



Development of e-Commerce Competencies Among Community Enterprise and SMEs in the Northeastern Region of Thailand

Pensri Jaroenwanit and Supot Deeboonmee

Abstract— This research aimed to investigate the understanding, the needs, and the development of e-Commerce competencies among the community enterprise and the SMEs in the Northeastern region of Thailand. The research was conducted by mixed-method approach and participatory research approach also. The research sample was entrepreneurs who had computer skill and qualified 4-5 stars of the product quality test, guaranteed by the Department of Community Development. Purposive sampling was used to select 53 community entrepreneurs and SMEs in Roi Et, Khon Kaen, Mahasarakham, Kalasin, and Udon Thani provinces as the samples. Qualitative data was collected by in-depth interviews and observations. Interview guideline was used as a research tool as well as the questionnaire in quantitative data collection.

Research results found that most of community enterprises and the SMEs had not experienced in the e-Commerce business. They needed to take the training course on e-Commerce. Based on the pre-test of e-Commerce training course, found that the participants' knowledge on the e-Commerce was at low level. After providing e-Commerce training course to participants, their knowledge was at high level. The satisfaction of participants on the training course was at high level. In addition, e-Commerce competencies developing course gave a chance to entrepreneurs to practice after the 8th week of the course based on intensively suggestion from the experts. Output of the practice showed that every participated entrepreneur could operate E-Commerce business by themselves better. They could understand e-Commerce concept, and had more sales volume through e-Commerce..

Keywords— e-Commerce, Competencies, Community Enterprise, SMEs.

1. INTRODUCTION

Globalization has accelerated commerce, and the internet is the driving force for an inter-connected supply chain [1]. In recent decades, the rapid development of the Internet has led to the great popularity of electronic commerce services [2]. With the advancement of e-commerce, people using the internet for their purchases no longer need to be physically present when their transactions occur. e-Commerce has created major changes in the retail and service industries. Today, customers can purchase products from their homes or offices. They are also able to see products on their computer monitors, and view information about how the products are manufactured [3]. Moreover, online shopping is becoming more secure as more security policies are being enforced by many online market places [4].

According to AC Nielsen's report (2010), approximately 875 million people worldwide have shopped online, and this percentage went up 40 percent

in two years. eMarketer (2011) predicted that the e-commerce market would reach 323 billion euro (\$407billion) in sales by 2011, accounting for 15.6 percent of overall retail sales. In addition, as consumers actively share information on products online, they have evolved into active participants who voice their opinions regarding various marketing activities of firms [5],[6], [7].

Electronics-Commerce or e-Commerce has taken place in Thailand since the beginning period of the Internet using. The ministry of Sciences conducted a website "www.nectec.co.th" to contribute knowledge about the Internet. E-commerce has begun to develop since the Internet was more popular, and spread widely to society especially on educational institutions which were adopting the Internet as teaching and learning tools. Government thus tried to push on the business conducted on the Internet [8], [9].

e-Commerce business in Thailand is now growing steadily. Sale volumes through the e-Commerce business have increased. It was found that the B2B entrepreneurs have sale volumes through the e-Commerce the most, followed by the entrepreneurs of B2G and B2C, respectively. Most of purchases are done domestically rather than internationally. A survey of the use of Information and communications technology in households in 2011, found that persons who were more than 6 years old have ever experienced in purchasing products or services via the Internet (3.8%) The most favorite item was costumes and jewelry (30.8%), followed by e-Ticket (14.8%), books (13.4%), and food & beverage (13.3%) respectively [10].

However, e-Commerce business is still facing with

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many obstacles. For instant, some customers were deceived by sellers, real products were not the same as on the advertisement, complicating of purchasing process, lack of security on personal data or credit card information, delaying of product delivery, etc [10],[11]. Nevertheless, e-Commerce business is an opportunity for those who would like to have their own business. The concept of e-Commerce is to realize and give priority of personal data security to customers, and conducting website which is easy to access. These conditions are keys that help the business achieve the goals[10],[11]. According to rationale and the significance of the study, this paper attempted to investigate the development of competency on the e-Commerce business among the SMEs in Thailand. The Northeastern region of Thailand was selected as a research area because this area was a region where contained a large number of SMEs. Research findings would be expected for creation new knowledge on the e-Commerce and also applied for creating guideline of the e-Commerce competency development for entrepreneurs in the future [12]. Thus, research objective is to examine the understanding, the needs, and the development of e-Commerce competency among the community entrepreneurs and the SMEs in Northeastern region.

