BUSINESS-TO-CONSUMER ELECTRONIC COMMERCE SUCCESS FACTORS IN THAILAND: THE WEBSITE MERCHANT PERSPECTIVES

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ABSTRACT

Electronic Commerce (E-Commerce) is considered a new channel of distribution that consumers can reach websites at anytime and from anywhere. In reality, however, consumers are not yet confident in on-line transactions. Several Thai website owners who operate business to consumer (B2C) e-commerce stated nine major success factors: government support, security and privacy, customer service, administrative support, online promotion, product uniqueness, logistics, product variety, and image creation. It is necessary that website merchants study various success factors, having impact on achieving business value of e-commerce investment and building customer trust which would then bring long-term profits to the organization.

Keywords: Electronic commerce, Business-to-consumer websites, Thailand

INTRODUCTION

The Internet, particularly the World Wide Web (WWW), has taken a greater role on business activities in the age of digital economy. This gave birth to an innovation called, "Electronic Commerce (E-Commerce)", a new way of doing business that helps the companies or individuals achieve their competitiveness. Businesses who invest in developing their own websites are able to expand their domestic and international markets while consumers can visit their shops with no time and space limitations.

Yet, e-commerce also poses a threat to businesses. That is, an increasing number of firms, who develop websites, have entered an "electronic market", a market with low barriers to entry. Furthermore, one of the important obstacles for the growth of e-commerce is the fact that most websites owners still lack true knowledge of conducting electronic business. They fail to consider key factors for the e-commerce and to convince

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stakeholders of significance of effective on-line transactions which could help the business to survive and bring customer trust and satisfaction.

At the same time, some customers hesitate to buy goods or services via the Internet because of security concerns. It is believed that on-line businesses will not be able to realize their success unless their customers have more confidence in the e-commerce. Moreover, Electronic commerce needs many management challenges to the firms to implement it successfully. Prior research on electronic commerce has mainly focused on the perspectives of consumers, frequently addressing issues such as benefits and barriers. Relatively little research has studied the electronic commerce management success factors by assessing from online website owners. Online website owners can have wider perspectives to determine the major issues affecting business success. The major objective of the study is to provide an online organization or other related organizations to concern about these issues and improve their business management via the Internet channel more efficiently. This article aims to present findings from the study of major factors for successful business to consumer (B2C) e-commerce from website merchants' perspectives. In other words, this article seeks to answer the following research question:
- What factors do online-companies anticipate from their implementation of business-to-consumers electronic commerce successfully?

THAILAND AND ELECTRONIC COMMERCE

Despite a growing number of Internet users, it is found that doing business via the websites has not been widely accepted by consumers. In addition, the survey conducted by the Electronic Commerce Resource Center (ECRC, 2000), with a sample of 3,120 Thai websites, reveals that only 6 per cent (or approximately 180 websites) conduct transactions via the Internet. Industries using e-commerce the most are computer appliances (17%), services (16%), hotel and tourism (12%), health food and hospital (7%), and entertainment (5%).

The Thai Government has attempted to boost the e-commerce by establishing the Electronic Commerce Resource Center (ECRC) and integrating the e-commerce into the 9th National Economic and Social Development Plan as one of national trade strategies to enhance the country's export and domestic trade in goods and services. Priorities will be directed to: the legal infrastructure, security, reduction of legal barriers to the development of e-commerce, as well as collaborations with private sector in the preparation of database, the study of a policy and a framework for e-commerce development and a reform of Thai bureaucratic system into the government in the "Digital Age", or e-Government.

SUCCESS FACTORS FOR E-COMMERCE

Electronic Commerce is frequently seen as an alternative channel of doing business enabling the owners or firms to be more competitive than traditional ones with retail stores. It helps suppliers to expand their channels of distribution to use the Internet network. Many corporations, known as "Dot Com Companies", even use this channel to set up their business with low costs of investment. Additionally, consumers can reach the information they need with no time and space barriers, less expenses but more options. They also enjoy surfing through a variety of websites to search for goods and services (Jarvenpaa and Todd, 1996–1997). However, success is not automatic on the Internet, the section below briefly noted the most commonly cited success factors.

Information technology infrastructure

Prior studies indicate that information technology infrastructure is one of the most important factors for doing effective on-line business (Applegate et al., 1996; Zwass, 1996). This consists of network, and speed of the network. More than that, the World Wide Web (WWW), which is a part of the Internet and a channel of operating e-commerce, provides enormous sources of information for the users. Quality of information on the websites is still questionable for some groups of people. Many Internet users also experience information overload (Cho and Park, 2001; Ranganathan and Ganapathy, 2002). Furthermore, web applications, relating to data processing for executives and service providing to customers, such as the ERP, the CRM and sales support system are also vital.

