

# Chapter 1

## Introduction

### 1.1 Rational Backgrounds

Tourism is considered as an important sector in several countries. It is one of the major sources of economic development. This has been made possible because of the rapid expansion of international tourism, which is mainly attributed to high growth rates of income in developed and newly industrialized countries. As a labor-intensive industry, it absorbs an increasing percentage of the workforce released from the agricultural and the manufacturing industries, and then prevents large scale unemployment. Therefore, aside from generating income and alleviating economic problems, this also creates employment, which translates into increased income, savings, investment and economic growth. (Lim, 1997, 835)

Countries such as Hong Kong, Taiwan and Singapore have a positive balance of payment of current account surplus. This is due to them having a surplus in foreign currency from international visitors as well as a limited supply of natural resources and raw materials to support the export sector.

The Thai government has a perception regarding the potential contribution of tourism to the economy, as witnessed by the inclusion of tourism promotion in every (national) economic and social development plan, which devoted an entirely separate section for tourism development. (National Economic and Social Development Board, 1976 cited in Bang-ornrat Rojwanasin, 1982, 2)

As a result of the economic crisis, Thailand established two main policies which the government introduced for the purpose of bringing in foreign exchange. This refers to the promotions for export and tourism areas. Particularly, tourism promotion is regarded as the fastest and most effective way to increase the inflow of foreign currencies. Therefore, revenue from tourism is one of the two main categories from which the government gained economically. Many countries such as Malaysia and Korea followed Thailand's path emphasizing the tourism industry. To further understand this matter, refer to Table 1.1 particularly in the East Asia section.

**Table 1.1: Number of international tourism arrivals to Thailand and length of stay 2005-2006**

Country of Origin	2006 Number of tourists	2005 Number of tourists	% Change (+/-)	2006 Duration of stay	2005 Duration of stay	% Change (+/-)
East Asia	7,942,143	6,692,982	+18.66	5.70	5.81	-0.11
Asean	3,556,395	3,099,569	+14.74	5.26	4.01	+1.25
Europe	3,321,795	2,686,567	+23.64	14.30	13.45	+0.85
America	825,118	739,707	+11.55	13.07	11.40	+1.67
South Asia	605,236	518,878	+16.64	7.10	5.82	+1.28
Oceania	627,246	501,882	+24.98	11.01	9.23	+1.78
Middle East	405,856	304,047	+33.48	8.62	9.28	-0.66
Africa	94,408	72,873	+29.55	8.83	6.74	+2.09
<b>Total</b>	<b>13,821,802</b>	<b>11,516,936</b>	<b>+20.01</b>	<b>8.62</b>	<b>8.20</b>	<b>+0.42</b>

**Source of data:** Immigration Bureau, Police Department

## **East Asia**

In 2006, East Asia recovered from the tsunami of December 2004. With more visitors than in 2005, international tourist arrivals in Thailand totaled 7,942,143. In the first quarter, the Chinese New Year Festival significantly stimulated more inbound Chinese tourists. Besides, many airlines such as Korean Air, Asiana Airlines, Air China, and charter flights to Phuket which had been cancelled resumed their flights to the province, which helped to revitalize Thai tourism. However, other factors such as the political chaos and disturbances in the three southern provinces should be taken into consideration because they are still important factors in decision-making for some groups of tourists, especially those first-time visitors to Thailand.

## **Overall Situation**

Thailand experienced international tourism receipts of 482,319 million baht or 12,726.10 million dollars in 2006. The highest amount came from the UK with 42,577.76 million baht or 1,123.42 million dollars. Japan came in second with 39,388.10 million baht or 1,039.26 million dollars. Korea came in third with 32,464.35 million baht or 856.58 million dollars and Malaysia came in fourth with 30,905.00 million baht or 815.44 million dollars. (Refer to Table 1.2)

International tourism receipts are calculated by: *(Total number of international tourists) x (the average length of stay) x (expenditure per person per day)*.

## **International Tourist Arrivals**

The tourist rate rose significantly in 2007. Most were first-time visitors coming from East Asia, Europe and the Middle East. However, Thailand could still retain a satisfactory growth rate of tourist from previous markets (ASEAN). (see Table 1.3)

This study focuses on the East Asian tourist group, which consists of the biggest share with 52.63%.

Overall, the number of international tourist arrivals in Thailand rose significantly with a 4.65% growth. This translates from the overall 2007 market of Malaysia with the highest rate (1,540,080), followed by Japan (1,277,638), Korea (1,083,652), and China, which came in fourth (907,117).

Even though Korea remained an important tourism market for Thailand, we still ignored it as it was not one of the higher market shares nor did it provide one of the majorities of international tourist arrivals in Thailand.

#### **Tourist Description:**

**1. Malaysian tourist situations and characteristics:** In 2007, the number of Malaysian tourists had fallen because of the disturbances in three southern Thai provinces. These disturbances played an important factor, which detrimentally affected the number of tourists coming to Thailand.

**2. Categories of Malaysian Tourists:** In 2006 private tours increased by 26% and group tours increased by 3%. Most of the tour participants were merchants, executive managers and housewives. (Marketing Database Group, Tourism Authority of Thailand, 2007)

**3. Trend:** In 2005, a survey on personal travel in the previous 12 months was conducted. Accordingly, 50% of Malaysian respondents considered international personal travel as important to their lifestyles, and 48% said it was somewhat important. Also, 96% of Malaysian travelers stated that they would make at least one personal trip on a commercial airline to an international destination in the next 12 months. The main reasons for their personal travels abroad were:

1. Sight-seeing (69%);
2. Relaxation (64%); and
3. Change of environment (51%).

In addition, another survey was conducted regarding business travel. It has been found that 46% of business travelers made more trips intra-regionally compared to outside Asia/Pacific. Also, 35% said the split was about the same and 19% had made more trips outside the region. Singapore was the most frequently visited Asia/Pacific destination (31%), followed by China (28%). Malaysia Airlines was the preferred airline for business travel (61%), followed by Cathay Pacific (13%) and Singapore Airlines (10%).

