

# **The Effectiveness of e-Commerce Policy Implementation by the Ministry of Commerce towards SMEs Entrepreneurs in Thailand**

**ประสิทธิภาพของนโยบายพาณิชย์อิเล็กทรอนิกส์ที่ออกโดยกระทรวงพาณิชย์ต่อผู้ประกอบการ SMEs ในประเทศไทย**

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## **Abstract**

The purposes of this research are as follow: to study the effectiveness, factors, strategies and plans of e-Commerce policies implementation, and to suggest or improve factors that could influence the effectiveness of e-Commerce policies implementation. An Investigation of e-Commerce Policy requires initial understanding of Strategies and Policy implementation in specific context. The study found that burdens for e-Commerce policy includes a lack of promotion, entrepreneurs' knowledge, internet transaction awareness, and a lack of human resources. Also, there are only two choices for e-Commerce to select from either "DBDmart.com" or "Thaitrade.com" which are not compatible with all types of e-Commerce entrepreneurs. The factor such as "Friend or Foe" or "Prisoner Dilemma" theories might create some fear to entrepreneurs and result in an unsuccessful policy. The study shows that the government should use the bottom-up policy making concept along with the vertical policy that focuses only on the flagship business that could drive an economy in the future. This paper proposes a model for examining the interaction of structural of e-Commerce policies implementation and SMEs in Thailand and integrates the theory concepts with related factors.

**Keyword:** e-commerce, public policy, entrepreneurs, SMEs

## **บทคัดย่อ**

จุดประสงค์ของการวิจัยในครั้งนี้เพื่อศึกษาประสิทธิภาพ ปัจจัย กลยุทธ์ และแผนการนำนโยบายมาประยุกต์ใช้ และเพื่อแนะนำหรือปรับปรุงปัจจัยที่มีอิทธิพลต่อประสิทธิภาพของนโยบายซึ่งในการวิจัยนี้นโยบายพาณิชย์อิเล็กทรอนิกส์นั้นจำเป็นต้องมีความเข้าใจเกี่ยวกับกลยุทธ์ และการดำเนินนโยบายอย่างถ่องแท้ การวิจัยครั้งนี้ค้นพบว่าอุปสรรคในการดำเนินนโยบายประกอบด้วย การขาดซึ่งการประชาสัมพันธ์ที่ดี ความรู้ของผู้ประกอบการ ความกลัวต่อการทำธุรกรรมในอินเตอร์เน็ตและการขาดบุคลากรที่เชี่ยวชาญ นอกจากนี้นโยบายทางเลือกสำหรับผู้ประกอบการมีเพียงแค่ 2 ทางเลือกเท่านั้น ซึ่งอาจไม่เหมาะสมกับประเภทของธุรกิจพาณิชย์

อิเล็กทรอนิกส์อื่นๆ ปัจจัยเช่นเรื่อง “เพื่อนรักเพื่อนร้าย” หรือ “ทฤษฎีเกมส์: ทางเลือกของนักไทย” อาจจะก่อให้เกิดความกลัวต่อผู้ประกอบการ และอาจจะส่งผลต่อความล้มเหลวของนโยบาย การศึกษาครั้งนี้แสดงให้เห็นถึงรูปแบบ ควรจะใช้การออกแบบนโยบายแบบจากระดับล่างสู่ระดับบนหรือแบบผสมผสานบ้าง หรือเป็นนโยบายแนวตั้งที่เน้นธุรกิจที่จะสามารถเป็นตัวชูโรงที่สามารถผลักดันเศรษฐกิจได้ในอนาคต การวิจัยนี้ได้นำเสนอรูปแบบการนำมาร่วมกันของโครงสร้างการใช้นโยบายพาณิชย์อิเล็กทรอนิกส์ต่อผู้ประกอบการวิสาหกิจขนาดกลางและขนาดย่อมในประเทศไทย และบูรณาการการกรอบแนวคิดนโยบายสาธารณะกับปัจจัยต่างๆ

**คำสำคัญ:** พาณิชย์อิเล็กทรอนิกส์ นโยบายสาธารณะ ผู้ประกอบการ วิสาหกิจขนาดกลางและขนาดย่อม

## Introduction

Since the financial crisis in 1997, Small and Medium Enterprises (SMEs) are the main driven mechanism of Thailand's economy. It helped Thailand to survive and compete against the competitive globalized world. Nowadays, Thai SMEs hold up more than 80% of the country's industrial producers and account for 70% of all employment. Furthermore, ICT has created some changes to the world in terms of economy, commerce, government, politics, medications, educations, communications, entertainment, etc. Especially, in term of poverty, ICT can be used to minimize such problems, enhance citizen's social life. In Thailand, the government stated the initiatives in 1992 to set up the National IT Committee, or NITC, which is a high-level policy body chaired by the Prime Minister. Its mandates of this organization are to develop policies and plans to promote ICT development and utilization in the country. On the basis of e-Commerce, the Ministry of Commerce (MC) acts according to the ICT master plan 2012- 2016 with an additional issue of the use of e-Commerce for OTOP products.

