

The External Environments Factors Affecting Success for Implementation: In Context of Sole Proprietorship E-Commerce Entrepreneurs in Thailand

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Abstract: The aims of the study are: First to study components of the support of government, components of the competitive environments and components of the success for implementation. Second to study the relationship among the support of government, competitive environments and the success for implementation. This study used quantitative method and utilized the questionnaires. Data were collected 338 respondents who are the sole proprietorship e-commerce entrepreneurs. The data were analyzed by descriptive statistics and confirmatory factor analysis. The results show that the components of the support of government, the findings revealed that the policy and support of government was focused at the highest priority, followed by laws related to e-commerce, respectively. Components of the competitive environments, the findings revealed that the competitive environments of competitors was focused at the highest priority, followed by bargaining power of suppliers and buyers, respectively. Components of the success for implementation, the financial was found the most important components of the success for implementation, followed by learning and growth, customers and internal process, respectively. The relationship show that the support of government has a positive relationship with the success for implementation and the competitive environments has a positive relationship with the success for implementation. The support of government has a positive relationship with the success of implementation at the highest priority followed by the competitive environments.

Key words: Internet, e-commerce, external environments, factors, success, entrepreneur

INTRODUCTION

Background: Today, Information Technology (IT) used in business has been increasingly developed. The internet, as such a part of IT, plays a vital role in consumers daily life. In 2012, there were 2.405 billion global internet users, out of a total global population of 7.017 billion or 34.27% of the total global population. Surprisingly, the number of Asian internet users turned out to be the highest at 1.076 billion users or 44.80% of the total global internet users (IWSUPS, 2012; PRB, 2012).

In Asian region, China ranked the 1st with its internet users of 538 million, representing 50% of the total Asian internet users. In Thailand, there were 20.1 million internet users or 1.90% of the total Asian internet users, ranked the 9th of the total internet users in Asia (IWSUPS, 2012). In Thailand, the internet users represented 30.14% of the total population of 66.7 million. Due to the increase of the internet users, the internet has significantly become influential in Thai society.

In 2012, a total of global transaction value was worth 963 billion Baht. According to the IRPEI (2011),

Thailand recorded e-commerce transactions worth 668 million Baht, ranked the 13th of the worldwide transaction value. According to the survey of Thai internet users operated by it is found that there are 57.2% of the total Thai internet users that have experienced purchasing or reserving product and/or service through the internet.

Also, the government policy has an influence on growing e-commerce, for example ICT Master Plan II B.E. 2009-2013. In the policy, the e-commerce is regarded as a critical strategy of commerce of the country. The government addresses on initiating innovation in the economic and social system. A large amount of budget has been allocated in constructing the infrastructure and supporting IT industry (MICT, 2009). Besides, laws and regulations related to electronic transaction increase the confidence in the e-commerce process. There are a wide range of laws and regulations enacted for controlling the e-commerce transaction including electronic commerce law, electronic signature law, computer crimes law, electronic transaction law, personal information privacy law, equal accessibility to the information infrastructure law and electronic transactions

act. These legislation and security standards are important to ensure the greater entrepreneurs trust for entering into e-commerce business, also lead the e-commerce business to grow (MICT, 2009). Due to the importance of e-commerce at the present time, the researcher aims to obtain a wider understanding of the e-commerce, particularly the key success factors of the e-commerce entrepreneur.

Objectives of the study: First to study the components in terms of it is the support of government, components of the competitive environments and components of the success for implementation of sole proprietorship e-commerce entrepreneurs in Thailand.

Second to investigate the relationships among the support of government, competitive environments and success for implementation of sole proprietorship e-commerce entrepreneurs in Thailand.

Review of literature

The concept of external environments: In the consideration of the types of external environment, renowned scholars have classified and nominated the external environment as follows: Classified the external environment into 2 types:

- Macro environment or general environment or social environment include government, law, society and culture
- Micro environment or competitive environment or task environment include suppliers, buyers and competitors

The external ones have strong influence over e-commerce. The recent studies indicated that there are 2 types of factor, internal and external that affect the success of e-commerce. The external factors were referred as the environmental factors. The external factors were described in the context of structural conditions that have significant influence on the development of e-commerce. That is the external factors are beyond control of the organization (Jennex, 2003; Molla, 2004; Chan and Swatman, 2002).

