one must identify business strategy in terms of six sub-elements: market/customer targets or segment, the product or product line (including services), the product position, required support technologies, strategic business processes, and market access (Figure 1). Each market/customer target segment possesses specific products or services requirements for a firm to meet. Product or service positions determine the underlying features and qualities that a firm's products will offer and how those offerings will be competitively positioned in the marketplace. Technologies are needed to meet the specific products and positioning requirements, and support the central business processes that develop products/services and deliver them to the market. Market access is a firm's approach to accessing its customers. In the context of e-commerce, the market access is through the Internet. Strategic business processes are the internal capabilities and skills that a firm needs to implement its business strategies.
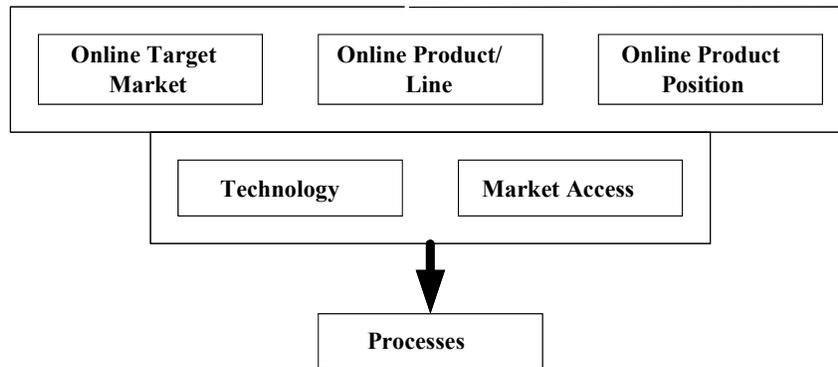
Figure 1. Business Strategy Framework (adapted from Boulton 2000)

Research Needs

Given the fact that much of the empirical research and information on e-commerce is based on the US and other developed nations, we need to research ecommerce strategies in the context of developing countries like Thailand. One possible reason for the lack of research is that e-commerce in Thailand is relatively new when compared with developed countries like the US. Therefore the purpose of this research is to examine successful e-commerce businesses strategies in Thailand. The contribution of this research will provide not only a framework of e-commerce business strategies for companies in Thailand and other similar culture Asian countries, but will also provide guidelines for the Thai government and its agencies in supporting Thai companies in conducting e-commerce. As such, the general research questions for this research study are:

1. What are the company's the customer targeting strategy and its requirements?
   a. What are the company's targeted online customers?
   b. What are the specific online customer needs and requirements that affect their online purchase decisions?
2. What are the online product/services line and online product/service positioning strategies for each market segment?
   a. What are the online products/services that the company offers?
   b. How are these offerings positioned in term of price and quality when compared with alternative products/services in the market?
3. What technologies are required to implement the product-market strategy?
   a. What technologies have the company used to develop online products/services?
   b. What technologies have the company used to develop the associated processes used in developing/delivering online products/services to the market?
4. What strategic processes are required to produce/improve online products/services?
   a. How does the company develop online products/services?
   b. How does the company acquire product/service components (for assembly) to meet customer order requirements?
   c. How does the company control the quality of online products/services?
   d. How does the company ensure the availability of online products/services?
5. What are the market access strategies?
   a. What are the company's distribution channels?
   b. How does the company use these distribution channels (the Internet or combine the Internet and traditional distribution channels) for customers to find products/services?
   c. How does the company provide customers with information and education about the company's products/services and recognize its brand/image?
6. What are the company's before and after-sales services to maintain customer relationships?

Case Research Methodology

This research is based on case research methodology. According to Paper (2001, para. 22), "Case studies make an excellent vehicle to explore state-or-the-art thinking because researchers can gain a better understanding of "how" and phenomena works and "why" it works the way it does." Since the purpose of this research is to also investigate "how" questions, the literature makes

it clear that a quantitative research approach is most appropriate. According to Clarke (2000), "electronic commerce is a domain of study within various disciplines, importantly including that 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. Since information systems (IS) are integral to E-commerce efforts, IS seem a natural source of research. The most common qualitative method used in formation systems has been identified as case method research (Orlikowski and Baroudi 1991; Alavi and Carlson 1992).

