MALAYSIA TOURISM AND ECONOMIC GROWTH:

INPUT OUTPUT ANALYSIS

By

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ABSTRACT

Tourism sector is an important sector that many countries are focusing on the development of tourism sector. There are many studies show there is a significant relationship between tourism sector and economic growth. The objective of this study is to see how significant the tourism sector extension would give impact on the Malaysia GDP and other macroeconomics aspects. The method used in this study is input output analysis. Using Malaysia input output table 2010, the 124 commodities were aggregated into main sectors in Malaysia and disaggregate the tourism sector. After that, the technical coefficient were calculate to the see the direct requirement of input needed by the sector to produce outputs. Then the multiplier effect which is the output multiplier and export of tourism sector multiplier and also the backward and forward linkages between tourism and non-tourism sectors in Malaysia. The multipliers shows that the tourism sector contributes to Malaysia economic by generating output and the export of tourism sector. Besides that, the interlinkages between sectors shows that there are strong linkages between tourism sectors with other sectors. It creates the demand and supply of outputs that can stimulates the economy.

ABSTRAK

Sektor pelancongan adalah penting bagi negara yang mementingkan pembangunan ekonomi. Banyak kajian menunjukkan terdapat hubungan signifikasi di antara sektor pelancongan dan pertumbuhan ekonomi. Objektif kajian ini ialah untuk melihat sejauh mana pembangunan sektor pelancongan memberi kesan terhadap pertumbuhan ekonomi dan aspek makroekonomi yang lain. Keadah kajian yang digunakan adalah analysis input output. Dengan menggunakan jadual input output 2010, 124 komoditi telah diagregatkan kepada 8 sektor di malaysia dan sektor pelancongan dipisahkan. Kemudian kesan pengganda and hubungan antara sektor telah dikaji. Kesan pengganda menunjukan sektor pelancongan kepada pengeluaran dan eksport sector pelancongan. Selain itu, hubungan yang kuat diantara sektor telah diperolehi dimana permintaan dan penawaran pengeluaran akan membantu dalam pertumbuhan ekonomi.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

For past six decades, international tourism have shown a huge development and also experiencing continued diversification. Experiencing continued expansion tourism is becoming one of the largest and significantly growing economic sector. International tourist arrivals grew by 5% in 2013 which is 1087 million arrival worldwide. This shows an increment from year 2012 with 1035 million arrival million (UNWTO, 2014). Tourism industry which already growing since ancient time found successful in generating income of a countries. Number of tourist destination are growing bigger and bigger. According to Khaleed (2009), tourism is one of the method to overcome macroeconomic problems. By focusing in tourism sector brings promising benefits to the country as it is one of the tool to generators of income and employment creation. Tourism based development plays a vital pivotal role in contributing to its GDP growth both in developed and developing countries.

Nowadays many countries focusing on tourism sector as a tool to develop their countries in term of many facets. Countries mainly developing countries are promoting and sustaining a world class tourism to generate economic growth. Developing countries are trying to enact policies to improve their tourism industry as a tool to develop their foreign exchange earnings. Malaysia are never left out in promoting their tourism in many ways. According to Elsadig and Abdur (2011) said that Malaysia is becoming of the leading tourist destination competing with other

popular tourist spots around the world. Besides that, those countries worldwide, including Malaysia, have a successful tourism sector, is often measured in dollars or specifically by the number of international tourist arrived and the income they bring in (Baharuddin, Ahmad, Jamil & Kong, 2000)

Malaysia is located in south East Asia and divided into peninsula Asian mainland and third of Borneo Island. Malaysia have total land mass of 329,845 square kilometres (127,354 sq. mi). Geographically Malaysia having 11 states with 2 federals territories (Kuala Lumpur and Putrajaya) form peninsular Malaysia. Peninsular Malaysia is separated by the South China Sea from east Malaysia which includes Sabah and Sarawak and also Labuan the third federal territory (Tourism Malaysia).

In Southeast Asia, Malaysia is one of a top tourist destination having an endless range of attractions for many types of tourist. Malaysia considered as a unique country and described as 'Asia in miniature' because the uniqueness of various cultures. The multicultural structure of Malaysia is filled with the cultures of three main ethnics such as Malay, Indian and Chinese. Besides that, there are complement from minority ethnics such as aboriginals and Eurasian ethics such as Iban, Dayak, Melanau, Kadazan, Bajau and others. By this, Malaysia can be best described as a place, allowing the convergence of cultures.

Nevertheless, the huge biodiversity of flora and fauna in Malaysia have attracted number tourists to visit Malaysia. As there is massive development on the tourism

sector, Malaysia government have step into an effort to diversify the economy and not solely depend on exports. Government started to focus on tourism industry by having policies and promotion to attract tourist around the world. By this the tourism sector is the second engine that help the growth of the country for developing global competitiveness. This industry effects positively on the Malaysian economy for increasing foreign exchange earnings, and employment opportunities (Bhuiyan et al., 2013).

1.1.1 History of Malaysia Tourism

Earlier, before independence in 1957 Malaysia economy was only focusing in agriculture sector such as tin, rubber and oil palm. At that period, tourism doesn't give any effects on Malaysia economy. In 60's tourism in Malaysia started as a new sector in the economic sector for the starting there was a slow growth. A tourist plan was added into the country's 1971-1975 plan and this shows the beginning of tourism contributing in Malaysia's economic. Malaysia government tried to develop Malaysia tourism and in year 1972 Malaysia government established Tourist Development Corporation of Malaysia (TDC) under former Ministry of Trade and Industry. However Malaysia give more attention on 1980's due to the fall in oil price and world's economic crisis. Beside economic, tourism sector gives positive impacts on foreign exchange earnings, job opportunities and tax revenues in 1980s. In 1987, another department was established called the ministry of culture, Arts and Tourism (MoCAT) and TDC has emerged to this department in year 2004, became Ministry of Tourism. Malaysia government have brought up many plan in order to encourage and improve local and private investment in tourism industry.

In 2001, Malaysia government had created fund to help investors which is tourism infrastructure fund with RM 700 Million allocation and increased the fund to RM 1.2 billion in 2005 and special fund for tourism infrastructure with allocation of Rm 400 Million. In 1992, TDC was replaced by Malaysia Tourism Promotion Board (MTPB). MTPB function according to the Malaysia Tourism Promotion Board act 1992 are:

- To stimulate and promote tourism to and within the country

- To stimulate, promote and market Malaysia as a best destination for tourism in international and domestic arena.

- To co-ordinate activities relating to tourism conducted by any organisation , government or non-government agencies and;

- To recommend to the minister as to create of appropriate methods, measures and programmes to facilitates or stimulate the development tourism industry in Malaysia and to implement or assist in the implementation of these recommendations.

In 2012, MTPB have 36 overseas and 9 marketing representative offices in 29 countries. Malaysia has a strong position today as tourist destination. By realising the strong potential in tourism sector globally, Malaysia government is taking steps to develop this service sector together with the collaboration private sectors to bring benefit to all.

1.1.2 Contribution of Malaysia Tourism

Tourism sector plays important role in many economic facets in Malaysia. Malaysia has been and still an attractive tourism destination in the world. Attracting more and more international tourist to Malaysia been a main focus of Malaysia government, besides development interesting tourist destination such as Langkawi Island, Pangkor Island, Cameron highland and many more. Besides that, the natural and cultural tourism combined with heritage and multicultural aspects such as and the tropical climate of Malaysia creates a sustainable tourist development.

Malaysia have brought in number of international tourist around the world year by year. From the Table 1.1 below, it can be seen that the number tourist arrival increase year by year. This table shows the arrival of tourist starting from the year 1998 till 2013 which shows a constant increment. In year 1998, tourist arrival was 5.56 million and 1999 there an increase in the tourist arrival which is 7.93 million. It increase more in year 2000 to 10.22 million. Continue to increase up to 12.78 million and 13.29 million in year 2001 and 2002 respectively. In year 2003, there was slight drop in the tourist arrival which was 10.58 due to the SARS and Gulf War in 2003, but in year 2004 until 2013 the number of tourist to Malaysia increase significantly. In year 2013 the number of tourist arrive was 25.72 million which shows a good number of tourist visited Malaysia. Beside arrivals, receipts also shows a drastic increment starting year 1998 till 2013. In year 2013, Malaysia have performed more

than expected in term of tourist receipt of RM 65.44 billion exceeding the initial target which is RM 65 billion.

Table1.1: Tourist Arrival and Receipts to Malaysia

TOURIST ARRIVALS & RECEIPTS TO MALAYSIA		
YEAR	ARRIVALS	RECEIPTS (RM)
2013	25.72 Million	65.44 Billion
2012	25.03 Million	60.6 Billion
2011	24.71 Million	58.3 Billion
2010	24.58 Million	56.5 Billion
2009	23.65 Million	53.4 Billion
2008	22.05 Million	49.6 Billion
2007	20.97 Million	46.1 Billion
2006	17.55 Million	36.3 Billion
2005	16.43 Million	32.0 Billion
2004	15.70 Million	29.7 Billion
2003	10.58 Million	21.3 Billion
2002	13.29 Million	25.8 Billion
2001	12.78 Million	24.2 Billion
2000	10.22 Million	17.3 Billion
1999	7.93 Million	12.3 Billion
1998	5.56 Million	8.6 Billion

Source: Tourism Malaysia, 2014

Malaysia have tourist around the world coming to Malaysia due to many factors that attract international and also domestic tourist. According to UNWTO, Malaysia is the 10th most visited country in the world, having more than 25 million tourist visited Malaysia last year. Table 1.2 below shows the top ten tourist arrival by countries of nationality in year 2012. Tourist from Singapore have visited Malaysia the most with the number of 13.01 million, which is 51.99% from the total of tourist arrivals. Following by Indonesia (2.38 mill), China (1.56 mill), Thailand (1.26mill), Brunei

(1.26 mill), India (0.69 mill), Philippine (0.508 mill), Australia (0.507 mill), Japan (0.47 mill), and United Kingdom (0.41 mill).