Malaysian Airlines was also the preferred airline for personal travel (52%) followed by Singapore Airlines (14%) and Cathay Pacific (11%).

**Japanese tourist situations and characteristics:** In 2007, the rate of Japanese tourists fell dramatically due to a bomb incident in Bangkok. This incident seriously affected local flights to major tourist destinations such as Phuket and Koh Samui.

**Categories:** In 2006, private tours increased by 10.37% and group tours increased by 7.98%. Most of these participants were employees, businessmen and executive managers. (Marketing Database Group, Tourism Authority of Thailand, 2007)

**Specific Categories of Japanese Tourists are as Follows:**

1. *Serving soldiers*, who are male aged 30 - 50, have difficulty in finding time for a vacation because of their work commitments. They want to enjoy meaningful experiences rather than visual tours. (Beecham, quoted in Dace, 1995)

2. *The Silver Greys*, those fifty to sixty years of age, have been influenced by growing up in the era of post-war austerity in Japan. They normally live frugal lives, but when they are on vacation, they like to let themselves go. However, they want the familiarity when on holiday, including Japanese food and tour guides who speak their language.

3. *The Full Mooners*. They are mature married couples who prefer to take single centre holidays, and are very quality-conscious.

4. *Technical Visit and Old Study Tours*. Many Japanese companies use work related study tours as a way of recruiting and rewarding staff. Most such tourists are men and many such trips are combined with leisure pursuits such as golf.

5. *Student Travel*. School, college and university students generally take short trips which are most popular in February. They tend to book flights and accommodation only from travel packages.

6. *The Young Affluent*. This is the twenty to thirty year old group, which has grown up in a period of affluence in Japan. They like to flaunt their money and they are independently-minded. They rarely take package vacations and are major participants in the short break and activity holiday market.

7. *The Office Ladies*. These are unmarried women in their early twenties. They have a large disposable income and they tend to live at home with their parents. They like travelling and enjoy visiting capital cities, such as Paris and London, and shopping in western countries. They like organized tours, although there is a trend towards more independent travel.

8. *The Honeymooners*. This group is defined by the fact that they go overseas for their honeymoon. This is true for as many as 95% of Japanese couples (Beecham,

quoted in Dace, 1995) who choose Asian destinations, European cities and cities in the USA.

**Possible Reasons for the Outbound Growth of Tourism in Japan:** (Consumer Behavior in Tourism, 2006)

1. Steady population growth since 1980 with bulges in the 25-29 and 50-54 age groups
2. The Japanese propensity for hard work has fuelled income growth
3. Increase in demand to go abroad
4. Increase in air capacity
5. Increase in business travel
6. Increased interest in Asia as a tourist destination

The Japanese market does have a controversial characteristic in terms of the demand of some Japanese tourists that their destinations should offer Japanese food, service, guides, and so on.

**Table 1.2 Tourism receipts from international tourist arrivals :  
January – December 2006**

Country of Residence	No. of Arrivals	Length of Stay (Days)	Per Capita Spending		Tourism Receipts	
			Baht/Day	\$US/Day	Mil. Baht	Mil. US
<b>East Asia</b>	<b>7,942,143</b>	<b>5.70</b>	<b>4,285.46</b>	<b>113.1</b>	<b>194,003.71</b>	<b>5,118.83</b>
<b>Asean</b>	<b>3,556,395</b>	5.26	<b>3,835.27</b>	<b>101.2</b>	<b>71,744.85</b>	<b>1,893.00</b>
Brunei	12,662	5.80	4,047.42	106.79	297.24	7.84
Cambodia	125,336	4.75	3,172.68	83.71	1,888.85	49.84
Indonesia	218,167	4.88	4,168.91	110.00	4,438.46	117.11
Laos	282,239	4.53	3,194.06	84.28	4,083.74	107.75
Malaysia	1,578,632	5.27	3,714.82	98.02	30,905.00	815.44
Myanmar	67,054	5.17	3,678.13	97.05	1,275.10	33.64
Philippines	202,305	6.96	3,975.62	104.90	5,597.84	147.70
Singapore	818,162	5.12	4,352.43	114.84	18,232.30	481.06
Vietnam	251,838	5.72	3,489.26	92.06	5,026.32	132.62
China	1,033,305	5.75	4,525.83	119.42	26,890.26	709.51
Hong Kong	463,339	4.82	4,816.06	127.07	10,755.69	283.79
Japan	1,293,313	6.63	4,593.55	121.20	39,388.10	1,039.26
Korea	1,101,525	6.25	4,715.54	124.42	32,464.35	856.58
Taiwan	472,851	5.99	4,298.37	113.41	12,174.60	321.23
Others	21,415	6.52	4,195.93	110.71	585.86	15.46
<b>Europe</b>	<b>3,321,795</b>	<b>14.30</b>	<b>3,704.64</b>	<b>97.75</b>	<b>175,976.60</b>	<b>4,643.18</b>
Austria	76,698	12.80	3,916.12	103.33	3,844.58	101.44
Belgium	66,835	14.16	3,528.26	93.09	3,339.10	88.10
Denmark	124,151	12.53	3,952.07	104.28	6,147.88	162.21
Finland	112,006	13.27	4,036.90	106.51	6,000.15	158.32
France	319,910	14.32	3,828.92	101.03	17,540.77	462.82
Germany	507,942	14.69	3,598.99	94.96	26,854.48	708.56
Italy	143,343	12.73	3,523.01	92.96	6,428.63	169.62
Netherlands	174,266	14.78	3,967.29	104.68	10,218.35	269.61
Norway	101,920	14.21	3,844.74	101.44	5,568.27	146.92
Russia	190,834	11.37	3,813.64	100.62	8,274.75	218.33
Spain	73,820	13.09	3,569.49	94.18	3,449.21	91.01
Sweden	307,284	14.81	3,488.34	92.04	15,874.99	418.87
Switzerland	145,647	14.95	3,463.93	91.40	7,542.41	199.01
UK	745,525	15.63	3,653.94	96.41	42,577.76	1,123.42
East Europe	95,312	12.36	3,884.68	102.50	4,576.36	120.75
Others	136,302	14.24	3,987.20	105.20	7,738.91	204.19

