

Effects of Attitude toward Using, Perceived Usefulness, Perceived Ease of Use and Perceived Compatibility on Intention to Use E-Marketing

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Received: April 2, 2014

Accepted: May 13, 2014

Published: July 1, 2014

doi:10.5296/jmr.v6i3.5573

URL: <http://dx.doi.org/10.5296/jmr.v6i3.5573>

Abstract

This research was purposed to establish the effect of attitude toward using, perceived usefulness, perceived ease of use and perceived compatibility on intention to use E-Marketing of small and medium sized business owners in the three southern border provinces of Thailand (Yala, Pattani and Narathiwat provinces) A questionnaire-based field survey was conducted to collect data from 430 participants. The data were analyzed and nine hypotheses were tested using structural equation modeling (Partial least square method in the SmartPLS application program). Results show that attitude toward using E-Marketing is the most influence factor that affecting on intention to use E-Marketing

Keywords: Attitude, Perception, Intention, Small and medium sized businesses, E-Marketing

1. Introduction

Internet technology has developed rapidly. The world become a globalization, users from all over the world can connect to each other easily. While the Internet play an important role in human life style, the marketplace had changed, the economics system had changed then the customer behavior had changed. Electronic commerce becomes the new market for small and medium sizes businesses (SMB) (Chong, Man, Chen and Lai, 2011). E-commerce and E-Marketing is the new channel for SMB that tried to access the international market like the large sized business (McCue, 1999; Hoffman and Novak, 1996; Herbig and Hale, 1997; Nguyen and Barret, 2006). So SMB had applied the Internet to use in their businesses (Sdowski, Maitland and van Dongen, 2002). The traditional strength of SMB is the ability to access the niche market and retain the customer relationship, but when the large sized businesses applied to use E-marketing in their businesses they can access the niche market and retain the customer relationship like SMB. This is the situations that drive SMB to make the decision to apply E-Marketing or lose their market sharing (Herbig and Hale, 1997). E-Marketing is an opportunity for SMB in the rural area to compete with their competitor with the low administration cost (Jeffcoate, Chappell, and Feindt, 2002; Downie, 2002; Dann and Dann, 2001; Poon and Swatman, 1997).

Though E-Marketing had many advantages for SMB, one important obstacle to the adoption of E-Marketing by SMB is the need for SMB to be able to compare the tangible opportunities presented by E-Marketing tools and traditional marketing tools before deciding to adopt E-marketing (Jeffcoate, Chappell, and Feindt, 2002; Downie, 2002; Dann and Dann, 2001; Poon and Swatman, 1997).

The advanced analysis on SMEs separated by provinces group report (The Office of SMEs Promotion (OSMEP), 2012) indicated that SMB in the three southern border provinces of Thailand (Yala, Pattani and Narathiwat provinces) used Internet and social media to promote their products and services very low (only 0.65 %). So, it was the finding for the research question were Attitude toward Using, Perceived Usefulness, Perceived Ease of Use and Perceived Compatibility affected the intention to use E-marketing of SMB in the three southern border provinces of Thailand.

2. Theoretical Orientation

This research was integrated Technology Acceptance Model (TAM) with The Diffusion of Innovation Theory (DIT).

2.1 *Technology Acceptance Model (TAM)*

Davis (1989) applied The Theory of Reasoned Action (TRA) to information technology area and developed it into TAM, which explains the motivation of the user in adopting new technology. TAM consists of three components: perceived ease of use (PE), perceived usefulness (PU), and attitude toward using (AT). The previous studies of Technology Acceptance Model such as the study by Lertwongsatien and Wongpinunwatana (2003) that examined the factors influencing the variation of e-commerce adoption behavior in small and medium businesses in Thailand, the study by Ha and Stoel (2008) that used TAM to

understand the consumer acceptance of e-shopping using structural equation model to reveal consumer e-shopping behavior, and the study by El Gayar et al., (2011) that tested TAM with the empirical data for understanding college students' acceptance of tablet PC in education. The latent variables of this study that synthesized from TAM consists of PE, PU, AT and BI.