Table 1.2: Top Ten Tourist Arrivals by Countries of Nationality 2012.

Country of Nationality	Number of tourist arrival (million)	Total of tourist arrivals (%)
Singapore	13.01	51.99
Indonesia	2.38	9.52
China (including Hong Kong and Macau)	1.56	6.23
Thailand	1.26	5.05
Brunei	1.25	5.03
India	0.69	2.76
Philippine	0.508	2.03
Australia	0.507	2.02
Japan	0.47	1.88
United kingdom	0.402	1.61

Source: Tourism Malaysia with the cooperation of Immigration Department, 2012

Besides having international tourist, Malaysia with attractive tourist destination have also attract domestic tourist. Domestic tourist do contribute to the tourism sector. The number of domestic tourist taking vacation is bigger than international tourist in most countries (Weaver and Oppermann, 2000). According to the Malaysian Ministry of Culture, Arts and Tourism (MOCAT), domestic tourism receipts

increasing at estimated 15% a year, and surveys done by the tourist office indicated that over 50% of hotel bed-nights were occupied by domestic tourists (The Economist Intelligence Unit, 1994).

Tables 1.3 shows the key statistic of domestic tourist in Malaysia for year 2012 and 2013. The number domestic tourist should be taken into consideration because domestic visitor will also help to improve the tourism sector. In 2013, it shown that 152.9 million visitor was recorded with an increase of 8.1 % compared to 2012 with 141.4 million visitors. The number trip of domestic visitor increase from 174.4 million in 2012 to 193.3 million in 2013 with growth of 10.8 %. A total of RM54.0 billion was spent for domestic tourism in 2013 as against RM47.8 billion registered in 2012. Meanwhile, the average expenditure per trip registered RM279 in 2013, an increase of 1.8 per cent from 2012. The growth of domestic visitors' expenditure was driven by the increase in the number of visitors and trips in 2013.

Table 1.3: Key statistics of domestic tourism, 2012 and 2013

Key Statistics	2012	2013	Percentage Change
Number of Visitors[1] (million)	141.4	152.9	8.1
Number of Tourism Trips (million)	174.4	193.3	10.8
Total Expenditure (RM billion)	47.8	54.0	13.1

Source: Department of Statistic Malaysia, 2013

During 1980's in order to overcome balance of payment deficit, Malaysia government planned to bring up a strong and developed tourism sector as an alternative source of foreign exchange. Improving tourism gives positive impact on development of direct tourism related sector and indirectly related sector. Thus, tourism generates the economics of developing countries and its importance is gaining huge recognition. Now Malaysia and other developing countries considering tourism as one of the important to of development of economy and also gain attention from government's industrial strategy. Malaysia government try to increase its allocation on the development of the industry over years. It has been increased from RM605.5 million in the 7th Malaysian plan to RM1009.0 million in the 8th Malaysian plan period, experiences 60% increase in its allocation (EPU, 2001). In the 9th Malaysian plan period, the allocation reached to RM1367.0 million (EPU, 2006).

Development of tourism sector do help the growth in Malaysia economic. Its contribution in economic growth is very important as it gives impact on growth sector directly related to tourism and also indirectly related. Tourism sector contributes in sales and production of output, employment, tax revenue and income (Horvath and Frechtling, 1999). The income generated by tourism through tourist expenditure are important earning for the country. By this the public and private sector can generate income via inter- sector linkages their earning can generate earning, besides creating employment opportunity to the locals. According to Department of Statistic Malaysia (2013), every year the amount of expenditure done by domestic and international tourist is raising because Malaysia is the best tourist destination and also number services beside interesting activities can be done here.

Table 1.4: National and International Tourism Expenditure

Year	National Tourism Expenditure		International Tourism Expenditure	
	RM (Million)	Annual change (%)	RM (Million)	Annual change (%)
2005	28,117.6	..	42,183.2	..
2006	32,294.4	14.9	48,264.3	14.4
2007	39,109.0	21.1	59,267.1	22.8
2008	32,069.2	-18.0	64,370.1	8.6
2009	36,606.3	14.1	70,473.6	9.5
2010	44,562.0r	21.7	75,333.7r	6.9
2011	57,521.8r	29.1	81,503.4r	8.2
2012	66,438.7p	15.5	88,217.8p	8.2

Source: Tourism Satellite Account (TSA) 2005-2012, 2012

Table 1.4 shows the national and international tourist expenditure occur in Malaysia from year 2005 till 2012. In 2005 national tourist expenditure is RM 28 177.6 million and international tourist expenditure was RM 42.183.2 million. In 2006 the expenditure of both national and international tourist expenditure have increased to RM 32 294.4 million and RM 48 264.3 million. Also in 2007, there was a drastic increase by RM 39,109.0 million and RM 59,267.1 million total expenditure of national and international tourist. In 2008, there declining rate where the expenditure of national tourist were at RM 32,069.2 million but there is a rise in international tourist expenditure which was at RM 64, 370.1 million. Then there are continues rising in both national and international tourist expenditure.

The tourists will spend in Malaysia. Transaction happens in Malaysia will help value of Malaysia currency increase. Besides that, many transaction such as hotel services, restaurant, transportation services and many others would help economic growth and also due to high demand for certain sector will help the sector to develop and create job opportunities to local people.

According to Dritsakis (2004), the most direct effect happen within some sectors for instead, hotels and restaurants, wholesale and retail trade, transportation and business services. Meanwhile indirect effects is to the other sectors that indirectly related to the development of tourism sector. Since numbers of international and domestic tourist visit Malaysia, the number of hotel and restaurants have increased drastically over years all over Malaysia. The hotel industry is consist of five star, four star, motels, chalet, homestays and many more. The demand for hotel industry increase as the arrival of international tourist visit Malaysia increase.

According to website of Tourism Malaysia, in 2013 the countries average hotel occupancy rate rose to 62.6% than 62.4% in 2012 and 60.6% in year 2011. This is in tandem with the increase in international and domestic tourists. In year 2013 Pahang recorded the highest occupancy rates at 80.4%. The Federal Territory of Kuala Lumpur and Selangor recorded the second and third highest occupancy rates of 69.5 % and 67.5% respectively.

Table 1.5: Hotel occupancy rate by state 2012-2013

STATE	2012	2013	DIFFERENCE
KUALA LUMPUR F.T	69.3	69.5	0.2
PUTRAJAYA F.T	65.3	62.0	-3.3
SELANGOR	67.3	67.5	0.2
PENANG	64.0	64.2	0.2
PERAK	49.6	49.8	0.2
KEDAH	52.9	53.0	0.1
PERLIS	41.2	43.1	1.9
KELANTAN	39.8	40.0	0.2
TERENGGANU	46.3	47.0	0.7
PAHANG	81.8	80.6	-1.2
JOHOR	56.1	56.4	0.3
MELAKA	62.0	62.2	0.2
NEGERI SEMBILAN	43.0	43.6	0.6
SABAH	60.8	62.2	1.3
LABUAN F.T	66.9	67.0	0.1
SARAWAK	57.2	57.4	0.2
MALAYSIA	62.4	62.6	0.2

Source: Tourism of Malaysia, 2013

Tourism sector have significantly gives positive impact on employment in Malaysia. The rise in many sector which is related to the tourism lead to increase in labour demand. Most of the sector in tourism sector are relatively labour intensive and the development of this sector would require for more labour to work in this sector. Other than that, the strong connection between sectors such as transportation, retail, utilities, food and beverages as well as financial services. In Malaysia there are many higher education institution are offering programmes on tourism and hospitality which creates thousands of graduates to works in this tourism sector. By creating job opportunities, this will also help low income group to upgrade their lifestyle by involving in tourism related small business or activities such as rural

homestay programme. By this Malaysia can overcome one of the macroeconomic problem.