2. LITERATURE REVIEW

2.1 e-Commerce

2.1.1 Definition of e-Commerce

e-Commerce is the process of buying, selling, or exchanging products, service and information via computer networks, including the Internet [13],[14]. In response to the recent rapid growth of e-commerce, many online e-Commerce platforms have developed Web-based information search service systems to process the enormous number of transactions that occur via the Internet [14],[15],[16].

2.1.2 Development e-Commerce

With the development of e-Commerce and online shopping, internet consumers face a dizzying array of product choices and consequently suffer from information overload [14],[17],[18]. The principal element of the contemporary way of doing business on the internet, a crucial factor that affects both the existence and the progress of Internet companies. The complexity to face and cope with this challenge is even bigger, knowing the fact that e-Commerce web services rely heavily on large-scale systems, consisting of thousands of computers, networks, software components, and users. Large systems are inherently complex, whilst the randomness in the way customers demand those web services initiate the problem of managing and planning the capacity of hardware resources [19].

2.2 Competencies

2.2.1 Definition of Competencies

Competency in the definition of David C. McClelland is the characteristics which are hidden under individual

personality. The hidden characteristics can be shown, and creates good individual performance [20]. United Nations Development Program (UNDP) defined the meaning of competency that; process which contributes individuals, organizations, institutions, and societies to present the development of abilities (either individually or collectively) to solve the problem and to implement to achieve the objectives [21].

2.2.2 Elements of the Competencies

Based on David C. McClelland, competencies consisted of 5 elements as followed;

1) **Knowledge** which is the knowledge on specific area such as knowledge on construction, knowledge on research, knowledge on astrology, and etc.

2) **Skill** which is a tool that individuals can use expertly to achieve the goals such as computer skill, cooking skill, speaking skill, and etc. skills has taken place from basic knowledge and good practice.

3) **Self – image** is presented as the attitudes, values, and opinions about their appearance, or what a person believes such as the self-confidence.

4) **Traits**; is what which can describes personal characteristics such as a trustworthy and reliable, or leadership.

5) **Motivation / Attitude**; is an internal driving factors that make individuals show their behavior toward a goal or the success [22],[23],[24].

2.2.3 Competencies on the e-Commerce of the Thai SMEs

Thailand has the strong competency of competitiveness in micro level. The strong competency of Thai SMEs in micro level is essential to run the SMEs and community enterprises [25] particularly the applying of information technology for the business management [26]. The use of e-Commerce will increase the marketing and advertising channels wider. Products and services of the SMEs and community enterprises will spread out to domestic market and international market effectively [27]. The e-Commerce will also enhance the competitiveness of the Thai private sector in international trade (Office of Small and Medium Enterprises Promotion 2009).

Therefore, applying of e-Commerce in their business will improve enterprise's competency skills, and improve skills and quality of the management to the SMEs and community enterprises, and increase the competency skill of Thai enterprises in domestic and international markets [28],[29].

2.3 Small and Medium Enterprises: SMEs

2.3.1 Definition of SMEs

SMEs or Small and Medium Enterprises are defined as independent, private owned business which contains low costs of operation and small number of employees [30]. Size of the SMEs is determined by the value of fixed assets of each type of enterprises as followed; production and service enterprise: the medium-size is not over 200 million Baht and the small-size is not over 50 million Baht. Trading enterprises: the medium-size of wholesale

trading is not over 100 million Baht and the small-size of wholesale trading is not over 50 million Baht. The medium-size of retail trading is not over 60 million Baht and the small-size of retail trading is not over 30 million Baht. Size of SMEs which is determined by the number of employees as per detail; production and service enterprise: medium-size is not over 200 staffs, and the small-size is not over 50 staffs. Trading enterprise: medium-size wholesale trading is not over 50 staffs, and not over 25 staffs for the small-size wholesale trading. Regarding to retail trading, medium-size retail trading is not over 30 staffs, and not over 15 staffs for the small-size retail trading [31].

