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 Fatihah, 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 inconsistence 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

NORLIDA HANIM MOHD SALLEH

Febuari 2009

Pengerusi : Associate Professor Ahmad Shuib, PhD

Fakulti : Ekonomi dan Pengurusan

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
ACKNOWLEDGEMENTS

First and foremost, I would like to thank and convey my highest appreciation to my committee chairman, Associate Professor Dr. Ahmad Shuib for his suggestions, his tremendous support throughout this study and his willingness to share his knowledge and patience in completing this thesis.

I would also like to thank my supervisory committee members, Dr. Law Siong Hook for guiding me to understand the methodology, Dr. Zaleha Mohd Noor and Dr. Sridar Ramachandran for their suggestions, views and comments at various stages of the study.

My deepest gratitude go to my parents, my husband and my three naughty children, Nurul Fahihah Shmain, Muhammad Akhmal Yasin Shmain and Muhammad Akhmal Hadid Shmain. My thanks also go to Associate Professor Dr. Redzuan Othman (UKM), Kamalrudin Mohamed Salleh (UKM) and Dr. Eliza Nor (USM), who had always given their hands, encouragement and accompanying me during the most difficult task/time along this study. May ALLAH bless you.

Last but not least, to all my friends, K.Siti, K.Lela, K.Yus, Puan Napsiah, K.Nora, Dr. Mat Yusof, Dr. Samsuddin, Dr. Husin Abdullah, Dr. Tajul Ariffin Masron and Bee Tin, thank you very much for your endless support and advice.
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.

Members of the Thesis Examination Committee were as follows:

**Khalid Abdul Rahim, PhD**  
Professor  
Faculty of Economics and Management  
Universiti Putra Malaysia  
(Chairman)

**Lee Chin, PhD**  
Lecurer  
Faculty of Economics and Management  
Universiti Putra Malaysia  
(Internal Examiner)

**Mohd Rusli bin Ya'cob, PhD**  
Senior Lecturer  
Faculty of Economics and Management  
Universiti Putra Malaysia  
(Internal Examiner)

**Jennifer Chan Kim Lian, PhD**  
Associate Professor  
School Of Business and Economics  
Universiti Malaysia Sabah  
(External Examiner)

---

**BUJANG KIM HUAT, PhD**  
Professor and Deputy Dean  
School of Graduate Studies  
Universiti Putra Malaysia

Date: 2 July 2009
Thus thesis submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

Ahmad Shuib, PhD  
Associate Professor  
Faculty Economics and Management  
Universiti Putra Malaysia  
(Chairman)

Law Siong Hook, PhD  
Faculty Economics and Management  
Universiti Putra Malaysia  
(Member)

Zaleha Mohd Noor, PhD  
Faculty Economics and Management  
Universiti Putra Malaysia  
(Member)

Sridar Ramachandran, PhD  
Faculty Economics and Management  
Universiti Putra Malaysia  
(Member)

HASANAH MOHD. GHASALI, PhD  
Professor and Dean  
School of Graduate Studies  
Universiti Putra Malaysia  
Date: 9 July 2009
DECLARATION

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.

NOR HIDA HANIM MOHD SALLEH

Date: 9 Jun 2009
TABLE OF CONTENTS

DEDICATION ii
ABSTRACT iii
ACKNOWLEDGEMENTS vii
APPROVAL viii
DECLARATION xi
LIST OF TABLES xvi
LIST OF FIGURES xix
LIST OF ABBREVIATIONS xx

CHAPTER
1 INTRODUCTION 1.1

1.1 General Background 1.1
1.2 Importance of the Malaysian Tourism Industry 1.4
1.3 Problem Statement and Significance of the Study 1.8
1.4 Objectives of the Study 1.11
1.5 Scope of the Study 1.12
1.6 Organization of Study 1.13