**Source of data:** Immigration Bureau, Police Department



**Table 1.2 Tourism receipts from international tourist arrivals (Continued)  
January - December 2006**

Country of Residence	No. of Arrivals	Length of Stay (Days)	Per Capita Spending		Tourism Receipts	
			Baht/Day	\$US/Day	Mil. Baht	Mil. \$US
<b>The Americas</b>	<b>825,118</b>	<b>13.07</b>	<b>4,292.81</b>	<b>113.27</b>	<b>46,294.90</b>	<b>1,221.50</b>
Argentina	3,814	7.88	4,378.41	115.53	131.59	3.47
Brazil	8,926	7.39	3,972.06	104.80	262.01	6.91
Canada	149,924	13.27	4,213.45	111.17	8,382.61	221.18
U.S.A.	640,674	13.31	4,323.76	114.08	36,870.40	972.83
Others	21,780	7.69	3,870.66	102.13	648.29	17.11
<b>South Asia</b>	<b>605,236</b>	<b>7.10</b>	<b>4,435.74</b>	<b>117.04</b>	<b>19,061.16</b>	<b>502.93</b>
Bangladesh	44,081	6.02	4,237.14	111.80	1,124.40	29.67
India	429,732	7.50	4,627.48	122.10	14,914.33	393.52
Nepal	23,205	5.90	3,402.83	89.78	465.88	12.29
Pakistan	45,122	6.03	3,335.06	88.00	907.42	23.94
Sri Lanka	47,448	5.97	4,487.54	118.40	1,271.16	33.54
Others	15,648	7.19	3,359.46	88.64	377.97	9.97
<b>Oceania</b>	<b>627,246</b>	<b>11.01</b>	<b>4,245.87</b>	<b>112.03</b>	<b>29,321.91</b>	<b>773.67</b>
Australia	538,490	11.22	4,293.27	113.28	25,939.32	684.41
New Zealand	86,703	9.78	3,918.92	103.40	3,323.06	87.68
Others	2,053	8.34	3,476.81	91.74	59.53	1.57
<b>Middle East</b>	<b>405,856</b>	<b>8.62</b>	<b>4,092.87</b>	<b>107.99</b>	<b>14,318.79</b>	<b>377.80</b>
Egypt	11,546	6.83	4,381.49	115.61	345.52	9.12
Israel	117,649	11.45	3,712.30	97.95	5,000.78	131.95
Kuwait	38,885	7.08	4,359.44	115.02	1,200.18	31.67
Saudi Arabia	23,870	8.31	4,527.47	119.46	898.07	23.70
U.A.E.	87,006	7.19	4,441.84	117.20	2,778.69	73.32
Others	126,900	7.66	4,213.30	111.17	4,095.55	108.06
<b>Africa</b>	<b>94,408</b>	<b>8.83</b>	<b>4,009.13</b>	<b>105.78</b>	<b>3,342.10</b>	<b>88.18</b>
South Africa	43,444	9.83	4,346.69	114.69	1,856.27	48.98
Others	50,964	7.99	3,648.88	96.28	1,485.83	39.20
<b>Grand Total</b>	<b>13,821,802</b>	<b>8.62</b>	<b>4,048.22</b>	<b>106.81</b>	<b>482,319.17</b>	<b>12,726.10</b>

