



**UNIVERSITI PUTRA MALAYSIA**

**FACTORS AFFECTING INBOUND TOURISM DEMAND  
IN MALAYSIA**

**NORLIDA HANIM MOHD SALLEH**

**FEP 2009 5**

**FACTORS AFFECTING INBOUND TOURISM DEMAND  
IN MALAYSIA**

**By**

**NORLIDA HANIM MOHD SALLEH**

**Thesis Submitted to the School of Graduate Studies,  
Universiti Putra Malaysia, in Fulfillment of the Requirement  
for the Degree of Doctor Philosophy**

**February 2009**



## DEDICATION

**To my beloved parents (Zamaah Din and Mohd Salleh Mohd Shah),  
and my children (Nurul Fatimah, Mohammad Akhmal Yasin and  
Muhammad Akhmal Hadid) and husband for being my reasons  
to further my studies.**

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirements for the degree of Doctor of Philosophy

**FACTORS AFFECTING INBOUND TOURISM DEMAND  
IN MALAYSIA**

By

**NORLIDA HANIM MOHD SALLEH**

**February 2009**

**Chairman : Associate Professor Ahmad Shuib, PhD**

**Faculty : Economics and Management**

This study examines the inbound tourism demand for Malaysia. Ten countries have been selected namely Singapore, Thailand, Indonesia, Brunei, China, Japan, Hong Kong, the United State of America, United Kingdom and Australia. These ten countries have been selected since they are among the most important generating tourists to Malaysia tourism industry. Seven macroeconomics variables are identified in the long run tourism market demand model for Malaysia. The variables are tourist arrivals to Malaysia, tourism price, substitute prices, travelling cost, income and exchange rates. They also have been tested for their significance in the short run along with other variables such as lagged dependent variable and dummy variables such Gulf War, the Asian economic crisis in 1997-98 and the outbreak of Severe Acute Respiratory Syndrome-SARS 2003.

The cointegration analysis in the ARDL framework is applied to estimate the Malaysia tourism demand. This study starts with the stationarity test to perform the order of integration of the variables, followed by the estimation of the ARDL

Model, the bounds test of the ARDL Model, the calculation and interpretation of the long-run and short-run elasticities, the diagnostic test and the accuracy evaluation of ARDL model.

The empirical findings have shown that the ‘bounds test’ in overall model is consistent and reliable since the model fulfill all the diagnostic test. Most of the variables such as tourism price, travelling cost, substitute cost and income are significant in the long-run as well as in the short-run. Most of them are statistically significant and theoretically correct, i.e: tourism prices are negatively related to the volume of tourist arrivals. Incomes in most cases have a positive relationship with tourist arrivals. For Singapore, Brunei, China and Australia tourists, Malaysia is considered as an inferior tourist destination as shown by their negative elasticity of income. Singapore and Thailand are seen either as complementary or substitute destinations by different originating countries. Word-of-mouth effect as represented by the past year tourist arrivals is a significant factor influencing inbound tourists. Dummy variables are also significant in the short run. However, in some markets such as Indonesia, Japan, United Kingdom and Australia, certain explanatory variables such as tourism prices are theoretically inconsistency but reasonable explanations have been provided. Based on the empirical findings some policy related to the tourism price and promotional of low cost fares as well as development of tourism infrastructures and products can be suggested to enhance more development in Malaysia tourism industry.

**Keywords: Inbound tourism demand, ARDL, Cointegration**



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

**FAKTOR YANG MEMPENGARUHI PERMINTAAN PELANCONG  
ASING KE MALAYSIA**

Oleh

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Kajian ini meneliti permintaan pelancong asing ke Malaysia. Sepuluh buah negara telah dipilih iaitu Singapura, Thailand, Indonesia, Brunei, China, Jepun, Hong Kong, Amerika Syarikat, United Kingdom dan Australia. Kesepuluh buah negara menjadi pilihan kerana merupakan antara negara utama penyumbang kepada ketibaan pelancong kepada industri pelancongan Malaysia. Tujuh pembolehubah makroekonomi digunakan dalam meneliti model permintaan pelancong asing ke Malaysia dalam jangka panjang. Pembolehubah tersebut adalah bilangan ketibaan pelancong ke Malaysia, harga pelancongan, harga pengganti, kos perjalanan, pendapatan dan kadar pertukaran. Pembolehubah ini juga akan diuji kesignifikannya dalam jangka pendek bersama dengan beberapa pembolehubah lain seperti lat pembolehubah bersandar dan dami Perang Teluk, krisis ekonomi di Asian pada 1997-98 dan penyebaran Sindrom Akut Pernafasan-SARS 2003.