The Porter 5 forces model: The 5 forces model was developed in 1979 by Michael E. Porter, a Professor at Harvard Business School. The model has been drawn to use in industry analysis and business strategy development. The model consists of 5 fundamental competitive forces as follows:

- Bargaining power of buyers: Even the bargaining power of buyers in negotiating the purchase is either high or low, it will eventually bring considerable pressure to the industry. For example, when the buyers have a great power to negotiate, industry's profitability will decline. On the contrary, when the buyers bargaining power is low, industry's profitability is likely to increase
- Bargaining power of suppliers: Suppliers are important in industry analysis. If the bargaining power of suppliers is high, the industry's profitability will decrease. Conversely, if the suppliers have a great bargaining power, the industry's profitability tends to be higher
- Threat of new entrants: The potential new entrant into the market is a vital challenge. The increasing number of new entrants into the industry triggers the lower market share and revenues
- Threat of substitutes: Substitutes refer to products that meet consumer need like the existing ones. For example, tea can be substituted by coffee. If an organization offers products that can be substituted with other products, organization's profitability is likely to reduce. In contrast, the organization's unavailability of substitute products tends to increase its profitability
- The intensity of competitive rivalry: The degree to which rivalry exists among firms in the same industry affects its market share and profitability

The support of government factors: Besides, the external business factors related to environment will be included in this study. The relevant external factors are the support of government which include of policies and support of government and e-commerce laws, regulations and restrictions. Xuan (2007) study related to the factors influencing the achievement of e-commerce success in retail industry in China mentioned revealed that providing excellent service and support by government has a positive effect on the success of e-commerce in retail business. The government has partially encouraged e-commerce entrepreneurs in many ways. For instance, the government offers the training in the area of information technology to the entrepreneurs so that they can enhance their e-commerce maximum capabilities (Chen *et al.*, 2006). Jennex (2003) studies in the view of the success of the small and medium-sized enterprises business to business in developing countries showed that the government's laws and restrictions, as environmental factors have an effect on e-commerce and technology infrastructure. The laws and restrictions are also the critical factors for the success of e-commerce.

Therefore, the law and regulation amendment helps facilitate e-commerce activities which in turn influence the e-commerce success (Jennex, 2003).

From the statement earlier, it can be apparently concluded that the support of government (GOVS) is one of the most important factors that influences the success of the e-commerce business. The support of government consist of the policy and support of government (GOVPS) and e-commerce laws, regulations and restrictions (LAW).

Hence, it is assumed that support of government has an influence on the success of e-commerce business implementation. Hypothesis 1 (H_1); the support of government is associated with the success for implementation.

The competitive environments factors: The competitive environment is sometimes called as environment in industry or task environment. The main propose of analyzing the competitive environment is to understand itself in the taken industrial environment. According to the Porter's industry analysis, there is a model called 5 forces model which is used as tool to analyze the circumstance of competition in an industry. The model is, also utilized to determine the competitive environment which is potential for profitability (Porter, 2008). Hence, the competitive environment is regarded, as an external organization factor that eventually affects the success of the e-commerce business. The competitive environment consists of the competitive environments of competitors, the bargaining power of buyers and suppliers (Capon, 2004; Ranaweera *et al.*, 2005).

Additionally, there are a number of studies concerning the relationship between the competitive environment and the success of e-commerce, for example Grandon and Pearson (2004) studies of e-commerce application in the United States, it is presented that the competitive environments of competitors has an influence on the e-commerce success in small enterprise. The bargaining power of buyers is one of the factors of the e-commerce success. The recent studies of successful e-commerce implementation, for instance stated that the consumer's pressure plays an important role in achieving the success of the e-commerce business (Chong and Pervan, 2007). Likewise, the previous studies of the critical factors of e-commerce industry in China indicated that bargaining power of suppliers affects the e-commerce success (Huang *et al.*, 2005).