The terms of Public policy are argumentative. Many theorists defined public policy differently as Lasswell (1951) defined “Public policy” as who will receive, when, and how do they receive the benefits or losses after the public policy is issued;

Frederich (1963), Daneke and Steiss (1978) conceptualized the public as the proposed course of action of a person, group or government within a given environment providing obstacles and opportunities which the policy was proposed to utilize and overcome in an effort to reach a goal or realize an objective.

The public policies approach can be divided into two types include: (i) Descriptive Approach or the study on the policy and its process which includes the examination of policy content (background, causes, and methodology of policy), policy process (how the policy is issued? Policy's steps, and stakeholders in each step), Policy determinants and policy output (understanding of input factors and outcome of the policy), and Policy outcome and impact (ii) Prescriptive Approach which were influenced by new political sciences techniques and tools for the study of policy process includes information for policy making (data management for further decision making) and policy advocacy (data analysis which its results will be used for policy assignment). Also type of public policies can be categorized as “Vertical policy” which starts of broad overarching policy. Decisions are made from the top and guide subsequent decisions throughout the organization. At the lower level, there might be regional or “strategic” policy, which transforms the national decision to regional based on the specific

context. "Horizontal policy" on the other hand referred to an integrated policy that is developed between organizations or parts in organization which share similar hierarchical positions.

Policy implementation process would be seen as all activities that must be undertaken to carry out an intention from its conception to realization. There are three elements in the implementation of a given policy namely (i) a decision to be made concerning the organizational structure.(ii) Policy goals must be translated into specific rules and regulations. (iii) Resources must be allocated and rules must be applied to the specific problems addressed by the policy.

In the realm of policy implementations, Palumbo and Calista (1990) together with Van Meter and Van Horn (1975) shared similar ideas about the perspectives of the Policy implementation which comprise of Top-down and Bottom-up perspectives. The Top-down perspective emphasizes on the formal steering problems and factors which are easy to manipulate and lead to centralization and control. Main factors for considered are organization's funds, structures, authority relationships among administrative units, regulations and evaluation requirements. The process begins with the policymaker's intent and the expectation of implementers at each level. The bottom-up perspective, on the other hand, starts with the problem in the society where it focuses on individuals and their behaviors. In this respect, the street-level bureaucrats are made central in the political process because they have a better understanding of what people in the society's need and they have a direct contact with the public. For Policy Evaluation, Dunn (1994) set up 6 criteria for policy evaluation, including Effectiveness, Efficiency, Adequacy, Equity, Responsiveness, and Appropriateness. The policy

analysis is one of the processes on policy making. Its core is the improvement of policy making through "the use of systematic knowledge, structural rationality and organized creativity."

In terms of e-Commerce, Lipoff and Janice (1996) defined e-Commerce as 'a business that is conducted electronically by internet, intranets, or private networks in combination with some amount of human interaction and paper-based processes' which consists of the business-to-business (B2B), business-to-consumer (B2C) and consumer to consumer (C2C). E-Commerce is usually associated with buying and selling over the Internet, or conducting any transaction involving the transfer of ownership or rights to use goods or services through a computer-mediated network. Electronic Commerce has become the most sought-after technology because it allows SME customers to conduct a real-time access, remote transactions without limitations imposed by time or geography and to access more up-to-date and transparent information which help them make appropriate decisions and fulfilling their requirements (Web Australia, 2005). However, the adoption of e-Commerce technology for SMEs is not easy because entrepreneurs are scared of the lack of human resources and of support by the government. Therefore, e-Commerce implementation requires the provision of information regarding potentials and advantages of e-Commerce development, costs, procedures necessary for implementation, and prospective customers (Araujo and Machodo, 2001).