Note : 1\$US = 37.90 Baht

Source of data: Immigration Bureau, Police Department

**Table 1.3 International tourist arrivals to Thailand (January-December)**

Country of Nationality	2007		2006		%Change	Air	Land	Sea
	Number	% Share	Number	% Share	07/06			
<b>East Asia</b>	<b>7,611,931</b>	<b>52.63</b>	<b>7,622,244</b>	<b>55.15</b>	<b>- 0.14</b>	<b>5,525,455</b>	<b>1,934,819</b>	<b>151,657</b>
<b>Asean</b>	<b>3,520,051</b>	<b>24.34</b>	<b>3,389,342</b>	<b>24.52</b>	<b>+ 3.86</b>	<b>1,573,134</b>	<b>1,821,778</b>	<b>125,139</b>
Brunei	8,987	0.06	9,418	0.07	- 4.58	8,324	558	105
Cambodia	99,945	0.69	117,100	0.85	- 14.65	31,717	64,695	3,533
Indonesia	237,592	1.64	219,783	1.59	+ 8.10	155,174	69,763	12,655
Laos	513,701	3.55	276,207	2.00	+ 85.98	14,667	484,677	14,357
Malaysia	1,540,080	10.65	1,591,328	11.51	- 3.22	490,529	1,010,213	39,338
Myanmar	72,205	0.50	62,769	0.45	+ 15.03	71,166	763	276
Philippines	205,266	1.42	198,443	1.44	+ 3.44	159,470	36,759	9,037
Singapore	604,603	4.18	687,160	4.97	- 12.01	538,737	39,698	26,168
Vietnam	237,672	1.64	227,134	1.64	+ 4.64	103,350	114,652	19,670
China	907,117	6.27	949,117	6.87	- 4.43	877,902	19,168	10,047
Hong Kong	367,862	2.54	376,636	2.72	- 2.33	364,449	2,207	1,206
Japan	1,277,638	8.83	1,311,987	9.49	- 2.62	1,237,318	29,253	11,067
Korea	1,083,652	7.49	1,092,783	7.91	- 0.84	1,022,303	58,752	2,597
Taiwan	427,474	2.96	475,117	3.44	- 10.03	423,119	2,866	1,489
Others	28,137	0.19	27,262	0.20	+ 3.21	27,230	795	112
<b>Europe</b>	<b>3,905,271</b>	<b>27.00</b>	<b>3,490,779</b>	<b>25.26</b>	<b>+ 11.87</b>	<b>3,667,257</b>	<b>175,176</b>	<b>62,838</b>
Austria	81,391	0.56	76,106	0.55	+ 6.94	77,583	2,598	1,210
Belgium	72,018	0.50	68,617	0.50	+ 4.96	66,163	4,278	1,577
Denmark	141,110	0.98	128,037	0.93	+ 10.21	135,436	4,341	1,333
Finland	143,266	0.99	110,502	0.80	+ 29.65	138,563	3,705	998
France	373,090	2.58	321,278	2.32	+ 16.13	336,024	29,066	8,000
Germany	544,495	3.76	516,659	3.74	+ 5.39	511,782	22,587	10,126
Ireland	73,734	0.51	68,198	0.49	+ 8.12	67,454	5,168	1,112
Italy	171,328	1.18	150,420	1.09	+ 13.90	161,561	6,900	2,867
Netherlands	194,434	1.34	180,830	1.31	+ 7.52	175,797	13,711	4,926
Norway	108,941	0.75	106,314	0.77	+ 2.47	103,535	4,151	1,255
Russian	277,503	1.92	187,658	1.36	+ 47.88	271,727	4,795	981
Spain	82,111	0.57	69,658	0.50	+ 17.88	78,980	2,234	897
Sweden	378,387	2.62	306,085	2.21	+ 23.62	360,511	12,413	5,463
Switzerland	146,511	1.01	140,741	1.02	+ 4.10	136,849	7,352	2,310
United Kingdom	859,010	5.94	850,685	6.15	+ 0.98	798,154	43,530	17,326
East Europe	148,302	1.03	110,113	0.80	+ 34.68	141,276	5,353	1,673
Others	109,640	0.76	98,878	0.72	+ 10.88	105,862	2,994	784
<b>The Americas</b>	<b>920,366</b>	<b>6.36</b>	<b>923,382</b>	<b>6.68</b>	<b>- 0.33</b>	<b>849,629</b>	<b>49,176</b>	<b>21,561</b>
Argentina	6,704	0.05	4,327	0.03	+ 54.93	6,051	448	205
Brazil	15,056	0.10	11,841	0.09	+ 27.15	14,462	429	165

Source of data: Immigration Bureau, Police Department

**Table 1.3 International tourist arrivals to Thailand (January – December) (Continued)**

Country of Nationality	2007		2006		%Change 07/06	Air	Land	Sea
	Number	% Share	Number	% Share				
Canada	183,440	1.27	183,094	1.32	+ 0.19	164,964	13,168	5,308
U.S.A.	681,972	4.71	694,258	5.02	- 1.77	632,862	33,737	15,373
Others	33,194	0.23	29,862	0.22	+ 11.16	31,290	1,394	510
<b>South Asia</b>	<b>709,811</b>	<b>4.91</b>	<b>631,208</b>	<b>4.57</b>	<b>+ 12.45</b>	<b>680,622</b>	<b>9,941</b>	<b>19,248</b>
Bangladesh	44,789	0.31	40,281	0.29	+ 11.19	44,441	320	28
India	536,356	3.71	459,795	3.33	+ 16.65	509,309	8,608	18,439
Nepal	19,546	0.14	21,180	0.15	- 7.71	19,278	152	116
Pakistan	46,656	0.32	46,367	0.34	+ 0.62	45,704	570	382
Sri Lanka	44,327	0.31	46,557	0.34	- 4.79	43,848	201	278
Others	18,137	0.13	17,028	0.12	+ 6.51	18,042	90	5
<b>Oceania</b>	<b>764,072</b>	<b>5.28</b>	<b>651,262</b>	<b>4.71</b>	<b>+ 17.32</b>	<b>715,976</b>	<b>27,524</b>	<b>20,572</b>
Australia	658,148	4.55	549,547	3.98	+ 19.76	617,046	22,656	18,446
New Zealand	104,195	0.72	98,786	0.71	+ 5.48	97,236	4,844	2,115
Others	1,729	0.01	2,929	0.02	- 40.97	1,694	24	11
<b>Middle East</b>	<b>436,100</b>	<b>3.02</b>	<b>392,416</b>	<b>2.84</b>	<b>+ 11.13</b>	<b>426,958</b>	<b>7,017</b>	<b>2,125</b>
Egypt	13,037	0.09	11,882	0.09	+ 9.72	12,797	99	141
Israel	128,674	0.89	121,508	0.88	+ 5.90	123,118	4,857	699
Kuwait	31,910	0.22	33,934	0.25	- 5.96	31,413	378	119
Saudi Arabia	22,483	0.16	20,804	0.15	+ 8.07	22,125	237	121
U.A.E.	74,957	0.52	69,509	0.50	+ 7.84	74,708	145	104
Others	165,039	1.14	134,779	0.98	+ 22.45	162,797	1,301	941
<b>Africa</b>	<b>116,677</b>	<b>0.81</b>	<b>110,511</b>	<b>0.80</b>	<b>+ 5.58</b>	<b>109,595</b>	<b>5,036</b>	<b>2,046</b>
S. Africa	52,788	0.36	47,228	0.34	+ 11.77	50,472	1,110	1,206
Others	63,889	0.44	63,283	0.46	+ 0.96	59,123	3,926	840
<b>Grand Total</b>	<b>14,464,228</b>	<b>100.00</b>	<b>13,821,802</b>	<b>100.00</b>	<b>+ 4.65</b>	<b>11,975,492</b>	<b>2,208,689</b>	<b>280,047</b>