CHAPTER
2 THE CONCEPTS OF TOURISM AND THE TOURISM
INDUSTRY IN MALAYSIA 2.1

2.1 Introduction 2.1
2.2 Concepts and Definitions 2.1
2.2.1 Tourism 2.1
2.2.2 Tourists 2.5
2.2.3 Tourism Industry 2.10
2.3 Malaysia’s Tourism Industry 2.12
2.3.1 Background of Malaysia’s Tourism Industry 2.12
2.3.2 Government Participation 2.14
2.3.3 Tourist Arrivals and Tourism Receipts to Malaysia 2.16
2.3.4 Malaysian Tourism Markets 2.19
2.3.5 Tourist Profile 2.22
2.3.6 Tourism Product of Malaysia 2.30

CHAPTER
3 LITERATURE REVIEW 3.1

3.1 Introduction 3.1
3.2 Concepts of Tourism Demand 3.1
3.3 The Measurement of Tourism Demand 3.2
3.3.1 Theory of Consumer Behavior 3.2
3.3.2 Consumer Behaviour and the Derivation of Damage Function 3.4
3.4 The Demand for Tourism 3.12
3.4.1 Utility Maximisation and Tourism Demand 3.18
3.4.2 Effect of Price Change Towards the Tourism Demand 3.20
3.4.3 Effect of Income Change Towards the Tourism Demand 3.22
3.4.4 Deriving Tourism Demand Curve 3.23
3.5 Elasticity 3.25
3.5.1 Price Elasticity of Demand 3.25
3.5.2 Cross Elasticity of Demand 3.26
3.5.3 Income Elasticity 3.27
3.6 The Determinants of the Demand for Tourism 3.28
3.6.1 Dependent variable 3.29
3.6.2 Independent variables 3.29
3.7 Empirical Evidence on the Demand for Tourism 3.39
3.7.1 Empirical Result of Cointegration Analysis 3.42
3.7.2 View of Past Studies 3.47

CHAPTER
4 METHODOLOGY

4.1 Introduction 4.1
4.2 The Specification of Tourism Demand Model and the Data 4.2
4.2.1 Dependent variables 4.4
4.2.2 Explanatory variables 4.5
4.3 Calculation of Tourism Elasticity 4.14
4.4 Estimation Procedures 4.15
4.4.1 The Nature of Time Series Data 4.16
4.4.2 Stationarity Testing 4.17
4.4.3 The Concept of Cointegration Analysis 4.23
4.4.4 ARDL test of Cointegration 4.25
4.4.5 The Diagnostic Test 4.28
4.4.6 Measuring Demand Model Accuracy 4.32

CHAPTER
5 EMPIRICAL RESULTS AND DISCUSSION

5.1 Introduction 5.1
5.2 Stationary test and order of integration in ASEAN and Non-ASEAN 5.2
5.3 The estimation of the ARDL Model in ASEAN and Non-ASEAN 5.5
5.4 The bound test of the ARDL Model in ASEAN and Non-ASEAN 5.10
5.5 The long-run and short-run elasticity 5.11
5.5.1 The Long-run Elasticities of the ASEAN and Non-ASEAN 5.12
5.5.2 The Short-run Elasticities of the ASEAN and Non-ASEAN 5.19
5.6 Diagnostics test of the ARDL Model 5.25
5.7 Evaluating the Accuracy of ARDL Model 5.28
5.8 The Important Finding of the Empirical Results 5.30
CHAPTER 6 CONCLUSIONS, IMPLICATIONS AND FUTURE RESEARCH 6.1

6.1 Introduction 6.1
6.2 Summary of Empirical Results 6.5
  6.2.1 Long-run Analysis 6.5
  6.2.2 Short-run Analysis 6.6
  6.2.3 Economic Theory 6.8
  6.2.4 Elasticity 6.12
  6.2.5 Diagnostic Test 6.13
  6.2.6 Comparison between the ASEAN and Non-ASEAN Countries 6.13
6.3 Policy Implication 6.17
6.4 Suggestions for the Future Research 6.24