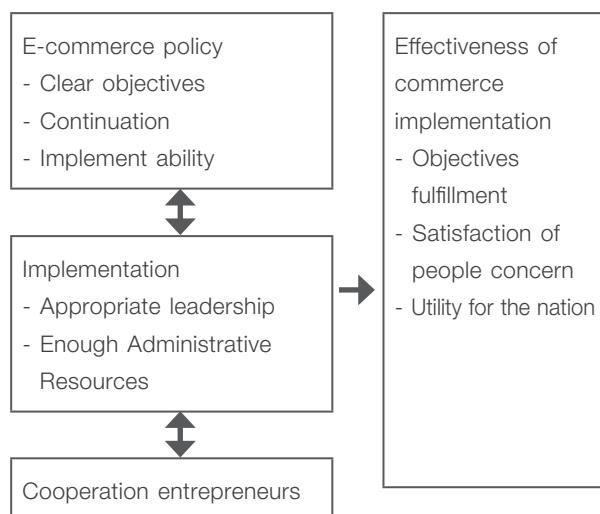
## Research Objectives

The research objectives of this research are as follows: to study the effectiveness, factors, strategies and plans of e-Commerce policies implementation, and to suggest or improve factors

that could influence the effectiveness of e-Commerce implementation.

## Conceptual Framework

According to the study by Gibbs, Kraemer, and Dedrick (2002), factors that could affect the effectiveness of e-Commerce policy implementation included national environment (e-Commerce entrepreneurs) and national policy (government). Therefore the conceptual framework was adopted accordingly which started with independent variables include e-Commerce Policy, Policy implementation, and the cooperation of entrepreneurs which affected the dependent variables or the effectiveness of e-Commerce implementation as can be seen in figure1



**Figure 1** Conceptual Framework

## Hypothesis

1. Different e-Commerce entrepreneurs who registered with the Ministry of Commerce (MC) were affected differently from the e-Commerce policy implementation by MC

2. Independent variables can be used to predict the effectiveness of e-Commerce policies that were implemented by MC

## Research Method

For the research methods, the researcher had used mixed methods research.

### Population and Samples

The population in this study is e-Commerce entrepreneurs who registered with MC (N=7,500) both from beginning expert level. The researcher used Yamane's equation to select the sample size which resulted in 377 samples.

### Statistical analysis

In this research, t-Test, and F-test of one way ANOVA were used in order to examine the data from questionnaires with the reliability equal to 0.877

### Content Validity

Questionnaire was given to five experts in order to get the content validity (IOC) which valued equal to 1 and were given for the try out session with non-subjective to evaluate reliability of the tool via Cronbach's Coefficient Alpha.

### Data Collection

The qualitative methods were used to collect data via an interview with 3 participants at the administrative levels in MC in order to have an understanding on the e-Commerce policies and strategies. Questionnaires were randomly given to e-Commerce entrepreneurs who registered with Ministry of Commerce.

## Result

Qualitative method: In an area of e-Commerce policies that were implemented by MC:

(1) Thaitrade.com is the website that provides online trading between Thai sellers and buyers which contain all Thailand trading information online and

help facilitate buyers from all over the world with the sellers or exporters from Thailand. After the launch of the website on 5th July 2011 until 2012, there is more than 3,500 candidate entrepreneurs who registered on the website, and more than 2,000 entrepreneurs are chosen by the board of division to have a right to be members of website. The websites holds more than 7,000 items online and more than 100,000 visitors from other countries.

(2) DBDmart.com is the tools for entrepreneurs who interest in doing business online to build their online stores and it aims to serve the B2C type of business. The website itself acts as the market for entrepreneurs to meet buyers. The functions of the website make it convenient for entrepreneurs to start businesses online. Moreover, the department of business development supports entrepreneurs with new distribution channels to expand their markets, deduce costs, and prepare for AEC in the next three years.

(3) DBD verified is the free trust mark that is issued by the department of business development under MC in order to increase the credibility for e-Commerce entrepreneurs. However, since May 2012 until October 2012, less than 70 companies are approved to have logos on their websites, where there are almost 10,000 websites which registered with MC.

