

**THE ECONOMIC IMPACT OF TOURISM IN MALAYSIA: AN  
INPUT OUTPUT ANALYSIS**

**By**

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**MASTER OF ECONOMIC  
UNIVERSITI UTARA MALAYSIA**

**December 2012**

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**Thesis Submitted to**

**Othman Yeop Abdullah Graduate School of Business,**

**Universiti Utara Malaysia,**

**In Fulfillment of the Requirement for the Master of Economics**

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## **ABSTRACT**

Tourism industry is the second biggest contribution to Malaysia's economic growth. This study aims to measure the economic impact of tourism to the Malaysian economy through the use of input output analysis. Using input output table 2005 which published by Department Of Statistic Malaysia, the tourism sector was disaggregate from the rest of the economy. The economic multiplier and inter sectoral linkages of 21 sector from Malaysian Input Output Table 2005 were analyzed using Microsoft Excel Software. The multiplier results showed tourism contributes significantly to the economy in term of generating output and household income. Inter sectoral linkages analysis showed tourism is a key sector in creating demand and stimulating production within the sector as well as other sector of the economy.

## **ABSTRAK**

Industri pelancongan adalah penyumbang kedua terbesar kepada pertumbuhan ekonomi Malaysia. Kajian ini adalah bertujuan untuk mengukur kesan industri pelancongan terhadap ekonomi Malaysia melalui penggunaan analisis input output. Dengan menggunakan jadual input output 2005 yang telah dikeluarkan oleh Jabatan Statistik Negara, sektor pelancongan telah dipisahkan dari seluruh sektor ekonomi. Pengganda ekonomi dan hubungan antara sektor daripada 21 sektor daripada Jadual Input Output Malaysia 2005 telah dianalisis menggunakan Perisian Microsoft Excel. Keputusan pengganda menunjukkan pelancongan menyumbang dengan ketara kepada ekonomi dalam menjana pengeluaran negara, pendapatan penduduk dan pekerjaan. Analisis hubungan antara sektor menunjukkan pelancongan merupakan sektor utama dalam mewujudkan permintaan dan merangsang pengeluaran dalam sektor serta sektor ekonomi yang lain.

## ACKNOWLEDGEMENT

First and foremost, my humble gratitude and appreciation to Almighty Allah, the Most Gracious and the Most Merciful, for enabling me proceed with this Project Paper work until its final form.

I am greatly indebted to my supervisor, Dr Mukarramah binti Harun who has made a significant contribution until the completion of this research and deserves special thanks for her kindness, patient, generosity and guidance when supervising my work. My thanks also to my examiner, Dr ..... for his/her support in order to make this research more meaningful.

Finally, special respects and thanks to my beloved father, Hj. Abdullah bin Omar who inspires me to succeed now and hereafter. My special respects and thanks also goes to my mother, Hjh Selamah@Zaharah bt Awang for her unconditional love and encouragement, and for my family and friends for being supportive throughout my study at University Utara Malaysia.

Last but not least, I am grateful to Allah S.W.T for giving me faith, will and strength to complete my study.

Thank you.

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Introduction**

Tourism comprises the activities of person travelling and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purpose not related to the exercise of an activity remunerated from within the placed visited (World Tourist Organization). In order words, it refers to the temporary, short movement of people outside their residential and working places to some destination and their activities during the stay. In the recent years, tourism has become a popular global leisure and is one of the largest and dynamically developing sectors of external economic activities in a country.

Malaysia is a beautiful country in Southeast Asia, extending from approximately 1° N to 6° 45' N latitude and 99° 36' E to 104° 24'E longitude consisting of thirteen states and three Federal Territories, with a total land mass of 329,845 square kilometres (127,354 sq mi). The country is divided into two parts, Peninsular Malaysia and Malaysia

Borneo (also known as East Malaysia) by the South China Sea. After being continuously under the control of different foreign powers for a long time it finally gained its independence on 31<sup>st</sup> August 1957. Surrounded by the Thailand in the north, Indonesia in the south west, Singapore in the south and Philippine in the north east, Malaysia has a long coastline, specially Peninsular Malaysia. It border the Strait of Malacca, and important international shipping crossroad, and therefore helps in the development of international trade which is integral to its economy.

Malaysia has a biodiversity range of flora and fauna, with picturesque coastal plains rising to hills and mountains. All these scenic natural beauty along with a diversity of cultures, well structured development in all the sectors has given a boost to tourism which forms increasingly important sector to the Malaysian economy. The tourism industry has experienced rapid growth and continues to be a key foreign exchange earner, contributing to GDP (gross domestic product) growth, investment, and employment as well as strengthening the services account of the balance of payments. But tourism has its negative effects also on the society as well on the ecosystem. Therefore, the study of impact of tourism is quite important in order to understand type of economy prevailing in Malaysia which is done in this study.

## **1.2 Tourism In Malaysia**

### **1.2.1 Visitors Arrivals, Gross Receipts and Tourism Development Effort**

Tourism is the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business or other purpose. Malaysia is well endowed with abundance of natural resources maintains its sustainable tourism. Tourism industry maintains its sustainability through its economic viability. Increasing attention has been given by the Malaysian government to develop sustainable tourism as an alternative source of foreign exchange. The development allocation for this industry has been increasing over the years. It has been increased from RM 605.5 million in the 7<sup>th</sup> Malaysian plan to RM 1009 million in the 8<sup>th</sup> Malaysian plan period. In the 9<sup>th</sup> Malaysian plan period, the allocation reached to RM1367 million.

Tourism department officially begun in 1959 was transformed to Tourism Development Corporation (TDC) in the early 1970's, the beginning of 'new era' for the Malaysian tourism industry. The recognition also came following a phenomenal growth rate experienced by the industry since the late 1960s. TDC was formed in 1972 under the Ministry of Trade and Industry (MITI), which was responsible for the coordination, development and promotion of domestic and international tourism.

During the period of 1970s, government efforts to develop tourism was set off to several development objective such as increasing foreign exchange earnings, increasing employment, and income levels, fostering regional development, diversifying the economic base, and increasing government revenue. The concentrated effort was given to

the development of basic infrastructure for tourism in that period. Tourism industry accrued higher priority from the government in 1980s.

Government supports for tourism continued with the establishment of the Ministry of Tourism and Culture in 1987 later renamed as the Ministry Culture, Arts and Tourism (MOCAT) in 1990. The industry has had full support in terms of funding, planning, coordination, regulation and enforcement with formation of MOCAT which was upgraded to the Ministry of Tourism in 2004 to coordinate, direct and ensure that all tourism development initiatives and programs were implemented according to National Tourism Master Plan in line with the government's objective to encourage and accelerate the domestic private sector and stimulate the tourism sector to lead the growth of the economy. The industry not only creates considerable high multiplier effects and linkages in the economy, but also fosters national integration and unity. If this trend of tourism growth in Malaysia continues, it may surpass manufacturing sector, which since 1987 has been the country's engine of growth. The revenue earned from international tourism has a pivotal role that directing Malaysian economy to higher growth.

Table 1.1: Tourist Arrivals and Receipts to Malaysia

TOURIST ARRIVALS & RECEIPTS TO MALAYSIA		
YEAR	ARRIVALS	RECEIPTS (RM)
2011	24.7 Million	58.3 Billion
2010	24.6 Million	56.5 Billion
2009	23.6 Million	53.4 Billion
2008	22.0 Million	49.6 Billion
2007	20.9 Million	46.1 Billion
2006	17.4 Million	36.3 Billion
2005	16.4 Million	32.0 Billion
2004	15.7 Million	29.7 Billion
2003	10.5 Million	21.3 Billion
2002	13.2 Million	25.8 Billion
2001	12.7 Million	24.2 Billion
2000	10.2 Million	17.3 Billion
1999	7.9 Million	12.3 Billion
1998	5.5 Million	8.6 Billion

*Source: Tourism Malaysia*

Malaysian economy's current account balance remains relatively resilient with manufacturing and tourism taking the lead. Tourism industry is currently the second largest foreign exchange earner, after manufacturing. From table 1.1 that was taken from Tourism Malaysian Industry show that tourism receipts increased significantly from 1998 to 2011. Tourism receipts increased with the increase in tourist arrivals. For instance, tourist's arrivals have increased from 5.5 million in 1998 to 13.2 million in 2002 and decrease in 2003 to 10.5 million but increase again from 15.7 million in 2004 to 24.7 million in 2011. Dato' Sri Dr. Ng Yen Yen , the Malaysian Tourism Minister said that in line the Malaysia Tourism Transformation Plan 2020, which aims to receive 36 million

tourist arrivals and RM168 billion in receipt by 2020, it is important for Malaysia to shift its focus on growing yield per tourist rather than to rely heavily on tourist arrival growth.

The tourism industry growth rate is dependent on the growth rate of the overall national economy and the hotel industry growth rate, in turn, is dependent, to some extent, on the growth of the tourism industry. Past statistics have indicate that the hotel sales volume represents approximately 36% of the total receipts from tourism. This fact should hold true when the economy remains stable.

Table 1.2: Top Ten Tourist Arrival 2010

Country	Tourist Arrival		
	2008	2009	2010
Singapore	11,003,492	12,733,082	13,042,004
Indonesia	2,428,605	2,405,360	2,506,509
Thailand	1,493,789	1,449,262	1,458,678
China	949,864	1,019,756	1,130,261
Brunei	1,085,115	1,061,357	1,124,406
India	550,738	589,838	690,849
Australia	427,076	533,382	580,695
Philippines	397,884	447,470	486,790
United Kingdom	370,591	435,091	429,965
Japan	433,462	395,746	415,881

*Source: Tourism Malaysia*

Malaysia has experienced a substantial growth in tourist arrivals. Table 1.2 highlights th top ten market in 2008, 2009 and 2010. From the table 1.2, we know that the basic pattern of tourist arrivals over the years has remained the same. Tourist from the ASEAN countries of Singapore, Indonesia, Thailand, China and Brunei continue to account the highest tourist arrival in Malaysia. Singapore remain the dominant feature in terms of demand with 13,042,004 person in 2010 followed by Indonesia with 2,506,509

person. Given the economic growth of the region, moreover, these countries will remain the backbone of the Malaysian tourism industry. In terms of the profile of non-ASEAN countries, tourist arrivals from Japan remain the highest.