Analisis kointegrasi dalam kerangka ARDL digunakan dalam menganggarkan permintaan pelancongan ke Malaysia. Kajian ini dimulakan dengan melakukan ujian kepegunan dan tingkat kointegrasi diikuti dengan menganggarkan model ARDL, ujian batas sempadan model ARDL, pengiraan dan intepretasi keanjalan jangka panjang dan jangka pendek, ujian *diagnostic* dan penilaian ketepatan model ARDL.

Hasil empirikal menunjukkan ujian 'batas sempadan' dalam semua model adalah konsisten dan boleh dipercayai kerana memenuhi hampir kesemua ujian '*diagnostic*'. Kebanyakan pembolehubah seperti harga pelancongan, kos perjalanan, harga pengganti dan pendapatan adalah signifikan dalam model permintaan pelancongan Malaysia sama ada dalam jangka panjang mahupun jangka pendek. Kebanyakan pembolehubah ini juga secara statistik adalah significant dan benar secara teorinya, i.e harga pelancongan adalah berhubung secara negatif dengan bilangan ketibaan pelancong. Pendapatan pula dalam kebanyakan kes adalah berhubung secara positif dengan bilangan ketibaan pelancong. Bagi sesetengah pelancong, Malaysia merupakan destinasi pelancongan yang bersifat '*inferior*' sepertimana ditunjukkan oleh nilai keanjalan pendapatan yang bertanda negatif. Singapura dan Thailand boleh menjadi sama ada destinasi pelengkap mahupun pengganti kepada Malaysia bagi pasaran pelancong yang berbeza. Pengaruh *Word-of-Mouth* yang dipersembahkan oleh bilangan ketibaan pelancong yang lalu (lat pembolehubah bersandar) adalah signifikan mempengaruhi permintaan pelancong ke Malaysia. Pembolehubah dami yang lain juga signifikan

dalam jangka pendek. Bagaimanapun, dalam beberapa pasaran seperti Indonesia, Jepun, United Kingdom dan Australia terdapat pembolehubah penerang seperti harga pelancongan yang bertentangan dengan teori tetapi keadaan ini masih boleh diterima berdasarkan alasan yang tertentu. Berasaskan keputusan empirikal ini beberapa polisi berkait dengan harga pelancongan dan promosi tambang murah, begitu juga dengan pembangunan infrastruktur dan produk pelancongan dapat dicadangkan dalam usaha membangunkan lagi industri pelancongan Malaysia.

**Keywords: Inbound tourism demand, ARDL, Cointegration**

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I certify that a Thesis Examination Committee has met on 13 February 2009 to conduct the final examination of Norlida Hanim binti Mohd Salleh on her thesis entitled "Factors Affecting Inbound Tourism Demand in Malaysia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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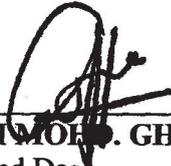
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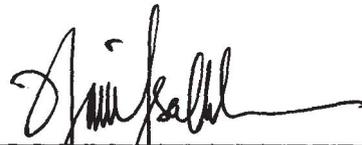
  

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Date: 9 July 2009

## DECLARAION

I hereby declare that the thesis is based on my original work except for quotations and citations, which have been acknowledged. I also declare that this thesis has not been previously or currently submitted for any other degree at UPM and any other institutions.



**NORLIDA HANIM MOHD SALLEH**

Date: 9 Jun 2009

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## LIST OF ABBREVIATIONS

ADF	-	Augmented Dickey Fuller
AIC	-	Akaike Information Criteria
AR	-	Autoregressive
ARCH	-	Autoregressive Conditional Heteroscedasticity
ARDL	-	Autoregressive Distributed Lag
ASEAN	-	Association of South East Asian Countries
CLRM	-	Classical Linear Regression Model
CO	-	Corchrane-Orcutt
CUSUM	-	Cumulative Sum of the Recursive Residual
CUSUMSQUARE	-	Cumulative Sum Square of the Recursive Residual
D03	-	Dummy the outbreak of Severe Acute Respiratory Syndrome in 2003
D91	-	Dummy of the Gulf War in 1991
D97	-	Dummy of the Asian Economic Crisis in 1997-98
DF	-	Dickey Fuller
E	-	Elastic
ER	-	Exchange Rate
GDP	-	Gross Domestic Product
HQ	-	Hannan-Quinn Information Criteria
IE	-	Inelastic
IFS	-	International Financial Statistics
IUOTO	-	Internatioan Union of Official Travel Organisation
KLIA	-	Kuala Lumpur International Airport
LER	-	Log of the Exchange Rate
LM	-	Lagrange Multiplier
LRPI	-	Log of Real Per capita Income
LSP	-	Log of Substitute Price
LTA	-	Log of Tourist Arrivals
LTC	-	Log of Travelling Cost
LTP	-	Log of Tourism Price
LTSP	-	Log of Substitute Price
MAE	-	Mean Absolute Error
MAE	-	Mean Absolute Error
MAH	-	Malaysian Association of Private Hospital
MAS	-	Malaysian Airlines System
MICE	-	Meeting, Incentive, Conferences and Exhiibitions
MOCAT	-	Ministry of Tourism
MTPB	-	Malaysia Tourism Promotion Board
N.A	-	Not Available
N.C	-	Not Computed
NID	-	Normal and Identical Distribution
Non-ASEAN	-	Others than ASEAN Countries
NTRRC	-	National Tourism Resource Review Commission
OLS	-	Ordinary Least Square
PP	-	Philip Perron
RM	-	Ringgit Malaysia