Security and privacy

The next factors affecting the e-commerce are security and privacy. These have hindered on-line businesses from their success since consumers still lack confidence on security and privacy policy of the firms (Han and Noh, 1999-2000; Nguyen et al., 2000; Speece, 2000). They are concerned about their safety, the misuse of their private information as well as the authentication of parties involved in the business (Furnell and Karweni, 1999).

Product issues

There are various product issues involved on-line transactions, for example, variety, uniqueness, and quality of products and services (Cho and Park 2001; Keeney, 1999). They are significant to the clients' buying decision.

Marketing management

E-commerce needs good marketing efforts such as sales promotion and advertisement to introduce their websites to consumers (Gordon and Lima-Turner, 1997; Schlosser et al., 1999). Additionally, after sales service is necessary to maintain customer

satisfaction. When clients are satisfied with the quality of the services, they are more likely to be loyal to products or services of that particular website. Despite the fact that the sellers and buyers do not actually meet and there is no proof of authentication, effective after sales service helps businesses sustain customer trust and satisfaction. Besides, good targeting and expansion to new markets are indispensable for the growth of e-businesses (Gordon and Lima-Turner, 1997).

Logistics

Doing business via the Internet frequently involves the transport of goods to customers at distant locations or in foreign countries. Consequently, the entrepreneurs will have to consider the importance of packaging and transporting their products. Research indicates that B2C e-commerce will be more successful if the company can deliver the products in perfect shape and in a timely manner (Keeney, 1999; Cho and Park, 2001).

Management

Other websites management includes human resource management and organizational restructuring. Website owners will not fully benefit from e-commerce unless they have an appropriate structure to deal with the changing way of doing business. It is also necessary that their employees learn management know-how and how to give the best service to their clients. E-commerce owners might want to have business alliance in order to reduce their management costs (Elmuti and Kathawala, 2001).

In addition to this, websites have to be developed and updated regularly. The owner of each website will have to register for the "domain name". To use the right domain name could be very beneficial to the business. The domain name should not only relate to the brand of the product but also be easy to remember. Good management for the domain name registration and use of a recognizable domain name will help the business improve their image and to spread their brand's name (Clark et al., 2001).

Government support policy

An external factor that can promote the long- term growth of e-commerce is the favorable policy of the government to support online business and consumers protection. Government supports are among the most crucial forces affecting adoption of electronic commerce by consumers (Teo et al., 1997-1998). The government can greatly contribute to e-commerce by the implementation of such facilitating measures and regulations as legal infrastructure, consumer protection, taxation and other laws concerning e-commerce (Rotchanakitumnuai, 2002; Tanvanish, 2000; Min and Galle, 1999).

RESEARCH METHODOLOGY

Data for the study was collected by means of a questionnaire to capture perceptions about these success factors. The questionnaire content was divided into two sections. The first section is about the success factor items, measured by a Likert's scale ranging from 1=strongly disagree to 5=strongly agree. The initial list of items was discussed with a number of experts, including faculty member, electronic commerce specialists, and managers in the field of Internet commerce to verify that each item represented the concept it was supposed to measure well. Items with which the experts did not agree were changed or eliminated to clarify wording. Two additional items were added: "apply push technology or marketing", and "real-time communication between buyer and seller". Therefore, a total of twenty-nine statements were used to measure website owners' perceptions toward electronic commerce success. Addition to this, the second section is general information about website merchants' demographic data. A small-sample pretest was officers and faculty members who have experience in electronic commerce to check the reliability of the items.

The sampling frame was constructed based on the e-commerce websites provided by Electronic Commerce Resource Center in Thailand. The 180 Thai websites constitute most of the population who actually do transactions with payment on the Internet. The respondents are persons who are the managers of the websites or marketing persons etc. Data was gathered by personal interview.

DEMOGRAPHIC PROFILE

A total of 143 website merchants responded to the survey, yielding a response rate of 79 %. As shown in Figure 1, their websites represented a variety of business interests such as flowers and gifts, Internet mall, apparel and clothing, decoration and furniture, handicraft, book and stamp, health and food, computer, apparel and clothing, hotel and tourist, appliance, and finance.

