Factors Influencing E-commerce Adoption in Small and Medium Businesses: An Empirical Study in Thailand

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Abstract

This study examines the factors influencing the variations of e-commerce adoption behaviors in small and medium businesses in Thailand. Based on the literature review, three groups of factors are identified, including organizational, technology, and environmental factors. Firms are classified into three main groups based on their behavioral intention towards adopting e-commerce technologies, namely adopters, prospectors, and non-adopters. Data was collected through a national survey in several main provinces in Thailand. The preliminary analysis results strongly support the research model. The results are interpreted and the implications of this study are subsequently discussed.

1. Introduction

The adoption and use of IT innovation in an organization have been studied extensively for many years [2, 5, 6, 7, 17]. Grover and Goslar [6], for example, studied the adoption and diffusion of telecommunications technologies in the US. organizations. Chau and Tam [2] examined the factors affecting the adoption of open systems. Iacovou, et al. [7] examined the adoption of Electronic Data Interchange (EDI) in small organizations. Some investigated adoption of IT related innovative practices. For example, Fitchman and Kemerer [5] studied the assimilation of software process innovation in organizations. Ravichandran [17] examined the adoption of Total Quality Management (TQM) within Information Systems Department. Though a large number of studies have been explored various types of IT related innovation, little have been done specifically on understanding the adoption of an emerging IT driven innovation, electronic commerce (e-commerce).

E-commerce is "the sharing of business information, maintaining business relationships, and conducting business transactions by means of telecommunication network" [29]. Currently, e-commerce pervasively and dramatically affects the ways firms think, operate, and compete in the market. Many innovative business models such as supply chain management, customer relationship management, and enterprise resource planning are also enabled by the implementation of e-commerce. The adoption of e-commerce has brought new opportunities and challenges to business organizations.

The main purpose of this study is to examine the factors that influence the variations of e-commerce adoption behavior in small and medium businesses. Prior studies found that small businesses have been slow in adopting technological innovations [27]. Since small businesses constitute almost 90 percents of all businesses in many economies, the slowing rate of innovation adoption is a critical issue needed to be examined. Moreover, small and medium businesses are differed from large organizations in many aspects. There is a need to examine whether models of IT innovation tested on the large organization context can be similarly applied to small businesses. Organizational theories that are applicable to a large business may not fit with small and medium business environment [26].

While most of prior studies in IT adoption and use have focused either on traditional dichotomous variables (for example, use/non-use, adopt/non-adopt), they were criticized for inadequacy in completely capturing a complexity

of IT innovation and the behaviors of adoption intention [17]. In addition, most of them emphasize only on firms who already adopt an innovation. Few have distinguish those firms whose have a specific plan to adopt IT innovations in the near future and those who have no clear intention of adoption. In response to this issue, we classify firms into three main groups based on their adoption behavior, namely *Adopters*, *prospectors*, and *non-adopters*. Adopters are firms that have already implemented and used e-commerce in their business activities. Prospectors are firms that have not yet implemented e-commerce, but they have a specific plan in the near future to adopt and implement e-commerce. Finally, non-adopters are firms that have not implemented e-commerce, and have no plan and intention to adopt e-commerce in the near future.

Prior studies in the organization innovation, information technology use, and diffusion of information technology innovation suggest a set of variables that can be used as predictors of IT innovation [9, 10, 23]. Based on the review of the innovation literature, particularly the study by Tornatzky and Fleischer [23], we identify three sets of predictors for e-commerce adoption: *organizational factors, technology factors*, and *environmental factors*. Since this study focuses on the behavior of e-commerce use at an organizational level, individual characteristic variables, such as individual innovation's perceptions, are not considered. The sample frame of this study includes firms located in Thailand—an Asia based country. Most of the IT innovation studies have conducted in the US. However, Asian firms are different from the US. firms in many respects, such as geographic, political, and cultural aspects. The research findings from this study can help in determining whether the organizational innovation theory can be generalized across other settings, particularly in the specific context of Thailand. In addition, newly industrializing and developing countries have been creating government interventions to accelerate use of IT within their countries. King, et al. [22] suggested that the role of institutions such as governments must be considered as essential components in IT use. The key factors found to be crucial from this study could be incorporated in governmental initiatives and could be used in developing the strategy for promoting e-commerce use in the region.