Table 1.6: Employment in Tourism Sector 2005 - 2012

Year	Employment in the tourism industries		Total employment		Share of employment in the tourism industries to total employment (%)
	Number ('000)	Annual change (%)	Number ('000)	Annual change (%)	
2005	1,511.5	..	10,045.4	..	15.0
2006	1,554.6	2.9	10,275.4	2.3	15.1
2007	1,568.8	0.9	10,538.1	2.6	14.9
2008	1,677.6	6.9	10,659.6	1.2	15.7
2009	1,759.5	4.9	10,897.3	2.2	16.1
2010	1,849.8	5.1	11,899.5	9.2	15.5
2011e	1,993.7	7.8	12,284.4	3.2	16.2
2012p	2,088.2	4.7	12,723.2	3.6	16.4

Source: Tourism Satellite Account (2005-2012)

From the table above, it can been seen that annual changes in the employment in the tourism sector shows a drastic. Overall the employment in 2012 have increased by 4.7 % compared to 7.8 % in recorded in 2011. The share of employment in the tourism industry for 2012 was 16.4%, which shows rise from year 2011, 16.2 % and in year 2012 it was the highest share within the eight years period. Total employment recorded 12.7 million in 2012, higher than 2011 which with 12.2 million persons

Tourism plays crucial role in contribution of GDP. Tourism sector will generate employment and income which lead to a positive tourism balance of payment. Besides it also will stimulate the supply of goods and services of sectors of tourism due to demand of tourist and will generally increase the level of economic activity in the country. This will lead to the development and the rise in GDP.

1.2 Problem Statement

Tourism been a sector that boost the development of a country. After seeing at the potential of tourism sector towards economic growth, government involves on the extension of the sector as it give significant impact on the economy. There are many research done on the relationship between tourism sector and economic growth. There is a positive relationship in tourism sector and economic growth. As the tourism sector develop, the economic growth would also increase accordance to it. Malaysia government is giving importance to this sector because it creates job opportunity either in direct or indirectly sector, increase sales and profit, income and many more. Direct sectors such as hotel, restaurant, and transport are the sector which directly involve in the sector and the indirect sector are such that that contribute indirectly towards to the sector. Thus as many sector are involved in the sector, the business and people received a lot of good effect from the sector. For example, as more and more tourist visit Malaysia there will more transaction happen where the local business would gain profit and also the job opportunity will be created when this sector is developing which can reduce the number of unemployment in Malaysia. Government are allocating a huge amount of money to develop this sector and try to increase the benefit that can be gain from this sector.

Few thing should be taken into consideration such as even though the number of tourist is increasing annually but Malaysia is fail to attract tourist from developed country such as United States, Korea, Japan and other developed country. As indicated in Table 1.2, it can be seen that the number of tourist from developed countries such as Australia, Japan and United Kingdom less visit Malaysia. This means that Malaysia fail to attract those developed count and not competitive enough to bring tourist from rich countries. Although there is few matter that are lacking but tourism sector is tremendously important as other sector in the development of the economic. In term of Gross domestic product (GDP), there is a positive correlation with the improvement of tourism

Table 1.3: Contribution of Tourism To Malaysia GDP

YEAR	TOURIST ARRIVAL (MILLION)	GDP (BILLION)
2008	20.9	50.6
2009	22.0	53.1
2010	23.6	52.2
2011	24.6	55.9
2012	24.7	59.0
2013	25.7	70.6

Source: Department Of Statistic, Malaysia 2014

According to the Table above, there are a positive relationship between tourist arrival and its contribution to GDP. In year 2008, there tourist arrival 20.9 million and the total GDP is RM 50.6 billion. In 2009 the tourist arrival have increased to 22.0

million and also there is an increase to RM 53.1 billion in Malaysia GDP. In 2010, tourist arrival went up to 23.6 million and in 2011 was at 24.6 million and there is also increment in GDP RM 52.2 billion in 2010 and RM 55.9 billion 2011. As in 2012 the tourist arrival was at 24.7 million and the total GDP at that year was RM 59.0 billion. Lastly in 2013 the tourist arrival was at 25.7 million and the total GDP was at RM 70.6 billion. From the table, the higher the arrival of tourism, the higher to number of GDP will increase. This prove that the higher tourist arrival, the higher the total GDP. This shows that tourism sector contribute the largest to GDP.

Not only to GDP, the tourism sector also given impact to the total employment.

Table 1.8: Contribution of Tourism to Malaysia Employment

YEAR	NUMBER OF JOB ('000)	PERCENTAGE TO TOTAL EMPLOYMENT
2008	780	6.9%
2009	810	7.4 %
2010	810	7.18 %
2011	800	6.6%
2012	820	6.5 %
2013	870	6.7%

Source: World Travel and Tourism Council, 2014

From the table above, there is a contribution tourism sector to the total employment in Malaysia. In year 2008 number of job created by tourism was 780 000 and the percentage contributed to the total employment was at 6.9 per cent. In 2009 job

created by tourism sector was 810 00 and the contribution to the total employment is 7.4 per cent. As for 2010, the total job created by tourism sector 810 000 and the 7.18 per cent contribution to the total employment in Malaysia. In 2011 800 000 and for 2012, 820 000 job created with contribution of 6.5 per cent and 6.7 per cent t6o the total employment. From the table, there huge number of jobs opportunity created by the sector.

It can said be said that it is important to develop tourism sector in order to improve economic growth. In this study, the impact of tourism sector on the economic growth by using multipliers effect and also interlinkages between sector in Malaysia economic

The study uses multiplier effect to indicate that each Ringgit of direct expenditure generate another Ringgit in output and the export of tourism sector. There are research question on what this study will be done in order to answer those questions:

1.2.1   What is the total impact of tourism towards economic?

1.2.2   What is the contribution of tourism sector towards Malaysia output

1.2.3   What is the impact of tourism sector on export?

1.2.4   What is the backward and forward linkages between tourism related sectors and non- tourism related sector

1.3 Objective Of Study

1.3.1   General Objective

The general objective of this paper to see on how tourism sector gives impact on Malaysia economic as it is one of the main tool being use for economic growth.

1.3.2 Specific Objectives

     I.   To examine the total impact of tourism towards economy

     II.   To examine the contribution of tourism sector towards Malaysia output

     III.   To examine the effect of tourism sector on export

     IV.   To examine the backward and forward linkages between tourism related sector and non-tourism related sector.

1.4 Scope And Limitation

The main objective of this study to see the impacts of tourism toward economic growth by using input output analysis. Input output analysis can be used to estimate the sectorial impact of changes of tourism on Malaysia economics. By using the input output table, the impact of tourism on the Malaysia output and also the impact of tourism on export can be determine. Besides that, the forward and backward linkages can be seen between tourism related sector and non-tourism sector. By this we can know how changes in tourism sector would affect the Malaysia economy.

The limitation in this study is limited data. The data collected is just from the input output table published by department of statistic Malaysia. Thus this study is going to see the impact of tourism on the economic growth through looking at the

production structure of the sector. There is other things matter in tourism beside the production of the sector that can effect economic growth of Malaysia. Aspects such as environment and social factors created from tourism that will also effect economic growth should be taken into consideration.

Besides that, trade and technology factor play important part that can affect the production of the sector over time. A drastic changes will happen in the sector if there is any changes in trade or technology. Although input output table an important tool which can measured the impact of tourism and other sector but it can be used for short run purpose but not for long run as this method ignore important factors that will bring drastic changes to the quantity of input and output produced.

1.5 Significant of Study

Since Malaysia is now focusing on the development of service sector to increase GDP. Tourism is mainly in government's attention to be developed as tourism has potential to bring in tourist and this will create lots of positive effect to the development of the country. By this study, it can be seen that tourism can increase the investment and business opportunity. Seeing the potential in generating income by the tourism sector it, the investors and businessman can invest in this sector and open business to gain profit from the sector.

Other than that, policy maker and government can use this study can use the tables on tourist arrival, tourist expenditure, hotel occupancy rate and other to plan policies that related to tourism to improve the sector better. Tourism also playing an important role in creating job opportunities. It creates around 1,331,000 jobs in 2010 and this tourism investment bring income RM 19.9 billion revenue in the same year. It is estimated will reach RM 49.8 billion in year 2020. By looking as the potential of tourism sector policy maker can develop policies related to tourism.

By using the input output table, we can see the linkages among various sector either its directly related or indirectly related to tourism. The production processes are always interdependent. The products of one sector are used in another sector while the product of that sector will be used as input by other many sectors and changes in any sector's output would affect the production of another sector. So this can use by sector to know better about the need, opportunity, profit and avoid the shortness of supply of inputs.

1.6 Study Outline

This study is organized as follow: Chapter 2 reviews the releated literature on the economic impact of the tourism sector using various input-output model in different economies. Besides that the relationship between tourism and economic growth will be review empirically. Chapter 3 describes the method and the source of data collection besides discussing about the 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 forward and backward linkages of sectors tourism sector. In the end, in chapter 5 will discuss the summary of the finding, the conclusion and suggest few recommendation on overcome the problem in tourism sector on economic growth.

Chapter 2

Literature Review

2.1 Introduction

In this chapter, collection of research will be reviewed to gather information from previous research. In this literature review, some published information on an area will be reviewed to support the objective of a research that will be conducted. Article, journal, theses, newspaper and any academic material from accountable website or publication will be use in order to attain the objective. This study is about the impact of tourism on economic growth in Malaysia. In this section, reviews will be done on the economic impact of tourism. There is a need to gather and investigate upon the research done on the tourism to support the result in the end of this project paper. This summary of literature review on economic impact of tourism will depict by exploring research, looking at the methodology and their uses in attaining the objective. In this section review on Malaysia tourism will be done, second the empirical review on the relationship of tourism and economic growth and lastly, the literature review on input output analysis.

