

**THE APPLICATION OF TECHNOLOGY ACCEPTANCE  
MODEL 2 (TAM 2) E-PURCHASE INTENTION AMONG  
HEALTH TOURIST IN THAILAND**

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**DOCTOR OF PHILOSOPHY  
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MODEL 2 (TAM 2) ON E-PURCHASE INTENTION AMONG  
HEALTH TOURIST IN THAILAND**

**BY**

**WANLAPHA PHATTHANA**

**Thesis Submitted to the College of Business,  
Universiti Utara Malaysia in full fulfillment of the requirement  
for the degree of Doctor of Philosophy**

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## ABSTRACT

Thailand is considered as having an excellent potential for becoming a hub in health tourism in Asia. Indisputably, health tourism seems to be a lucrative business in Thailand. Thailand is increasingly enjoying international acclaim for its health care services while touring the country. Health tourism has seen a marked increase in the number of health tourists which reached 2 million in 2008 as compared to just 1.2 million in 2005 (Department of Export Promotion, 2009). However, in 2009, there is a marked decline of health tourism to only 1.3 million mainly due to political instability. Since the hospitals do not have electronic commerce (e-commerce) infrastructure for securing e-purchase intention, also due to the low internet penetration rate (2.1%) and low on-line purchase for health care services (4.2%) in Thailand, the health tourism slumps further. This may not happen if the health businesses in Thailand have proper e-commerce sites to offer e-purchase facilities to customers. Thus, the main objective of the study is to examine the predictors of electronic purchase intention of health tourism based on Technology Acceptance Model 2 (TAM 2) as the underpinning theory (Venkatesh and Davis, 2000). E-purchase intention is defined as the degree to which the consumer would like to purchase on-line in the future (Chu and Lu, 2007). Based on the literature, four factors (perceived usefulness, perceived ease of use image and price) could be hypothesized as affecting e-purchase intention and attitude. Also, attitude is hypothesized as a mediator on the relationship between the four predictors and e-purchase intention. Measurement constructs for purchase intention (5 items) was adapted from Heijden et al., (2003); perceived ease of use (6 items) was adapted from Davis (1989); perceived usefulness (5 items) was adapted from Lymperopoulos & Chaniotakis (2005), image (8 items) was adapted from Venkatesh & Davis (2000) and Yun and Good (2007; and attitude (8 items) was adapted from Lanseng and Andreassen (2007) and Lymperopoulos & Chaniotakis (2005); and price (5 items) was adapted from (Broekhuizen & Huizingh, 2009). All measures use the 7-point Likert-scale of “strongly disagree - strongly agree” continuum. The primary data was collected from 320 target respondents of international patients who came for health care services in

Thailand's private hospitals. The responses collected were 236 completed questionnaires representing 73.75% response rate. The data was analyzed using structural equation modeling (SEM) method. The result shows that the revised model achieves goodness of fit ( $p=0.242$ ,  $CMIN/df=1.063$ ,  $GFI=0.923$ ,  $RMSEA=0.041$ ,  $AGFI=0.903$ ,  $TLI=0.997$ ). This study found two direct significant predictors of e-purchase intention which are perceived usefulness ( $\beta=0.194$ ;  $CR=2.494$ ;  $P=0.013$ ), thus asserting H7, and attitude ( $\beta=0.385$ ;  $CR=7.562$ ;  $P<0.001$ ) thus asserting H5; and four direct significant predictors of attitude which are perceived ease of use ( $\beta=0.367$ ;  $CR=7.511$ ,  $p<0.001$ ), H1 is asserted; perceived usefulness ( $\beta=0.385$ ;  $CR=7.562$ ;  $P<0.001$ ), H2 is asserted; image ( $\beta=0.311$ ;  $CR=6.170$ ;  $P<0.001$ ), H3 is asserted; price ( $\beta=0.139$ ;  $CR=3.02$ ,  $p<0.001$ ), H4 is asserted. Attitude is also found to be a full mediator for all four linkages. The underpinning or competing model also achieves model fit, thus indicating the robustness of TAM2 model for explaining international patients e-purchase intention for health tourism. The findings of this study are discussed in the perspective of health tourism and its implications to patient's e-purchase intention.

**Key words:** e-purchase intention, attitude, health tourism, perceived usefulness, perceived ease of use, image, price, TAM 2, Thailand

## PUBLICATION FROM THIS RESEARCH

The following conference paper has been presented from the finding of the research reported in this thesis:

- Nik Kamariah Nik Mat & Wanlapha Phattana. (2009). The application of Technology Acceptance Model 2 (TAM 2) on Health Tourism Purchase Intention in Thailand. *The First Seminar On: Entrepreneurship and Societal Development in ASEAN (ISE-SODA 2010)*-Langkawi Malaysia.
- Wanlapha Phattana & Nik Kamariah Nik Mat. (2010). The Application of Technology Acceptance Model 2 (TAM 2) on health tourism e-purchase intention predictors in Thailand, *Proceedings International Journal of Arts & Sciences (IJAS)*, Schulstrabe 15, 79288 Gotteinheim, Germany, 28 Nov-3 Dec 2010. Organized by Central Connecticut State University, USA.
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## LIST OF ABBREVIATIONS

- AGFI Adjusted Goodness-Of-Fit Index
- AMOS Analysis of Moment Structures
- AT Attitude
- PI E-Purchase Intention
- CFI Comparative Fit Index
- IM Image
- DF Degree of Freedom
- P Price
- PEU Perceived Ease of use
- PU Perceived usefulness
- GFI Goodness-of-Fit Index
- N Population
- n Sample Size
- NFI Normal Fit Index
- RMSEA Root Mean Square Error of Approximation
- SMC Squared Multiple Correlations
- SEM Structural Equation Modeling
- TAM Technology Acceptance Model
- TAM2 Technology Acceptance Model 2



# **CHAPTER 1**

## **Introduction**

### **1.1 Chapter Overview**

This chapter presents the background of the study, which is in the area of health tourism. It states the research problems, research objectives, and addresses the key questions. This chapter also includes the rationale for the research. Finally, it outlines the sequence of steps described in the following chapters.

### **1.2 Background of study**

The main purpose of this study is to examine the predictors of electronic purchase intention (e-purchase intention) in health tourism in Thailand using Technology Acceptance Model 2 (TAM2). E-purchase intention is defined as “the intention to purchase goods, services and information from various online suppliers” (Kotler, Keller, Ang, Leong, & Tan 2009). Health tourism is defined as “the act of traveling to other countries to obtain cost-effective medical, dental, and surgical care that combine wellness and healthcare alongside leisure and relaxation” (Business Thai, 2008). TAM 2 is an extended TAM model to explain perceived usefulness and usage intentions in the field of social influence and cognitive instrumental processes (Venkatesh and Davis, 2000). This model is thought to be an ideal platform to explain e-purchase intention in health tourism.

consumer's need would help the private hospitals to adapt their resources when customers go online for information searching.

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## **APPENDIX**

### **A**

#### **QUESTIONNAIRE AND THE ANTECIDENCE MODEL OF PURCHASE INTENTION IN NON-HEALTH SETTING**