**Source of data :** Immigration Bureau, Police Department

From table 1.4, it can be seen that China is the first choice of tourist destination for Japanese tourists and Thailand is the fifth. A large proportion of tourist trips are for leisure-purposes, with business travel being of secondary importance.

Considering the number of tourist arrivals and Thailand international tourism receipts, it was found that the majority of tourists coming to Thailand are from Malaysia and Japan. This study can be used to compare with US and UK markets for making policy because of the difference in tourist behaviors.

**Table 1.4 Japanese Outbound travels by purpose of visit and leading destination**

<b>Japanese Arrivals (2005)</b>	<b>Number</b>	<b>Share</b>
1.China	3,390,000	19.5%
2.U.S.A.	2,929,000	16.8%
3.Korea	2,440,000	14.0%
4.Hong Kong	1,211,000	7.0%
5.Thailand	1,197,000	6.9%
6. Taiwan	1,127,000	6.5%
7.Guam	955,000	5.5%
8.Australia	686,000	3.9%
9.France	667,000	3.8%

**Source:** UNWTO, 2006

## 1.2 Literature Review

In 2002, Mello, et al. conducted a study regarding the international model of tourism demand. They used a system of equation model to examine tourism demand during the periods of transition and integration into the wider international community. The Almost Ideal Demand System model (AIDS model) was applied to the UK demand for tourism in neighboring destinations of France, Spain and Portugal. The results showed the extent to which the cross-country behavior of demand becomes more or less similar over time with respect to changes in expenditure and

effective prices. The expenditure elasticities were greater for Spain than France during the initial period, indicating that tourism could assist countries to ‘catch-up’ with their richer neighbors. However, this outcome was not always the case and might not persist, as Portugal had low initial expenditure elasticity and Spain’s relatively high expenditure elasticity decreased over time. Destinations’ sensitivity to changes in their own and competitors’ prices could also change over time, as indicated by the increases in the own-price and cross-price elasticities for Spain, compared with the decreases for France and Portugal. The cross-price elasticity estimated indicates substitutability between the immediate neighbors, Portugal and Spain, and France and Spain.

Alleyne (2003) suggested that when analyzing tourism demand, account should be taken of the time series property of the data, in particular, seasonal unit roots. He employed the HEGY methodology in modeling the demand for Jamaica’s tourism product and compared the results with those obtained from the traditional Box Jenkins methodology in which seasonal unit roots are implicitly assumed. Alleyne (2003) found that pre-testing the data for seasonal unit root and incorporating their effects helps improve forecasting accuracy in the single equation model.

In the case of Thailand, Song and Witt (2003) examined the demand for Thai tourism by seven major countries – Australia, Japan, Korea, Singapore, Malaysia, the UK and the USA. The general autoregressive distributed lag model (ADLM) was followed in the construction, estimation, testing and selection of the tourism demand models. The empirical results showed that habit persistence was the most important factor that influences the demand for Thai tourism by residents from all origin countries. The income, own price, cross price and trade volume variables were also found to be significant in the demand models, but the explanatory power of these

variables, judged by the number of times they appear in the models, varies from origin to origin. The Asian financial crisis that occurred in late 1997 and early 1998 also appeared to have had a significant impact on tourist arrivals from Singapore, Malaysia, Korea and the UK, but the magnitude and direction of influence are not the same for all models. The models that performed relatively well for each of the countries, according to both economic and statistical criteria, were selected to generate *ex ante* forecasts for the period up to 2010. The results suggested that Korea, Malaysia and Japan are expected to be the largest tourism generating countries by the end of the forecasting period, while the growth rate of tourist arrivals from Korea to Thailand was likely to be the highest among the seven origin countries.

For Asian countries such as Malaysia, Norlida Hanim Mohd Salleh, Law Siong-Hook, Sridar Ramachandran, Ahmad Shuib and Zaleha Mohd Noor (2008) all attempted to estimate the demand for tourism to Malaysia in the long and short-term as well as the relationship among tourist arrivals and some of the macroeconomic variables. Tourism price, travelling cost, substitute tourism price, income and exchange rate had been selected as the determinants in the long-run as well as the short-term. The 1997 Asian economic crisis and the outbreak of SARS were also included as short-run variables. Here the Asian 7 had been chosen since it was the highest market share of tourist arrivals to Malaysia. The ARDL (The autoregressive distributed lag) technique was applied to test the evidence of long-run and short-run relationships between demand for tourism and its determinants. The empirical results showed that there was a cointegration among the variables in all the individual countries of the Asian 7. Most of the variables were significant in the tourism demand for Malaysia in the long-run as well as for the short-run granger causality.