RMK-9	-	The 9 <sup>th</sup> Malaysia Plan
RMSE	-	Root Mean Square Error
RMSE	-	Root Mean Square Error
RPI	-	Real Per capita Income
RRT	-	Ramsey Reset Test
RSS	-	Sum of Square Residual
RW	-	Random Walk
RWD	-	Random Walk with Drift
SARS	-	The outbreak of Severe Acute Respiratory Syndrome
SBC	-	Schwarz Bayzean Information Criteria
SIC	-	Standard Industrial Classification System
SRMSE	-	Root Mean Square Error
SRMSE	-	Standardized Root Mean Square Error
TA	-	Tourist Arrivals
TC	-	Travelling Cost
TDC	-	Tourism Development Coperation
TP	-	Tourism Price
TSP	-	Substitute Price
U	-	Theil's Inequality Coefficient
U.A.E	-	United Arab Emeriates
UECM	-	Unrestricted Error Correction Model
UK	-	The United Kingdom
UNCTAD	-	United Nations Conference on Tourism
USA	-	The United States of America
VAY	-	Visit ASEAN Year
VFR	-	Visit Friends and Relatives
VMY	-	Visit Malaysia Year
WDI	-	World Development Indicators
WOM	-	Word-of-Mouth
WTO	-	World Tourism Organization
WTTC	-	World Travel and Tourism Council

## CHAPTER 1

### INTRODUCTION

#### 1.1 General Background

Over the past fifty years, tourism had experienced an incredible growth trend globally. With the total tourist arrivals of 25.3 million and tourist receipts US\$2.1 billion in 1950, these figures increased tremendously to 763.2 million and US\$622.7 billion in 2004. In terms of growth rate, international tourist arrivals had increased at an annual average rate of slightly over six per cent in the last five decades and tourist receipts had increased an average of 11.1 per cent annually during the same period. Based on this information, in 2004 alone more than 2 million people took to international travelling and spent about RM\$1.71 billion daily. Due to its huge contribution to the foreign exchange earnings, tourism is now among the largest exporting sectors in the world (WTO, various series).

The importance and contributions of the tourism industry to the socio-economic development of the host countries are substantial and significant. According to the World Travel and Tourism Council in 2006 (WTTC, 2006), world travel and tour industry is expected to contribute about 3.6% or US\$1,754.5 billion to the Gross Domestic Product (GDP) and in the next ten years the value is forecasted to increase to US\$2,969.4 billion. Similarly, its contribution to export is also very important. The travel and tourism industry is estimated to share about 11.8% of the

total world export in 2006 or about US\$1,646.6 billion. In 2016, the figure is predicted to rise to US\$3,468.4 or 10.9% of the total world export.

Besides its important contribution to the world GDP and export earnings, travel and tourism is also a major provider of employment opportunities. It is estimated that in 2006 about 76,729,000 people are directly employed in travel and tourism industry or providing about 2.8% of the total employment. If direct and indirect employment are to be incorporated, the number would increase to 234,305,000 jobs which comprise 8.7% of the overall employment. In the next decade, direct employment in the tourism industry is projected to increase to 89,485,000 jobs, and 279,347,000 jobs if both direct and indirect employment are included (WTO, 2007).

Given the sizeable contribution of the tourism industry to the GDP, and export earnings as well as it being a source of employment, many countries especially the developing countries are seriously promoting the development of this industry to diversify their economic sectors to a broader base. The rapid growth of new tourism destinations particularly in developing countries and noticeably in the Asia and Pacific region (where Malaysia is part of) has provided more traveling alternatives to tourists. These new destinations have been the choice of many international tourists especially from the developed countries because these destinations provide them with new travelling experience from the unspoiled environments at a very competitive price.