Perceived Usefulness (PU)

PU as defined by Davis (1989) refers to the level of individual belief that using technology will increase work performance. The study by Taylor and Strutton (2010) showed that PU has both direct and indirect effect on intention to use E-Marketing through AT.

Perceived Ease of Use (PE)

PE as defined by Davis (1989) refers to the degree to which a person believes that using the particular system would be free of effort. The study by Taylor and Strutton (2010) showed that PE has both direct and indirect effect on intention to use E-Marketing through AT.

Attitude toward E-Marketing (AT)

AT as defined by Davis (1989) refers to a physical tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor. AT has direct effect on intention to use technology (Fishbein & Ajzen, 1977; Davis, 1989)

Intention to Use E-Marketing (BI)

BI as defined by Davis (1989) refers to the strength of the prospective adopter's intention to make or to support the adoption decision in their company.

2.2 The Diffusion of Innovation Theory (DIT)

DIT which was developed by Rogers (1983) can be used to analyze the characteristics of technology use associated with the consumption of media when innovations occur. Individuals use internal communication within their group to make decisions about accepting or rejecting new innovations. DIT suggests five innovation characteristics: relation advantage, compatibility, complexity, trial ability and observe ability. DIT is used to explain innovation communication processes through certain channels and time. Many studies have applied DIT to study the adoption of new technologies such as the study by Lin and Yu (2006) that examined the influence on customer attitude for using the internet as a channel for information searching compared with ordering, and the study by Roach (2009) that explored consumer perceptions of mobile phone marketing which influenced their intention to accept marketing communication sent via mobile phone channel.

The study by Agarwal and Jayesh Prasad (1998) indicated that only three innovation characteristics were consistent; Relation Advantage (labeled Perceived Usefulness in TAM), Compatibility and Complexity (labeled Perceived ease of use in TAM). The previous studied that integrated TAM and DIT such as the study by El-Gohary (2012) which analyzed the different factors affecting the adoption of electronic marketing (E-Marketing) by Egyptian small tourism organization. It is evident that TAM is similar to DIT in some aspects. If the

two theories are integrated it would allow the model to be more appropriate, as showed in Figure 1.

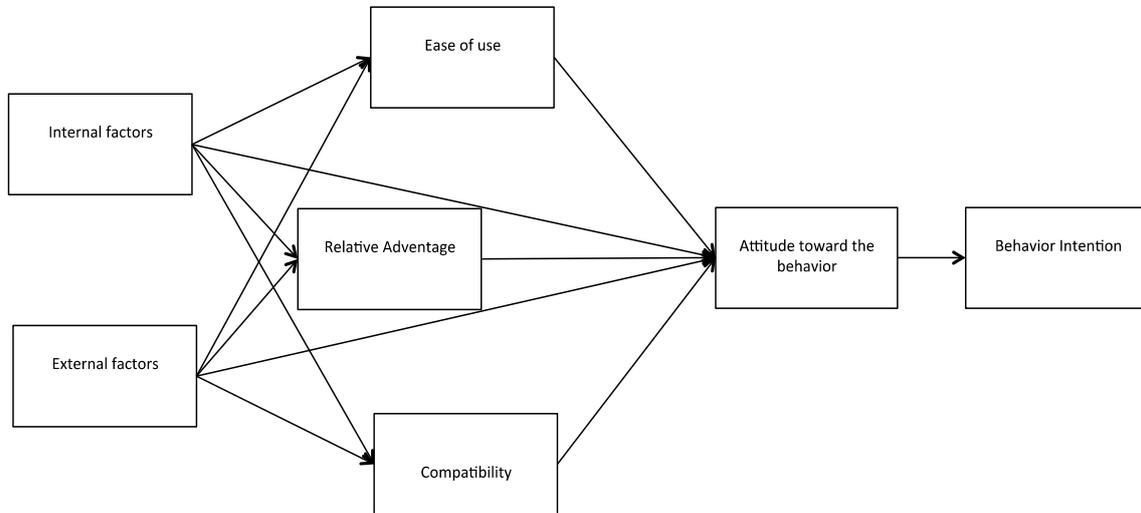


Figure 1. the integrated TAM with DIT

Source: Adapted from El-Gohary (2012)

The latent variable which synthesized from DIT was Perceived Compatibility.