Furthermore, there were some similarities in terms of the culture and religions among the population. These factors might also motivate the citizens to travel irrespective of high tourism price and travelling cost. However, in general, the empirical results were consistent with the economic theory and models passed all the diagnostic tests. Thus, the results from this study can be used as a guide in order to formulate relevant tourism policy for Malaysia.

In volatility analysis, Michael McAleer, Riaz Shareef and Bernardo da Veiga (2005) studied a risk management framework of daily tourist tax revenues for the Maldives, which was a unique SITE (Small Island Tourism Economies) because it relied almost entirely on tourism for its economic and social development. Daily international arrivals to Maldives and their associated growth rates were analyzed for the period 1994-2003. This seemed to be the first analysis of daily tourism arrivals and growth rates data in the tourism research literature.

The primary purpose for analyzing volatility was to model and forecast the Value-at-Risk (VaR) thresholds for the number of tourist arrivals and their growth rates. This seemed to be the first attempt in the tourism research literature to apply the VaR portfolio management approach to manage the risks associated with tourism revenues. The empirical results based on two widely-used conditional volatility models showed that volatility was affected asymmetrically by positive and negative shocks, with negative shocks to the growth in tourist arrivals having a greater impact on volatility than previous positive shocks of a similar magnitude. The forecasted VaR threshold represented the maximum expected negative growth rate that could be expected given a specific confidence level. Both conditional volatility models led to the same average VaR at -6.59%, which meant that the lowest possible growth rate in

daily tourists in residence, and hence in tourist tax revenues, was expected to be - 6.59% at the 99% level of confidence. This should be useful information for the Maldivian government and private tourism service providers in the Maldives.

Riaz Shareef and Michael McAleer (2007) showed how the GARCH(1,1) model and the GJR (1,1) model could be used to measure the conditional volatility in monthly international tourist arrivals to six SITEs, namely Barbados, Cyprus, Dominica, Fiji, Maldives and Seychelles, and to appraise the implications of conditional volatility of SITEs for modeling tourist arrivals. For the logarithm of monthly international tourist arrivals, the estimates of the conditional volatility using GARCH (1, 1) and GJR (1, 1) were highly satisfactory. The sufficient conditions to ensure positivity of the conditional variance were met for all six SITEs, except for Maldives. It was worth noting that the empirical log-moment and second moment conditions were satisfied for both models and all six SITEs, which indicated model adequacy for policy analysis and formulation. The asymmetric effects were generally satisfactory, with the exception of Dominica. This implies that the effect of positive shocks on conditional volatility was greater than negative shocks in the short and long run. Thus, the results for Dominica suggested that an unexpected fall in monthly international tourist arrivals decreases the uncertainty about future monthly international tourist arrivals, which was contrary to the results for the other five SITEs.

In a study on the impact of other factors of volatility, GARCHX models were introduced by Apergis (1998) to investigate how short-run deviations from the relationship between stock prices and certain macroeconomic fundamentals affect stock market volatility. In the Apergis model, the squared past error-correction term



which represents the short run deviations is added to the GARCH conditional volatility.

Soosung Hwang (2001) introduced a simple new conditional volatility model called GARCHX using the cross-sectional market volatility. The model was simple, but could be used to explain the proportion of market volatility included in individual stock volatility. Using data from the UK and US markets, this consisted of individual asset returns included in the FTSE350 and the S&P500. Daily log-returns were calculated from 11 December 1989 to 9 December 1999. He found that in more than three-quarters of the cases, the maximum likelihood values of the GARCHX (1, 1) model were larger than those of the GARCH (1, 1) model and the coefficients on the cross-sectional market volatility were significant. Therefore, individual stock volatility seemed to be better specified with the inclusion of additional cross-sectional market volatility. Finally, he found that the proportion of the market volatility in an individual stock's conditional volatility ranges from 12% to 16%.

From details of literature reviews, we can conclude that Mello, et al. (2002) studied the AIDS model that was given by

$$w_i = \alpha_i + \sum_j \gamma_{ij} \ln p_j + \beta_i \ln \left( \frac{x}{p} \right)$$

Where  $w_i$  = the logarithm of the expenditure share of tourism

$\ln p_j$  = the logarithm of the effective prices of tourism

$\ln \left( \frac{x}{p} \right)$  = the logarithm of the real per capita expenditure of tourism

$\gamma_{ij}$  = the own-price and cross-price elasticities of demand

$\beta_i$  = the expenditure elasticities of demand

They studied the elasticities of demand and forecasts using the method of estimation that was the Ordinary Least Square (OLS). OLS is a static analysis, thus it relies heavily on the basic assumptions in the Classical Linear Regression Model (CLRM), especially the assumptions related to the error term. Any violation of the assumptions would result in invalid regression estimation.

In order to overcome this problem, the data used in regression analysis should be stationary. If the data is stationary, then the error term should meet all the basic requirements under the CLRM assumptions. However, most tourism demand data shows seasonal activity and such data might exhibit non-stationary trends and seasonality, and the issue of stationary data has been ignored by this paper. Estimation based on non-stationary data is flawed. This can lead to a serious problem of spurious regression. The consequence for ignoring data stationarity is that the estimated parameters are unreliable and t-tests and F-tests produce misleading results. Hence, in order to overcome this problem, Alleyne (2003) suggested that when analyzing tourism demand, account should be taken of the time series property of the data, in particular, seasonal unit roots. He employed the HEGY methodology in tourism demand modeling. He found that pre-testing the data for seasonal unit root and incorporating their effects helps improve a problem of spurious regression and forecasting accuracy.