Table 1.3: Top Ten Tourist Receipt 2010

Country	Tourist Receipt (RM Million)		
	2008	2009	2010
<b>Singapore</b>	22,990.7	27,499.2	28,417.4
<b>Indonesia</b>	4,570.7	4,478.5	4,758.7
<b>China</b>	2,469.0	2,783.5	3,129.0
<b>Brunei</b>	2,545.7	2,496.3	2,624.8
<b>Australia</b>	1,697.5	2,,139.8	2,388.4
<b>India</b>	1,496.1	1,601.8	1,807.1
<b>United Kingdom</b>	1,407.4	1,690.4	1,647.4
<b>Thailand</b>	1,686.0	1,468.7	1,480.9
<b>Japan</b>	1,136.0	1,003.0	1,144.1
<b>Philippines</b>	745.2	753.1	913.1

*Source: Tourism Malaysia*

Furthermore, in terms of tourism receipts, Singapore maintained its leading position, amounting to RM28,417.4 million followed by Indonesia with RM4,758.7 million in 2010. China is the third contributor for tourism Malaysian receipt with RM3,1290 million in 2010. Like any other trips taken elsewhere, most of the money spent will be used on several major components. Table 1.4 highlights the eight major components of tourist expenditure item in Malaysia for year 2009 and 2010.

Table 1.4: Component of Tourist Expenditure 2010

Items	RM Million		
	2009	2010	Growth (%)
<b>Accommodation</b>	16,573.8	17,343.2	4.6
<b>Shopping</b>	15,103.1	16,213.3	7.4
<b>Food &amp; Beverage</b>	9,290.5	9,716.7	4.6
<b>Local Transportation</b>	5,253.1	5,423.3	3.2
<b>Entertainment</b>	1,594.0	1,751.3	9.9
<b>Domestic Airfares</b>	2,274.7	2,259.7	-0.7
<b>Organized Tour</b>	2,271.0	2,429.2	7.0
<b>Miscellaneous</b>	1,007.5	1,355.8	34.6
<b>TOTAL</b>	53,367.7	56,492.5	5.9

*Source: Tourism Malaysia*

### 1.2.2 Hotel, Restaurant and Travel Agent in Malaysia

The performance of the hotel sector is also influenced by the volatility of changes in the external and international environment. An economic upswing or downturn will have an almost immediate impact on its performance. In recent years, the Malaysian hotel industry has seen drastic changes in its external environment, largely as a result of the greater extent of volatility in the environment and the increasing level of uncertainties in the world's economy. On a macro level, the hotel industry in Malaysia is quite vulnerable to foreign and international competition. The operation of tourism facilities, services and amenities are often dependent on a number of travel infrastructure networks. These networks may include transportation, water supply, energy/power, waste disposal and telecommunications.

Table 1.5: Hotels and Rooms Supply 2010/2011

<b>HOTELS &amp; ROOMS SUPPLY 2010/2011</b>						
<b>STATES</b>	<b>Hotels</b>		<b>Changes</b>	<b>Rooms</b>		<b>Changes</b>
	<b>2010</b>	<b>2011</b>	<b>2010/2011</b>	<b>2010</b>	<b>2011</b>	<b>2010/2011</b>
Kuala Lumpur	236	<b>260</b>	10.2	29,961	<b>38,520</b>	28.6
Putrajaya	4	<b>4</b>	0.0	1,080	<b>930</b>	-13.9
Selangor	130	<b>255</b>	96.2	13,461	<b>19,367</b>	43.9
Perak	192	<b>216</b>	12.5	9,124	<b>10,195</b>	11.7
Pulau Pinang	122	<b>145</b>	18.9	11,990	<b>13,728</b>	14.5
Kedah	154	<b>189</b>	22.7	11,250	<b>12,270</b>	9.1
Perlis	15	<b>16</b>	6.7	630	<b>776</b>	23.2
Kelantan	79	<b>106</b>	34.2	3,692	<b>4,153</b>	12.5
Terengganu	157	<b>137</b>	-12.7	7,005	<b>4,133</b>	-41.0
Pahang	298	<b>292</b>	-2.0	24,127	<b>23,269</b>	-3.6
Johor	266	<b>234</b>	-12.0	14,299	<b>15,723</b>	10.0
Melaka	122	<b>163</b>	33.6	8,138	<b>9,993</b>	22.8
Negeri Sembilan	77	<b>80</b>	3.9	8,055	<b>6,935</b>	-13.9
Sabah	213	<b>326</b>	53.1	11,858	<b>18,078</b>	52.5
Labuan	25	<b>27</b>	8.0	1,513	<b>1,408</b>	-6.9
Sarawak	277	<b>257</b>	-7.2	12,314	<b>13,862</b>	12.6
<b>Malaysia</b>	<b>2367</b>	<b>2707</b>	<b>14.4</b>	<b>168,497</b>	<b>193,340</b>	<b>14.7</b>

*Source: Tourism Malaysia*

The hotel industry in Malaysia is dominated by four and five star hotels. The location of the hotels reflects the geographical distribution of tourist in the country. Based on tourism Malaysia Department report in 2011, Kuala Lumpur is the major gateway city had supply 260 hotels and 38,520 rooms, while Pulau Pinang owns about 145 hotel and 13,728 rooms. The accommodation sector moreover grew significantly in 2011 with a total of 340 newly opened hotels, hence increasing the total number to 2707 in 2011 from 2367 in 2010. Total rooms supply also increase from 168,497 in 2010 to 193,340 in 2011.

Table 1.6: Average Occupancy Rates (AOR) of Hotels by Locally 2010/2011

LOCALITY	2010	2011	VARIANCE
KUALA LUMPUR F.T.	66.9	68.6	1.7
PUTRAJAYA F.T.	67.5	65.8	-1.8
SELANGOR	62.7	66.2	3.4
PERAK	47.5	47.2	-0.3
PENANG	60.2	63.5	3.3
KEDAH	49.6	51.5	1.9
PERLIS	40.9	37.1	-3.8
KELANTAN	51.8	39.0	-12.8
TERENGGANU	42.8	42.5	-0.3
PAHANG	76.6	79.1	2.5
JOHOR	54.5	52.0	-2.4
MELAKA	59.1	60.8	1.7
NEGERI SEMBILAN	37.0	40.6	3.5
SABAH	56.2	58.8	2.6
LABUAN F.T	75.3	65.6	-9.7
SARAWAK	54.4	53.3	-1.1
<b>MALAYSIA</b>	<b>59.3</b>	<b>60.6</b>	<b>1.3</b>

*Source: Tourism Malaysia*

Hence, in 2011, there was a decline in the occupancy rate of hotel. According to Malaysia Tourism Department report, Putrajaya's hotel average occupancy rate was recorded as 65.8 %, Perak at 47.2%, Perlis at 37.1%, Kelantan at 39.0%, Terengganu at 42.5%, Johor at 52.0% and Labuan and Sarawak at 65.6% and 53.3% respectively.

### **1.2.3 Number of Tourist Destination Site in Malaysia**

Malaysia has a wide range of tourist attraction. Located in South Asia, Malaysia is fast becoming one of the hottest tourist destinations in Asia. Malaysia is a country, which is blessed with enthralling natural beauty along with all the innumerable tourist attractions and as a result of this the country attracts large number of visitors from all over the world. Tourism is a thriving industry in the country and contributes significantly

to the economy of the country. Malaysia Popular Destinations are numerous and all these places attract tourists from all over of the world. Almost 2 million foreign tourists traveled to Malaysia in 2010. Most of them were citizens from neighboring countries such as Singapore and Indonesia but a growing number of other foreign tourists are discovering this country as well. There are a lot of number of tourist destination site in Malaysia. Most of popular tourist destination are Cameron highlands, Johor Bharu, Kuantan, Kuching, Port Dickson, Pulau Pangkor, Pulau Perhentian and others.

Malaysia Tourist Attractions are diverse and variegated. The nature lovers can feast on the most stunning waterfalls, verdant rainforests and spectacular beaches of the country. Cites of Malaysia, like Kuala Lumpur boasts of mind boggling architectural marvels, pulsating nightlife and infinite entertainment options. Some of the major tourist attractions in Malaysia are Petronas Twin Towers, Telaga Tujuh Waterfalls and Taman Negara National Park. Petronas Twin Towers is located in Kuala Lumpur. It is one of the tallest buildings of the world and has become synonymous with the existence of the city. The height of the building is 452 meters and is one of the most spectacular architectural marvels of Asia. The design of the building was derived from the five pillars of Islam and the building was designed by Argentinean- American Architect Cesar Pelli. The 88 story building boasts of a sky bridge, which is situated on levels 41 and 42. The bridge is 58.4 meters in length and is located at a height of 170 meters above street level.

### **1.3 The Role and Contribution of Tourism Sector**

The tourism industry remains the key driver of growth in the services sector. The tourism industry has contributed significantly to the Malaysian economy over the last 30 years, particularly in terms of foreign exchange earnings and job creation. The sector has evolved from one that served domestic and regional tourists in the 1970s to cater for mass tourism on the 1980s. since the 1990s, greater emphasis has been given to segment the tourism market, including developing niche products to increase the volume of high-spending tourists as well as attract long-haul tourists.

In promoting the industry, the private sector has been encourages to develop tourism products to meet market demand, while the Government complements private initiatives by providing infrastructure and facilities. The emphasis is on improving existing resources as well as for money. Among the measures taken over the years to encourage private sector effort to develop tourism, include the setting up of the two specific tourism funds, namely, the Tourism Infrastructure Fund and SME Tourism Fund. These funds are aimed at meeting the increased demand for easier financing of new tourism projects as well as to expand and upgrade existing tourism infrastructure and amenities.

To increase participation of the local population in tourism related economic activities, the government of Malaysia has initiated the Homestay programme and Student Tourism Clubs. The Silver hair programme was replaced with the Malaysia My Second Home (MM2H) programme in 2002 to encourage foreign participant to extend in Malaysia. To improve service standards of frontliners in the industry, the Malaysia government initiated training courses such as ‘Think Tourism’ ;Eco-Host’ and ‘Mesra Malaysia’. Meanwhile, sustainable tourism development in Malaysia will be promoted

and this is reflected in the recognition given by the United Nations Educational Scientific and Cultural Organization (UNESCO) declaring Langkawi as a geopark on June 1, 2007, the first in Southeast Asia and 52<sup>nd</sup> in the world. Langkawi is the only geopark in the world, comprising 99 island with duty free status.