Perceived Compatibility (PC)

PC as defined by Rogers (1995) refers to the degree to which an innovation is perceived as being consistent with the existing values, needs and past experiences of potential adopters. The study by Wu and Wang (2005) showed that PC has both direct and indirect effect on intention to use mobile commerce through PU, and the study by El-Gohary (2012) showed that PC has indirect effect on intention to use E-Marketing through AT.

3. Research Framework

Based on the theory presented in the theory orientation, a research framework of intention to use E-Marketing was developed. The framework shows the relationship between the four factors affecting the intention to use E-marketing, as showed in Figure 2.

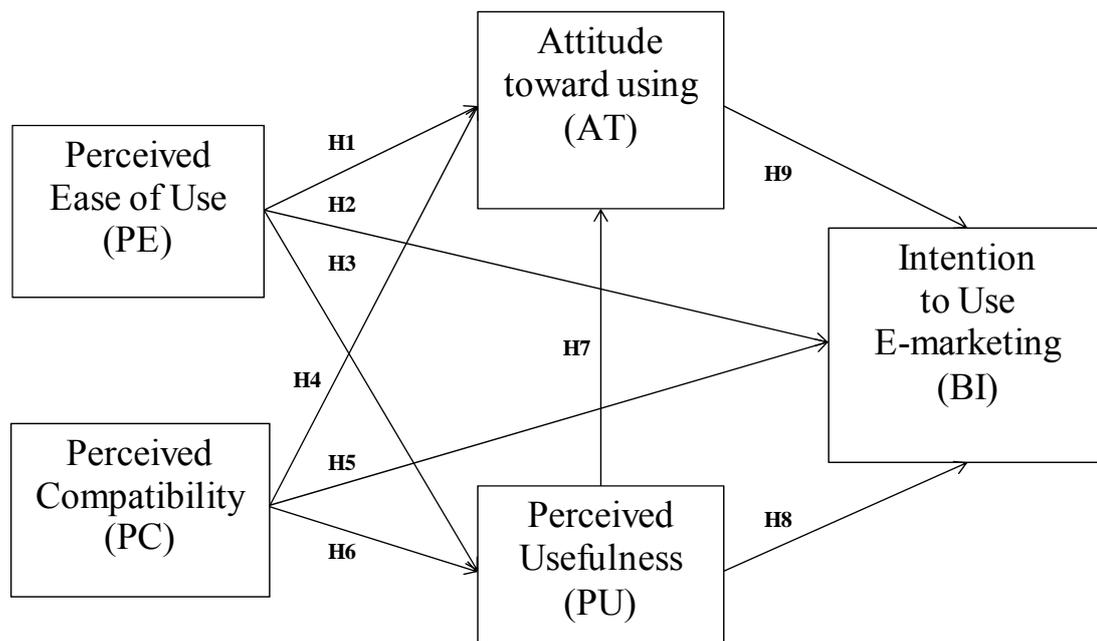


Figure 2. research framework

This research framework consists of four causal variables (attitude toward using, perceived usefulness, perceived ease of use and perceived compatibility) and a dependent variable (intention to use E-Marketing). This research proposed to test nine hypothesizes that indicated the relationship between causal variables and dependent variable.

The research hypotheses

H1: Effect of Perceived ease of use on Attitude toward using E-Marketing

H2: Effect of Perceived ease of use on Intention to use E-Marketing

H3: Effect of Perceived ease of use on Perceived usefulness

H4: Effect of Perceived compatibility on Attitude toward using E-Marketing

H5: Effect of Perceived compatibility on Intention to use E-Marketing

H6: Effect of Perceived compatibility on Perceived usefulness

H7: Effect of Perceived usefulness on Attitude toward using E-Marketing

H8: Effect of Perceived usefulness on Intention to use E-Marketing

H9: Effect of Attitude toward using E-Marketing on Intention to use E-Marketing

4. Research Methodology

4.1 Research design

This research adopted structural equation model (SEM) that sought to establish the effect of SMB owners perception on the intention to use E-Marketing in the three southern border

provinces of Thailand (Yala, Pattani and Narathiwass).