The outline for this manuscript is as following. Following the introduction, the e-commerce status in Thailand, is presented, and following by the review of the theoretical background. The research model, methodology, and the status of data analysis are subsequently presented. Finally, the implications of this study for research and practice, as well as the limitations of this study are followed.

2. Background

2.1 Theoretical Background

Organizational innovation can be defined as the development and implementation of ideas, systems, products or technologies that are new to the organization adopting it [19]. Innovations are a means of changing an organization, either as a response to changes in the external environment or as a preemptive action to influence the environment. The adoption of innovation is a process that includes the generation, development, and implementation of new ideas or behaviors [19]. Innovations can be categorized as a broad range of types, including new products or services, new process technologies, new organizational structures or administrative systems, or new plans or programming pertaining to organizational members [14].

The innovation literature has identified various groups of variables that are possible determinants of organizational adoption of an innovation [5, 9, 10, 23]. Based on a synthesis of the organizational innovation literature, Kwon and Zmud [10] identified five sets of factors that may influence IT innovation. These sets include user characteristics, task characteristics, innovation characteristics, organizational characteristics, and environmental characteristics. Kimberly and Evannisko [9] proposed three clusters of predictors for innovation adoption: characteristics of organization, characteristics of leader, and characteristics of environment. Tornatzky and Fleischer

[23] suggested three elements that influence the technological innovation decision: organizational context, tchnological context, and environment context.

Recently a number of IT innovation studies (for example, [1, 23]) have adopted an emerging theory from the strategic management literature—absorptive capacity [3]—to explain a firm's abilities in adopting and assimilating an innovation. Boynton, et al. [1], for example, argued that a firm's abilities to effective use IT are influenced by the development of an IT-related knowledge and processes that bind them together the firm's IT managers and business managers. They pointed to the organizational climate as the key factors influencing the ability of firms to absorb new knowledge and technology. Fitchman and Kemerer [23] found that organizations are more likely to initiate and sustain the assimilation of software process innovations when they have a more extensive existing knowledge ion areas related to the focal innovation.

Drawing from these studies, we develop a research model for e-commerce adoption. It consists of seven variables representing three major groups: organizational factors, technology factors, and external factors. First, organizational factors have been the most widely used and tested as the key determinants of innovation [6, 22]. In this study, we focus on three sets of variables: structural variable (size), process variable (top management support for e-commerce), and IT context variables (IT emphasis, and existence of IT department). Many studies have examined the effects of structural factors on innovation, such as size, specialization, and formalization [6]. Size is one of the most widely investigated variables for innovation adoption. The arguments for the impacts of size on organizational innovation are mixed. Some argued that larger sizes promote innovation due to greater slack resources; while, some argued that smaller sizes foster innovation due to the flexibility advantage [25].

Process factors have also frequently adopted as a key determinant of IT related innovation intention, especially roles of top management. The IT innovation literature generally reported a positive effect of senior management support on IT related innovation [12, 16]. The common rationales provided include influencing the allocation of slack resources and generating enthusiasm and commitment toward changes among organizational members. This study examines the positive effect of top management support in the context of e-commerce innovation.

Finally, since e-commerce is largely a bundle of various IT components (i.e., hardware, software, networking), IT context factors could play an importance role in determining an e-commerce adoption intention. Two IT context factors are examined in this study, including IT emphasis and existence of IT department. First, prior studies suggested the positive relationship between the roles of IT and IT related innovation adoption (see also, [15, 17]). Organizations that highly emphasize IT are more likely to try new technologies and ideas. This study examines the effect of IT emphasis, measured by IT investment, on e-commerce adoption intention. Second, evidences from the innovation literature recently suggest the role of a firm's ability to absorb new knowledge related to innovation can play an importance role in innovation adoption [3]. Small and medium businesses that are familiar with IT skills and knowledge in organizations, and could be a main unit in acquiring and diffusing the knowledge necessary to adopt and implement e-commerce innovation. Hence, it is conceivable that existence of IT department in small and medium size businesses could promote their e-commerce adoption intention.

