

**FACTORS INFLUENCING CONSUMERS' BEHAVIORAL  
INTENTION TO PURCHASE ONLINE TOURISM  
PRODUCTS VIA MOBILE DEVICE**

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**ASIA e UNIVERSITY  
2019**

FACTORS INFLUENCING CONSUMERS' BEHAVIORAL  
INTENTION TO PURCHASE ONLINE TOURISM  
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GARRY TAN WEI HAN

A Thesis Submitted to Asia e University in Fulfilment of the  
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## ABSTRACT

Traditionally purchasing tourism products were confined to either brick-or-mortar store or online, on a desktop computer. With the growing popularity of mobile devices (m-devices) and technological advancement in wireless networks, a new form of shopping channel has emerged in the tourism industry. Consumer can now purchase via m-devices. Given the benefits and potential of this channel, the acceptance however is not widespread and currently an under-addressed topic among academicians. Specifically, practitioners are also skeptical if consumers are ready to accept this alternative channel. Drawing upon the Unified Theory of Acceptance and Usage of Technology (UTAUT) (i.e., Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions) as a baseline model, the conceptual framework was integrated with Flow Theory (i.e., Perceived Enjoyment), Psychological Characteristic (i.e., Personal Innovativeness in Information Technology and Mobile Perceived Compatibility), Social Environment (i.e., Perceived Critical Mass) and Security Concern Factors (i.e., Perceived Risk and Wireless Trust) to study on the consumers' behavioral intention to purchase. Through the use of Partial Least Squares-Structural Equation Modelling (PLS-SEM) of 503 mobile respondents collected through self-administered questionnaires, it was discovered that some of the structural paths are not consistent with past literatures. A Post Hoc Multiple Mediation Analysis has been included to discover some of the non-supported findings. Additionally, a non-parametric Permutation approach has also been conducted to discover on the gender and age differences in the decision making. The findings are mixed and therefore requires further testing. This study has valuable contributions to academicians, practitioners, and society. Academically, the integrated framework contributes to the tourism and marketing literatures by uniting UTAUT, flow theory, psychological characteristic, social environment and security concern factors in the Asian context. Practically, by focusing on the important factors affecting consumers' decision to adopt mobile tourism shopping, organisations can create effective mobile marketing campaigns. Socially, the study contributes to job creations and revenue generation for the host country.

Keywords: *Mobile shopping, Mobile commerce, Consumer behaviour, Tourism, UTAUT, Malaysia*

## APPROVAL PAGE

I certify that I have supervised /read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in quality and scope, as a thesis for the fulfilment of the requirements for the degree of Doctor of Philosophy.

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## DECLARATION PAGE

I hereby declare that the thesis submitted in fulfilment of the PhD degree is my own work and that all contributions from any other persons or sources are properly and duly cited. I further declare that the material has not been submitted either in whole or in part, for a degree at this or any other university. In making this declaration, I understand and acknowledge any breaches in this declaration constitute academic misconduct, which may result in my expulsion from the programme and/or exclusion from the award of the degree.

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A handwritten signature in black ink, appearing to read 'Garry Tan Wei Han', written in a cursive style.

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## LIST OF SYMBOLS AND ABBREVIATIONS

-	Negative Effect
+	Positive Effect
3G	Third Generation
4G	Fourth Generation
AMOS	Analysis of Moment Structure
ATU	Attitude Towards Using
AU	Actual System Use
AVE	Average Variance Extracted
BI	Behavioral Intention
CB-SEM	Covariance-based Structural Equation Modelling
CM	Common Method Bias
CR	Composite Reliability
C-TAM-TPB	Combined TAM and TPB
DOI	Diffusion of Innovations
DTPB	Decomposed Theory of Planned Behavior
EE	Effort Expectancy
E-Sat	E-satisfaction
ETP	Economic Transformation Programme
f <sup>2</sup>	The Effect Size
FC	Facilitating Conditions
GDP	Gross Domestic Product
HTMT	Heterotrait-Monotrait Ratio of Correlations
IS	Information System
IT	Information Technology
LISREL	Linear Structural Relations
LTE	Long Term Evolution
M-Devices	Mobile Devices
MITI	Ministry of Trade and Industry
MM	Motivational Model