The tourism industry has performed favourably. Tourist arrivals have increased almost 15-fold from 1.2 million in 1974 to 24.7 million in 2011. Likewise, gross earnings have also increased to RM58.3 billion in 2011. The tourism industry contributes a significant share of Malaysia's total employment. Tourism related activities provided 15.31 thousand job in 2000 but in 2010, jobs in related tourism industry is 1770 thousand. However, employment creation is even higher, taking into account the strong linkages tourism has with other segments of the economy, such as transportation, retail, utilities, food and beverages, as well as financial services. In addition, tourism also plays a crucial role in helping low income groups to improve their livelihood through involvement in tourism related activities, such as rural homestay programme, eco and agro-tourism guide activities as well as handcraft industries.

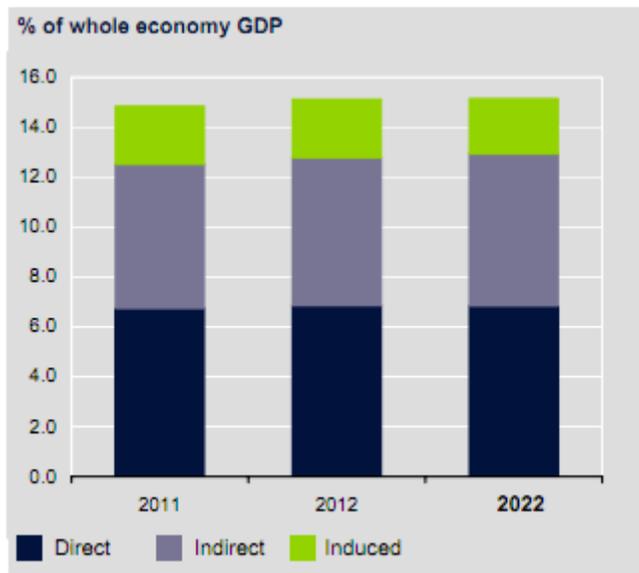
The tourism industry has been a star performer over the years, with the exception of 2003 when travel receipts contracted on account of geopolitical tensions in the Middle East and the outbreak of Severe Acute Respiratory Syndrome (SARS). Gross receipts of the industry have been steadily increasing at an average rate of 14.1 per year during the period 2000 to 2006. Tourist spending remains the main contributor to earnings in the Malaysia services account, generating an average of 45.3% of gross receipts on an annual basis.

Table 1.7: Gross Value Added of Tourism Industries and Percentage Share to GDP

Year	Total output of tourism industries (at basic prices)		Total intermediate consumption (at purchasers' prices)		Total Gross Value Added of Tourism Industries (at basic prices)		Gross Domestic Product (at current prices)		Percentage share of GVATI to GDP
	RM (Billion)	Annual change (%)	RM (Billion)	Annual change (%)	RM (Billion)	Annual change (%)	RM (Billion)	Annual change (%)	
2000	73.2	..	31.9	..	41.3	..	356.4	..	11.6
2001	75.0	2.5	32.7	2.5	42.3	2.5	352.6	-1.1	12.0
2002	77.1	2.9	33.9	3.7	43.2	2.2	383.2	8.7	11.3
2003	79.2	2.7	34.7	2.3	44.5	2.9	418.8	9.3	10.6
2004	87.8	10.9	39.0	12.4	48.8	9.7	474.0	13.2	10.3
2005	100.3	14.2	43.9	12.7	56.4	15.5	522.4	10.2	10.8
2006	110.3	9.9	48.7	11.0	61.5	9.1	574.4	10.0	10.7
2007	129.9	17.8	57.3	17.5	72.7	18.1	642.0	11.8	11.3
2008	148.5	14.3	66.3	15.8	82.2	13.1	742.5	15.6	11.1
2009	151.1	1.7	68.0	2.5	83.1	1.1	679.9	-8.4	12.2
2010	163.0	7.9	73.7	8.4	89.3	7.5	766.0	12.7	11.7

Source: Tourism Malaysia

Figure 1.1: Total contribution of Tourism to GDP



Source: Tourism Malaysia

Table 1.8: Employment in the Related Tourism Industries

Year	Employment in the related tourism industries		Total employment	Share of employment in the related tourism industries to total employment (%)
	Number ('000)	Annual change (%)	Number ('000)	
2000	1,531.1	..	9,269.2	16.5
2001	1,323.4	-13.6	9,357.0	14.1
2002	1,402.1	5.9	9,542.6	14.7
2003	1,472.8	5.0	9,869.7	14.9
2004	1,503.2	2.1	9,979.5	15.1
2005	1,511.5	0.6	10,045.4	15.0
2006	1,554.6	2.9	10,275.4	15.1
2007	1,568.8	0.9	10,538.1	14.9
2008	1,677.6	6.9	10,659.6	15.7
2009	1,759.5	4.9	10,897.3	16.1
2010	1,770.8	0.6	11,129.4	15.9

(Source: Department of Statistic Malaysia)

Tourism is expected to remain an important activity, which contributes significantly to the Malaysia economy. Under the Ninth Malaysia Plan, the overall tourism policy is to realise the sector's full potential as an important source of growth in terms of income-generation, job creation, foreign exchange earnings and entrepreneurial development.

#### **1.4 Problem Of Statement**

Tourism is regarded as an important sector to the Malaysia. There are some advantages and disadvantages of tourism towards to the development of Malaysia. Most importantly, tourism is also important for a country from the economic point of view. This is very positive for country to have a large sum of money allocated in its budgets. Tourism has a variety of economic impacts. Tourist contributed to sales, profit, jobs, tax revenue and income in an area. For example, money spends by tourist in a hotel help to create jobs directly in the hotel, but it also create job indirectly in the economy. The hotel has to buy food from the local farmers who may spend this money for their own daily. The most direct effects occur within the primary tourism sector such as lodging, restaurants, transportation, amusements, and retail trade.

Most of international tourist come to Malaysia are from ASEAN countries such as Singapore and Indonesia. It showed Malaysian tourism sector face a difficulties in attracting a tourist from high income countries such as tourist from United States, Canada, Germany, Switzerland, South Korea and others. We can say here that Malaysia is still not competitive in attracting tourist compared by the European Countries while the impact of tourism give an good effect to GDP, household income and also for the industries.

Furthermore, employment in the related tourism industries only grew at 0.6 per cent in 2010 while the output of tourism industries has increased by 7.9 per cent in 2010. Increase in employment is too less than increase in output for tourism industry. In 2010, the share of employment in the related tourism industry was 15.9 percent as compared

with 16.1 per cent in the previous year. The ratio of total employment to the number of tourist arrivals in 2010 is 22 to one in the tourism sector, but in Thailand the ratio is one employee to every three to five tourist. This show that the Malaysia tourism sector still lack efficient in human resources to provide better service to visitors.

This study will focuses on impact on output and household income in a Malaysian economy resulting from tourism activity and also will look at the linkages between tourism sector with other sector in Malaysian economy. The study uses multiplier effect to indicate that each Ringgit of direct expenditure generate another Ringgit in output and household income. This study organized three basic questions that either are ask or should be ask about the economic impact of tourism:

1.4.1 What economic impact does tourism have to the Malaysian economy?

1.4.2 How tourism sector contributed to output in Malaysia

1.4.3 How tourism sector contributed to household income in Malaysia?

1.4.4 What are backward and forward linkage of the tourism sector with the other economic sector?

## **1.5 Objective Of Study**

### **1.5.1 General Objective**

The general objective of this study is empirically examines the economic impact of tourism sector on the Malaysian economy.

### 1.5.2 Specific Objective

The specific objective of this study is to:

- i. To examine the impacts of tourism sector on output in Malaysia
- ii. To examine the impact of tourism sector on household income in Malaysia.
- iii. To examines the strengths of the inter sectoral forward and backward linkages between the tourism sector and the non tourism sector in the rest of Malaysia economy.

### **1.6 Scope and Limitation Of Study**

Specifically, this study pursues to look at the economic impact of tourism to Malaysian economic by applying the input-output analysis. The strengths of the inter sectoral forward and backward linkages between the tourism sector and the non tourism sector in the rest of Malaysia economy will be measure on output and household income in a Malaysian economy. This study is limited to the contributions of tourism sector to the tourism output and household income in Malaysian economy.

Economic impact alone may not provide the total impact of tourism. This study did not include social and environmental analyses of tourism because of the possibility of becoming a large scale of study, lack of data and limited time to address these constraints. Similarly, external costs such as infrastructure, inflation, seasonality, over dependency on tourism and the opportunity costs of the resources involved in tourism sector expansion are not considered in this study.

Although an input output an analytical and descriptive analysis of the economic impact, the model has certain limitation such as trade and technology effects. These effects may cause quick changes in sector outputs during a study period and the production function of the economic sectors would be non-linear. The input output model has considerable usefulness for short and medium term planning but the application to long term planning may be limited if the structure of an economy changes quickly over time.

### **1.7 Significant Of Study**

This study will provide a quantifiable estimation of the economic contribution of the tourism sector to the Malaysian economy. The outcomes of the study can be applied in investment and business operational decisions of the country's tourism sector. The indicator such as visitors arrivals, visitors' expenditure, markets, popular tourist destination, problem and obstacles of the tourism sector identified in this study will be helpful to systematically plan the tourism activities and facilitate policy decisions in the country. The outcomes will provide the information needed in key marketing decisions and formulating the next five year plan of the tourism sectors which will significantly impact all tourism stakeholders.

The finding will be useful to the Malaysian economy to adjust the production structure of the tourism related businesses to meet future tourism demand in the country. With identification of tourism's inter-industry linkage strengths to the different economic sectors, other economic sector can be better informed of their needs, opportunities, and so

avoid possible supply bottlenecks in the economy. Further, this study can be adopted to estimate tourism contribution in other similar developing countries as Malaysia.

### **1.8 Outline of study**

This study is organized as follow: Chapter 2 reviews the relevant literature on the economic impact of the tourism sector using various input-output model in different economies. Chapter 3 describes the data collection and methodology used in the study. Chapter 4 discusses the results of economic multipliers and total economic impact of the tourism sector in the country and also discusses about the direct, indirect and induced effect from tourism sector in Malaysia. Chapter 5 discusses the summary of the finding and the conclusion.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter review the literature on the theoretical approaches and practical application of tourism economic impact estimation. First section present an overview of economic impact of tourism by applying input output analysis. Section two reviews the empirical evidence on the economic impact analysis of tourism in difference economy. Section three discusses the basic structure of input output analysis. Section four discuss the tourism economic multipliers such as output, income and employment multipliers while the backward and forward linkages of tourism sector will discusses in section five.