The second group of variables is technology factors. Specific factors related to innovation characteristics are frequently used as a key determinant of innovation adoption intention. Rogers [19], for example, identified several attributes of an innovation that are key influences on innovation acceptance behaviors, such as relative advantage, complexity, compatibility, and observability. Tornatzky and Klein [23] identified relative advantage, compatibility, and complexity as innovation characteristics that are salient to the attitude formation of innovation adoption. Though most

of these factors are more pertinent to an individual perception, some attributes are applicable at the organizational-level (see also, [2, 22]) This study investigates the effects of two innovation characteristics on e-commerce adoption intention: perceived compatibility and perceived benefits. Different organizations may face different innovation opportunities. Whether these opportunities can be exploited depends on the degree of match between the innovation's characteristics and the infrastructure currently available in the organization [19]. In addition, not all innovations are relevant to an organization. The degree of relevance depends on the potential benefits organizations received.

The third group of research variable in this study is the external factor. Past studies in IT innovation have stressed the importance of environments. Environmental contingencies such as environmental uncertainty and heterogeneity have been found as facilitators of innovation [6, 20]. When organizations face a complex and rapidly changing environment, IT is both necessary and justified [13]. Environmental factors, especially market factors (i.e., competitiveness), cannot be controlled by organizations; rather, they affect the way firms conduct their business. Thus, it is conceivable that environmental factors create a need for a firm to adopt IT related innovation such as e-commerce. This study examines the effect of competitiveness on the adoption of e-commerce.

Table 1 summarizes the research variables used in this study, and figure 1 graphically illustrates the research model. The variables included in the research model are not pretense to be comprehensiveness. Rather, they are selected based on the consensus in the innovation literature and empirical evidences as representing key theoretical factors affecting organizational innovation adoption.

Factors	Theoretical Representation	Variables	
Organizational Factors	Organizational Structure	Size	
	Organizational Process	Top Management Support for E-commerce	
	IT Context	IT Emphasis	
		Existence of IT Department	
Technology Factors	Technological Context	Perceived Benefits	
		Perceived Compatibility	
Environmental Factors	Organizational Environment	Competitiveness	

Table 1 Research Variables



Research Model Organizational Factors

(1) Size

Organizational size has been one of the most frequently examined factors in the study of organizational innovation (for example, [16, 22]). Prior studies reported that size has a positive impact on the likelihood of IS related innovation adoption such as adoption of CASE tools [16], object oriented [5], and TQM [17]. Large size firms are more likely to adopt innovation since they are capable to absorb risk associated with innovation and have sufficient resources and infrastructure to facilitate the implementation of innovation [5].

Small and medium size businesses encounters barriers to innovation adoption by limited financial resources, insufficient of technological expertise, and shortage of management perspective [26]. Adoption and implementation of e-commerce demands a certain level of organizational resources. Larger organizations should be in a better position to support such demands. Moreover, larger organizations should have a higher potential to use e-commerce due to a larger scale of business operations [11]. Therefore, we expect that e-commerce adopters would have a larger size than prospectors and non-adopters.

Hypothesis 1: The three types of organizations significantly differ in their size.

(2) Top Management Support for E-commerce

It is well accepted that top management plays a critical role in acquisition and diffusion of innovation [12, 16, 28]. Top management can stimulate change by communicating and reinforcing values through an articulated vision for

the organization [22]. Moreover, top management can ensure that resources and capabilities require to adopt and implement innovation will be readily available when they are needed [16]. Empirical studies in IT innovation suggested a positive effect of leadership support on innovation adoption. Rai and Patnayakuni [16], for example, found that top management support has a positive effect on CASE tools adoption behavior in IS departments.

Adopting and implementing e-commerce requires resources extensively that are forthcoming only with the active support from top management. In addition, top management support for e-commerce would also send a strong signal to get line management to actively participate in proposing and developing e-commerce initiative. Therefore, we expected that e-commerce adopters would have a higher level of top management support for e-commerce than prospectors and non-adopters.

Hypothesis 2: The three types of organizations significantly differ in the extent of top management support for e-commerce.

(3) IT Emphasis

Firms significantly differ in the level of IT emphasis. Case studies that highlight strategic IT applications (for example, [18]) also suggest that firms in service industries are more conductive to the use of IT for their business operations. Jarvenpaa and Ives [8] found that top management's interest in IT, as an indirect measurement of the importance of IT, was lower for firms in the petroleum industry compared to firms in banking.