In Thailand, a business law related to the SMEs has announced officially which called "the Small and Medium Enterprises Promotion Act B.E.2543" [30], [32], [33]. This act gave priority to the Minister of industry to clarify any business which related to the SMEs. The SMEs business would be grouped as 3 major groups included 1) Production sector which covered the production in the agricultural processing, manufacturing and mining processing. 2) Trading sector which covered wholesale trading and retail trading, and 3) Service sector [34], [35].

2.3.2 Development of SMEs

Developing of SMEs is essential to rely on the cooperation among both government agencies and private agencies in regional level to issue practical plan and development policy [36], [37]. Dimensions of development will focus on the priority and operation which can divided into 5 dimensions, including 1) Human Resource Development and Capacity Building, 2) Enhancing Marketing Capabilities, 3) Access to Financing, 4) Access to Technology, and 5) Creating Conducive Policy Environment. These 5 dimensions are adopt to reduce process of business registration, develop a policy and regulatory framework that promotes the development of enterprises, and promote the empowerment and partnership between the government sector and the private sector in the integrated development of enterprise [38].

2.3.3 SMEs situation in Thailand

According to current business situation in Thailand, Thai SMEs entrepreneurs are still facing with many challenges from both domestic and international markets such as high competition in the market, state policy, and etc. Effects from external factors such as the AEC and world economic system also are strongly increased, and affected to the SMEs directly. Therefore, Thai SMEs have to use their advantages of being a base for industrial and agricultural suppliers, and a hub of transportation in the ASEAN to strengthen their business [39].

Regarding on the export and import of Thai SMEs in the first 10 months of 2012 (January-October), found that the export values of Thai SMEs was 1,669,116.76 million baht. In October 2012, total export value of the SMEs was 156,712.24 million baht, which was increasing from October, 2011 about 2.06%. Regarding to import value, total import value of Thai SMEs was 1,816,539.72 million baht, which increased 0.29% from

in October 2011. Import value in October, 2012 was 187,390.08 million baht, increased from October, 2011 about 1.49% [40].

2.4 Community Enterprise

2.4.1 Definition of Community Enterprise

Community enterprise represents the business of the community which related to the production and services. The production and services are operated by groups or individuals who are bound with the way of life, and group themselves to start the business [41]. Community enterprise is an economic activity that drives local economic development by applying concepts of community economy or sustainable economy in the local business systematically [42].

2.4.2 Development of Community Enterprise

An effective development of community enterprise has to change some perspectives of the community [43] to develop manufacturers who can response to local needs, and to upgrade manufacturer's competency to international standard. The most priority is to develop the ability to run a business which establishes credibility to clients, contractors, or even financial institutions. Standard of management, Information Technology adopting, market channels creating, and developing production capacity to handle large volume orders are essential to develop the community enterprise [44].

3. METHODOLOGY

The research has conducted by the Mixed-Method approach and participatory research approach also. Research sample was 53 enterprises of the SMEs in Northeastern region of Thailand. Since the number of entrepreneurs who have qualified the 4-5 star in five provinces as study areas (research population) are 417 enterprises. The researchers determined the sample size of 10 per cent of all entrepreneurs, which will have a sample of 42 people, but to be more accurate, a sample of 53 cases has been chosen. Purposive sampling was adopted which consisted of 2 enterprises from Roi Et Province, 22 enterprises from Khon Kaen Province, 7 enterprises from Mahasarakham Province, 7 enterprises from Kalasin Province, and 15 enterprises from Udon Thani Province.

Moreover, the sample had to have computer skill, and qualified 4-5 stars of the product quality test, guaranteed by the Department of Community Development. The study selected this group of entrepreneurs because these SMEs had competency to develop products and business commercially. They could produce products and services with good quality and standard, and made satisfaction to customers [45].

Qualitative data was collected by in-depth interviews and observations. Interview guideline was used as a research tool as same as the questionnaire in quantitative data collection. The questionnaire was tested for reliability and found that the Cronbach's Alpha is higher than 0.7, it means that the questionnaire is reliable.