2.2 Overview of International Tourism's Impact on Economic

Tourism has become as one of a leading and one of the fast growing industries in the world over year. As stressed by WTO (2003), definition of tourism is a process,

activity and result which from relationship and interaction among tourism, suppliers, host government, host communities and surrounding environments that involves in attracting and hosting of visitors. Tourism is a sector that obtaining attention in many countries because of its contribution in the economic growth. Every year it been reported that the number of international tourist arrival have grew significantly in many countries which have directly and indirectly. International tourist arrival have rose by 4.6% in the first half 2014. Tourist destination around the world have received around 517 million international tourist from January till June 2014 which is 22 million more than first half year of 2013 (WTTC , 2014). The increment of international tourist arrival have led to increase of many economic aspect and countries which taken tourism as key of economic development have gain a lot from this sector.

Tourism is used as an engine to develop the economy of many countries around the world. Tourism, in government's view, will increase GDP of a country is important because its lead to increase the standard of living, income per capita , business opportunity , employment level and economic stability. Many government sees tourism as a tool of development that will protect the environment and traditions with minimum negative impacts (Liu & Wall, 2006). According to UNWTO 2014, the total contribution of travel and tourism to GDP in 2013 was USD 6,990.3 billion which is 9.5% of total GDP. Besides that, in 2013, the total contribution of travel and tourism to employment including job which is indirectly supported by tourism industry 8.9% from total employment and assume will increase by 2.5% in 2014.

2.3 Overview on Malaysia Tourism on Economic Growth.

In Malaysia, tourism is the fifth largest sector after oil, gas and energy, financial services palm oil and financial services largest sector. Malaysia is now recognised as the best tourist spot, ranking in top 10 best in arrival and in top 15 in global receipts. Besides that, tourism give impact on Malaysia economy, generating RM 39.9 billion in year 2009 to gross national income (GNI). It been assume that Malaysia's tourism industry will contribute income to RM103.6 million in GNI with RM 36 million arrivals in 2020 (Malaysia, 2010). This industry effects positively on the Malaysian economy for increasing foreign exchange earnings, and employment opportunities (Bhuiyan et al., 2011). Malaysia has secured third position in tourist arrivals among the Commonwealth countries after Britain and Canada. According to the statistics of 2005, tourism is contributing over 40% in the balance of payment of Malaysia and becomes the key foreign exchange earner of the country (Malaysia, 2006). In 2006, tourism contributed second largest foreign exchange earning sector after manufacturing. Tourism earned US$18.1 billion in export revenue which is representing 10 % of the total exports of Malaysia in 2006 (WTTC, 2006)

2.4 Empirical Review on Relationship between Tourism and Economic Growth.

2.4.1 Input Output Analysis

In this study, the relationship between tourism and economic growth will be studied. There are many studies done on the tourism sector which lead to the economic growth in different countries using input output analysis. As study done by Khan,

Chou and Wong in 1990 have used input output analysis. They used input output transaction table of 1983 to see the impact of economic impact of tourism in Singapore. This studies it shows that the tourism contributes 12.5% in GDP. The tourism income multiplier is 0.94 which is lower than multiplier obtained by Heng and Low (1990) but higher than Bahamas, Cayman islands and Fiji. Meanwhile, the estimated tourism employment multiplier were 33 jobs per million of Singapore and also output multiplier is 1.96 per Singaporean dollar and it nearly similar to the other research which done by Heng and Low. The import multiplier were also used and estimated to be 0.38 per Singaporean dollar.

Another research that written by Rashid et al. is an inter-sectoral analysis on Malaysian economy concern tourism impact analysis in which static input output analysis was the basic of the analysis. The author have used the 1983 input output table to assume the impact of tourism for 1991 on economy. Resulting from tourist expenditure, the direct and indirect impact on sectoral output, employment, non-competitive imports and commodity taxes were estimated following with questionnaire method in 1991. According to the research that, many sectors receiving benefits from this tourism sector either directly or indirectly. The influence on output, employment and commodity taxes by the contribution of tourist expenditure found to be varied and small which is less than 5%. The study conclude that the other sector do have strong technological linkages with other domestic supply sector, therefore it is important to give to develop these strategic and non-strategic tourism sector in designing tourism policy.

As emphasis Archer (1995) to see the importance of tourism on Bermudan's economy. Archer have used input out model in his research. In early 1980s till 1992 due to worldwide recession, the arrival of Bermudan's tourist receipt was decreasing. Input output model were developed in year 1985, 1987 and 1992 to measure the influence on income, employment, import and government revenue by specific tourist sector for overnight and cruise passengers. The result of the finding is that the tourism became the main source of employment even though tourism sector wasn't influence the foreign exchange and income for Bermudan economy. Besides that, the income multiplier show improvement from 1.095 in 1985 to 1.257 in 1992 and employment was 11500. In the end Archer suggested that Bermudian government need to emphasis on strategies measures to improve the tourism product.

Surugiu (2009) a research done on Romania's tourism. The author have employed input output analysis as the tool to measure the impact of hotel and restaurants for two different years, 2000 and 2005. The author have used output, value added, earning and employment multiplier as a backward linkages and used Augustinovics (1970) as the forward linkages for output, earning and employment. In this research the output (1.736/1.560) and employment (0.023/0.005) multiplier in hotels and restaurants reached higher value but in 2005, those regarding the value added (0.781/0.837) and earning (0.269/0.276) were smaller than 2000. As for the forward linkages coefficient, the result shows that hotel and restaurant have the lowest interdependence means output forward linkages (OFL) is 1.077 in 2005 is low than 2000 which is 1.91. For the earning forward linkage coefficient shows the importance of hotels are low 0.198 in 2000 and decrease to 0.171 in 2005. Employment forward linkages (LFL) there is a change of 0.014 in employment due

to a change in the final payment of hotel and restaurant. Using the I-O year 2005, the author have forecasted the final demand, intermediate consumption and value added for hotels and restaurant in Romania. The forecast of the macroeconomic indicators shows the final demand will reach up to 18.655 billion RON, intermediate consumption 9.999 billion RON and value added 12.438 billion RON. As a conclusion, the tourism sector can be effective even higher even double but with a strong tourism industry and transport infrastructure and diversified services.

In 2009 Surugiu, Frent and Surugiu have used input output analysis to measure the significant effect of tourism on Romania economy. The input output model synthesizes the inter relationship between hotels, restaurants and travel agencies and with other economic sectors. Other than that, input output analysis would also help to predict the effect that occurs due to the changes in an economy. In this journal backward and forward linkages were used to describe the increase in the production of tourism would increase the demand for input from other sectors and also the supply to other sector. These depict in general how tourism plays important role in Romania economy.

The result that obtain from this research is backward linkage coefficients are placing these tourism industries on the 11th positions. For input multiplier, a change of 1 Ron in the demand for hotels, restaurants and travel agencies results in a change in the economy's total output by 2.447 Ron. The income backward linkage for the tourism activity indicates that 1 Ron increase in the final demand would increase the income in the economy by 0.391 Ron. As it regards the EBL, this indicator is 0.029 and for the EFL it reaches 0.016. On the other hand, forward linkage coefficients

indicates a relatively low potential for hotels, restaurants and travel agencies to increase the supplies for sectors which use the tourism product in their production. The output forward linkage coefficient for hotels, restaurants and travel agencies shows that a unit change in sector final payments will generate a total change in the total output of the economy of 1.278 units. The forward linkage coefficient of 0.495 is placing the sector of the 17th position from 19th, indicating that the sector has a higher capacity to create value added than output, incomes or jobs. The forward linkage coefficient with respect to employment indicates that if the final payments of hotels, restaurants and travel agencies sector increases by one unit the total change in employment in the economy will be of 0.016.

2.4.2 Computable General Equilibrium (CGE)

Besides using input output analysis, there are many other researcher have used other type of tools to examine the impact of tourism on the economic growth. Over the last couple of years, however, there have been initial applications of CGE models to the tourism field in many countries such as Australia (Adams and Parmenter 1995), Hawaii (Zhou et al. 1997), Spain (Blake 2000), the UK (Blake et al. 2001) and the US (Blake and Sinclair 2002). CGE models have been used to evaluate the economic impact of increases or decreased in tourism demand and were developed to overcome the many shortcomings of IO models (Blake et al, 2001)

Adams and Parmenter (1995) have analysis the impact of tourism expansions on economic growth within certain regions in Australia the authors have computable

general equilibrium (CGE) model stimulating 10% growth of tourism for 117 sectors in in Australia economy.   The results of this research shows that an increase of 10% of tourism would give positive impact which is exchange rate appreciation and increase in import. The negative impacts are on traditional export sectors production and declining balance of trade. The author have added here that even though Queensland is one of the centres of tourism in the country but it experience a downturn in economic growth due to the crowding out in exports sectors for example agriculture and mining. Furthermore, it is suggested to that Queensland should highly depend on traditional export which is declining due to an expansion of international tourism.

Besides that, a study done by Blake (2000) estimates the effect of on 10 % increase in tourism would affect the Spain economy by using the CGE model. As a result 10 % increase in tourism would affect the GDP by 0.05%, 0.61% increase in real exchange rate and also a slight increase in household consumptions, domestic tourism and investment. The finding shows that the benefit from the expansion of the tourism would offset the increase in import and also decease in value of other export.