MPC	Mobile Perceived Compatibility
MPCU	Model of Pc Utilization
MTB	Malaysian Tourism Board
MTTP	Malaysia Tourism Transformation Programme
NFC	Near Field Communication
NFI	Normed Fit Index
NKEA	National Key Economics Areas
PBC	Perceived Behavioral Control
PC	Perceived Compatibility
PE	Performance Expectancy
PEJ	Perceived Enjoyment
PEOU	Perceived Ease of Use
PI	Personal Innovativeness
PIIT	Personal Innovativeness in Information Technology
PLS-SEM	Partial Least Squares-Structural Equation Modelling
PR	Perceived Risk
PU	Perceived Usefulness
Q2	Stone-Geisser
q2	The Effect Size
RFID	Radio Frequency Identification
RhoA	Dijkstra-Henseler
SCT	Social Cognitive Theory
SEM	Structural Equation Modelling
SI	Social Influence
SN	Subjective Norms
SRMR	Standardized Root Mean Square Residual
TAM 2	Technology Acceptance Model 2
TAM 3	Technology Acceptance Model 3
TAM	Technology Acceptance Model
TDC	Tourism Development Corporation
TPB	Theory of Planned Behavior

TRA	Theory of Reasoned Action
UTAUT	Unified Theory of Acceptance and Use of Technology
VB-SEM	Variance-based Structural Equation Modelling
VIF	Variance Inflation Factors
WiMAX	Worldwide Interoperability for Microwave Access
WT	Wireless Trust

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of Study

#### 1.1.1 Tourism Industry in Malaysia

The tourism industry is one of the fastest growing service industries in Malaysia (Mohd Isa & Ramli, 2014; Tang & Tan, 2015). Malaysia was ranked third after China and Hong Kong as one of the top travel destinations in Asia and the Pacific region by World Tourism Ranking in 2014 (Hospitality Valuation Services, 2016). Presently, Malaysia was also ranked second in the Travel and Tourism Competitiveness Index by the World Economic Forum among South East Asia countries in 2017 (Thestar.com.my, 2017a). The sector recorded about RM 82.1 billion in receipts with a registered 26.76 million of tourist arrival in 2016 (Tourism Malaysia, 2017). The growth was overwhelming as compared to 25.03 million incoming tourists and RM 60.6 billion incomes from tourist receipts in 2012 (Tourism Malaysia, 2017). The number of tourists' arrival is further projected to rise to 36 million with receipts per tourist of RM 4675 per arrival and a total estimated receipts of RM 168 billion by 2020 (Huang, 2016; Ghani, 2016). On the basis of the sector contribution to the output of the economy, the industry is the second-largest foreign exchange earner after the manufacturing industry (Saad & Nabiha, 2014; Huang, 2016). According to a study by World Travel and Tourism Council (2015), the tourism industry contributes about 5.7 percent (direct) and 14.9 percent (indirect) towards the country's Gross Domestic Product (GDP) in 2014. The direct and indirect contribution towards GDP is further expected to reach RM 95.9 and RM 262.2 billion respectively by 2025 (World Travel and Tourism Council, 2015). Additionally, the tourism industry has also accounted about 6 percent (direct) and 14 percent (indirect) of unemployment in 2014, emphasizing the importance of the growth for Malaysia

(Giap, Gopalan & Ye, 2016). Statistic figures also reported that the direct and indirect employment number is further to rise to 993,000 and 2,489,000 jobs respectively by 2025. Further, according to the statistic in 2014 by World Travel and Tourism Council, Malaysia was ranked 26 out of 184 countries in the world based on the relative importance of the travel and tourism industry to the country's national output (Giap, Gopalan & Ye, 2016). In recent years, most international tourists arrived from more than 80 countries but among the top 10 tourist markets for 2017 (in ranking order) were Singapore (13.3 million), Indonesia (3.1 million), China (2.1 million), Thailand (1.8 million), Brunei Darussalam (1.4 million), India (0.64 million), South Korea (0.44 million), Philippines (0.42 million), Japan (0.41 million) and United Kingdom (0.4 million), (Tourism Malaysia, 2017). Please see Table 1 for further information on the top 10 countries by arrival to Malaysia in 2017.