Results from in-depth interviews confirmed that in MC, Export promotion department is in charge of creating values for entrepreneurs to sell their goods, products, or services to other countries. It acts as the medium between sellers and buyers (Thai-foreigners) by setting up a market website called "Thaitrade.com". Business Development department, on the other hand, has duties on planning researching and analyzing the techniques that help improve Thailand e-Commerce, produce

the credibility to both online entrepreneurs and consumers, maintain the e-Commerce standards, and search for opportunities for e-Commerce businesses. The main reasons why people do not want to register with MC are they do not understand why they have to register, they are concerned about taxation issue and what privileges are by registering with MC. For the feedbacks from the entrepreneurs, MC had claimed that the feedbacks are excellent and more than 80% of Thai online entrepreneurs joining workshops are satisfied with the classes. However, there are some barriers on the e-Commerce policy implementation towards Thai online entrepreneurs include the management level or the administrative level do not see the importance of e-Commerce, along with the lack of staffs who are equipped with e-Commerce knowledge, and no budget planning. Moreover, with no stability of government, it could affect the e-Commerce policy in terms of budgeting and infrastructure. Similarly, the majority of the respondents agreed that there are problems of current e-Commerce policy implementation. They include there is insufficient public relation and advertisement to customers, customers do not trust the security system, and they are afraid of the system failure and outdated websites.

Quantitative method: the researcher has conducted online questionnaires by randomly selected respondents from the e-Commerce entrepreneurs who are registered MC. The questionnaires that were given to the respondents comprises of two sections (self-assessment & e-Commerce policy evaluation criteria).

Also, the average scores for e-Commerce policy evaluation criteria are rated approximately at 3 or at moderate level which mean that, with or without the implementation of e-Commerce policy

by MC, e-Commerce entrepreneurs' businesses remain unchanged.

After using multiple regressions, it is found that variables that have correlation with the effectiveness level of e-Commerce policy (Y) with the significant level at 0.01 are as follows: Raw scores equation:

Y (Effectiveness of e-Commerce policy) = 3.184 - .186 (Hotels and tourism businesses) + .459 (Entrepreneurs who have highest effectiveness level) + .169 (Entrepreneurs who have high effectiveness level)

Standard score equation as followed;

Z (Effectiveness level of e-Commerce policy) = .267 (scores of highest effectiveness level Entrepreneurs) + .147 (scores of high effectiveness level Entrepreneurs) - .097 (scores of hotels and tourism businesses)

The study can be concluded in different points: variables that have positive correlation with the effectiveness level of e-Commerce policy include entrepreneurs who have highest and high effectiveness level effectiveness level, whereas variables which have a negative correlation are hotels and tourism businesses.

## Discussion

Entrepreneurs are more careful or anxious about policies that are implemented by the government due to their negative attitude towards the government. They are uncertain whether the government is "Friend or Foe?" since the government still collect taxes from entrepreneurs especially e-Commerce entrepreneurs to give their business information. The "Friend or Foe" attitude by entrepreneurs is related to the classic prisoner's

dilemma tale where partnerships are endogenously determined, players work together to earn money, after. Prisoner's Dilemma is the Game theory in different situations that point out why two people might not cooperate even they share the same benefits. Axelrod (1984) cited that two players in the game can choose to cooperate or defect. The rule of this game is the benefits will be given to both players once they cooperate, yet more benefits will be given to the one that defects rather than the one that cooperates and no benefit at all if none of them cooperate. Axelrod and Hamilton (1981) stated that the prisoner's dilemma is the biology of selfishness and Altruism or evolution of Co-operative behavior. Tax policy will have a negative impact in different aspects to the SMEs that just start their businesses. Moreover, tax policy is supposed to affect the efficiency in cooperating through incentives or disincentives. Charoenpao (personal communication, May 2012) also agreed that one of the obstacles that block e-Commerce entrepreneurs to register with MC is fear of taxation.

The researcher analyzed the e-Commerce policies, strategies, and action plans that were implemented by MC. It resulted that in terms of strengths, Dbdmart.com is able to serve Thai market mainly for B2C type of business. There are also variety of products and services. It is free of charge and a good start from people who start their online businesses. For threats, business owners do not have freedom to make their own decisions as the site is directed to the governmental sector. Also, the high competition by private sectors and a quick change in the market could potentially obstruct the ways businesses operate. For Strengths of Thaitrade.com are its main focus on international markets, its provision of products and services variety and its collaboration with other global sites. In term

of the site operation, it provides around the clock support for SMEs and OTOP entrepreneurs and its contents are constantly updated. However, some limitations of the website are English is the only language available for visitors and there is no the promotional campaign via Google services. DBD verified's strengths are its service in providing Trust Mark for online entrepreneurs to increase online consumers' confidence in purchasing products, its free-of-charge service and its reliability as it is implemented by the governmental sector. For weaknesses, the criteria in obtaining Trust Mark are strict which leads to the difficulty for amateur entrepreneurs to obtain the mark. Also, Trust mark has not yet recognized by the majority of Thai customers.