As Table 1 shows, the majority of the respondents conducted electronic commerce over the Internet less than one year (about 50%). These electronic commerce websites were fairly small in size. Out of 143 respondents, 59 percent have invested less than 100,000 Baht in electronic commerce. On average, they employed only 2-3 employees for this online business and had annual sales via the Internet channel ranging from 50,000 Baht to more than 5 million Baht.

FINDINGS

Exploratory factor analysis was used to examine the dimensionality of electronic commerce success. A principle component factor analysis with Varimax rotation was undertaken, and a nine-factor solution was found, which explained about 60 per cent of variation in the items (Table 2). The tests suggested that the subsequent overall nine factors solution adequately accounted for the underlying structure of the data (Barlett's Test of Sphericity p-value=0.000, KMO measure of sampling adequacy = .740).

As seen in Table 2, dimensions with Eigenvalues of 1 or above were retained and nine factors emerged. Table 2 indicates some items with an asterisk. These items can be dropped because they did not load above 0.5 on any factor.

The result showed that there are nine success dimensions. Most of the factors are meaningful sets of items. The first factor, named government support, focused on government supports in electronic commerce and consumer protection law. The second factor, security and privacy, included network security, payment security, and privacy protection. The third factor called customer service included online after sales service, responsive communication, and clear targeted customers. The next factor, called administrative support, consisted of application support system for management, qualify personnel, and business process redesigned to conducted business via the Internet more efficiently. Another two factors are online promotion and uniqueness of product factors, which included only one item in each dimension. One factor, named secure logistic, focused on reliable product delivered, secure product packaging. Probably, the ninth factor, product variety, dealt with the variety of product and content of the website. The final factor, image creation, included domain name setting, quality of product and push strategy to management online business.
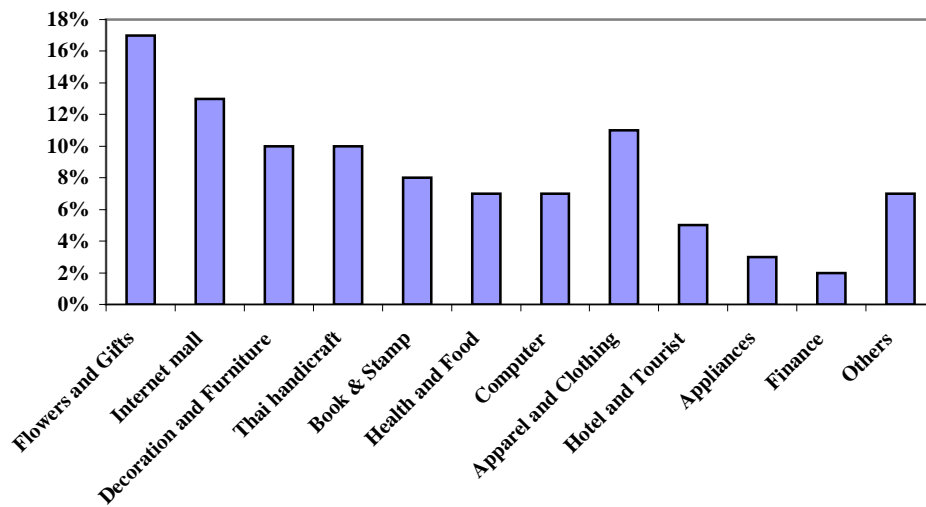
Figure 1: Types of Products and Services of Respondents' Websites

Table 1: Business-to-consumer website merchants' demographic profiles

Characteristics	N	Percent
Duration of E-commerce business		
≤ 1 year	71	50.35
> 1-2 years	50	35.46
> 2-3 years	13	9.22
> 3-4 years	6	4.26
> 4-5 years	1	0.71
Investment (Baht)		
≤ 100,000	83	59.28
100,001-300,000	27	19.28
300,001-500,000	7	5.0
500,001–700,000	1	0.72
700,001-1,000,000	3	2.14
> 1,000,000	19	13.58
Number of Employees		
1	38	26.6
2-3	59	41.3
4-5	27	18.9
> 5	19	13.2
Annual Sales (Baht)		
≤ 50,000	47	35.61
50,001 – 100,000	20	15.15
100,001 – 300,000	24	18.18
300,001 – 500,000	10	7.58
500,001 – 1,000,000	7	5.30
1,000,001 – 2,000,000	8	6.06
2,000,001 – 5,000,000	5	3.79
> 5,000,000	11	8.33