From the statement mentioned earlier, it can be apparently concluded that the competitive environments (COMEN) is one of the most important factors that influences the success of the e-commerce business. The

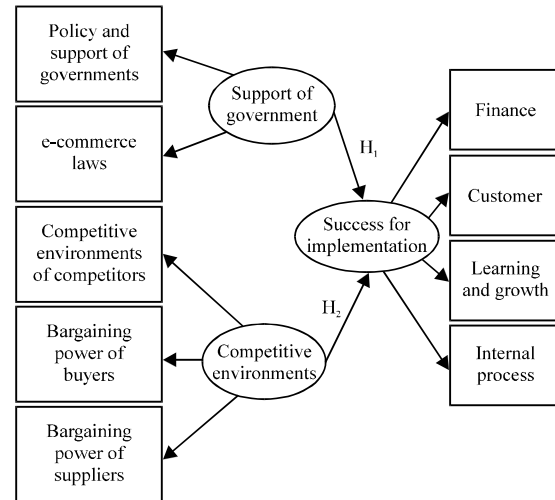


Fig. 1: Conceptual framework of research

competitive competition consist of the competitive environments of competitors (COM), bargaining power of buyers (BUY) and suppliers (SUP).

Hence, it is assumed that competitive environments has an influence on the success of e-commerce business implementation. Hypothesis 2 (H_2); the competitive environments is associated with the success for implementation.

The success for implementation factors: To measure the success for implementation, Kaplan and Norton (1992) and Donkor (2003) originated the measurement framework to emphasize on the indicators from 4 perspectives. Financial perspective (FINS) measure by financial performance, particularly the increase of revenue and asset has to be focused. Customer perspective (CUSS) measure by consumers satisfaction, market share, repurchase rate, seeking new market and acquiring new customers have to be evaluated. Internal Process perspective (IPS) measure by management performance including resources cost effectiveness and internal process are to be assessed. Learning and Growth perspective (LGS) measure by human resources in terms of their learning and development of skill and competence.

Conceptual framework: Conceptual framework are shown in Fig. 1.

MATERIALS AND METHODS

Population and sample: The target population for this study consists of 4,313 e-commerce entrepreneurs who have registered, as sole proprietorship e-commerce

entrepreneurs with the Department of Business Development, Ministry of Commerce in 2013 and run their firm in Thailand.

The collected data from target population are classified, based on the type of industry of the e-commerce entrepreneurs with percentage technique; therefore the proportionate stratified sampling is used in this study.

In order to indicate the sample size Hair *et al.* (2010), suggested that the appropriate sample size should obtain >300 samples to analyze a structural equation model. According to Krejcie and Morgan's table, the sample size could be considered at 352 and Taro Yamane's table with a 0.05 level of significance, the sample size could be determined at 365. To be summary, decided to gain some spare data, the sample size for this study is justified at 400 total.

Research tools: The chosen research tools of this study is questionnaire. Initially, the questionnaire is developed, based on the recent literature review and related studies.

The questionnaire is divided into 2 parts as follows: Part 1, the questions are mainly to ask general information of respondents who are e-commerce entrepreneurs (the owners).

Part 2, the questions are more detailed regarding support of government, competitive environments and success for implementation. The Likert scale summated rating is used with its equal intervals (5-point), ranking form 5-1 (5 = Max., 1 = Min.).

Data collection: The primary data collection, the questionnaire is chosen. Data were collected 338 respondents (from 400 total). The secondary data collection of this study were drawn from the literature review including concepts, theories and other relevant studies related to the e-commerce success.

Data analysis: To analyze the data, the research tools in the study was verified to ensure its reliability by employing descriptive statistics, Confirmatory Factor Analysis (CFA), using by SPSS and AMOS.

RESULTS AND DISCUSSION

General business information of e-commerce entrepreneurs includes gender, age, education, type of industry and business time period. It is found that 68% of e-commerce entrepreneurs were female. There were 51% of total respondents aged between 31 and 40 years old and 42% of them graduated a bachelor's degree. The majority of industry was fashion, apparel and accessories,

Table 1: Results of standard deviation, average, meaning and reliability

Variables	SD	Mean	Meaning	Reliability
GOVPS	0.84	4.72	The most important	0.832
LAW	0.73	4.60	The most important	0.796
COM	0.69	3.84	The important	0.744
CUS	0.61	3.63	The important	0.816
SUP	0.53	3.48	Moderate	0.788
FIN	0.75	4.34	Increase	0.848
CUS	0.65	3.48	Moderate	0.870
LG	0.70	3.86	Moderate	0.785
IP	0.53	3.15	Moderate	0.764