Zhou et al. (1997) analyse the economic effect of the declining tourism demand in Hawaii. In doing so they draw comparisons as to the effectiveness of the I-O and CGE analyses. They simulate a 10% decline in visitor expenditures in Hawaii's CGE and I-O models and compare the two results.it been found the decline of tourist demand would drop the number of output produced by the tourism sector such as transportation, hotels, restaurant and bars with smaller reduction in outputs for other sectors. In General, IO results provide estimates with larger magnitudes than CGE

results because the I-O model does not allow prices to fall. The CGE model apparently has specific advantages such as the ability to account for resource flows between sectors, to show price effects and to allow greater modelling flexibility

2.4.3 Causality test

This paper was done to examine the impact long run economic growth of Greece from 1960–I till 2000-IV and used causality analysis between real gross domestic product, real exchange rate and international tourism earning. The result obtain from Granger causality tests based on error correction models (ECM), this indicates the presence of long-run relationships among these variables. The results of the causality analysis denote that international tourism earnings and real exchange rate cause economic growth with a "strong causal" relationship, while economic growth and real exchange rate cause international tourism earnings with a "simply causal" relationship. The results of the cointegration analysis suggest the existence of cointegration relationship between the three variables (Dritsakis, 2004)

2.5 Input Output Table

Economic impact analysis is a way to estimate the effects from various economic event or changes that occurs in area's economy. Input output (I-O) model is the most command method used to see the impact on the economic at regional and state level. I-O model allow local communities, businesses and governments to estimate the effect of types of economic changes in an area or community (Montana Department

of Labour And Industry, 2013). The input output analysis is a standard method to measure the spread effects of the changes happen in final demand for the product in an industry or sector (Surugiu, 2009). The basic information used in input output analysis is the flow of product from each industry which is a producer to each of the sectors, itself or others as a consumer (Miler and Blair, 2009). Bekhet (2010), the basic I-O table describes rows showing "Who gives to whom?" and columns showing "Who receives from whom?" in an economy.

The structure of each sector's production activity is represented by appropriate structural coefficient that shows the quantitative term of the relationships between input and output. A set of linear equation interpret the interdependence among sectors which express the balance between the total input and total output of each good and services (Eurostat, 2008). The main need of in the input output analysis is the input output table. An input-output table records the "flows of products from each industrial sector considered as a producer to each of the sectors considered as consumers" (Miller and Blair, 1985). The production process of each good and services are always connected to each other. The product produce a sector will be used as inputs by other sectors while the product of the process many be used by other sector as input or also as final product. As the global becoming more competitive, stronger interdepends between sector are created, deeper division of labour and greater diversity and complexity of products , and the exchange of intermediate product become more important. Thus this makes to see the impact and estimating the consequence of changes in an economy is necessary (Eurostat, 2008). By using the input output analysis, the estimation of the input output coefficient which also called as the technical coefficient can be done. The technical coefficient

obtained by dividing each column of the transaction table with corresponding "total"

column.

I-O tables give a comprehensive and detailed information about the sales and

purchases of goods and services among numbers of industries in the economy and it

also been used by planner, policy-maker and economist in tourism (Economic and

Social Commission for Asia and Pacific, 1990). The advantages of using Input

Output analysis as a tool to measure the economic impact are it will reveal the

interrelation of tourism industry with other industry in the country. Besides that, it

provide consistent and systematic approach to understand the economic impact on

certain economic and also able to determine the relative size of the tourism sector in

the overall economy and enables to see the comparison of tourism sector with other

sectors (Surugiu,2009).

2.6 The multiplier effect

Economists have long been interested in measuring the total impact upon output,

income and employment resulting from a given change in demand or investment. To

this end, the multiplier as developed by Keynes is one of the most useful analytical

techniques (Mieryk, 1967). Multiplier can be used to estimating the overall changes

in in economy due to changes in final demand. Among all the information provided

by input output, multiplier is most frequently used (Surugiu, 2009). 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 describe 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 on unit of visitor spending in the local economy. According to Krumme (2009) there a few multipliers which popularly used in the input output analysis. First output multiplier which is expressed as the ration of output changes due to increase in a unit in final demand. Secondly the employment multiplier which is used to estimate the total employment attributable to the stimulus per job or man-year of employment directly created. Income multiplier is used to measure the changes income (wages, salaries and profits etc.) that happen due to the changes in final demand.

2.7 Forward and Backward Linkages

We also can get useful interpretation from the transaction table, is the measure of economic linkages in the economy. The I-O analysis show two results on analysed sector which are backward and forward linkages. Highly linked regional economies mostly will be self-sufficient than those with low linked. Other than that, this economy less rely on inputs from outside source. By analysing the value of the off diagonal element, the degree of linkages can be obtained from the input output table. According to Deller, Sumathi, Marcouiller (1993) the bigger the value show tightly linked economy, meanwhile smaller values shows that more open or looser economy.

Since Malaysia have is an open economy, the coefficient in the off diagonal being very small. Using this linkage analysis, the strengths of intersectoral forward (FL) and backward (BL) relationship between the tourism sector and other sector in the economy can be determine. FL measures the importance of tourism industry from the point as a supplier to the other industries and BL measures its relative important as demander (Cai, Leung & Mak, 2006).

2.8 Conclusion

There are many research done using different methods to examine the economic effect of tourism In this research the new input output table, 2010 which was released in 2014 will be used. The multiplier impact of output and the export of tourism sector will be examined and the backward and forward linkages will be examine using 8 subsector of tourism in Malaysia.

Chapter 3

Methodology

3.1 Introduction

A research design is very essential procedure in methodology. It is a blueprint containing the procedure for collecting information and methodology analysing the data. Information gathered through the research design is to identify whether the collected information is appropriate for answering the problem (Zikmund, 2003). Section the data source and methodology will describe. First the data source and data analysis method will be explained then continue with brief explanation on basic input output analysis. Next the estimation of tourism economic multiplier which consist of output multiplier and export of tourism multiplier. Lastly the backward and forward linkages will be explained.

3.2 Data resource

The main data that need in input output analysis is the input output table .The data used in this research is the 2010 Malaysia Input Output table and it is a secondary data obtained from the Department of Statistic Malaysia. The department of statistic Malaysia have uploaded the Input output table in their official website at www.statistics.gov.my.

3.3 Type of study

Quantitative method will be used in this research. By using input output table, the interrelationship of sectors in tourism industry itself and also with other sector can be evaluate. In input output table, there are 120 commodity x commodity input output matrix of Malaysia. The figures in the table shows the number of product that will be used as input to produce other commodity and also a final product that can be consumed. By using the figures in the table, tourism multipliers and also the interlinkage of the between sector will be calculated.

3.4 Technique of Data Analysis

Input output analysis always been used to see the impact of changes in economic. Due to cost and time saving, most of the researchers prefer to use this method to estimate the influence of certain changes in an economy. The main data for this research which is the input output table for year 2010 is obtained from the department of statistic official website. The input output table contained with 124 commodity x 124 commodity which show the amount output produced and input need by sector in Malaysia. Input output table of year 2010 will be used to do examine the impact of changes in final demand on economic growth in Malaysia. There are many sectors that fall under tourism sector and those sector directly serves tourism sector.

In the input output table, 124 commodities will be aggregated and arranged main sectors according to the list of 124 activity and 124 commodity classification

obtained from the department of Statistic Malaysia (2010). This will make to work more easily than looking the data in term of commodity which is nearly 124 commodity. Besides that, we can only focus on the sector which is falls under tourism sector and it total contribution to tourism sector itself and other sectors.

After aggregating the commodity into sectors, the table will be used to find the technical coefficient. This technical coefficients later will be used to obtain the multipliers such as output multiplier and the export of tourism sector multiplier by using the formulas provided. The data in input output table will be analysed using the Microsoft Office Excel to answer research objective. At last the result and the estimation will be interpreted and explain using tables and recommendation on how to improve the situation.

Figure 3.1: Flow of Data Analysis

Input output table, 2010

(Department of Statistic, Malaysia)

Aggregation of 124 commodity X 124 commodity

Malaysia Standard Industrial Classification (2008)

(MISC)