The data obtained from the questionnaire was

analyzed by using fundamental descriptive method. The meaning of the mean value in table 1, 2, 3 is defended as follow:

- 1.00-1.80 refers to lowest
- 1.81-2.60 refers to low
- 2.61-3.40 refers to moderate
- 3.41-4.20 refers to high
- 4.21-5.00 refers to highest

4. FINDINGS

Research findings were presented as followed;

A. Personal Data of Test Subjects

It was found that most entrepreneurs were women (67.74%), the age of entrepreneurs was between 41-50 years old (35.48%), education background was below undergrad (50.00%), and most of them were community enterprises and food SMEs (33.87%). Business running period was 6-10 years (43.55%), and most of them did not experience in online business (87.10%)

B. Understanding and needs about e-Commerce

It was found that most community enterprises and the SMEs did not experience in e-Commerce business. They needed to take the training course on e-Commerce. Knowledge on e-Commerce before training was at low level ($\bar{x} = 2.34$) Average score of knowledge on various perspectives as per details; knowledge on e-Commerce was at medium level ($\bar{x} = 2.65$). Knowledge on transportation and billing in e-Commerce was at low level, knowledge on basic computer skill for e-Commerce business and social network was at low level, knowledge on business administration, marketing was at low level and knowledge on public relation and advertisement through an internet and extended to a wider market was at low level. ($\bar{x} = 2.46$, $\bar{x} = 2.38$, $\bar{x} = 2.14$ and $\bar{x} = 2.11$ respectively). The results are shown in Table 1.

Table 1 The understanding and the needs on the e-Commerce

| Issues | Knowledge level before training course provided | |
|---|---|-----------------|
| | Average | Knowledge Level |
| 1. Knowledge on e-Commerce. | 2.65 | Medium |
| 2. Knowledge on basic computer skill for e-Commerce business and social network. | 2.38 | Low |
| 3. Knowledge on business administration, marketing. | 2.14 | Low |
| 4. Knowledge on transportation and billing in e-Commerce. | 2.46 | Low |
| 5. knowledge on public relation and advertisement through an internet and extended to a wider market. | 2.11 | Low |
| Average knoledge level before training course provided | 2.15 | Low |

C. Training course on e-Commerce competencies development

Training course on e-Commerce competencies development operated for 3 days with several topics

included 1) opening business world: from OTOP to e-Commerce business, course period: 1 hour and 15 minutes, 2) implementing OTOP business for the best competencies, course period: 1 hour and 45 minutes 3) technique on the online communication marketing, course period: 1 hour and 45 minutes, 4) applying computer skill for e-Commerce business, course period: 1 hour and 30 minutes, 5) Photo Shooting on products, course period: 1 hour and 30 minutes, 6) E-OTOP, course period: 1 hour and 45 minutes, 7) technique on promoting the online shop, course period: 1 hour and 45 minutes, 8) online marketing strategies for OTOP business; course period: 1 hour and 30 minutes, 9) online marketing in the 3.0 Web era, course period: 3 hour and 15 minutes, and 10) building credit and security in e-Commerce business, course period: 1 hour and 45 minutes. When the training courses finished, found that, knowledge on e-Commerce among entrepreneurs was at high level ($\bar{x} = 3.79$) as same as the others. Knowledge on e-Commerce was at high level. Knowledge on transportation and billing in e-Commerce was at high level, knowledge on public relation and advertisement through an internet and extended to a wider market was at high level, knowledge on basic computer skill for e-Commerce business and social network was at high level, and knowledge on business administration, marketing was at high level. ($\bar{x} = 3.98$, $\bar{x} = 3.90$, $\bar{x} = 3.87$, $\bar{x} = 3.75$ and $\bar{x} = 3.68$ respectively) Overall satisfaction on training course was at high level ($\bar{x} = 4.06$). The results are shown in Table 2.

The average rate of satisfaction could be divided to perspectives included; satisfaction on experts and course contents was the most, satisfaction on place and convenience was the most ($\bar{x} = 4.25$, $\bar{x} = 4.20$ respectively). Satisfactions on officer service, public relation, course documentation and materials, and place and time of training were much. ($\bar{x} = 4.15$, $\bar{x} = 4.06$, $\bar{x} = 4.02$, and $\bar{x} = 3.80$ respectively). The results are shown in Table 3.