To overcome this problem, the modern econometric methodologies are employed in recent studies on the demand for tourism. After the mid-1990s, most researchers apply the dynamic analysis since the problem of spurious regression. Two of the most popular dynamic methodologies in the field of tourism at present are the ADLM (The general autoregressive distributed lag model) and the ARDL (The

autoregressive distributed lag). Song and Witt (2003) examined the demand for Thai tourism by seven major origin countries using the ADLM and Norlida Hanim Mohd Salleh, et al. (2008) which estimated the demand for tourism to Malaysia among tourist arrivals using the ARDL. The ADLM is the error correction method (ECM) while the ARDL is the cointegration method. The ECM method is a dynamical system with the characteristics that the deviation of the current state from its long-run relationship will be fed into its short-run dynamics. The cointegration method shows the long-run equilibrium relationship while accommodating the dynamic short-run relationship. If the equations under consideration are cointegrated, the regression equations are free from spurious results.

For volatility analysis, Michael McAleer, et al. (2005) studied a risk management framework of daily tourist tax revenues for the Maldives using value at risk (VaR) to measure the risk from growth of the number of tourist arrivals affecting the environment. The GARCH (1, 1) and The GJR (1, 1) were used to forecast the required conditional volatilities. Riaz Shareef, et al. (2007) showed how the GARCH (1, 1) model and the GJR (1, 1) model could be used to measure the conditional volatility in monthly international tourist arrivals to six SITES. Their results also show that the GARCH (1, 1) and the asymmetric GJR (1, 1) models provide an accurate measure of risk. Besides, there were several external factors affecting volatility. Therefore, Apergis (1998) introduced GARCHX (1, 1) models to investigate how short-run deviations from the relationship between stock prices and certain macroeconomic fundamentals affect stock market volatility. Finally, Soosung Hwang (2001) introduced GARCHX using the cross-sectional market volatility. Their results

also show that the GARCHX (1, 1) and the asymmetric GJR-X (1, 1) models provide an accurate measure of risk like the GARCH (1, 1) and the asymmetric GJR (1, 1).

In studies from literature reviews, we can conclude the weakness and the strengths of the previous studies as follows:

#### **Weakness**

1. Using the method of the estimation that was the Ordinary Least Square (OLS), it relies on the basic assumptions in the Classical Linear Regression Model (CLRM), especially the assumptions related to the error term. Any violation of the assumption would result in invalid regression estimation (spurious regression).

#### **Strengths**

1. Using the HEGY methodology in tourism demand modeling that pre-testing the data for incorporating their effects helps improve the problem of spurious regression and forecasting accuracy.
2. Two of the most popular dynamic methodologies in the field of tourism are the ADLM (The general autoregressive distributed lag model) and the ARDL (The autoregressive distributed lag); the ADLM is the error correction method (ECM) while the ARDL is the cointegration method. If the equations under consideration are cointegrated, the regression equations are free from spurious results.
3. For volatility analysis, the GARCH (1, 1) model and the GJR (1, 1) model could be used to measure the conditional volatility in monthly international tourist arrivals. Their results show that the GARCH (1, 1) and the asymmetric GJR (1, 1) provide an accurate measure of risk.

To overcome the spurious regression and forecasting accuracy problem from the traditional regression, the data used in regression analysis should be stationary otherwise it must be cointegrated. If the data is stationary, then the error term should meet all the basic requirements under the CLRM assumptions. The unit root tests and seasonal unit root tests must be used to test the stationarity of the data. In the study for Malaysian and Japanese tourist demand elasticities analysis and forecasts, we will use the cointegration approach associated with unit root tests and seasonal unit root tests. As the results of the GARCH (1, 1) and the asymmetric GJR (1, 1) show that they provide an accurate measure of risk. Therefore, the GARCH (1, 1) and the asymmetric GJR (1, 1) including to GARCHX (1, 1) and GJR-X (1, 1) will be employed in this study.

### 1.3 Objectives of this Study

The main objective of this study is to analyze the situation of tourism in Thailand. This mainly focuses on the effects of tourist arrivals particularly Malaysian and Japanese.

Other sub-objectives are as follows:

1. To determine the factors that significantly explained the number in flock Malaysian and Japanese tourists visiting Thailand.
2. To estimate an equation of the demand for Malaysian and Japanese tourism.

Hence, this is to analyze the different variables that influenced the number of tourist arrivals. It includes other key behavioral decisions, income per capita, the relative price, the relative price with respect to the price level observed in competing countries, nominal exchange rate and occupancy rate in Thailand.

3. To estimate elasticity of the Malaysian and Japanese tourists demand for the formulation of efficient tourism policies.

4. To analyze the volatility from growth of number of tourist arrivals that affect environment (eco-tourism).

5. To determine tourism taxes.

6. To study whether the change in the real exchange rate has any effect toward the volatility of international tourist arrivals or not.

#### **1.4 Research questions and hypotheses**

1. How best to estimate elasticity of demand for Malaysian and Japanese tourists in relation to such factors as income, own-price or relative price elasticity of demand compared with UK tourists and American tourists

2. How best to measure the reaction and satisfactions of Malaysian and Japanese tourists by considering various factors compared with UK tourists and American tourists (i.e. GDP per capita, relative price etc)

3. How best to distinguish behaviors between Malaysian, Japanese, UK or American tourists in terms of short haul, medium haul and long haul

4. How best to measure tourism volatility that affect the environment

5. How best to measure the change in the real exchange rate that affect the volatility of international tourist arrivals

Therefore, the hypotheses of the research are set up as:

Hypo 1. Malaysian and Japanese tourists demand responds spontaneously to changes in GDP per capita compared with UK tourists and American tourists.