Leontif Input Output Model

Microsoft excel

Output and tourism export multiplier

Backward and Forward Linkages
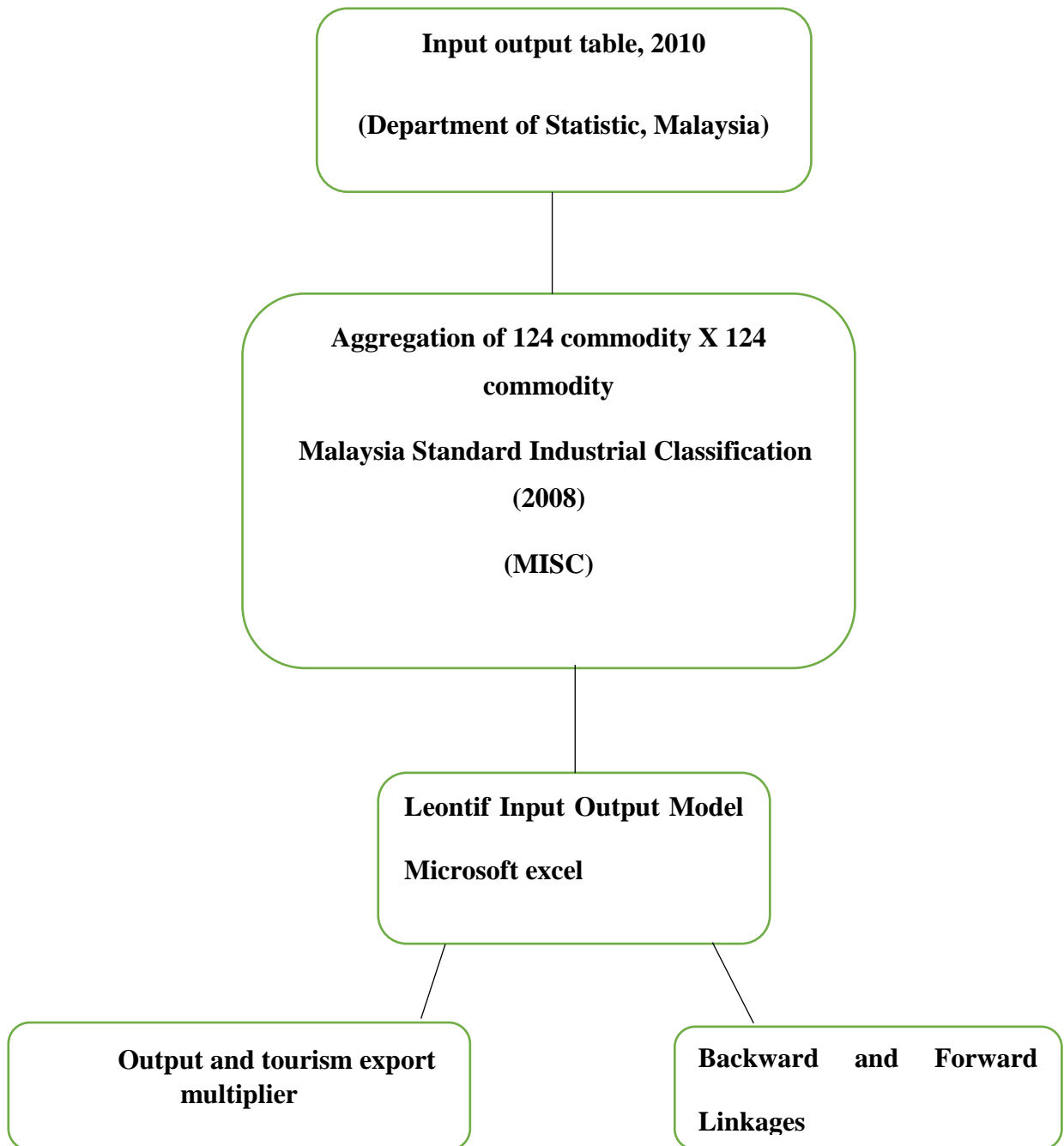
3.5 Basic Input Output Analysis.

Table below shows a very general view of I-O table which consist of four quadrants which quadrant 1 (Q1), quadrant 2(QII), quadrant 3(QIII) and quadrant 4 (QIV)

Figure 3.2: A General Structure of Input Output Table.

BRANCHES / PRODUCTS	1 2 3 ... n	HH	Gov	Inv.	Exp.	Out-put
1	X11...........X1j.........X1n					
2	Quadrant I			Quadrant II		
...	....			Final demand		
n	Xn1...........Xnj.........Xnn					
Gross Value Added						
a. Compensation of employees						
b. Gross operating surplus	Quadrant III			Quadrant IV		
c. Taxes on production (- subsidies)						
Imports						
Input						

Adapted from: Surugiu (2009), *The Economic Impact Of Tourism. An Input Output Analysis*

In each quadrants, there are transactions have among various sector and also the amount. QI shows the intermediate consumption. It is the basic of the input output table. It represent the transaction for intermediate sales and purchases of goods and services among firms. QII shows the final use of goods and services product local and state government unit, investment and exports. QIII is the requirement of each sector for primary input such as capital, land and labour and also the input absorb by the sectors in the economy sector and outside of the country (import). In this QIII we

have imported commodities, taxes on products, subsidies on product, and gross value added. Gross value added is the total of compensation of employee, other net taxes on production and operating surplus, gross. The operating surplus, gross itself is a total of consumption of fixed capital and operating surplus, net. In quadrant QIV, there is no any transaction occurs in this this sphere as there is very few market transaction reported in this section. The transaction table above can be also describe as this following equation:

$$a_{ij} = \frac{x_{ij}}{X_j}.$$

(1)

Where:

a_{ij}: the technical coefficient of sectors

X_{ij}: amount of input sector other sector purchase from the selling sector tourism sector

X_j: output for the tourism sector

In the output input model the total input is equal to total output which means the total receipts by seller must balance with the total expenditure by buyers. Devkota (2003) mention the three basic I-O table equation:

Intermediate input + gross value added = total inputs

Intermediate demand + final demand = total output

Total inputs = total output

Firstly the I-O model be turned into an analytical model and it can be done by converting the interbranches into a matrix A form. Matrix A is also called as the technical coefficient. By using this matrix A or technical coefficient, the direct requirement of a sector can be known in order to produce a unit of its product. The technical coefficient can be calculated by dividing the value from the transaction matrix by total input

$$a_{ij} = \frac{x_{ij}}{X_j}$$

Coefficient a_{ij} can be interpreted as the proportion of tourism industry total production input of industry supplied by any other industry. Assume that $x_{ij} = a_{ij} * X_j$, the equation (1) can be written by replacing $x_{ij \ and}$ obtain this

$$\sum_{i}^{n} x_{ij} = \sum_{i}^{n} a_{ij} * X_j + \sum_{i}^{n} Y_i \qquad (2)$$

Equation above shows that the production of each sector depends on the production level of other sectors and also the final demand. From equation (2), total output (X) equals to the sum of the total final demand for its output (Y) and intermediate demand for its output

$$X = A*X + Y \qquad\qquad (3)$$

Then by solving equation (3) for total output we will get

$$X = (I-A)^{-1} *Y \qquad\qquad (4)$$

And thus

$$\triangle X = (I-A)^{-1} * \triangle Y \qquad\qquad (5)$$

I is identity matrix and $(I-A)^{-1}$ is also known as Leontif inverse or also as the interdependence coefficient or total requirements table. The last equation shows that the product of a change in total final demand multiplied with $(I-A)^{-1}$ is the change in total output. Using the Leontif matrix which is matrix transformation which can be used to calculate multiplier coefficient. These coefficient will depict all the indirect effects.

3.6 Tourism Multipliers

Multiplier measures the impact of additional expenditure in happens in an economy.. Multipliers can be used to predict the change in the economy due to a change in final demand. Multipliers are one of the important tool that mostly used in input output analysis. In this study, tourism sector divided into seven subsectors

- Manufacture of food and drink
- Accommodation
- Restaurant
- Transportation
- Communication
- Finance and insurance
- Amusement and recreational services

By using these subsector the multiplier effect will be computed.

To achieve objective I, output multiplier is used to examine the impact of tourism on Malaysia output level

3.6.1 Output multiplier

The output multiplier shows how much one additional unit of tourist spending increases the level of output in the Malaysian economy.

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

OM=output multiplier

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

3.6.2 Export of Tourism Multiplier

To achieve the II objective, the export of tourism sector will be used. In this multiplier, one additional unit of export of tourism sector would affect the level of output can be obtained

$$EM = (I-A)^{-1} * E$$

EM=Export multiplier

(I-A)$^{-1}$ = Inverse matrix

E= total export

3.7 Interlinkages between Tourism Sector and Non-Tourism Sector.

Linkages analysis is used in this research to achieve objective III which is to see the interlinkages relationship between tourism related sector and non-tourism related sector. Linkages analysis is always used to show the importance of sector that produced goods and services. The linkages analysis were used to examine the strength of intersectoral forward and backward relationship between tourism sector and other sector The interdependence of production structure have been introduced by Rasmussen (1956), Chenery & Watanabe (1958). One of the well know method in this analysis is forward and backward linkages.

Backward linkages are also known as the column sums of the Leontief-inverse from the demand-driven input-output model which measures its relative importance as demander. Forward linkages is the row sums of the Ghosh-inverse from the supply-driven input-output model measures relative importance of the tourism sector as supplier to the other (non-tourism) industries in the economy. Besides these models, direct input coefficients, and direct output coefficients, and hypothetical extraction of sectors from the demand-driven and supply-driven model are used to define key sectors (Oosterhaven, 2008).

Chapter 4
Result and Discussion

4.1 Introduction

In this chapter discusses the result obtained after all the data from input output table 2010 by using formulas in Microsoft excel. Firstly the structure of Malaysia input output table 2010 will be describe. Then the technical coefficient will be discussed and multipliers will be estimated. Lastly the backward and forward intersectoral linkages will be calculated.

4.2 The Technical Coefficient

Technical coefficient is also known as the direct requirement table. This technical coefficient can be obtain from the transaction table by calculating using the formula. Technical coefficient shows the fraction of total expenditure of purchase input or what direct amount needed from the sector at the side. Technical coefficient can be computed using this simple formula.

$$aij = xij \,/\, xj$$

a_{ij} is shows the quantity of output sector tourism sector absorbed by another sector per unit in order to produce its output. This a_{ij} is also called as the input coefficient of commodity of sector tourism in to other sector. By using this technical coefficient ,

how much a sector need to produce its output in order to satisfy the depending intermediate demands of other sector to produce its output.