Table 2 The level of knowledge after training course

| Issues | Knowledge level after training course | |
|---|---------------------------------------|-----------------|
| | Average | Knowledge Level |
| 1. Knowledge on e-Commerce. | 3.98 | High |
| 2. Knowledge on basic computer skill for e-Commerce business and social network. | 3.87 | High |
| 3. Knowledge on business administration, marketing. | 3.68 | High |
| 4. Knowledge on transportation and billing in e-Commerce. | 3.90 | High |
| 5. knowledge on public relation and advertisement through an internet and extended to a wider market. | 3.87 | High |
| Average knowledge level after training course | 3.79 | High |

Table 3 Satisfaction of participants on the training course

| Issues | Satisfaction level | |
|--|--------------------|---------|
| | Average | Level |
| 1. Satisfaction on experts and course contents was the most. | 4.25 | Highest |
| 2. Satisfaction on officer service, public relation. | 4.15 | High |
| 3. Place and time of training were much. | 3.80 | High |
| 4. Course documentation and materials. | 4.06 | High |
| 5. Satisfaction on place and convenience was the most. | 4.20 | Highest |
| Average satisfaction level | 4.06 | High |

D. Output of the self-practice after training course

e-Commerce competencies developing course gave a chance to entrepreneurs to practice after the 8th week of the training course based on intensively suggestion from the experts. Output of the practice showed that every participated entrepreneur could operate e-Commerce business by themselves. They could understand e-Commerce concept, and had more sales volume through e-Commerce. For instant, number of person who visited the online shop was totally 78,821 times or averaged 1,392.85 times/ enterprise. Number of person who contacted the shop through telephone and online channels was 5,323 persons or averaged 100.43 / enterprise. Total purchase order was 2,316, 400THB or averaged 43,705.66 THB / enterprise. For enterprise which had not had purchase order yet, there was a positive sign to increase purchase order in the future. In addition, based on 53 participated enterprises, there were 12 enterprises which got purchase order through e-Commerce (22.64%) .

E. Discussions

The results are interesting and leading to discussion issues as follows.

The development of E-commerce training workshops from this research is consistent with the past research of Chanin and Wasin (2013, 38 – 48) [46], which was found that exchange of knowledge among co-workers makes them work more efficiently. When involving the customers in the knowledge exchange process, benefits can be achieved for both parties. The integration of customer knowledge into organization knowledge can improve products and services, can lead to optimized business processes and a higher numbers of innovation. Thereby, knowledge management is very important for improving good relationships with customers.

Satisfaction on implementation of e-Commerce from this research is consistent with the research result of Sasiwimon, Varasiri and Suphakit (2012) [47], which has found that the samples had overall high satisfaction with using e-Commerce.

5. CONCLUSIONS

The SMEs in the Northeastern region still lack of the understanding on e-Commerce. They need to be developed their e-Commerce knowledge, information, marketing channels, and finance. The development should conduct as soon as possible to eliminate problems

or obstacles which might harm to business in the near future.

After the workshop, found that level of knowledge on e-Commerce was high. This reflected that the SMEs could improve their knowledge easily, and did not take long time to learn. However, the training course must be developed and fit to entrepreneurs. Course instructor had to survey the needs of entrepreneurs before developing the training course. As well, entrepreneurs must be ready to learn and have some basic skills, such as computer skill. Basic skill would help entrepreneurs learning quickly. It was also reflected that if the course was designed based on the needs of entrepreneurs, the course resulted in the benefit and satisfaction to entrepreneurs. However, the entrepreneurs had to takes time to develop some skills such as photo retouching and online marketing. It can be concluded that entrepreneurs could create more communication channels for their enterprises and higher sale volume by using efficient e-Commerce. Therefore, agencies related to business development should give opportunity of training course participation, with the suggestions from the experts to entrepreneurs for creating the business competency.

6. RECOMMENDATIONS

Research suggestions for e-Commerce competencies development included:

Basic knowledge should be provided to participated entrepreneurs before starting the e-Commerce competencies developing course such as basic computer skill, internet, e-mail, photo editing skill, English skill, international marketing and finance. Expert consulting should be provided to entrepreneurs during the practice, and it is good to remind entrepreneurs to set up computer and internet system promptly while the experts are giving some recommendations.

Monitoring and evaluating should be operated at least 1 year after launching the training course to make sure that entrepreneurs have sufficient good skill, and to support more related business knowledge and experience to them continuously.

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