Table 2: Factor analysis for Business-to-Consumer Success Dimensions

Items	Loading for Factors								
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**	**F9**
Factor 1: Government support									
E-commerce tax law support	.878								
E-commerce law support	.841								
Consumer law protection support	.747								
Factor 2: Security and Privacy									
Security protection		.748							
Secure payment system		.697							
Privacy protection		.502							
Internet speed of consumer computer system*		.431							
Speed of the website network system*		.430							
Factor 3: Customer service									
Online after sale service			.786						
Having clear target customers			.536						
Realtime communication between seller and buyers			.502						
Provide certification authority*			.444						
Factor 4: Administrative support									
Application support systems for management				.680					
Qualified personnel				.660					
Busines process redesign				.629					
Business alliance*				.423					
Factor 5: Online promotion and selling support									
Online domain name advertising					.877				
Online sale promotion*					.421				
Online purchasing support system*					.414				
Factor 6: Uniqueness of product									
Differentiated product for online sale						.763			
Search for new markets and customers*						.428			
Factor 7: Secure logistics									
Reliable product delivery							.809		
Secure product packaging							.552		
Cheaper price*							.464		
Factor 8: Product variety									
Variety of product provided								.910	
Website content								.500	
Factor 9: Image creation									
Easy domain name setting									.604
Product quality									-.564
Apply push technology or push marketing									.536
Eigenvalues	2.810	2.322	2.211	2.148	1.946	1.864	1.785	1.530	1.422
% of Variance	9.366	7.742	7.37	7.16	6.485	6.213	5.951	5.101	4.741
Cumulative % of Variance	9.36	17.10	24.47	31.63	38.12	44.33	50.28	55.38	60.13

Bartlett's Test of Sphericity = 1165.709 df = 435 Sig. = .000
Kaiser-Meyer-Olkin Measure of Sample Adequacy = 0.740

Note: * Items omitted because loading did not exceed 0.5

CONCLUSION AND IMPLICATIONS

It can be concluded that nine factors have an effect on the B2C e-commerce, and this corresponds to past studies and can be generalized. For instance, government support is the most important indicator. Legal infrastructure and consumer protection factors are also significant and are widely discussed domestically and internationally, such as in health care, food and pharmaceutical businesses.

Next, the security and privacy factor includes the safe process for payment and privacy policy. This still discourages consumer confidence about e-commerce. Further, to conduct the online business more successfully, other important factors are to adjust business process to perform more efficiently, to provide information system applications to support management, and to have adequate knowledgeable personnel.

More than that, Thai website owners feel that traditional marketing efforts can be applied to on-line businesses. Continued advertisement of domain name, promotion, after sales services are helpful to build customer satisfaction. E-commerce needs to clearly specify their target groups and keep expanding their markets. Variety of products, good packaging and safe transport of products must also be considered as this type of business involves both domestic and foreign markets.

Furthermore, in this information age where people can reach websites anytime from several parts of the world, content on the web has to be always updated as this will help consumers to better decide to buy goods and services via the Internet. Would-be on-line businesspersons, thus, need to take into consideration the accuracy, relevancy, completeness of their products or services information. Besides, their websites should be designed for the ease of use while web content development and maintenance is also important.

This study makes a contribution that website merchants are also concerned about the factors that affect customers such as security and privacy, service and support, secure product delivery. Thailand's electronic business via the Internet channel will not succeed with long-term profits unless consumers accept it. To sustain the success of Thailand's electronic commerce, it is necessary to build customer confidence in consumer protection. They will have to be protected by the laws when they experience unfairness from the businesses and involving parties such as logistics companies, banks. The future success strongly needs the support from government sector integrated with the reliable management of website merchants to make consumers trust of the online system.

Moreover, this study suggests that electronic commerce implementation should not mindless hurry to a new technology without some extent of seriously management planning. Current and prospective online businesses need to merge excellent information technology, marketing and management efforts, for their moves towards business competitiveness.

LIMITATIONS

Limitations for this research are the fact that there are only a small number of companies conducting e-commerce with on-line payment. When there are increased numbers of on-line businesses, it could be possible to focus the study on one particular industry-export, tourism, on-line department stores or financial services-as well as to extend the framework of analysis to the Business-to-Business (B2B) e-commerce. It may be that perceptions of success factors differ across industries, but it is difficult to evaluate this because of the very early stage of development in Thailand e-commerce. Further, the results might be limited to the time of research operations, for example, at an early stage of electronic commerce implementation. The later stages of electronic commerce might show different success factors. Future research might have to use other variables to find out the result of these success factors, for example sales growth, return on investment, consumer loyalty.

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