Table 2: Result of 2nd order confirm factor analysis

Relations	Standardized estimates	Relation	Standardized estimates
GOVPS-GOVS	0.67	FINS-SUCCESS	0.91
LAW-GOVS	0.48	CUSS-SUCCESS	0.38
COM-COMEN	0.64	LGS-SUCCESS	0.34
BUY-COMEN	0.18	IPS-SUCCESS	0.60
SUP-COMEN	0.37		

representing 39% of total respondents. There were 57% of the total respondents that have business time period >2 years.

The findings showed that the standard deviation (0.84-0.53), average (4.72-3.15) and meaning of each variable (Table 1). The reliability is >0.70 (0.870-0.744) (Table 1).

The 3 measurement models corresponded with the empirical data, the standardized estimate of 2nd order confirm factor analysis (Table 2).

The results of hypotheses, it is concluded that hypothesis 1 (H_1); the support of government has a positive relationship with the success for implementation with a 0.01 level of significance. Hypothesis 2 (H_2); the competitive environments has a positive relationship with the success for implementation with a 0.01 level of significance.

In the analysis of the causal relationship model, the results showed that the model was fitted with the empirical data with the following values; Minimum was achieved, $\chi^2 = 28.941$, $\chi^2/\text{degrees of freedom} = 1.034$, degrees of freedom (df) = 28, probability level = 0.416, CFI = 0.953, RMSEA = 0.038 and RMR = 0.042 (Fig. 2).

The support of government has a positive relationship with the success for implementation. This is consistent with the research of Jennex (2003), the studies related to the support of government is an important factor of the e-commerce success. The studies of small and medium-sized enterprises business to business in developing countries presented that government's support is regarded as environmental factor which means to the success of e-commerce. Likewise Chong *et al.* (2011), studies related to the support and commitment

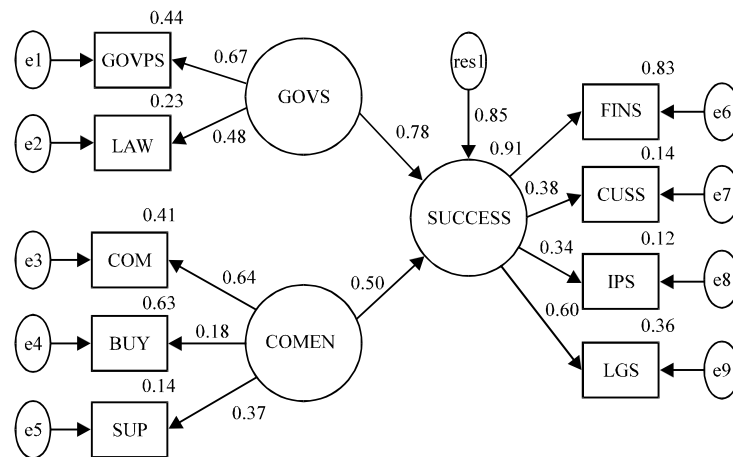


Fig. 2: Result of structural equation model

from government sector are such important factors to the e-commerce success of the small and medium-sized enterprises business to business in China.

Grandon and Pearson (2004) competitive environment influencing e-commerce application in the small enterprise and competitive environment, as a core component of e-commerce adoption. Hence, the competitive competition is one of the key factors for the success of the e-commerce.

CONCLUSION

The results show that the components of the support of government, the findings revealed that the policy and support of government was focused at the highest priority, followed by laws related to e-commerce, respectively. Components of the competitive environments, the findings revealed that the competitive environments of competitors was focused at the highest priority, followed by bargaining power of suppliers and buyers, respectively. Components of the success for implementation, the financial was found the most important components of the success for implementation, followed by learning and growth, customers and internal process, respectively.

In the analysis of the components influencing the success for implementation of sole proprietorship e-commerce entrepreneurs in Thailand, it is concluded that the support of government has a positive relationship with the success for implementation with a 0.01 level of significance. The competitive environments has a positive relationship with the success for implementation with a 0.01 level of significance.