**Table 1.1:**

**Top 10 Arrivals by Country to Malaysia**

<b>Country</b>	<b>Arrivals (Million)</b>
Singapore	13.3 million
Indonesia	3.1 million
China	2.1 million
Thailand	1.8 million
Brunei Darussalam	1.4 million
India	0.64 million
South Korea	0.44 million
Philippines	0.42 million
Japan	0.41 million
United Kingdom	0.40 million

Source: Tourism Malaysia (2017)

The popularity of Malaysia can be attributed to the cultural heritage, natural wonders, shopping paradise, entertainment, gastronomic adventure and a host of tourists attractions distributed across the country (Hassan et al., 2008). Similarly, Malaysia also positions itself as a popular Islamic tourism country by rendering products in rich Islamic values (Samori, Md Salleh & Khalid, 2016; Ghani, 2016). World Economics Forum recently reported that Malaysia is one of the world's top 20 cheapest countries to visit in the world (NST.com.my, 2017). Table 2 indicates the number of international tourist arrivals to Malaysia and the revenue received from 2004 to 2015. Presently, both the tourism receipts and arrivals have shown an upward trend, with minor exceptions for 2015 due to the combination of internal and external issues. Among the internal factors include the implementation of the six percent Goods and Service Tax, flooding issues in parts of Malaysia and also the introduction of the minimum wages (Malaysiakini, 2015). The external factors such as the global economy crisis and the disappearance of MH370 on 8 March 2014 and the loss of flight MH 17 on 17 July 2014 have also profound impact on the willingness of tourists to travel to Malaysia (Malaysiakini, 2015; The Malay Mail Online.com, 2015). Additionally, the drop of arrivals was also impacted by the restructuring of Malaysian national carrier which has cut unprofitable routes to boost profitability (Hospitality Valuation Services, 2016). Selke, Hoon and Schaar (2015) explained that the Chinese tourist recorded a 20 percent fall since April 2014 which lead to the reduction of operational revenue in the Malaysian hotel sector. Euromonitor Malaysia however expected the international tourist arrival to Malaysia to grow at 4.5 percent per annual till 2018 (Hospitality Valuation Services, 2016). World Travel and Tourism Council (2015) on the other hand forecasted that the international tourist arrival will reach 43,180,000 with an estimated receipt of RM 110.5 billion by 2025.

**Table 1.2****International Tourist Arrivals and Receipts to Malaysia**

<b>Year</b>	<b>Arrivals (Million)</b>	<b>Receipts (RM)</b>
2016	26.76 million	82.1 billion
2015	25.72 million	69.1 billion
2014	27.44 million	72.0 billion
2013	25.72 million	65.4 billion
2012	25.03 million	60.6 billion
2011	24.71 million	58.3 billion
2010	24.58 million	56.5 billion
2009	23.65 million	46.1 billion
2008	22.05 million	49.6 billion
2007	20.97 million	53.4 billion
2006	17.55 million	36.3 billion
2005	16.43 million	32.0 billion
2004	15.70 million	29.7 billion
2003	10.50 million	21.3 billion
2002	13.20 million	25.8 billion

Source: Tourism Malaysia (2017)

The number of tourists' arrival brings positive effects on the growth of the economic sections in Malaysia (Bhuiyan, Siwar & Ismail, 2013). This is due to the ability of the industry to generate incomes, provides employment opportunities, attracts foreign investments and serves as a source of contributions toward the nation's foreign exchange (Hanafiah, Harun & Jamaludin, 2010; Irwana, Othman & Mohamed, 2014; Ahmad, Jabeen & Khan, 2014). Ghani (2016) highlighted that the tourism sector has generated multiplier effects with strong forward and backward linkages with other economics sectors. The escalation of the tourism industry not only bring economic growth to other tourism-related industries such as leisure services, retail, accommodation, entertainment, hospitality transportation and other services (Telfer, 2002; Choo & Mohd Nasurdin, 2014) but also development to other forms of infrastructures and public facilities such as parks, roads and outdoor recreation facilities