## **2.2 Economic Impact of Tourism**

Tourism has a variety of economic impacts. Tourists contribute to sales, profit, job, tax revenue, and income in an area. The most direct effects occur within the primary tourism sector such as lodging, restaurants, transportation, amusement, and retail trade. Through secondary effects, tourism effect most sectors of the economy. An economic impact analysis of tourism activity normally focuses on change in sales. Income and employment in a region resulting from tourism activity (Daniel J. Stynes, 1996)

A simple tourism impact scenario illustrates. Let's say our country attracts an additional 100 tourists, each sending RM100 per day. That's RM10000 in new spending per day in the area. If sustained over 100 day season, our country would accumulate a million Ringgit in new sales. The million Ringgit in new spending would be distributed to lodging, restaurant, amusement and retail trade sectors. Perhaps 30% of the million Ringgit would leak out of the region immediately to cover the costs of goods purchased by tourist that are not made in the local area. The remaining RM700,000 in direct sales might yield RM350,000 in income within tourism industries and support 20 direct tourism jobs. Tourism industries are lanor and income intensive, translating a high proportion of sales into income and corresponding jobs.

The tourism industry, in turn, buys a goods and services from other businesses in the area, and pay out most of the RM350,000 in income as wages and salaries to its employees. This creates secondary economic effects in our country. The study might use a sales multiplier of 2.0 to indicate that each Ringgit of direct sales generates another Ringgit in secondary sales in this country. Through multiplier effects, the RM7000,000 in

direct sales produces RM1.4 million in total sales. This secondary sales create additional income and employment, resulting in a total impact on the country of RM1.4 million in sales, RM650,000 in income and 35 jobs.

In applying an economic model, economic impact analysis can produce estimates of the total economic impact of holding a sport event, operating a museum, and other actions that will influence an economy. Furthermore, economic impact analysis also helps policy analysts and decision makers to evaluate current and proposed projects by providing estimates that are measurable and comparable. Clawson and Knetsch (1966) claim that economic impact analysis can provide tangible estimates of tourism's contribution to an economy. The economic contribution under consideration often results in public policies or decisions that are favourable to tourism development.

### **2.3 Empirical Evidence on the Economic Impact Analysis of Tourism**

One of the prominent studies that employed input-output model in estimating the economic impact of tourism was performed by Rashid et al. (1993) conducted an inter-sectoral analysis on Malaysian economy concerning tourism impact analysis in which static input-output analysis was the basis of analysis. The study used 1983 input-output table to estimate the impact of tourism on Malaysian economy for the year 1991. Tourist and non-tourist components were categorized from private consumption expenditure column and export column of the final demand sectors of 1983 input-output table. The direct and indirect impacts on sectoral output, employment, commodity taxes, and non

competitive imports were estimated resulting from tourist expenditures which were generated following questionnaire method in 1991. Tourist expenditures were categorized into domestic, Singaporean, and other foreign tourists. It was found that all sectors of the economy were receiving benefit from tourism directly and indirectly. The contribution of tourist expenditure in influencing output, employment and commodity taxes was found to be varied but still small. The contribution of tourism on the generation of value-added, employment, and commodity taxes was found to be less than 5% of the total but steadily expanding. The Wholesale and retail trade, Hotel and restaurants, Land transportation, Air transportation, and Business and personal services sectors were benefiting largely from tourism. The study conclude that other sectors did have strong technological linkages with other domestic supply sectors, therefore, it required to give simultaneous emphasis to the development of these strategic and non-strategic tourism sectors when designing policy.

Archer and Fletcher (1996) analyzed the impact of tourists' expenditure's contribution on the generation of income, government revenue, and supporting employment and the balance of payment using input output model to the Seychelles island economy. The input-output transaction table was disaggregated into 18 sectors. While analyzing the economic impact of tourism by different country of origin tourist, they found that impact varies by visitors' origin. Visitors from Germany, Italy, Switzerland, Ireland, the UK and other European countries were the highest spenders and contributed significantly in generating income and employment. The study shows that input-output analysis can do more than merely quantify impact. It can produce data which is of importance to policymakers and provide guidance to marketing experts. It also

provides a strong indication to government which sector of the economy should be promoted and encouraged to meet particular policy objective.

Albqami (2004) estimated output, employment, and income multipliers of the Saudi Arabian economy from the economic impact analysis of tourists' expenditure using input output model. The input output transaction table of 1997 was disaggregated into nine sectors where tourism sector was included as one of the sectors. The impacts of tourist expenditure on output, income, and employment were measured at direct and indirect level. The share of output, income and employment was found to be 5% of gross output, a total SR8690 million of income and the service sector received 33% of income from tourism receipts, and the total employment generated from tourism expenditure was 507,114 which was about 12% of total employment. The study concludes that service sector received highest income and employment impact although output impact was relatively lower compared to transportation sector.

Sharif and Zakariah (2003. 2004) study on the economic impact of changing tourist profile in Malaysia for years 2001-2002. They have shown in their results that tourism activities in Malaysia appears to be favourable not only to the external account but also in generating local values-added and tax revenue. They found that tourist from West Asia which most of them from Muslim and Arab counties, spent relatively higher proportion on wholesale and retail trade. The expenditure pattern of tourist from West Asia is favourable to the economy in terms of having a remarkable proportion of their expenditure on item that has a considerable multiplier effect on output and value-added and friendly to the external demand.

Tianhu Fan and Jan Oosterhaven (2005) investigate the impact of international tourism on the Chinese economy for 1997. They investigate the Chinese economy's dependence on the 1997 international tourists' expenditure, the most recent year for which sufficiently detailed data are available. They employ an input-output impact model extended with SAM-based endogenous consumption demand to estimate the direct, indirect and induced dependence of the Chinese economy on international tourism. The results show a small dependence of Chinese GDP on international tourism of 1.64%. This dependence is not only absolutely small, but when compared to results found from literature, results that are often smaller, less closed, less diversified, and more tourism oriented economies than the Chinese economy in 1997. They conclude that the impact of international tourism in China is still small, its high value added-intensity indicates its future potential for the Chinese economy.

Krista Daniella Yu (2011) study on the economic impact of tourism to the Philippine economy through the use of input-output analysis. The input-output model is used to examine the interdependence between industries in an economy. In constructing the input-output table, the NSCB(2006) assumed that all outputs produced by an industry have the same input structure and an output has the same input structure no matter what industry produced it. From the inverse matrix, she derives the multiplier that will estimate the economic impact of an exogenous change in the hotel and restaurant sector to output, GDP and income. She used the latest input-output released, 60 x 60 2000 input-output table of the Philippines from the National Statistical Coordination Board (2006). This table includes the Hotel and restaurant sector which will be used to measure tourism activities. From this study, she concludes that the Philippine tourism industry does have an

impact in the economy. Although its impact is not as significant as expected, it does contribute to the welfare of the citizens through increasing their income and at the same time reduce balance of payment deficit.

## **2.4 Basic Structure Of Input Output Model**

The Leontief I-O model describes the internal relationships and analysis of a specific sector's impacts on different economic sectors of a country. According to Bekhet (2010, p.108), the basic I-O table describes rows showing "Who gives to whom?" and columns showing "Who receives from whom?" in an economy. Mazumder et al. (2009) reported that I-O modelling is widely used to answer the demand side questions such as whether the final demand from one sector, say tourism, is expected to increase in future and would this affect the total output necessary to satisfy this new demand and its multiplier effects throughout the economy?

Pratt (2009, p.43) claimed that an I-O table depicts a comprehensive set of accounts of sales and purchases of goods and services among the producing sectors, final consumers (households, international visitors, export and government) and resource owners (labour, capital and land) in a year for a specific economy. Lin and De Guzman (2007) explained that an I-O model is based on the premise that the economy can be decomposed into aggregate sectors. The I-O model is therefore a tabular representation of output flows from several industries or sectors and the flows of inputs to various industries or sectors (Fatemi, n.d.).

Figure 2.1 shows the basic structure of an I-O table. The table illustrates the flows between the sales and purchases of both the intermediate and final demand of sector outputs. The blocks of intermediate and final inputs show the inputs required to produce the outputs of different sectors of an economy. The block of product and industries shows how the outputs are used to make inputs for different sectors in the economy. The final demand block shows the transactions of final users with intermediate production sectors. The value added block indicates the primary input components considered as final demand. The total input block is the column sums of all inputs needed for production including the inputs purchased from different sectors as well as the purchase of capital, land and labour (see Figure 2.1). The total output/demand block is the output produced by a particular sector to meet the internal and external demand (Devkota, 2003). The value added row totals show the compensation of employees, operating surplus, production tax and subsidies, depreciation and import taxes.

The column total in the industry sector shows the gross output or value of the product produced by that sector. The row totals for the sectors show the total demand for each product that is required to produce their outputs and it must be equal to total inputs (see Figure 2.1). The column totals of the final demand components show the total expenditures including visitors' expenditure. The final demand sector includes the value of goods and services used by government, households, gross fixed capital formation, changes in inventories and exports (Blake, 2005). The final demand sector is known as an exogenous sector because changes in demand for the products in this sector occur autonomously and its repercussions are transmitted through the rest of economy (Jones, 1997, p.7)

Figure 2.1: Basic structure of the input output table

	Sectors/Industries											Final Demand				Total Gross Input (TGI)		
	1	2	3	.	.	.	.	.	.	.	.	n	.	.	.		.	
Sectors/Industries	2																	
	3																	
	.																	
	.																	
	.																	
	.																	
	.																	
	.																	
	.																	
	.																	
	n																	
Value Added	.																	
	.																	
	.																	
	.																	
	.																	
Import																		
	Total Gross Output (TGO)											Total Expenditure				Total		

Source: Adapted from Khanal (1994)

The row entries of the I-O table describe the total sales as inputs to the column entries in the economy. The column entries in the table describe the inputs used by each sector from different sectors. Therefore, the I-O coefficients examine how production in each sector changes in response to a change in the final demand of that sector (Chang, 2001). Devkota (2003) reported that an I-O model is a transactions table that displays and measures the purchases and sales of goods and services taking place in an economy at a given point of time. In Figure 2.1, as per the double accounting system in an I-O table,

the total inputs and outputs of these economic sectors must be equal (Blake, 2005). The basic equations of an I-O table include (Devkota, 2003):

$$\textit{Intermediate input} + \textit{gross value added} = \textit{total inputs}$$

$$\textit{Intermediate demand} + \textit{final demand} = \textit{total output}$$

$$\textit{Total inputs} = \textit{total output}$$

In an economy, sector output is denoted by vector  $X$ , vector  $Y$  is the final demand in each sector. They are connected through a matrix  $(I-A)^{-1}$ , known as the “Leontief inverse” shown in the following equation:

$$X = (I-A)^{-1} \cdot Y$$

$$\Delta X = (I-A)^{-1}$$

Where:

$I$  = identity matrix

$A$  = input-output coefficient matrix across sectors

$\Delta X$  = change in outputs

## **2.5 Tourism Economic Multiplier**

Tourism not only creates jobs in the tertiary sector, it also encourages growth in the primary and secondary sectors of industry. This is known as the multiplier effect which in its simplest form is how many times money spent by a tourist circulates through a country's economy. Economic multiplier measure the economic impact or effect in term of output, household income or employment resulting from a change in the final demand within an economy (Mazumder et al, 2009). Multiplier is used to described the final change in visitor expenditure and is central to any measure of the economic impact of tourism (Archer,1982). The larger the multiplier, the greater the impact an unit of visitor spending in the local economy.