From Technical coefficient Table in Appendix, show the direct requirement of input needed from tourism sector by other sectors in Malaysia produce output and also the input need by tourism sector to produce its output from other sector in economy. Agriculture, forestry and fishery needed output from tourism sector as input by 0.0950 and mining and quarrying need 0.022 input from tourism sector. As for manufacturing, it needs 0.04 input from tourism sector and electricity, water and gas needed 0.016 unit of input from tourism sector. Other than that, construction needs 0.015 input from tourism sector and 0.0834 by wholesale and retail trade and motor vehicle. 0.091 unit of input needed by service sector from the tourism sector and lastly, tourism sector needed 0.32 from itself to produce its output.

Input needed by sectors from seven subsector of tourism to produce it output is shown in the same table and also the input required from other sector by the seven subsector to produce its output. Agriculture, forestry and fishery doesn't need any input from amusement and recreational services and also from accommodation. Agriculture, forestry and fishery needs 0.002 from restaurant and from transportation by 0.014. Next it needs 0.00 from communication and from finance and insurance 0.05 as input. Agriculture, forestry and fishery need 0.03 from manufacturing of food and drinks to produce its output.

Mining and quarrying need nothing from amusement and recreational services, accommodation and need very little input from restaurants. Mining and quarrying needs 0.0012 input from transportation and 0.001 from communication sector. For finance and insurance it needs 0.001 as input and 0.00 from manufacturing of food and drink to produce its output. Manufacturing sector needs 0.02 from transportation .0.00 from communication, 0.013 from finance and insurance and lastly 0.007 from manufacture of food and drink. As for electricity, water and gas requires no input from amusement and recreational services, accommodation and restaurant. It requires 0.007 from transportation and 0.005 from communication and also 0.043 from finance and insurance. Lastly 0.000 from manufacturing of food and drinks. Construction sector needs 0.008 from transportation, 0.002 from communication, 0.004 from finance and insurance. For wholesale retail trade and motor vehicle ,it need input from 0.009 from restaurant, 0.02 from transportation ,0.006 from communication , 0.022 from finance and insurance and 0.028 from manufacturing of food and drinks. Services sector need 0.0006 from amusement and recreational services as input to produce its output and 0.002 from accommodation, 0.006 from restaurant and 0.02 from transportation. From communication, service sector needs 0.025 and 0.04 from finance and insurance. Lastly needs 0.003 from manufacturing of food and drink. Tourism sector needs 0.004 from amusement and recreational services as input, 0.005 from accommodation, 0.008 from restaurant, 0.03 from transportation and from communication, it needs 0.07. Lastly for finance and insurance it needs 0.093 and 0.11 from manufacturing of food and drinks.

Besides that, the subsector needs input from other subsector of tourism to produce its output. For amusement and recreational services needs 0.13 input to produce its own

output, 0.00 from accommodation, 0.007 from restaurant, 0.008 from transportation, 0.04 from communication, 0.02 from finance and insurance and lastly 0.013 from manufacturing of food and drinks. For accommodation, it needs 0.12 from restaurant, 0.005 from transportation, 0.017 from communication, 0.019 from finance and insurance and 0.04 from manufacturing of food and drinks. Restaurant needs 0.047 from restaurant, 0.009 from transportation, 0.032 from communication, 0.037 from finance and insurance and lastly 0.22 from manufacturing of food and drinks. Next transportation need 0.01 inputs from restaurant, 0.01 from transportation, and 0.008 from communication. For communication, it needs 0.04 from transportation, 0.32 from communication and 0. 93 finance and insurance. For finance and insurance, it requires 0.02 from accommodation, 0.01 from transportation, 0.04 from communication, and 0.3 from finance and insurance. As for manufacturing of food and drinks, it needs 0.02 from restaurant, 0.001 from transportation and from communication, it needs 0.01 from finance and insurance and lastly needs 0.27 from manufacturing of foods and drinks.

4.3 Multiplier Effects.

There are many types of multiplier that can be used to see the economic impact of tourism sector. In this research, output multiplier and the multiplier effect of export from tourism sector can be obtain. This multiplier effect will examine the impact of every additional of RM 1 toward the output and the export of tourism sector.

4.3.1. Output Multiplier

The output multiplier shows how much one additional unit of RM 1 in final demand would give impact on total output

Table 4.1: Output Multiplier of Sectors in Malaysia

SECTORS	TOTAL EFFECT
AGRICULTURE, FORESTRY AND FISHERY	27.28
MINING AND QUARRYING	2.89
MANUFACTURING	32.28
ELECTRICITY ,WATER AND GAS	3.77
CONSTRUCTION	2.46
SERVICE SECTOR	18.68
TOURISM SECTOR	78.73

The Table above show the output multiplier to all sectors in Malaysia. This multiplier shows how much one additional unit of tourist spending to will affect other sectors' output in Malaysia. For the additional RM 1 final demand would affect the total product of agriculture, forestry and fishing by RM 27.28. For mining and quarrying, RM 2.89 will be effected in total output for RM 1 additional for final demand. Next for manufacturing the effect on output is RM 32.28 for every additional of RM 1 in tourist spending. This because the demand for manufacturing product high which make the production of manufacture sector will have a great impact from the increase of tourist spending. There is RM 3.77 of effect on electric,

gas and water output for every RM 1 spending of tourist in Malaysia. Construction sector will have the effect by RM 2.46 and gain the lowest effect from every additional RM 1 tourist spending which means there is no much effect on the construction for every additional RM 1 tourist spending. For service sector the effect on total output for every additional RM 1 is RM 18.68. And for tourism sector itself the effect RM 78.73 from every additional RM 1 of tourist spending. There are a huge effect on tourism sector as there is additional RM 1of tourist spending. There is a direct of effect on the tourism sector on tourist spending.

Table 4.2: Output Multiplier on Tourism Subsectors

SECTOR	TOTAL EFFECT
Manufacture Of Food And Drinks	5.6620207
Accommodation	0.0119503
Restaurant	0.1063736
Transportation	0.9121306
Communication	0.3924094
Finance And Insurance	3.4132725
Amusement And Recreational Services	0.0002521

In the table above, it can be seen that the manufacture of food and drink have the RM 5.66 which means that the every one unit of changes in final demand would give

impact RM5.66 changes in total output. For accommodation, the effect to the total output is RM 0.01 and for restaurant is by RM 0.11 effect on total output for every additional of RM 1 in final demand. As for transportation, the effect on total output is RM 0.91 for the every additional RM 1 in final demand and for communication, the effect is by RM 0.30 for total output. Other than that, the effect on finance and insurance is RM 3.41 for every addition of RM 1 in the final demand. The amusement and recreational services, there were very only a very mild impact on the total output for every RM 1 changes in final demand.

4.3.2 Export of Tourism Sector

Table 4.3: Export of Tourism Multiplier

SECTORS	TOTAL EFFECT
AGRICULTURE, FORESTRY AND FISHERY	10.851
MINING AND QUARRYING	1.112
MANUFACTURING	12.440
ELECTRICITY ,WATER AND GAS	1.453
CONSTRUCTION	0.947
SERVICE SECTOR	7.197
TOURISM SECTOR	30.201

The Table 4.3 show the export of tourism multiplier which show the effect on one additional unit of export of tourism sector on total output. The agriculture, forestry and fishery will be effect by 10.85 per cent. As for mining and quarrying, the

additional of every RM 1 in export of tourism will effect RM 1.18 of total output. For manufacturing sector every spending RM 1 will effect RM 12.44 of the total output. Other than that, the electricity , water and gas will be effect by RM 1.45 for every RM 1 additional of export of tourism sector and construction is effected by RM 0.95 for every additional of RM 1 in total output. The services sector, for a every RM 1 will affect the total output by RM 7.20 and for tourism sector of itself will be effect by RM 30.20 for every additional of RM 1.00.

Table 4.4: Export of Tourism Sector Multiplier on the Tourism Subsector

SECTOR	TOTAL EFFECT
Manufacture Of Food And Drinks	3.3546
Accommodation	0.000000000
Restaurant	0.000000000
Transportation	0.507394614
Communication	0.098669614
Finance And Insurance	0.499719470
Amusement And Recreational Services	0.000006656

For the export based multiplier, it can been that, for every additional of RM 1 in final demand, the impact on the manufacture of food and drinks are RM 3.35 in the total export. There is no any impact for both accommodation and restaurant in export for changes in final demand. As for transportation the effect on the export is RM 0.51 for

every RM 1 and for communication is by RM 0.10 and also for finance and insurance by RM 0.50 impact of export for every RM 1. There is a very low changes in the amusement and recreational services.