IT emphasis is defined as the level of importance the firms have placed on IT. In this study, we use the level of IT investment as a surrogate measurement of this variable. Differences in the level of IT emphasis are expected to significantly influence the adoption behavior of IT related innovation. Prior studies suggested that organizations that put more emphasis on IT tend to be more aggressive in seeking and trying new technologies and ideas. For example, Premkumar and King [15] found that firms in service industries, which are more emphasis on IT, are more likely to adopt IS planning. Orlikowski [12] found that adoption and implementation of CASE tools were influenced by the roles of IT in the firms. Ravichandran [17] also found that firms where IS plays a strategic role are more likely to adopt TQM in information systems development. Based on these cumulative evidences, we expected that e-commerce adopters would have a higher level of IT emphasis than prospectors and non-adopters. This leads to the following hypothesis:

Hypothesis 3: The three types of organizations significantly differ in the level of IT emphasis.

(4) Existence of IT Department

Absorptive capacity theory [3] asserts that a firm's ability to appreciate an innovation, to assimilate it, and apply it to new ends is largely a result of the firm's preexisting knowledge in areas related to the focal innovation. This prior related knowledge makes it easier for organizations to acquire and retain new knowledge for adopting an innovation. Complementary to this perspective, it was found that the technology assimilation is best characterized as a process of organizational learning, wherein individuals and the organization as a whole acquire the knowledge and skills necessary to effectively acquire and apply the new technology [1]. Prior empirical studies in IT innovation also point to prior knowledge as a key determinant of IT innovation adoption [5].

Adopting and implementing e-commerce innovation requires organizations to posses a bundle of IT related skills and knowledge [24] such as telecommunication knowledge (for example, TCP/IP, HTTP protocol), security management knowledge (for example, SSL, Public Key Infrastructure), and Internet application environment (for example, Java technology). Though many small firms may adopt an outsourcing strategy for e-commerce operation,

they are still need some basic knowledge for selecting appropriated service providers, and in many cases they need these basic skills and knowledge to control and monitor the operation of e-commerce.

IT department can be viewed as a source of IT related knowledge within organizations. Most small businesses do not have any formal, or even informal IT department, and routine IT services is usually performed by its accounting or administrative units. Small businesses which have an IT department should be in a better position to possess some IT related skills and knowledge, which make it easier for them to acquire new knowledge for adopting e-commerce innovation [3]. Therefore, we expect that e-commerce adopters were more likely to have a formal IT department within organizations than prospectors and non-adopters.

Hypothesis 4: The three types of organizations significantly differ in the existence of IT department.

3.2 Technology Factors

(1) Perceived Benefits and Perceived Compatibility

Perceived benefits refer to the extent of management recognition of the relative advantage that e-commerce can provide to the firms. Perceived benefits are regarded as an important factor in determining adoption of new innovations [7, 19]. For example, Iacovou, et al. [7] found that perceived benefits have a positive effect on the likelihood of EDI adoption in small businesses.

The higher the level of management understanding on the relative advantage of the e-commerce, the more the likelihood of the allocation of the managerial, financial, and technological resources necessary to adopt and implement e-commerce innovation. This positive perception of the benefits of e-commerce should provide an incentive for the small and medium size business to adopt the innovation. Therefore, we expect that adopters of e-commerce would have a higher level of perceived benefits than that of prospectors and non-adopters.

Hypothesis 5: The three types of organizations significantly differ in the extent of perceived benefits.

Perceived compatibility is defined as the extent to which an innovation is perceived as being consistent with the existing needs, values, and technological infrastructure of potential adopters [19]. Adopting e-commerce entails with the selection and implementation of a suite of technologies (for example, hardware, software, communication networking). If the innovation is compatible with existing work practices, environments, and firms' objectives, firms will be more likely to adopt them. Therefore, we expect that adopters of e-commerce would have a higher level of perceived compatibility than that of prospectors and non-adopters.

Hypothesis 6: The three types of organizations significantly differ in the extent of perceived compatibility.

3.3 Environmental Factors

(1) Industry Competitiveness

The innovation literature has widely recognizes the influences of environmental contingencies. The environment creates contingencies to which firms have to respond typically through product and process of innovation [4]. Moreover, firms have to be compatible with their environment which is essential for their long term survival and growth [21].

Competitiveness reflects the intensity level of competition environment within the industry where the firms operate. In a competitive environment, businesses are pushed to be innovative by the rivalry [13]. Firms respond to competition by offering innovative services and products. Past studies in IT innovation suggest that, in competitive environment, firms are in a greater need to adopt IT related innovation for competitive advantage [6, 17, 22]. For example, Iacovou, et al. [7]) found a strong relationship between external pressure and EDI adoption behavior. Given the increasing uses of e-commerce in industries, firms in a high competitive environment are pressured to adopt e-commerce in order to respond to the competition. E-commerce can be used a strategic tool to implement an organization's chosen strategy and to respond to competitors. Therefore, we expected that e-commerce adopters would have a higher level of competitiveness than prospectors and non-adopters.