4.2 Sampling and data collection

Research data were collected from SMB owners in the three southern border provinces of Thailand. The database of SMB owners was obtained from the Department of Business Development (DBD), the Ministry of Commerce in Yala, Pattani and Narathiwass provinces. Of the 893 SMEs in Yala, Pattani and Narathiwass provinces on the DBD database list, 430 SME owners were randomly selected for the purpose of this research.

The Research scales adopted in this study were adapted from previous research. Adjustments were made in order to fit the purpose of the scales used in the current research context. Some five-item scales used to measure PU were adapted from the previous studies of Davis (1989), El-Gohary (2010) and Taylor and Strutton (2010). PE was assessed using a four-item scale which was adapted from the work of El-Gohary (2010) and Taylor and Strutton (2010). PC was measured by a four-item scale which was adapted from the work of El-Gohary (2010). Attitude toward using E-marketing was measured by a two-item scale, which was adapted from the work of Davis (1989), El-Gohary (2010), and Curran and Lennon (2011), and a two-item scale was also used to measure intention to use E-marketing, and was adapted from the work of Davis (1989), El-Gohary (2010) and Phillips, Calantone and Lee (1994). All the measurement items were measured on a five-point Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Questionnaires were completed by the SMB owners who both owned the business and occupied a management position related to marketing. A total of 430 usable questionnaires were retrieved for the final data analysis

4.3 Data analysis

Data was analyzed using both descriptive statistics and structural equation model (SEM). Descriptive statistics provide a summary of the characteristics of samples data. SEM statistical model represent causal relationship and path. Each path is a hypothesis for testing a theoretical proposition. This research used SmartPLS application program to analyze research data with partial least square technique and testing the hypotheses using Bootstrap resampling method.

5. Results and Discussion

The summary of the results is presented in two main sections: demographic characteristics and test of hypotheses.

5.1 Demographic statistics

This section shows the demographic characteristics of the samples based on the questionnaire as showed in Table 1.

Table 1. Demographic characteristics of sample (n = 430)

Variable	Category	Frequency	Percentage
Age	less than 25 Years	20	4.7
	25-35 Years	266	61.9
	36-45 Years	121	28.1
	more than 45 Years	23	5.3
	Total	430	100.0
Religious	Buddhist	234	54.4
	Islam	195	45.3
	Other	1	.2
	Total	430	100.0
Business location	Yala	160	37.2
	Pattani	140	33.0
	Narathiwat	130	29.8
	Total	430	100.0

In terms of the age of samples (n = 430), the majority of participants (61.9 %) were between 25 – 35 years while the minority (4.7 %) were less than 25 years. When it comes to religious, a majority of the participants (54.4 %) are Buddhist follow by (45.3 %) are Islam, only 1 (0.2%) is other religious. With regard to business location of the participants, the majority (37.2 %) located in Yala province whereas the minority (29.8 %) located in Narathiwat provinces.

Structural equation model (Partial least square method in the SmartPLS application program) was used to analyze the data base on the research framework (Figure 2). The research model showed in Figure 3