Multipliers capture the size of all effects, usually expressed as a ratio of total effect to direct effects (Miller and Blair, 1985). For example, the sales multiplier for the lodging industry was 1.4 in a region. This means that a visitor spending RM100 on lodging will have a total effect of RM140 within the region. That is RM100 received by hotel as direct sales effect and another RM40 received by other related industries in the region as secondary effect.

### **2.5.1 Output Multipliers**

Blair and Miller (2009) defines an output multiplier for a specific sector such as the total value of production in all sectors of economy that is necessary in order to satisfy a dollar's worth of final demand for the sector's output.

### **2.5.2 Income Multiplier**

The income multiplier allows us to explore the impact of a change in final demand for sector  $j$  on households' income (Blair and Miller, 2009).

### **2.6 Total Economic Impact Analysis of Tourism Sector**

The direct effect are those changes associated with the immediate effects of changes in the visitors; expenditure (Stynes,1997). In other words, direct effect are production changes, associated with the immediate effect of changes in the visitors' expenditure. For example, RM100 spent on lodging will directly increase sales in the hotel sector. This is the direct sales effect of the visitor spending. The hotel will hire employees and pay salaries, creating direct employment and income effects.

Stynes (1997) reported that indirect effects are the production changes resulting from various rounds of re-spending of the hotel industry's receipts in backward linked industries. For example, a hotel's payment for products such as energy, food, transport, linen and financial services. A hotel buys linen supply and food from other industries to deliver the services to its customers. The linen company, on the other hand, also buys raw materials and equipment such as cotton and machinery from other industries. The sales of these linked industries and the associated income and jobs generated from these sales come from indirect effect.

Induced effects are changes in economic activity resulting from household spending of income earned directly or indirectly because of the visitors' spending (Stynes, 1997).

For example, hotel and linen supply employees supported directly or indirectly by tourism, spend their income locally for their own consumption on housing, food, transport and other household products and services.

## 2.7 Tourism Inter Sectoral Linkages Analysis

Miller and Blair (2009) explained that a backward linkage serves as an indicator of an industry's relative importance as a user of inputs from the production sector. Backward linkages are demand oriented (Drejer, 2003). A sector with a higher backward linkage value represents a sector with a higher effect on the demand for domestic production (Cai & Leung, 2005). A backward linkages are calculate as:

$$BL_i = \frac{\sum X_{ij}}{X_j} \quad \text{or} \quad \frac{\sum X_{ij}}{\sum_i \sum_i X_y} = \sum a_{ij}$$

Where,

$BL_i$  = Backward Linkages of the  $j^{\text{th}}$  Sector,

$X_{ij}$  = Amount of Commodity 'i' used in the production of commodity 'j',

$X_j$  = Gross output of  $j^{\text{th}}$  sector (column vector) which consists of total intermediate purchases and gross value added,

$a_{ij}$  = I-O coefficient which explains the amount of  $i^{\text{th}}$  commodity used in the per unit production of the  $j^{\text{th}}$  commodity.

According to Miller and Blair (2009) a forward linkage serves as an indicator of an industry's relative importance as a supplier of inputs from the production sector. A forward linkage is supply oriented (Drejer, 2003). The higher the value of the forward linkage of a given sector, the larger will be the impact on the price level of the sector in the economy (Cai et al., 2006). A forward linkages are calculate by:

$$FL_i = \frac{\sum X_{ij}}{X_i} = \frac{\sum X_{ij}}{\sum_j \sum_j X_{ij}}$$

Where,

$FL_i$  = Forward Linkage of the  $i^{\text{th}}$  sector

$X_{ij}$  = Amount of commodity 'i' used in the production of commodity 'j',

$X_i$  = Gross output of  $i^{\text{th}}$  sector (row vector) which consists of intermediate and final demands.

## **CHAPTER 3**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter describes the research data and methodology used in the study. The first section present the data source which secondary data from input output table will be use in this study. Second section will describes the data analysis methods and also show the overview of the research method and procedure in this study. Third section will discuss about the measurement the tourism economic multiplier such as output, income and employment multiplier and inter sectoral linkage of backward and forward linkages will discuss in fourth section.

### **3.2 Data Source**

Secondary data are gathered from input-output tables. Data on input-output coefficient were obtained from Malaysia's input-output table published by Department of Statistics Malaysia (2005).

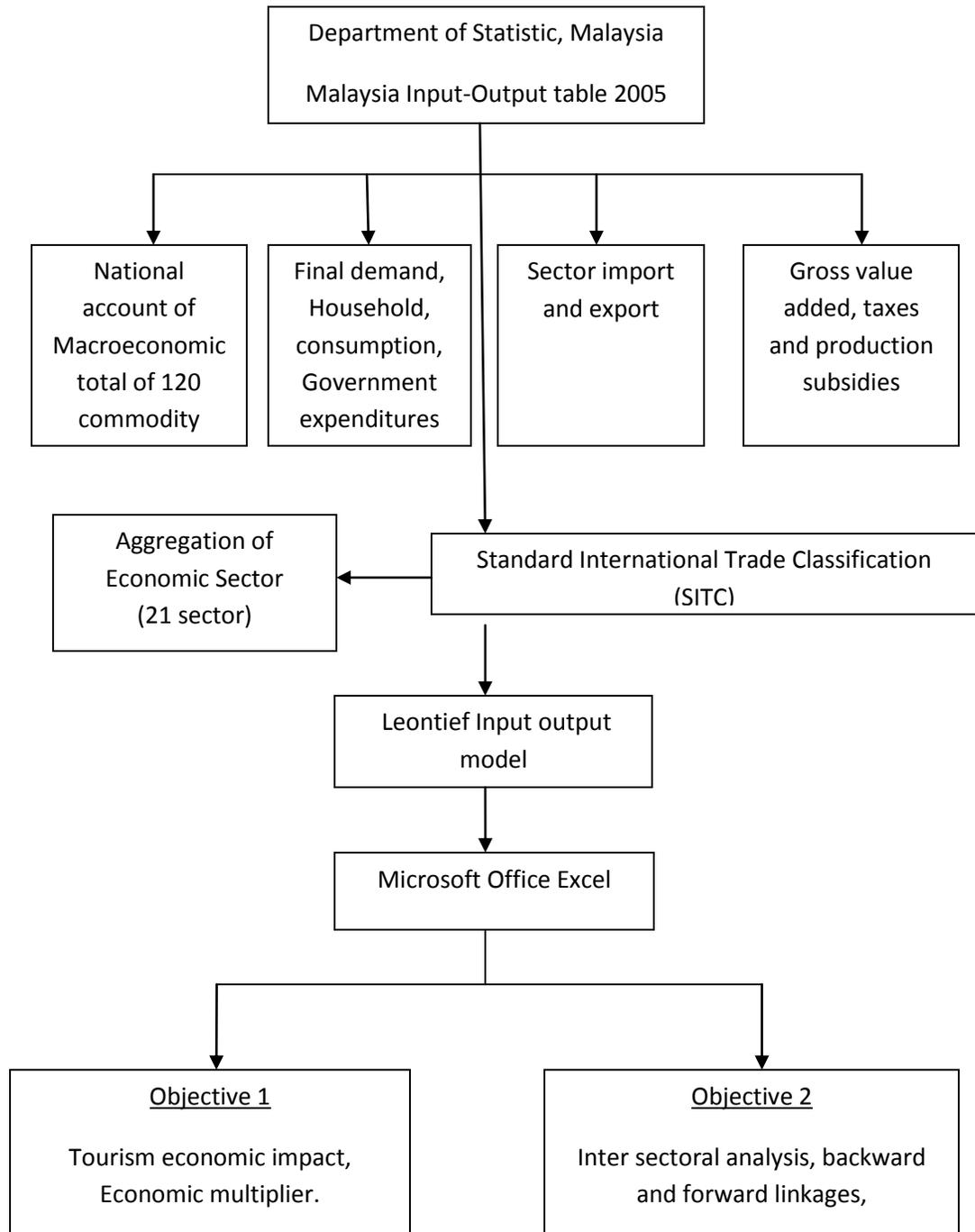
### **3.3 Data Analysis Method**

Input output model are most widely used to measure the effect of impact study. Input-output model is the best employed at a relatively low cost and provides both descriptive and analytical tourism economic impact of Malaysia. Tourism industry is not classified as single industry. This industry is formed by aggregating different economic activities that serve it directly. In order to determine tourism multipliers through input output techniques, the Year 2005 Malaysian input output transaction table has been utilized. The 2005 input output tables are a 120 commodity X 120 commodity input output matrix of Malaysia.

In this study, the 120 sectors in a transaction table are aggregated into 21 sector and focus given to tourism related sectors. The main reason was to focus only on the tourism related sectors and match with the visitors' expenditure categories for data analysis. Sectoral gross output and household income for 2005 were obtained from the 2005 input output transaction table. The number of paid employees' for the year 2005 was derived from considering compensation of employees' row of the 2005 input output transaction table Next, this transaction table is constructed into a technical coefficient

matrix in order to conduct further analysis. The, coefficient table is developed to derive multipliers. The aggregating process follows the guideline of Standard International Trade Classification (SITC). The data in input output table were analyzed using the Microsoft Office Excel to answer research objective. Figure 3.1 shows an overview of the research methods, particularly the steps to analyse the Malaysia input output table.