REFERENCES R.1

APPENDICES A1,B.1,C.1

BIODATA OF THE STUDENT D.1
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1.1</td>
<td>The Performance of the Malaysian Tourism Industry, 1980-2004</td>
<td>1.7</td>
</tr>
<tr>
<td>Table 2.1</td>
<td>Development Allocation for Tourism in the Malaysia Plan, 1986-2005 (RM Million)</td>
<td>2.15</td>
</tr>
<tr>
<td>Table 2.2</td>
<td>Tourist Arrivals and Tourism Receipts to Malaysia, 1975-2003</td>
<td>2.17</td>
</tr>
<tr>
<td>Table 2.3</td>
<td>The top ten markets (Tourist Arrivals), 1994 – 2004</td>
<td>2.20</td>
</tr>
<tr>
<td>Table 2.4</td>
<td>Average Per capita Expenditure in Malaysia by ASEAN and Non-ASEAN, 1994-2004</td>
<td>2.23</td>
</tr>
<tr>
<td>Table 2.5</td>
<td>The Top Ten of the Average Per capita Expenditure in Malaysia, 1994-2004 (RM)</td>
<td>2.24</td>
</tr>
<tr>
<td>Table 2.6</td>
<td>Components of Tourist Expenditure 1991-2004</td>
<td>2.24</td>
</tr>
<tr>
<td>Table 2.7</td>
<td>Average Length of Stay in Malaysia by the ASEAN and Non-ASEAN Countries, 1994-2004</td>
<td>2.25</td>
</tr>
<tr>
<td>Table 2.8</td>
<td>The Top Ten of the Average Length of Stay in Malaysia, 1994-2004</td>
<td>2.26</td>
</tr>
<tr>
<td>Table 2.9</td>
<td>Main Purpose of Visit 2003-2004</td>
<td>2.27</td>
</tr>
<tr>
<td>Table 2.10</td>
<td>Major Activities Engaged 2003-2004</td>
<td>2.27</td>
</tr>
<tr>
<td>Table 2.11</td>
<td>Main Factors in Choosing Malaysia 2003-2004</td>
<td>2.28</td>
</tr>
<tr>
<td>Table 2.12</td>
<td>Information obtained before coming to Malaysia 2003-2004</td>
<td>2.29</td>
</tr>
<tr>
<td>Table 2.13</td>
<td>Main Features in Promoting Malaysia 2003-2004</td>
<td>2.29</td>
</tr>
<tr>
<td>Table 2.14</td>
<td>Tourism Products of Malaysia: Natural Products</td>
<td>2.32</td>
</tr>
<tr>
<td>Table 2.15</td>
<td>Tourism Products of Malaysia: Man Made Products</td>
<td>2.33</td>
</tr>
</tbody>
</table>
Table 3.1: Literature Review of Dependent Variables in Tourism Demand

Table 3.2: Literature Review of Independent Variables in Tourism Demand

Table 3.3: Literature Review on Tourism Demand Method

Table 5.1: Result of Unit Root Tests for the ASEAN (ADF at Level)

Table 5.2: Results of Unit Root Tests for the FarEast (ADF at Level)

Table 5.3: Results of Unit Root Tests for the Developed Countries (ADF at Level)

Table 5.4: Results of Unit Root Tests for the ASEAN (ADF at First Difference)

Table 5.5: Results of Unit Root Tests for the Far East (ADF at First Difference)

Table 5.6: Results of Unit Root Tests for the Developed Countries (ADF at First Difference)