4.4 Inter Linkages Between Tourism And Non Tourism Sector

Table 4.5: Backward and Forward Linkages between Sectors

SECTORS	BACKWARD LINKAGES	RANK	FORWARD LINKAGES	RANK
Agriculture, Forestry And Fishery	1.518452	15	2.036061179	5
Mining And Quarrying	1.184986	17	1.405304658	12
Manufacture Of Food, Drink And Tobacco	2.441078	1	2.055866887	4
Manufacture Of Textile, Apparel And Leather Product	1.672664	10	1.146554923	11
Other Manufacturing	1.637305	11	3.789731653	1
Electricity, Water And Gas	1.535680	13	1.774424797	8
Construction	1.851662	6	1.282527422	14
Wholesale & Retail Trade And Motor Vehicle	1.542880	14	2.011094909	7
Accommodation	1.1890467	4	1.062914962	16
Restaurants	1.995229	2	1.278613422	15

Transportation	1.854267	7	1.650951640	8
Communications	1.953311	3	2.087060267	3
Finance And Insurance	1.860486	5	2.386003946	2
Real Estate And Ownership Of Dwelling	1.686762	9	1.325956632	13
Private Sector	1.544019	12	2.020718828	6
Amusement And Recreational Services	1.826980	8	1.154627648	10
Public Services	1.5033	16	1.036149424	17

In the table above, shows both backward and forward linkages between tourism sector and non-tourism sector. The higher value in backward linkages than forward linkage means that demand for input is more than its supply The manufacture of food, drinks and tobacco have the highest backward linkages which is 2.44 and its forward linkages is 2.055. This means that the manufacture of used more input from other sector to produce its input. Secondly the restaurant have 1.99 backward linkages and 1.27 for forward linkages. Followed by communication with backward linkages at 1.95 and forward linkages 2.087. For communication case,

communication sector need less from other sector to produce its output. Same goes for accommodation for backward linkages 1.89 and forward linkages is 1.06. Next for finance and insurance the backward linkages 1.86 and forward 2.37. As for construction backward linkages is 1.85 and forward linkages is 1.28. After that, for transportation the backward 1.85 and forward is at 1.65. For amusement and recreational services its backward linkages is 1.82 and forward linkages 1.15 followed by real estate 1.69 for backward and 1.33 for forward linkages. At 10th place manufacture of textiles, apparel and leather product have 1.67 as the backward and 2.055 for forward linkages and as for other manufacturing the backward linkages 1.63 and forward linkages is 3.79. Private sector is recorded 1.544 as backward and 2.02 as forward linkages. Next, as for electricity, water and gas have 1.535 is backward and 1.77 for forward linkages. Wholesale and retail trade and motor vehicle is 1.54 for forward linkages and 2.011 for backward linkages. Agriculture, forestry and fishery have 1.52 for backward linkages and 2.036 as forward linkages. Lastly public services have 1.51 for backward and 1.036 as forward linkages and mining and quarrying have 1.18 as backward and 1.41 for forward linkages.

Chapter 5

Conclusion and Recommendation

5.1 Introduction

In this chapter, a summaries will be done according to the literature review, research methodology and the result analysis. Besides that the research objective will be discussed according to the result obtain from the previous chapter. In the last part, according to the result obtain, the expectation and future recommendation will be given for future use. The I-O analysis is used to see the impact of tourism sectors in economic growth. Thus the result generated will be used as a reference in future for policy making regarding the tourism sector.

5.2 Summary of Finding

5.2.1 Research Summary

In this research the impact of tourism sector towards economic growth was analysed. Using the Malaysia input output table 2010 which obtained from the Department of Statistic Malaysia and to obtain the result input output analysis was used. Firstly the 124 commodity x 124 commodity will be aggregated in to 8 main sectors. To fulfil the objectives of the research, multiplier effect and the backward and forward linkages were used on the sector related to the tourism and non-tourism.

5.2.2 Summary of Finding

5.2.2.1 Objective one:

In the first objective, the multiplier impact have been examined to see the effect of the changes of final demand on the total output and same goes for the export multiplier to see the effect on the tourism based export. Thus in the output multiplier result there are a significant effect in for manufacture of food and drinks where every additional of RM 1 final demand would impact total final demand as much as RM 5.66 and next shows that the finance and insurance have RM 3.41 of final demand effect if there is an additional of RM 1 in final demand. For amusement and recreational services there is no effect in the total final demand if there is an additional RM 1.

5.2.2.2 Objective two

As for objective two the inter linkages between sector are examined to see the interlinkage between tourism related sector and non-tourism sector. Tourism sector with high linkage effects have big potential to boost economic and will directly improve the economic growth. The backward linkages will shows the demander side of the sector and as for forward linkages it shows the supplier side of the sectors. From the result we can see that the manufacture of food, drinks and tobacco have the highest demand of input from other sectors to produce its output. The mining and quarrying have the lowest backward linkages with other sectors shows that it doesn't rely on other sector to produce it output. For forward linkages, other manufacturing sector except food, drink and tobacco supply its output as input to other sectors to

produce its output and public services have weakest forward linkages which means the other sectors doesn't use public services output as its input.

5.3 Research Implication

In this study the influence of tourism sector on economic growth is shown. Thus this research can be used by many parties in order to obtain some idea or framework on how input output can be used and the result gained from the research done for many purposes. The result of this research will give an idea to improve the tourism sector in Malaysia. This can be used by academicians, researchers, policy makers, tourism ministry and many others stakeholders.

5.3.1 Researchers and Academicians

This study can be used by the researchers or academician from higher institution to do research on the tourism sector. Thus the method that been used in the research is to find the direct, indirect and induce effect of multiplier on the tourism sector. Besides that the backward and forward linkages were used to see the strength of linkages between the tourism sector and non-tourism sector.

5.3.2. Ministry of Tourism.

Many countries are taking tourism as an engine to develop the country in term of economic growth and economic development. Malaysia also have creates many policy and project for tourism sector. This research would help to see the impact of tourism sector on economic growth, this research can be used as a guideline to create policies that would improve the development of tourism sector as well as Malaysia

economy. After seeing the effect of the multiplier, the policy maker can bring up policy that could help the extent of tourism industry.

5.3.3 Private Sector, Local Businesses and People.

Private and local businesses can use this research and see the prospect in this business. By this, local business and tourism related private sector could reorganise the tourism product and marketing structure accordance to the need, current trend and demand of tourist. By fulfil the need of tourist, the local business could develop their business accordingly and gain profit that could also contribute to the economic growth. Besides that, the development business would help to create job opportunity and will reduce the unemployment rate in Malaysia.

5.4 Recommendation

There are many ways to improve the tourism sector in Malaysia. By looking at the rise in tourism sector, it create opportunity to improve the development of tourism by diversifying tourism active. There few suggestion that can be used to improve the development of tourism sector.

- Government should increase their effort in improving the economic impact of tourism sector.
- Government should promote activities that should be directed towards rising the awareness on the important in improving the tourism sector and also encourage tourist to visit Malaysia
- Improvements to attraction and present markets and developing tourist infrastructure.

- Government should create inter-ministerial committees include the representative from tourism sector in order to monitor and coordinate the implementation of tourism policy

- Malaysia government must make improvements in procedures for the issuance of visas, border formalities and customs regulation to ease international travel.

Besides government, private sector together with other stakeholders should collaborate in order to develop tourism. In order attract tourism around the world, there is a needed for a strategy that involve customer marketing to promote tourism product offering which must be different than other countries. For example promoting tour package with other tourism packages such as welfare tour packages with tourism homestay. This likely to be an "added value" for tourist product and will contribute to the extension of tourist visit to Malaysia.

Other than that, beautiful and unique need to be explored and introduce natural product that are invaluable to national treasure such as beautiful flora and fauna. This can increase the demand for tourism product to attract more tourists. Moreover as Malaysia is rich with racial diversity, it's important to focus on environmental and socio culture and integrate it international tourism policies and plans for tourism development by ministry of tourism Malaysia. In realizing the vision of 2020 to develop nation and introduce Malaysia at the international level, government and private sector should collaborate. Multilateral bilateral, and sub-regional cooperation should be strengthened.

In conclusion, the above recommendation are ways to improve Malaysia tourism sector for tourist attractions. However, tourism sector need to be improve and develop accordance needs, demands, current trend, tastes and quality of tourism sector.

5.6 Conclusion

In this study, the impact of Malaysia tourism on economic growth. In this research the importance of tourism on in improving the economic is highlighted and tourism effect on its sectors and also indirectly towards non tourism sector. Tourism sector is a collaboration several sectors and these functions of these sectors will developed Malaysia tourism sector with the help of government and private sectors intervention by policy making and enforcement of law. This research will be good material for policy maker, tourism ministry researchers and others to see the effect of tourism and how to develop it further.

The method used in this research is input output analysis, a method used to evaluate the economic impact at regional and state level. Multiplier effect is commonly used in this method to find the significant level in generating output and export of tourism sector. There are few information that we can obtain by using this multiplier. We can see influence of Malaysia tourism in order to generate output and export from tourism sector. Other than that, the strength of linkages between sectors can be determine using backward and forward linkages This tourism sector have strong

linkages among other sectors. Policy maker can use this information as a guide to make policies on tourism sector that can help in the extension tourism industry and promote the industry to next level to attract tourist. From the result of this research we can conclude that tourism sector are significantly impacts on the economic growth by generating the output and the export from tourism sector. Lastly the development of tourism sector can be achieved if there collaboration between various parties and also promoting tourism by implementing effective policies and projects to attract tourist and by 2020, Malaysia can be a develop nation by 2020.

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