According to Yin, "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, p. 13).

Yin (1994) explained that case studies are appropriate when contextual conditions might be highly pertinent to the phenomenon of study. Benbasat, Goldstein and Mead argue that "Case study research is particularly appropriate for certain types of problems: those in which research and theory are at their early, formative stages," and "sticky, practice-based problems where the experiences of the actors are important and the context of action is critical" (Bonoma 1983 and Roethlisberger 1977, as cited in Benbasat, Goldstein, and Mead 1987, p. 369). In addition, Creswell explained that, "Characteristics of a qualitative research problem are: (a) the concept is "immature" due to a conspicuous lack of theory and previous research; (b) a notion that the available theory many be in accurate, inappropriate, incorrect, or biased; (c) a need exists to explore and describe the phenomena and to develop theory; or (d) the nature of the phenomenon may not be suited to quantitative measures (Morse 1991, as cited in Creswell, 1994, p. 146)." These 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 that provide firm foundations on which conventional specific research can be based. Second, the phenomena are highly unstable. "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 (Clarke 2000)." Next, cultural variation is significant due to the transcended national boundaries capability of e-commerce. Clarke (2000) explained that there are very considerable variations among national cultures due to radically different adoption rates, impacts and implications of e-commerce. Moreover, culture from country-of-origin and country-of-residence is quite different. 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." Clearly, the case study research method is well-suited to the study of e-commerce strategies in Thailand.

Unit(s) of Analysis

According to Yin, "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" (1994, p. 21). The research questions address e-commerce strategies in Thailand. As such, the sample selection criteria will be Thai companies that implement e-commerce. The specific unit of analysis will be management levels of Thai companies tied directly to e-commerce strategies and their implementation.

Research Design

This research will be carried out as follows:

1. Theory Development

According to Yin, "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). For this research, Boulton's business strategy framework (2000) provides an excellent foundation for the "analytic generalization" (Yin 1994, p.30). This framework is not meant to be tested or verify, but rather is modified in the study. According to Creswell (1994, p. 94-95), "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."

2.   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 conversations. This approach is appropriate to the exploratory nature of the research.

3.   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.

4.   Research Questions

Given that companies that conduct e-commerce in Asia, including Thailand, have failed to develop e-commerce strategies that are suitable for the business environment and culture, the study focuses on successful e-commerce strategies implemented in Thailand. The further investigation of the literature for a framework was conducted. Boulton's business strategies framework was selected and used to formulate the initial research questions.

5.   Sample Selection

This research will employ multiple case studies. 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). 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. Schendel and Hofer (1979) state that site selection should be done "… in a non random manner, with a preference for either leading or average organizations." 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)." For this research, eight Thai companies were selected. They were identified as having successful e-commerce strategies. To address the differences in these eight case studies, the following 2X2 matrix will be utilized to divide them based on business focus and business format (Figure 2). 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). Business format represents the way in which an organization conducts business. The difference here is that if a business conduct brick and mortar business and electronic commerce, it is called a brick-and-click format. If a business is mainly conducted on the Internet without physical stores, it is called pure play format.

	B-to-C	B-to-B
Pure Play	Thaigems.com HotelThailand.com	ThaiAsianFood.com FoodMarketExchange.com
Brick and Click	Officemate.co.th AR4U.co.th	Valuesystem.co.th Cementthai.co.th

Figure 2. 2 × 2 Matrix

6. Data Collection/Data Analysis

For this research, multiple data sources, including interviews, documents, archival records, and direct observations, will be collected. Triangulation between multiple data sources will provide support to any conclusions. According to Yin, "a major strength of case study data collection is the opportunity to muse many different sources or evidence" (1994, p. 91). The data for each case will be the answers to research questions based on the business strategy framework from Figure 1. Yin stated that the analysis of case study evidence is one of the least developed and most difficult aspects of doing case study (1994, p. 102). According to Benbast, Goldstein and Mead, "The analysis of case data depends heavily on the integrative powers of the researcher" (1987, p. 374).

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