Related Plans and strategies that were implemented by MC to e-Commerce are synthesized from IT2010 Policy Framework, the 10<sup>th</sup> national economic and social development, ICT Master Plan 2009-2013, and the ICT Master plan of MC 2008-2011, which were resulted in action plans by the Department of Export Promotions, and Department of Business Development as "Thaitrade.com", "DBDmart.com", and "DBD verified". It can be said that an e-Commerce policy that were implemented by MC is the horizontal policy where there are many stakeholders involve in the policy. However, the type of policy which best suit e-Commerce policy in the researcher's point of view should be the vertical policy where it should focus on one single type of business (e.g. Hotels and tourisms) rather than policies to support all types of business since that there are some limitations under this policy, namely budgets, human resources, and entrepreneurs' competencies. Moreover, the researcher did not find any marketing strategy for the e-Commerce policies that were implemented by MC, where the

e-Commerce business by privates sectors use the advertising channels such as google.com, yahoo.com, and some other search engine websites to promote their online businesses. Also, there are still some problems that can indicate the departments under MC do not have any contingency plans to handle with situations to entrepreneurs' comments or problems from action plans, or it can be called "Wicked problems", or the problem where a solution of a particular problem cause new problems. These problems cannot be solved through "off the shelf solutions", or they are resistant to traditional sectorial interventions designed and delivered in a top-down fashion by individual government departments. The government needs to use a place-sensitive mode of policy intervention or the strategies are constructed with knowledge of the particular circumstances in communities and delivered via collaborations across stakeholders (Magnusson, 1996; Andrew, 2001; Sabel and O'Donnell, 2001). Apart from that, SMEs entrepreneurs need to build up their own strengths on online stores since the policies that were implemented by MC are merely a pilot test, or an insufficient resources in two departments under MC. Doukidis, Lybereas and Galliers (1996); Matlay and Addis (2003) also showed that the decision for ICT adoption in SMEs are more likely made by the owner which often have little concerns towards the importance of ICT strategy and planning within their business (Beckett, 2003).

From the study, it found that MC does not have enough budgets and revenues for e-Commerce, there is also the limitation of human resources and experts for e-Commerce, no integration among the organization, directions, monitoring, and e-Commerce database is limited as Mr. Banyong Limprayoonwong mentioned on the limitation of the e-Commerce policies that there are lacks of human

resources, government stability, and low budgeting. (Limprayoonwong, 2012, personal communication, 2012). Therefore, e-Commerce entrepreneurs should enhance their competencies and capabilities in order to draw government's attentions to support and promote e-Commerce which is related to the study by Otmazigin (2011) who stated that the policy implementations in Japan and Korea are not originated by the government's visions but it started from the market demands with the support from the entrepreneurs in cultural industry will then become the driven mechanisms for their countries' economy.

Different entrepreneurs who join the e-Commerce program by MC make differences in the effectiveness of e-Commerce policy that were implemented by MC, from the research it found that, entrepreneurs in the smaller type of business agree that the e-Commerce policy in aspects of effectiveness, efficiency, and adequacy are effective rather than medium size of businesses because the smaller business size allow the entrepreneurs to use distribution channels or do activities particularly through social network to expand their market. Department of Innovation, Industry, Science and Research, Australia Government (2011) also stated that SMEs mainly use social network to collaborate with customers as well as to share news about their businesses. By adopting new technology with SMEs, this allows entrepreneurs to reach global market, enhance their competitiveness and competencies.

## Recommendations

To recapitulate, the researcher has put recommendations for the government according to the studies on the effectiveness of e-Commerce policies implementation by MC as the government needs to consider the bottom-up management rather than top-down management which requires the participation by the private sectors in order to reduce the "Friend or Foe" problems since an e-Commerce policy is decided for specific purposes and group of citizens. Also, the vertical policy should also be used by focusing on the e-Commerce business groups that can drive the macro economy such as hotels and tourism industries, and unique products such as OTOPs. Apart from e-Commerce policies, the government should issue some other parallel policies, strategies, or action plans accordingly such as the funding policies, marketing and management policies, and innovation policies that are useful to entrepreneurs in reality. Lastly, the government should firstly focus on the e-Commerce businesses that are considered as the flagship industries which acts as the main driven mechanisms for Thailand's economy since Thailand will join an AEC in the next few years. The government should create some capabilities and competencies to those e-Commerce entrepreneurs to compete against other countries in the long term.

The synthesis model comprises of four stages starting from agenda setting and moving to policy formulation stage, then the policy implementation and lastly policy evaluation.



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