The structural equation model can be concluded that the theoretically-hypothesized structural equation model which has been developed was consistent with the empirical data.

The results of the causal relationship model analysis showed that the components in terms of the support of government has a positive influence on the success of the e-commerce implementation at highest level, followed by the competitive environments, respectively.

REFERENCES

- Capon, C., 2004. Understanding Organisational Context: Inside and Outside Organisations. 2nd Edn., Prentice-Hall, Englewood Cliff, NJ., ISBN-13: 9780273676607, Pages: 461.
- Chan, C. and P. Swatman, 2002. Management and business issues for B2B eCommerce implementation. Proceedings of the 35th Hawaii International Conference on System Sciences, January 7-10, 2002, Hawaii, USA., pp: 3083-3093.
- Chen, R.S., C.H. Tsai, C.C. Chiu and D.S. Johnson, 2006. Research on transactional principle in Taiwan's electronic business. Web J. Chinese Manage. Rev., 9: 1-28.
- Chong, S. and G. Pervan, 2007. Factors influencing the extent of deployment of electronic commerce for small-and medium sized enterprises. J. Electron. Commerce Organ., 5: 1-29.
- Chong, W.K., M. Shafaghi and B.L. Tan, 2011. Development of a business-to-business critical success factors (B2B CSFs) framework for Chinese SMEs. Market. Intell. Plann., 29: 517-533.
- Donkor, S., 2003. Performance measurement in the e-commerce industry. Masters Thesis, Faculty of Worcester Polytechnic Institute, Worcester, MA.

- Grandon, E. and J.M. Pearson, 2004. E-commerce adoption: Perceptions of managers/owners of small and medium sized firms in Chile. *Commun. Assoc. Inform. Syst.*, 13: 81-102.
- Hair, J.F., W.C. Black, B.J. Babin and R.E. Anderson, 2010. *Multivariate Data Analysis: A Global Perspective*. 7th Edn., Pearson Education Limited, New Jersey, USA., ISBN: 9780135153093, Pages: 800.
- Huang, J., X. Jiang, J. Lee and C. Zhao, 2005. Exploratory study and empirical study on critical website success factors of chinese publishing enterprises. *Manage. Sci. Financial Eng.*, 11: 109-124.
- IRPEI, 2011. Global e-commerce sales. Internet Retailer Portal to e-commerce Intelligence, (IRPEI). <http://www.internetretailer.com/trends/sales>.
- IWSUPS, 2012. Internet usage in Asia. Internet World Stats Usage and Population Statistics (IWSUPS), April 25, 2014. <http://www.internetworldstats.com/stats3.htm>.
- Jernex, M., 2003. UNCTAD and e-commerce success. *Electron. J. Inform. Syst. Dev. Countries*, 11: 1-7.
- Kaplan, R.S. and D.P. Norton, 1992. The balanced scorecard-measures that drive performance. *Harvard Bus. Rev.*, 70: 71-79.
- MICT, 2009. The second Thailand Information and Communication Technology (ICT) master plan (2009-2013). Office of the Permanent Secretary of Ministry of Information and Communication Technology (MICT), Bangkok, Thailand, October 2009.
- Molla, A., 2004. The impact of e-readiness on ecommerce success in developing countries: Firm-level evidence. Development Informatics Working Paper Series, No. 8, Institute for Development Policy and Management, University of Manchester, Precinct Centre, Manchester, Oxford, MA.
- PRB, 2012. The world at 7 billion: World population data sheet 2011. Population Reference Bureau (PRB). <http://www.prb.org/Publications/%20Datasheets/2011/world-population-data-sheet.aspx>.
- Porter, M.E., 2008. The five competitive forces that shape strategy. *Harv. Bus. Rev.*, 86: 78-93.
- Ranaweera, C., G. McDougall and H. Bansal, 2005. A model of online customer behavior during the initial transaction: Moderating effects of customer characteristics. *Market. Theory*, 5: 51-74.
- Xuan, W., 2007. Factors affecting the achievement of success in e-tailing in China's retail industry: A case study of the Shanghai Brilliance Group. DBA Thesis, Southern Cross University, Lismore, NSW.