Hypo 2. Malaysian and Japanese tourists demand responds spontaneously to changes in relative price compared with UK tourists and American tourists.

Hypo 3. Malaysian and Japanese tourists demand responds spontaneously to changes in relative price with the respect to the price level observed in competing countries (Singapore, Indonesia and Philippines) compared with UK tourists and American tourists.

Hypo 4. Malaysian and Japanese tourists demand responds spontaneously to changes in nominal exchange rate compared with UK tourists and American tourists.

Hypo 5. Malaysian and Japanese tourists demand responds spontaneously to changes in occupancy rate compared with UK tourists and American tourists.

Hypo 6. Tourism volatility affects the environment and determines tourism taxes.

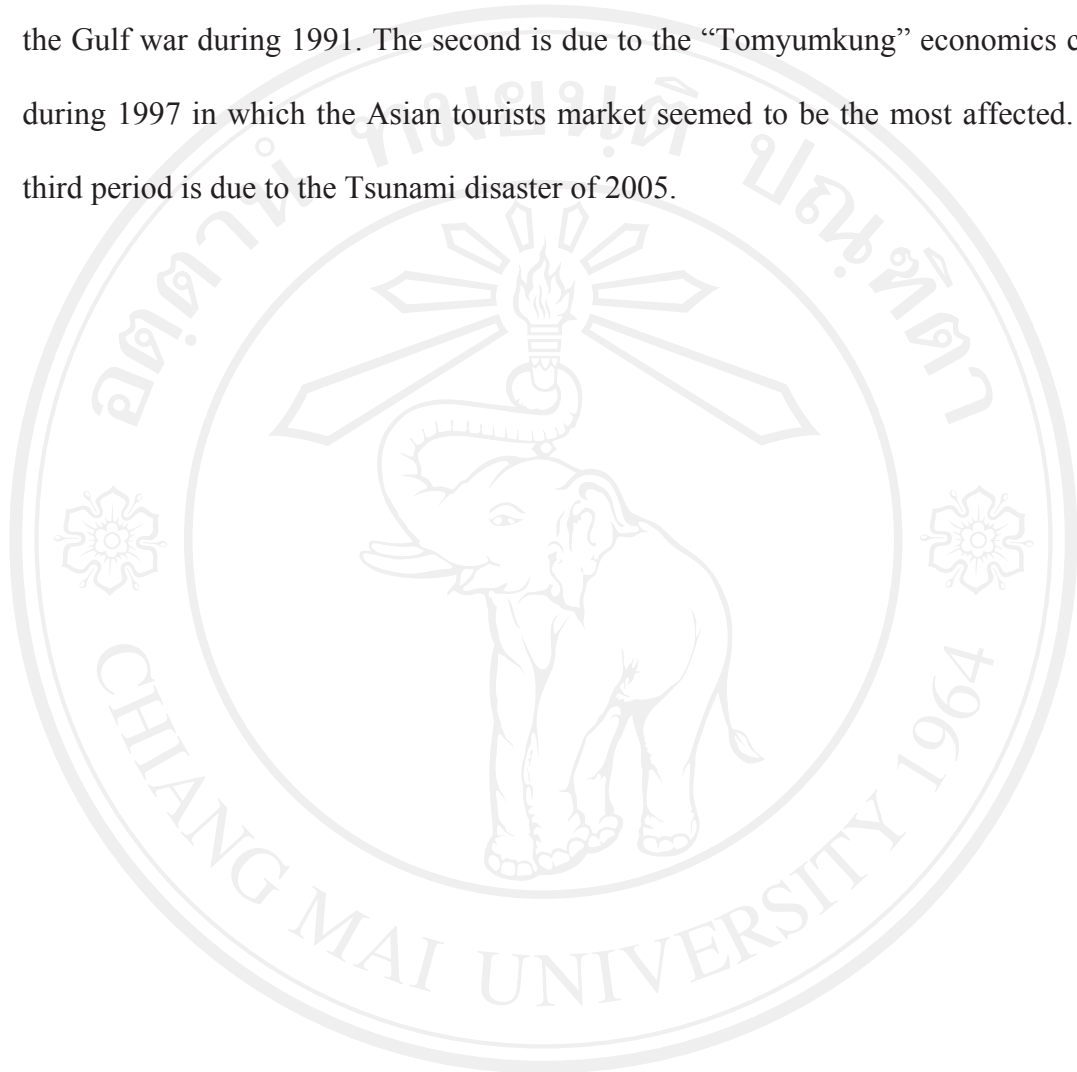
Hypo 7. The change in the real exchange rate affects the volatility of international tourist arrivals.

### **1.5 Place of Study and Data Collection**

The research operation is conducted in Chiang Mai University, Burapha University and the head office of Tourism Authority of Thailand.

Based on the above methodology we can divide data collection as follows: we used the secondary data from 1976 to 2009. The data used to measure the independent and dependent variables are from the Tourism Authority of Thailand (TAT), the Bank of Thailand (BOT), and the Immigration Bureau (Police Department).

Note, there are three important dips in the tourist activities in the periods of 1991, 1997 and 2005, respectively. The first period is due to the negative impact of the Gulf war during 1991. The second is due to the “Tomyumkung” economics crisis during 1997 in which the Asian tourists market seemed to be the most affected. The third period is due to the Tsunami disaster of 2005.



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