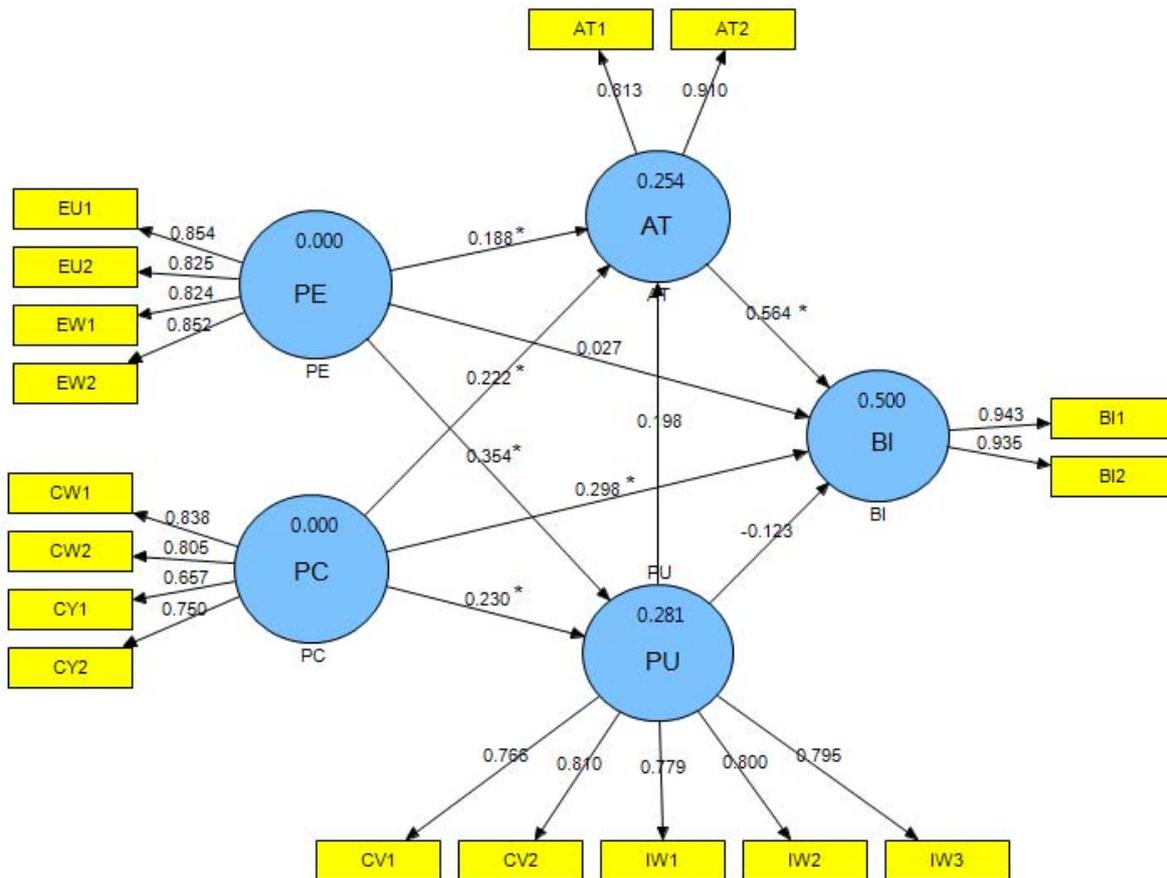


Figure 3. Research model

The data for the model that the researchers will be testing were collected to test a theoretical model of intention to use E-Marketing. This model proposes that AT and PC directly effect on intention to use E-Marketing, while AT is a mediator between PE, PC and intention to use E-Marketing.

5.2 Test the validity and reliability of the constructs

To test the discriminant validity of the constructs, researchers calculated the average variance extracted (AVE). The meaning of the AVE test is the correlation of the construct with its measurement items should be larger than its correlation with the other constructs or more than 0.5.

To test the consistent and stable measures over time of the constructs, researcher calculated the composite reliability score (similar to Cronbach's α in that they both measures of internal consistency). The composite reliability score should more than 0.7.

The AVE and the composite reliability score of the indicators in this research as showed in Table 2

Table 2. Results from PLS analysis

Construct	AVE	Composite Reliability	R ²	Cronbachs Alpha
BI	0.8819	0.9372	0.4997	0.8662
AT	0.7438	0.8527	0.2536	0.6639
PU	0.6244	0.8926	0.2812	0.8496
PE	0.7037	0.9047	0	0.8597
PC	0.5863	0.8490	0	0.7672

The results from Table 2 showed that all sub constructs are very strong discriminant validity and very strong composite reliability.