Table 5.7: The Estimated ARDL Model of the ASEAN

Table 5.8: The Estimated ARDL Model of the Far East

Table 5.9: The Estimated ARDL Model of the Developed Countries

Table 5.10: Bound Test Results for the ASEAN

Table 5.11: Bound Test Results for the Far East

Table 5.12: Bound Test Results for the Developed Countries

Table 5.13: Long-run Elasticities for the ASEAN

Table 5.14: Long-run Elasticities of the Far East

Table 5.15: Long-run Elasticities for the Developed Countries

Table 5.16: The Short-run Elasticities of the ASEAN
Table 5.17: The Short-run Elasticities of the Far East 5.23
Table 5.18: The Short-run Elasticities of the Developed Countries 5.24
Table 5.19: Diagnostics test of the ASEAN, Far East and Developed Countries 5.25
Table 5.20: Results of RMSE and Theil's U Statistics of the ASEAN, Far East and Developed Countries 5.29
Table 5.21: Summary of the Empirical Results (the sign and significant of the variables) in the Long run 5.31
Table 5.22: Summary of the Empirical Results (the sign and significant of the variables) in the Short run 5.32
Table 5.23: Summary of the Sign and Elasticities in the Long run 5.36
Table 5.24: Summary of the Sign and Elasticities in the Short run 5.36
Table 5.25: Summary of the Significant and Sign of the Variables in the Short run 5.39
Table 5.26: Comparison of the Long-run Variables Between the ASEAN and Non-ASEAN Countries 5.41
Table 5.27: Comparison of the Short-run Variables Between the ASEAN and Non-ASEAN Countries 5.43
Table 5.28: The Important of the Variable to the ASEAN, Far East and Developed Countries 5.45
Table 5.29: Ranking According to Variables in the Long run for ASEAN, Far East and Developed Countries 5.46
Table 5.30: Ranking According to Variables in the Short run for ASEAN, Far East and Developed Countries 5.46
Table 6.1: Summary of the Long-run Analysis 6.6
Table 6.2: Summary of the Short-run Analysis 6.7
Table 6.3: Comparison Between the ASEAN and Non-ASEAN Countries in the Long-run Analysis 6.14
Table 6.4: Comparison Between the ASEAN and Non-ASEAN Countries in the Short-run Analysis 6.16
Appendix A

Table A.1: Tourism Demand Models

Table A.2: Summary of the Main Conclusions Drawn From Past Empirical Studies

Appendix B

Table B.1: Results of Unit Root Tests for the ASEAN (Phillip Perron at Level)

Table B.2: Results of Unit Root Tests for the Far East (Phillip Perron at Level)

Table B.3: Results of Unit Root Tests for the Developed Countries (Phillip Perron at Level)

Table B.4: Results of Unit Root Tests for the ASEAN (Phillip Perron at First Difference)

Table B.5: Results of Unit Root Tests for the Far East (Phillip Perron at First Difference)

Table B.6: Results of Unit Root Tests for the Developed Countries (Phillip Perron at First Difference)

Appendix C

Table C.1: E-views Results of ARDL Model - Singapore Market

Table C.2: E-views Results of ARDL Model – Indonesia Market

Table C.3: E-views Results of ARDL Model – Thailand Market

Table C.4: E-views Results of ARDL Model – Brunei Market

Table C.5: E-views Results of ARDL Model – China Market

Table C.6: E-views Results of ARDL Model – Hong Kong Market
Table C.7: E-views Results of ARDL Model – Japan Market