Figure 3.1: Overview of the research methods and procedures



### **3.4 Estimate of Tourism economic Multipliers**

This section describe the methods used to measure the economic multiplier from the input output model. Multiplier measures the total changes throughout the economy from one unit change for a given sector. Multipliers capture the secondary economic effects of tourism activity. Multiplier have been frequently misused and misinterpreted in tourism studies (Archer 1984) and are a considerable source of confusion among non-economists. They are vary considerable from region to region and sector to sector. There are many different kinds of multipliers reflecting which secondary effects are included and which measure of economic activity is used. The IO model gives a better conclusion in calculating the multiplier because the model map out the economy more completely (Stynes,1997). The tourism activities considered in this study are:

- a) Accommodation
- b) Manufacture of Food and Beverage
- c) Wholesale and Retail Trade
- d) Restaurant
- e) Transportation
- f) Business Services
- g) Communication
- h) Recreation

Based on the eight primary tourism sectors estimated in the visitors' expenditure in Malaysia, the tourism economic multipliers have been computed for this study. These

are: output and income multiplier. The methods to compute the tourism multiplier are discuss below:

### 3.4.1 Income Multiplier

The income multiplier measures the change in income in the economy as a result of a change in final demand. The number of paid employee for was derived from considering compensation employee's row of the 2005 input output transaction table. Income multiplier for Malaysia tourism industry computed as (adapted and modified from Mazumder et al, 2009):

$$IM = (I-A)^{-1} I$$

Where,

IM	Income multiplier
$(I-A)^{-1}$	inverse matrix
I	household income for seven tourism sector

### 3.4.2 Output Multiplier

The output multiplier can shows the increase of production of all sector when the demand for tourism sector increase in one unit. The output multipliers of the tourism sector of Malaysia economy were calculated as follow (adapted and modified from Mazumder et al,2009):

$$OM = (I-A)^{-1}$$

Where,

OM                    Output multiplier for seven tourism sectors in Malaysian economy

$(I-A)^{-1}$             inverse matrix

### **3.5 Total Economic Impact of Tourism Sector**

The impact can be measure in different stages of the visitors expenditure such as direct, indirect and induced impact of tourism sector.

#### **3.5.1 Direct Impact**

Direct impact include changes in industries associated directly with visitors' expenditure such as payment to hotel, restaurant, retail stores, phone and internet. Direct impact is calculated as the sum of the total column vector of the respective input output table (Jones, 1997)

#### **3.5.2 Indirect Impact**

Indirect effect are sales, income or job resulting from various round of the purchase for food, manufacturing, linen and handicraft industries (Stynes,1997). The indirect impact is calculated by multiplying each sector's direct effect by its respective column elements derived from the respective input output table and summing the product (Jones,1997)

### **3.5.3 Induced Impact**

Induced effect are sales, income and job resulting from household spending of the income earned as a result of the visitors' expenditure either directly or indirectly. The induced impact is calculated by multiplying both the direct and indirect impact by their respective column element derived from the respective input output table and summing the products (Jones,1997).

### **3.6 Inter Sectoral Linkages Analysis of Malaysian Tourism Sector**

Linkages analysis is an important analysis for an economy to shows the importance of sectors produced goods and services. Linkages analysis, used to examine the interdependency of production structures, was introduced by the works of Rasmussen (1956), Chenery & Watanabe (1958) and Hirschman (1958). Since that many different methods were improved and expanded for the measurement of linkages coefficient. One of the popular method for the analysis of interdependency between economic sectors is backward and forward linkages analysis.

Backward linkages are defined as the column sums of the Leontief inverse from the demand driven input output model. Forward linkages are defined as the row sums of the Ghosh inverse from the supply driven input output model. Backward and forward linkages are descriptive measures of the economic interdependence of industries in terms of the magnitude transaction. Linkages show the estimate of the direct and indirect increase in output following an increase in final demand.

Linkages based on Rasmussen method is based on the column or row sums of the Leontief inverse to measure inter sectoral linkages. The backward linkage based on the Leontief inverse matrix is define as the column sums on the inverse matrix.

$$BL^R_j = \sum l_{ij}$$

Where,

$l_{ij}$  is the  $ij^{\text{th}}$  element of Leontief inverse matrix that is denoted by  $L = (I-A)^{-1}$

$BL^R_j$  is backward linkage for sector  $j$  which reflects the effects of an increase in final demand

Forward linkages defined as the row sums of the Leontief inverse matrix. It measures the magnitude of output increase in sector  $i$ , if the final demand in each sector were to increase by one unit. It measures the extent to which a unit change in the primary input of sector  $i$  causes production increases in all sector.

$$FL^R_j = \sum l_{ij}$$

Where,

$l_{ij}$  is the  $ij^{\text{th}}$  element of Leontief inverse matrix that is denoted by  $L = (I-A)^{-1}$

$FL^R_j$  is forward linkage for sector  $i$ .

## **CHAPTER 4**

### **RESULTS AND DISCUSSION**

#### **4.1 Introduction**

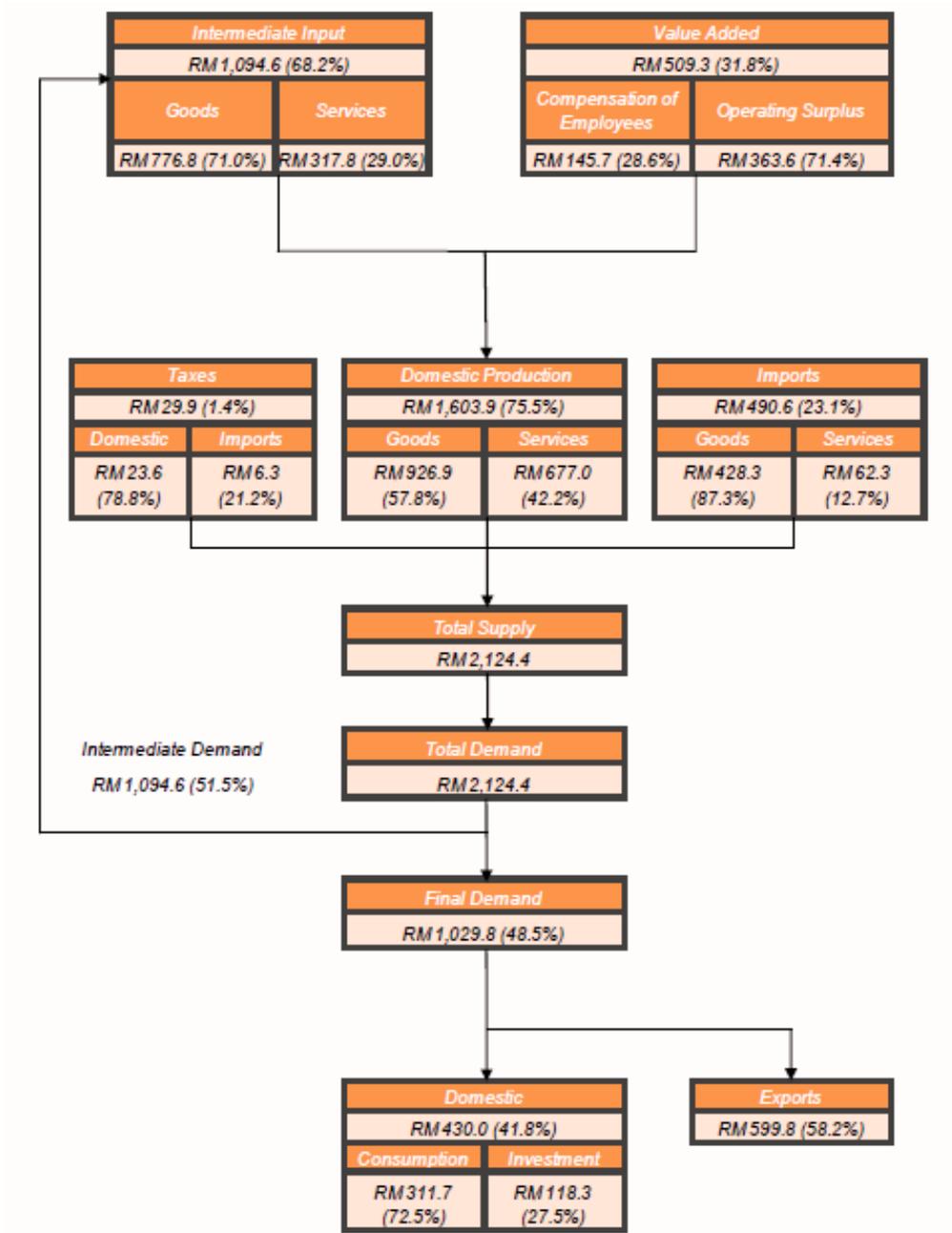
Chapter 4 represent the result and discussion for the study. First section presented the microeconomic indicator of Malaysia economy based on input output table 2005 which present the analysis of table input output was developed by Department of Statistic Malaysia. This part also analyzes the contribution of all sectors in Malaysia. Section two discuss the tourism multiplier effect of seven tourism primary sector such as output, income and employment multiplier and backward and forward linkages discuss in section three.

## **4.2 Macroeconomic Indicator of Malaysia Economy**

The Malaysian economic structure by commodity flow of goods and services based on supply and demand is shown in figure 4.1. Total supply of goods and services in 2005 was RM2,124.4 billion of which 75.5 per cent was contributed by domestic production, 23.1 per cent by import and 1.4 per cent by commodity taxes. The total value of domestic production was RM 1,603.9 billion with goods and services contributed 57.8 per cent respectively. Meanwhile from the total import of RM490.6 billion, the contribution of goods was 87.3 per cent and services were 12.7 per cent.

The total demand for goods and services in 2005 was valued at RM2,124.4 billion of which 51.5 per cent was used as intermediate demand and 48.5 per cent as final demand. In terms of intermediate input, the goods contributed 71.0 per cent and services 29.0 per cent. As for final demand, 41.8 per cent was recorded by domestic demand and 58.2 percent by exports. Gross value added in 2005 registered RM509.3 billion with compensation of employees accounting 28.6 per cent and operating surplus 71.4 per cent.