Hypothesis 7: The three types of organizations significantly differ in the extent of competitiveness.

4. Research Methodology

4.1 Data Collection

Survey was the primary research methodology of this study. Prior the data collection phase, questionnaire was sent to a number of persons who were qualified to evaluate the content and appropriateness of the questions. These reviewers were requested to review the document for question clarity, interest, and mechanical considerations, as well as the length of time necessary to complete the questionnaires.

Data for testing the research model was collected though a nation survey in several major provinces in Thailand, such as Chiang-Mai, Songkla, and Khon Kaen, and Bangkok, the capital city of Thailand. Based on the definition by Ministry of Industry of Thailand, we define small and medium businesses as those which have overall asset values less than or equal to 200 million bahts for manufacturing and service firms, 100 million bahts for wholesalers, and 60 million bahts for retailers. Respondents were those who influenced or were part of a decision making of e-commerce adoption. Data was collected through several strategies, such as a mail-based survey, questionnaire distribution during Small and Medium Enterprises (SMEs) seminars, and an individual interview. Totally, one thousand and two hundred packages of questionnaire were distributed, and four hundred and fifty two questionnaires were returned. Sixty-five questionnaires were discarded due to several reasons. For example, some questionnaires were not completed. Some respondents did not involve with a decision making. The total response rate of this study is 32.25 percents, which is very high comparing to the typical response rate of survey studies in the North America. Table 2 presents the response rate of this study.

Provinces	Number of Questionnaires				Response Rate
	Sent	Received	Discarded	Total	
Bangkok	500	210	23	187	37.4%
Outside Bangkok	700	242	42	200	28.5%
Total	1200	452	65	387	32.25%

Table 2 Response Rate

4.2 Organization Types

Respond firms were subsequently classified based on their e-commerce adoption intention. Questionnaire asked respondents whether organizations had already adopted e-commerce. If respondents answered no, they had to specify the plan of e-commerce adoption, ranging from adoption within 3 months, 6 months, 1 year, no specific plan, or no intention of adoption. Firms were classified as *adopters* if they had already adopted e-commerce, as *prospectors* if they had a specific plan to adopt e-commerce within one year, and *non-adopters* if they had no specific plan to adopt e-commerce within one year. From the total 387 responses, one hundred and five firms (27%) were classified as adopters, forty-eight firms (12%) as prospectors, and two hundred and thirty four (60%) as non-adopters. Evidences from this analysis suggest that the majority of small and medium businesses in Thailand were non-adopters. Table 3 provides a summarization on the number of firms for the three organization types.

4.3 Measure

Since the target respondents were firms in Thailand, Thai language was used to develop the questions. Organization size was determined by the number of full time employees. Respondents were asked to specific the number of employees whether they had lower than 10 employees, 10 - 30, 31-50, 51- 100, and higher than 100. Top management support was measured by four item scales assessing top management's interests and understanding in information technology and perceptions of top management towards information technology. IT emphasis was assessed by using a surrogate measurement, IT investment intensity. Respondents were asked to specific the proportion of IT investment on the total annual budget. Answers ranged from no budget for IT investment, less than 2.5%, 2.5-5%, 5-7.5%, 7.5-10, to higher than 10 percents.

IT existence was measured by asking respondents whether they had IT department within their organizations. The answers were coded to "0" for having an IT department and "1" for no IT department. A score for each organization type was calculated by dividing the total score with the number of firms in each type. Therefore, the lower the average score, the more the organization type had an IT department. Perceived compatibility is assessed by a three items scale; Perceived benefit is measured by a five item scale. These two scales were developed based on prior studies scales. Finally, we used a three item scale to assess industry competitiveness, measuring the number of competitors adopting e-commerce, the success and failure of the competitors in adopting e-commerce.

Organization Type	Number	Percentage		
Adopters	105	27.13		
Prospectors	48	12.40		
Non-adopters	234	60.46		
Total	387	100		

Table 3 Distribution of the three organization types

5. Results

Analysis of Variances (ANOVA) was employed to analyze a mean difference among the three groups. A post-hoc multiple comparison (Scheffee's) was subsequently employed to perform a pair-wise comparison of the mean difference among the three organization types. Results from ANAOVA analysis supported all of the seven hypotheses. In particular, analysis results strongly support hypothesis 2-6 (p < 0.001), support hypothesis 1 (p < 0.01), and moderately support hypothesis 7 (p < 0.05). Table 4 presents the statistical analysis results.