Table C.8: E-views Results of ARDL Model – United Kingdom Market

Table C.9: E-views Results of ARDL Model – United States of America Market

Table C.10: E-views Results of ARDL Model – Australia Market
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 2.1:</td>
<td>Classification of visitors</td>
<td>2.9</td>
</tr>
<tr>
<td>Figure 2.2:</td>
<td>Supply-side definition of the tourism industry</td>
<td>2.11</td>
</tr>
<tr>
<td>Figure 3.1:</td>
<td>An indifference curve for two goods (X and Y)</td>
<td>3.5</td>
</tr>
<tr>
<td>Figure 3.2:</td>
<td>Demonstration of Maximizing Utility (Minimizing Cost) Between Two Goods (X and Y)</td>
<td>3.8</td>
</tr>
<tr>
<td>Figure 3.3:</td>
<td>The Relationship Among Demand Concepts</td>
<td>3.12</td>
</tr>
<tr>
<td>Figure 3.4:</td>
<td>Total Paid and wages</td>
<td>3.14</td>
</tr>
<tr>
<td>Figure 3.5:</td>
<td>Choice Between Leisure and Working Hours</td>
<td>3.16</td>
</tr>
<tr>
<td>Figure 3.6:</td>
<td>The Effect of Increment of Paid/Wage to the Selected of Working Hour and Leisure</td>
<td>3.17</td>
</tr>
<tr>
<td>Figure 3.7:</td>
<td>Maximising the Utility of Two Goods (Tourism and non-tourism)</td>
<td>3.19</td>
</tr>
<tr>
<td>Figure 3.8:</td>
<td>Demonstration of Maximizing Utility Between Tourism and other Goods and Services (X and Y)</td>
<td>3.20</td>
</tr>
<tr>
<td>Figure 3.9:</td>
<td>Substitution and Income Effects with Normal Goods/Services (Tourism and as a Normal Services) (X and Y)</td>
<td>3.21</td>
</tr>
<tr>
<td>Figure 3.10:</td>
<td>Changes of Tourism Demand Due to the Change of Income</td>
<td>3.22</td>
</tr>
<tr>
<td>Figure 3.11:</td>
<td>Construction of Tourism Demand Curve</td>
<td>3.24</td>
</tr>
<tr>
<td>Figure 3.12:</td>
<td>Variables and Method Summary of Tourism Demand Analysis</td>
<td>3.48</td>
</tr>
<tr>
<td>Figure 5.1:</td>
<td>Results of CUSUM and CUSUMSQUARE Test of the Recursive Residuals of ASEAN, Far East and Developed Countries</td>
<td>5.26</td>
</tr>
<tr>
<td>Figure 5.2:</td>
<td>The actual and estimated of the tourist arrivals based on the ARDL model of tourism demand from the ASEAN, Far East and Developed Countries</td>
<td>5.28</td>
</tr>
</tbody>
</table>
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 - Cochrane-Orcutt
CUSUM - Cumulative Sum of the Recursive Residual
CUSUMSQ - 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 - International 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
MAH - Malaysian Association of Private Hospital
MAS - Malaysian Airlines System
MICE - Meeting, Incentive, Conferences and Exhibitions
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
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMK-9</td>
<td>The 9th Malaysia Plan</td>
</tr>
<tr>
<td>RMSE</td>
<td>Root Mean Square Error</td>
</tr>
<tr>
<td>RPI</td>
<td>Real Per capita Income</td>
</tr>
<tr>
<td>RRT</td>
<td>Ramsey Reset Test</td>
</tr>
<tr>
<td>RSS</td>
<td>Sum of Square Residual</td>
</tr>
<tr>
<td>RW</td>
<td>Random Walk</td>
</tr>
<tr>
<td>RWD</td>
<td>Random Walk with Drift</td>
</tr>
<tr>
<td>SARS</td>
<td>The outbreak of Severe Acute Respiratory Syndrome</td>
</tr>
<tr>
<td>SBC</td>
<td>Schwars Bayzean Information Criteria</td>
</tr>
<tr>
<td>SIC</td>
<td>Standard Industrial Classification System</td>
</tr>
<tr>
<td>SRMSE</td>
<td>Root Mean Square Error</td>
</tr>
<tr>
<td>SRMSE</td>
<td>Standardized Root Mean Square Error</td>
</tr>
<tr>
<td>TA</td>
<td>Tourist Arrivals</td>
</tr>
<tr>
<td>TC</td>
<td>Travelling Cost</td>
</tr>
<tr>
<td>TDC</td>
<td>Tourism Development Cooperation</td>
</tr>
<tr>
<td>TP</td>
<td>Tourism Price</td>
</tr>
<tr>
<td>TSP</td>
<td>Substitute Price</td>
</tr>
<tr>
<td>U</td>
<td>Theil's Inequality Coefficient</td>
</tr>
<tr>
<td>U.A.E</td>
<td>United Arab Emirates</td>
</tr>
<tr>
<td>UECM</td>
<td>Unrestricted Error Correction Model</td>
</tr>
<tr>
<td>UK</td>
<td>The United Kingdom</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Tourism</td>
</tr>
<tr>
<td>USA</td>
<td>The United States of America</td>
</tr>
<tr>
<td>VAY</td>
<td>Visit ASEAN Year</td>
</tr>
<tr>
<td>VFR</td>
<td>Visit Friends and Relatives</td>
</tr>
<tr>
<td>VMY</td>
<td>Visit Malaysia Year</td>
</tr>
<tr>
<td>WDI</td>
<td>World Development Indicators</td>
</tr>
<tr>
<td>WOM</td>
<td>Word-of-Mouth</td>
</tr>
<tr>
<td>WTO</td>
<td>World Tourism Organization</td>
</tr>
<tr>
<td>WTTC</td>
<td>World Travel and Tourism Council</td>
</tr>
</tbody>
</table>
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.