5.3 Test of hypotheses

The results of hypotheses testing as showed in Table 3

Table 3. Test of hypotheses

Hypothesis	Path	Total Effect	T-statistics	Results
H1	PE -> AT	0.188*	2.3002	Accept
H2	PE -> BI	0.027	1.0675	Reject
H3	PE -> PU	0.354*	2.9707	Accept
H4	PC -> AT	0.223*	2.3814	Accept
H5	PC -> BI	0.298*	3.6279	Accept
H6	PC -> PU	0.230*	2.0123	Accept
H7	PU -> AT	0.198	1.7433	Reject
H8	PU -> BI	-0.123	0.1082	Reject
H9	AT -> BI	0.564*	6.7469	Accept

*Statistics Significant level $P < 0.05$

The results showed in Table 3 provided support for research hypotheses H₁, H₃, H₄, H₅, H₆ and H₉, whereas there was no support for research hypotheses H₂, H₇ and H₈. The relevant hypotheses test that were conducted to assess the significance of statistic tested the null hypothesis at 95% confidence level wherein the acceptability level of the hypothesis test was = 0.05. The relevant hypotheses tests are presents in the following sections.

Consistent with H₁, attitude toward using E-Marketing within the three southern border provinces of Thailand was found to be directly effect by perceived ease of use E-Marketing which provides support for Davis (1989)'s finding based on TAM. The results of the current research suggesting PE as a significant factor affecting attitude toward using E-Marketing, confirms the study by Taylor and Strutton (2010), whereas H₂ was not supported by the study's finding which indicated that PE did not directly affect intention to use E-Marketing.

Consistent with H₃, perceived usefulness of E-Marketing within the three southern border provinces of Thailand was found to be directly effect by perceived ease of use E-Marketing,

which provides support for Davis (1989)'s finding based on TAM. The results of the current research suggesting PE as a significant factor affecting attitude toward using E-Marketing, confirms the study by Wu and Wang (2005).

Contrary to H4, attitude toward using E-Marketing within the three southern border provinces of Thailand was found to be directly effect by perceived compatibility of E-Marketing. The results of the current research suggesting PC as a significant factor affecting attitude toward using E-Marketing, confirms the study by Vijayasathy (2004). Similarly, contrary to H5, the study's results showed that PC was directly affect intention to use Marketing and contrary to H6, PC was directly affect perceived usefulness of E-Marketing, confirms the study by Wu and Wang (2005).

Consistent with H7, attitude toward using E-Marketing within the three southern border provinces of Thailand was not found to be directly effect by perceived usefulness of E-Marketing which provides not support for Davis (1989)'s finding based on TAM. Similarly, consistent with H8 was not supported by the study's finding which indicated that PU did not directly affect intention to use E-Marketing.

Finally, consistent with H9 attitude toward using E-Marketing was found to be significant determinant of SMB owners' intention to use E-Marketing, confirms the study by Davis (1989).

6. Conclusions

The current research has shown that for SMB owners in the three southern border provinces of Thailand attitude toward using E-Marketing is the most influence factor that affecting on intention to use E-Marketing. Perceived compatibility has both direct effect and indirect effect through attitude toward using E-Marketing on intention to use E-Marketing. Perceived ease of use has no direct effect on intention to use E-Marketing but has indirect effect through attitude toward using E-Marketing on intention to use E-Marketing. Perceived usefulness has no both direct effect and indirect effect on intention to use E-Marketing.

The research implications, four mostly-used in TAM and DIT constructs were empirically tested. The finding showed that the proposed research model can partly explain the significant of variance in intention to use E-Marketing. The research model shows that intention to use E-Marketing of SMB owners in the three southern border provinces of Thailand depends on their attitude toward using E-Marketing and their perception of compatibility. Confirming that intention to use E-Marketing depends on individual attitude and perceptions. This study therefor makes an important theoretical contribution to explain SMB owner behavior in intention to use E-Marketing.

The study of Effects of Attitude toward Using, Perceived Usefulness, Perceived Ease of Use and Perceived Compatibility on Intention to Use E-Marketing, would help The Office of SMEs Promotion (OSMEP) to realize, which would be the highest causal factor that influences the intention to use E-Marketing of small and medium sized businesses in the three southern border provinces of Thailand, and it helped them to improve the right factors for increasing the intention to use e-Marketing in the future.

Acknowledgement

The authors wish to express special thanks to the Office of the Higher Education Commission, Thailand for supporting this research by grant fund under the program strategic scholarships fellowship frontier research networks (specific to the southern region).

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