Furthermore, pair-wise analysis was performed to determine the mean difference among the three organization types (Table 5). The results suggest that adopters and non-adopters were significantly differed in all variables. However, the results of the mean difference between adopters and prospectors and between prospectors and non-adopters are mixed. In particular, adopters and prospectors are significantly differed in size, IT emphasis, and existence of IT department. Prospectors and non-adopters are significantly differed only in IT emphasis, perceived benefits, and perceived compatibility. Table 5 shows the summarization of the pair-wise analysis.

Variables	F	Adopters		Prospectors		Non-Adopters	
		Mean	SD	Mean	SD	Mean	SD
Size	4.73**	2.56	1.72	1.82	1.22	2.12	1.48
Top management support for e-commerce	26.39***	4.03	0.81	3.9	.13	3.33	.06
IT Emphasis	34.00***	3.15	1.37	2.6	1.29	1.96	1.08
Existence of IT Department	33.73***	1.49	.50	1.80	.404	1.87	.34
Perceived Benefits	10.203***	3.62	.80	3.69	.87	3.2	1.0
Perceived Compatibility	30.57***	3.75	.69	3.59	.84	3.01	.92
Industry Competitiveness	3.89*	4.00	.10	3.66	.154	3.66	.7

Table 4 Statistical Analysis Results

*p<0.05; **p<0.01; ***p<0.001

Table 5 Pair-wise Analysis of the Mean Difference Among the Three Organization Types

Variables	Mean difference between Adopters & Non-adopters	Mean difference between Adopters & Prospectors	Mean difference between Prospectors & Non-adopters
Size	Significant*	Significant*	Not Significant
Top management support for e-commerce	Significant***	Not Significant	Not Significant
IT Emphasis	Significant***	Significant*	Significant**
Existence of IT Department	Significant***	Significant***	Not Significant
Perceived Benefits	Significant**	Not Significant	Significant*
Perceived Compatibility	Significant***	Not Significant	Significant***
Industry Competitiveness	Significant**	Not Significant	Not Significant

*p < 0.05; **p < 0.01; ***p<0.001

6. Discussion

It is unarguable that e-commerce is becoming one of the key technologies driven businesses in current dynamic environment. A study of e-commerce would expand our understanding on the rational underlying the logic of firms in adopting the technology. Results from the statistical analysis yield several insights. First, larger firms tend to move towards e-commerce adoption quicker than smaller firms. This observation is supported by the results of hypothesis 1 testing. Second, top management support is also a major factor driving e-commerce adoption (Hypothesis 2). However,

this factor is not a key factor accelerating an adoption decision indicated by a non-significant difference of top management between adopters and prospectors. Third, IT emphasis is the only factors that can be used to distinguish among the three organization types. Results of hypothesis 3 testing suggest that firms that highly invest in IT will adopt e-commerce quicker than those that spend less on IT investment. Fourth, existence of IT department is also another major factor which can be used to determine adopters, a firm which already adopted e-commerce, and prospectors, a firm which is still considering and or planning of e-commerce adoption. Firms with their own IT departments are more likely to adopt e-commerce quicker than those without their own IT department. For the technology factors, characteristics of the technology, perceived benefits and perceived compatibility, are the keys factors which influence the decision of e-commerce adoption. However, these factors do not influence the quickness of decision-making implied by a result of non-significant difference between adopters and prospectors. Finally, adopters are more likely to be in a more competitive environment, comparing with the other two organization types. However, there is no difference on the mean factor of the environmental variable between prospectors and non-adopters.

This study has implications for both practitioners and researchers. For practitioners, this study shows that IT context plays a major factor in influencing a firm's adoption decision. Firms that strongly support IT (i.e., high level of IT investment and IT emphasis) are more likely to be able to adopt e-commerce technology. Firms should create IT capability so that they are ready to adopt new technologies. For researcher, this study is one from a few which collected data in Thailand. The results of this study can be used to determine whether the innovation adoption theory widely applied in North America or Europe context can be applied in the Asian context. Future research may attempt to compare results from the two contexts.

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