Figure 4.1: The flow of goods and services according to the input output table (RM billion)



#### 4.2.1 Gross value added of Malaysia economy

The total value added in 2005 was RM509.3 billion and the value added growth increased at the rate 8.1 per cent a year. The main contributor to the growth in 2005 was the tertiary industries contributed 42.9 per cent. Followed by secondary industries 35.6 per cent and primary industries 21.5 per cent.

Table 4.1: Value added and Contribution, 2005

Economic sector	Value added	Contribution (%)	Share by industry
<b>Primary Industry</b>	<b>109,380</b>	<b>21.5</b>	<b>100</b>
Agriculture, Fishery & Forestry	36,156	7.1	33.1
Mining & Quarrying	73224	14.4	66.9
<b>Secondary Industry</b>	<b>181,220</b>	<b>35.6</b>	<b>100</b>
Manufacturing	151,544	29.8	83.6
Electricity, Gas and Water	13,865	2.7	7.7
Construction	15810	3.1	8.7
<b>Tertiary Industry</b>	<b>218,673</b>	<b>42.9</b>	<b>100</b>
Wholesale & Retail Trade	53,172	10.4	24.3
Hotel & Restaurants	10,791	2.1	4.9
Transport & Communication	40,585	8.0	18.6
Finance & Insurance	37,820	7.4	17.3
Real Estate & Ownership of Dwellings	20,439	4.0	9.3
Business & Private Services	22,042	4.3	10.1
Government Services	33,823	6.7	15.5
<b>Total</b>	<b>509,272</b>	<b>100</b>	

The value added of secondary industries in 2005 was RM181.2 billion. Manufacturing sector accounted for 83.6 per cent in 2005 followed by construction sector with 8.7 per cent. The primary industry was the lowest contributor among the industries with RM109.4 billion in 2005. The major contribution was from the Mining & Quarrying

sector which registered 66.9 per cent followed by Agriculture, Fishery & Forestry sector contributed 33.1 per cent

#### 4.2.2 Sector Gross Domestic Product (GDP) of Malaysia

The total domestic output in Malaysia economy in 2005 was RM1,603.9 billion. The main contributor to the domestic output in Malaysian economy was from secondary industries 62.1 per cent, followed by tertiary industries 28.2 per cent and primary industries 9.7 per cent as shown in table below.

Table 4.2: Value and contribution of domestic output, 2005

Economic sector	Value (RM Million)	Contribution (%)	Share by industry
<b>Primary Industry</b>	<b>155,410</b>	<b>9.7</b>	<b>100</b>
Agriculture, Fishery & Forestry	60,000	3.7	38.6
Mining & Quarrying	95,410	6.0	61.4
<b>Secondary Industry</b>	<b>995,384</b>	<b>62.1</b>	<b>100</b>
Manufacturing	899,165	56.1	90.4
Electricity, Gas and Water	35,149	2.2	3.5
Construction	61,070	3.8	6.1
<b>Tertiary Industry</b>	<b>453,112</b>	<b>28.2</b>	<b>100</b>
Wholesale & Retail Trade	77,493	4.8	17.1
Hotel & Restaurants	27,610	1.7	6.1
Transport & Communication	119,451	7.4	26.4
Finance & Insurance	74,330	4.6	16.4
Real Estate & Ownership of Dwellings	31,847	1.9	7.0
Business & Private Services	43,055	2.7	9.5
Government Services	79,327	4.9	17.5
<b>Total</b>	<b>1,603,907</b>	<b>100</b>	

The secondary industries contributed RM995.4 billion in 2005. In 2005, Manufacturing sector was the main contributor for secondary industries which recorded 90.4 per cent of output. This was followed by Construction sector with 6.1 per cent.

Tertiary industries contributed RM453.1 billion from the total output. Transport and Communication sector was the main contributor in tertiary industries which recorded 26.4 per cent of production in 2005. Meanwhile, Wholesale & Retail Trade Sector contributed 17.1 per cent in tertiary industries.

#### **4.2.3 Intermediate Input of Malaysia economy**

The total intermediate input in 2005 was RM1,094.6 billion. Secondary industries remained as the main contributor of 74.3 per cent for year 2005, followed by tertiary industries 21.5 per cent and primary industries 4.2 per cent.

Figure 4.3: Intermediate Input, 2005

Economic sector	Value (RM Million)	Domestic (RM Million)	Import (RM Million)	Contribution (%)	Share by industry
<b>Primary Industry</b>	<b>45,006</b>	<b>35,819</b>	<b>9,186</b>	<b>4.2</b>	<b>100</b>
Agriculture, Fishery & Forestry	22,908	18,373	4,536	2.1	50.9
Mining & Quarrying	22,097	17,446	4,651	2.1	49.1
<b>Secondary Industry</b>	<b>804,183</b>	<b>493,031</b>	<b>311,152</b>	<b>74.3</b>	<b>100</b>
Manufacturing	738,156	445,254	292,901	68.2	91.8
Electricity, Gas and Water	21,122	18,183	2,940	2.0	2.6
Construction	44,905	29,594	15,311	4.1	5.6
<b>Tertiary Industry</b>	<b>233,287</b>	<b>200,733</b>	<b>32,552</b>	<b>21.5</b>	<b>100</b>
Wholesale & Retail Trade	24,204	20,477	3,728	2.1	10.4
Hotel & Restaurants	16,761	15,626	1,135	1.5	7.2
Transport & Communication	78,567	69,561	9,005	7.3	33.7
Finance & Insurance	36,383	35,752	631	3.4	15.6
Real Estate & Ownership of Dwellings	11,395	10,608	788	1.1	4.9
Business & Private Services	30,892	21,597	9,295	2.9	13.2
Government Services	35,083	27,113	7,970	3.2	15.0
<b>Total</b>	<b>1,082,475</b>	<b>729,584</b>	<b>352,891</b>	<b>100</b>	
Commodity Taxes	12,160	8,620	3,540		
<b>Overall Total</b>	<b>1,094,635</b>	<b>738,204</b>	<b>356,431</b>		

The Manufacturing sector remained as the main contributor with 91.8 per cent from the total value recorded by the secondary industries. Construction sector and Electricity, Gas & Water sector registered 5.6 per cent and 2.6 per cent respectively. Meanwhile, the tertiary industries contributed RM233.3 billion or 21.5 per cent in 2005 to the total intermediate input. Transport and communication contributed the highest with 33.7 per cent followed by Finance & Insurance sector and Government Services sector registering 15.6 per cent and 15.0 per cent respectively.

Primary industries was the lowest contributor of all industries valued at RM45 billion. Agriculture, Fishery & Forestry sector contributed the highest with 50.9 per cent and followed by Mining & Quarrying sector at 49.1 per cent.

### **4.3 Multipliers effect of seven primary tourism sector in Malaysia**

Based on the technical and interdependent intermediate coefficient information for input output system, the total output and income multiplier have been calculated for selected tourism sector. Table 4.4 and 4.5 below shown the empirical results for direct, indirect and initial effect for seven selected tourism sector.

The total multiplier consist of direct, indirect and induced or compensation effect. Direct effects represent the first round purchases made by each sector from all other intermediate per every RM1 worth of output. While the indirect effect reflects a series of indirect purchases as wave of second, third and subsequence round effects make their way the local economy. The induced consumption effect is actually the column total of inverse matrix for close input output system. The total output multiplier is the summation of direct, indirect and induced effect.

#### **4.3.1 Output Multiplier**

The output multipliers of the Malaysian tourism industry of each of the eight tourism sector are represented in table 4.4. Among the tourism related sectors, recreation sector yielded the highest output multipliers with RM2.70 which constitute RM0.46 from direct effect, RM1.8 from indirect and RM0.38 from induced

consumption effect. It show that for RM1 increase in visitors expenditure will increase RM 2.70 in total output. Restaurant sector yielded the second highest with RM2.04. Food and Beverage sector yielded the third highest multiplier with RM1.45. Transportation sector and accommodation sector yielded significant output multipliers of RM1.91 and RM1.57 respectively.

**Table 4.4: Output Multipliers**

<b>Economic sector</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>	<b>ranking</b>
<b>Accommodation</b>	0.110601	1.133883	0.341959	1.586443	5
<b>Manufacture Food and Beverage</b>	0.2957	1.468024	0.201059	1.964783	3
<b>Wholesale and retail trade</b>	0.102953	1.196067	0.210599	1.509619	7
<b>Restaurant</b>	0.251271	1.367269	0.430496	2.049037	2
<b>Transportation</b>	0.256069	1.391404	0.265452	1.912925	4
<b>Business Service</b>	0.033705	1.044075	0.475734	1.553514	6
<b>Communication</b>	0.061786	1.098626	0.224611	1.385022	8
<b>Recreation</b>	0.461757	1.864598	0.379921	2.706276	1

Business services sector, Wholesale and retail trade sector and Communication sector yielded the lower income multiplier. For business services sector, RM1 increases in visitors expenditure will increase RM 1.55 in total output which constitute RM0.03 from direct impact, RM1.04 from indirect impact and RM0.48 from induced impact.

### 4.3.2 Income Multiplier

The household income multiplier explains the income effect of the output change in the final demand. Table 4.5 presents the income multiplier for eight primary sector in Malaysia. Business service sector ranked the first among the seven primary tourism sector based in income multiplier with RM 0.83, which constitutes RM0.33 from direct impact, RM0.34 from indirect effect and RM0.16 from induced effect. While, the Restaurant sector present the second highest income multiplier after business services sector with RM0.61, which is estimated for every RM1 increase in the final demand to generated income by RM0.61.

**Table 4.5: Income Multipliers**

Economic sector	Direct	Indirect	Induced	Total	ranking
Accommodation	0.195197	0.22133	0.066749	0.483277	4
Manufacture Food and Beverage	0.029894	0.000174	0.00601	0.036078	8
Wholesale and retail trade	0.115251	0.137848	0.024272	0.27737	5
Restaurant	0.219725	0.300423	0.094591	0.61474	2
Transportation	0.103061	0.1434	0.027358	0.273819	6
Business Service	0.331318	0.345921	0.157619	0.834859	1
Communication	0.087279	0.095887	0.019604	0.20277	7
Recreation	0.15331	0.285862	0.058246	0.497418	3

Accommodation sector yielded the significant value for income multiplier with RM0.48 which constitute RM0.19 from direct impact, RM 0.22 from indirect impact and RM0.67 from induced impact. It show that for RM1 increases in visitors expenditure will increase RM0.48 in household income. While, the transportation sector, communication

sector and food and beverage sector give a lower tourism income multiplier with RM0.27, RM0.21 and RM0.04 respectively

#### **4.4 Tourism Inter Sectoral linkages in Malaysia**

Linkages analysis begins with the tourism industry and examines the strength of the inter sectoral forward and backward relationship between tourism and other industries in the rest of the economy. The forward linkage measures its relative important of tourism as supplier to the other industries in the economy whereas the backward linkages measure its relative important as demander. This linkage indices show the tourism component of each industry is linked to other industries in the economy. Table 4.7 present the inter sectoral backward and forward linkages indices for each of the seven primary tourism sector in Malaysia.

Table 4.7: Economic Linkages of Malaysia Tourism Industry

	Sector	Backward Linkage	Rank	Forward Linkage	Rank
1	Agriculture, Forestry and Fishing	1.550189963	19	1.830731412	7
2	Mining and Quarrying	1.321214457	21	1.494969952	13
3	Manufacture Food and beverage	2.375444427	1	1.706661803	12
4	Other manufacturing	1.842878708	13	5.14491254	1
5	Electricity, gas and water	2.002357873	6	1.831880611	6
6	Construction	1.888455046	11	1.822282925	8
7	Wholesale and retail trade	1.717274338	15	3.109857947	2
8	Accommodation	1.824134318	14	1.192596212	18
9	Restaurant	2.227942233	4	1.456122391	14
10	Transportation and Storage	2.323989456	3	2.340038777	4
11	Communication	1.846490955	12	1.803886338	10
12	Financial and Insurance activities	2.010805244	5	2.972134342	3
13	Real estate and ownership	1.613508032	16	1.806392436	9
14	Rental and leasing	1.956659673	8	1.248597066	17
15	Professional	1.588729722	18	1.753895279	11
16	Business services	1.612760329	17	1.320225732	15
17	Public administration and defence	1.895838471	10	1.140964783	20
18	Education	1.512181023	20	1.024908452	21
19	Health	1.953663322	9	1.312623974	16
20	Recreation	2.331436779	2	1.922900813	5
21	Other services	1.998516994	7	1.157887581	18

Result show that, food and beverage sector yielded the highest value for backward linkages with 2.37 while the forward linkage is 1.70. It shows that food and beverage sector used more input from other sector to produce its output. The higher value in backward linkages than forward linkage means that demand for input is more than its supply. Recreation sector yielded the second highest backward linkages with 2.33. Transportation sector and communication sector show a significant backward and forward linkage with 2.32 and 1.84 respectively. While the wholesale and retail trade sector and business sector show the lower backward linkage with 1.71 and 1.61

respectively. It means that wholesale and retail trade sector and business sector don't depend to much with other sector in producing its output.

Wholesale and retail trade sector and transportation sector yielded the highest forward linkages with 3.10 and 2.34 respectively. Higher value in forward linkages means that these sector supply more its output to other sector. Recreation sector and communication sector yielded the significant forward linkages with 1.92 with 1.80 respectively. While, business service sector and accommodation sector show the significant value for forward linkage with 1.32 and 1.19 respectively.

## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATION**

#### **5.1 Introduction**

This chapter summarizes the study and make a conclusion by revisiting the results of the economic impacts of tourism on the Malaysia economy. The first section discusses the summary of the major research finding. It is the objective will be achieved or not. Section two present the research implication for the country tourism sector. Section four outlines the limitations of this study followed by research conclusion are discussed in section five.

## 5.2 Summary of finding

Between 2000 and 2011, the visitor arrival and receipts increased significantly in the country. More visitors' expenditure means more money re-circulated in the economy with more multiplier effects resulting in higher economic impacts in the economy. The finding show that most of visitor arrival are from ASEAN country. Their expenditure contributed to economic growth to the Malaysian economy. The highest visitor are from Singapore and Indonesia. They contributed RM28,417.4 million and RM4,758.7 million respectively.

The result show that the visitors spent most on business service, wholesale and retail trade. The visitors expenditure in local transportation was small. This is because visitors from neighbouring country such as Singapore, Thailand used their own vehicle to visit Malaysia. Further, long haul visitors may be purchasing air tickets from their country, which results in lower direct expenditure on transportation in Malaysia.

The primary tourism sectors, such as wholesale and retail trade and food and beverage produced higher output multiplier, whereas the business service and recreation sector exhibited higher income multiplier. The higher output multiplier indicated that the tourism sector relied more on the country's domestic production system. In business sector, for every Ringgit's spent by a tourist the total output generated 0.344 time in the economy. In other words, a one Ringgit visitor's expenditure multiplied 0.344 times in the economy. The high output multiplier of the tourism sector also revealed that the sector provided a stimulus effect to increase the output of other economic sector. However, the tourism income multiplier is small, revealing more imports, and the sector is not particularly significant for the income generation due to skill shortage, and tax and

import are relatively high in the sector. The low income multiplier implies that tourism's primary impact created larger income effect than the direct and induced impacts. The low income multiplier also showed that the sector significantly depends on foreign employees resulting in a high level of income leakage from the economy.

The high linkage effects of the tourism sector offer greater potential to stimulate the economic activity and therefore have a greater effect on the country's economic growth. This implies that tourism, as a purchaser of inputs, increased more than the average of all economic sectors in the economy. The economic sectors that exhibit higher backward linkages are the sectors that are more connected with the industrial sectors. In terms of forward linkages, the wholesale and retail trade are the tourism sectors ranked the first in tourism economic sector. The average level of the forward linkages index indicates that the sector has medium capacity to sell its products to other sector inputs are mainly used for personal consumption and providing final goods to the economy.

### **5.3 Research Implication**

The findings of this research provide some policy guidelines to the Malaysia tourism stakeholders in developing the tourism sector in the country. The findings of this study have some important implications for academics, researchers, government, private sector, NGO's and the community involved in the tourism in the country as below:

### **5.3.1 Public sector: Government of Malaysia**

The study provides information about the importance of the tourism primary sectors, which should be given more priority in planning and investment. The government should encourage investment in the key economic sector with larger economic multiplier.

Tourism marketing and management are important because tourism businesses are better handled by the private sector and communities at large. The government should formulate effective fiscal and investment policies that can attract more investment from the different stakeholders in the country's tourism sector. Moreover, the private sector and the community should be given autonomy to take the lead role in marketing and management of tourist destination in the country.

### **5.3.2 Private sector, local community, donors and regional organization**

This study has provided important information on the benefits of tourism activities for investment and business operational decisions. The private sector can invest in the tourism primary sector such as accommodation, food and beverages, entertainment and retail trade establishments, which are well inter linked with the general economy. The projected employment and output of the tourism sector will aid in the planning and evaluation of tourism demand in the country. The agriculture and livestock, construction, retail trade, food and beverages, and banking and finance sectors should maximize their potential to produce the respective estimated outputs to meet the future tourism demand in the country.

The private sector and the community should introduce and promote unique tourism events and festivals to visitors emphasising the nature community and culture heritage tourist destination. This can be achieved by employing local people thereby reducing the dependency on foreign workers and ultimately reducing income leakages from the county's economy. Community involvement in tourism management and marketing could enhance awareness, sense of identity, empowerment, pride and well being of local communities. Tourism marketing tools should make use websites, social networking sites, brochures and trained tour guides in the country for providing efficient services to international tourists visiting the country.

### **5.3.3 Academician and Researcher**

This finding contributes to the input output literature and extends the knowledge in the disaggregation of the tourism sector from rest of the economy. The study enhanced the procedures for estimating tourism economic multipliers and inter sectoral backward and forward linkages to quantify the economic contribution of the tourism sector in an economy. Therefore, the research method used in this study can be used to estimate the economic impacts of tourism, energy, and water supply, which may not be explicitly found in the industrial classifications of developing countries economic.

#### **5.4 Recommendation**

The finding of the analysis revealed that tourism sector contributed more income to the economy and play as a second sector contributed to the Malaysian economy after manufacturing. Apart from this, there a few recommendation that the researcher thinks necessary to bring about. First, apart from promoting Malaysian tourism industry internationally. The government of Malaysia must educate its people, especially from the rural areas about the tourism as an industry. The sentiment that all tourist are bad need to be corrected. In fact, tourism can help in developing the rural areas and the government is able to plan such development should be emphasised. It is hard to change people's perception over things, especially since the perception has some negative connotations, and that the perception is developed in the families. Therefore, a careful approach in convincing the people about the benefits of tourism is essential. Having said that, policy formation in tourism requires some degree of consensus between all those with tourism development.

The second recommendation concerns the participation from every side. The planners, in particular and the various government employees, must bare the responsibility in identifying, evaluating and understanding the community perception in order to get strong participation from the rural community. They cannot take for granted that whatever decisions they make are good for the community. A good planning will have to include the participation of the local community.

The third recommendation concerns with tourism and the provision of education in Malaysia. Community should know the importance of tourism education for economic growth. This study also strongly believes that the relationships between tourism and the

environment should be emphasised at the university level taught courses. This is because, a long term sustainable tourism industry in Malaysia will depend on the communities perception about the important of tourism. Since they are the ones who will handle the decision making in the tourism industry in the future, they must know where to draw the line between developing the industry and avoiding disaster to the environment, for example pollution.

## **5.5 Conclusion**

This study highlights the country significantly depends on the performance of the tourism sector for its growth. Tourism is multi sector industry and its demand impacts several sectors in the economy directly and indirectly. As the economic importance of tourism industry is growing among the policy makers and researchers, this study applied input-output technique to determine multiplier to measure the significance of tourism in generating output, income and employment in Malaysia. These multipliers showed several interpretations. First is, Malaysia tourism industry not only playing an importance role for generating output, income and employment but also creates spill over effects on other related sector of the economy. This industry has strong inter sectoral linkages with other sector in the economy. Secondly, result that have been estimated in this study can be considered as a guideline to the tourism industry policy makers to take necessary action in developing and implementing policies and then to pay attention to promote those area of tourism where the effect is highest.

Based on the analysis of this paper, it is clear that tourism industry is contributing significantly to the Malaysian economy in terms of generating output, income and employment. As Malaysia is aimed to be a developed nation by 2020, this industry has the potential to contribute significantly towards achieving the goal

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