



DEMAND FOR TOURISM IN MALAYSIA BY TOURISTS FROM FOUR MAJOR INDUSTRIAL COUNTRIES - A PANEL DATA ANALYSIS

(A PROCURA TURÍSTICA NA MALÁSIA POR TURISTAS DE QUATRO
PRINCIPAIS PAÍSES INDUSTRIALIZADOS - UMA ANÁLISE EM PANEL DATA)

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ABSTRACT

The fact that tourism industry can play an important role in generating growth for an economy has been widely accepted by political authorities in many countries. The relevant issue then is, what moves the growth of tourism sector in a particular economy? The present study examines the significant influence of some selected factors towards inbound tourists from four major industrial countries; namely, the U.S, the U.K, Germany and Japan to Malaysia.

Based on the sample period of eleven years (ranging from 1994 to 2004), the data are analyzed by employing the panel data econometric technique. Results of the study indicate that the level of income in the tourists' country of origin, price of tourism in the substitute destination (the Philippines) and the "Malaysia...Truly Asia" global campaign, are significantly influential in determining the flow of international tourists from the four countries in the sample into Malaysia.

KEYWORDS

Tourism demand, panel data econometrics, four major industrial countries, Malaysia.

RESUMO

O facto de a indústria turística poder desempenhar um papel importante no crescimento de uma economia tem sido largamente aceite pelas autoridades políticas em muitos países. A questão é, então, saber o que impulsiona o crescimento do sector do turismo numa economia específica. O presente estudo examina a influência significativa de alguns factores seleccionados em relação aos turistas externos de quatro principais países industrializados; nomeadamente dos EUA, do Reino Unido, da Alemanha e do Japão para a Malásia.

Baseados num período de análise de onze anos (de 1994 a 2004), os dados são analisados através da técnica econométrica de *panel data*. Os resultados do estudo indicam que o nível de rendimento no país de origem, o preço do turismo no destino substituto (as Filipinas) e a campanha global "Malaysia ... Truly Asia", são significativamente influentes na determinação do fluxo de turistas internacionais dos quatro países da amostra para a Malásia.

PALAVRAS-CHAVE

Procura turística, econometria em *panel data*, quatro principais países industrializados, Malásia.



1.0 INTRODUCTION

Tourism is an industry; it is a socio-economic activity - the activities related to traveling. Chamber's English Dictionary defines tourism as the activities of tourists and those who cater for them. The promotion and encouragement of touring, the planning of the trip, tourist guidance and management, travel and transportation as well as hotel and catering are among the major activities and services related to tourism industry.

Given the fact that tourism industry in its broad sense encompasses a wide range of activities and services, it is often referred to as "the world's largest industry". Accordingly, tourism industries for many economies contribute significantly to their foreign exchange earnings. For a relatively small and very opened economy like Malaysia's for example, tourism industry is ranked third in the list of its major foreign exchange earners.

Perhaps, based on the premise that tourism industry can play an influential role in accelerating the growth and development of the national economy, the Malaysian Government in recent years has intensified its promotional activities towards enhancing the level of international tourist flow into the country. Whereas it is generally recognized that the level of international tourist flow into a particular country changes through time, what are the major contributing factors towards such a phenomenon?

Congruent with the current policy of the Malaysian government to promote international tourism, the present paper attempts to examine the significant importance of some socio-economic variables in influencing inbound tourists from four major industrial countries to Malaysia. The data for the study are analyzed from the perspective of panel data econometrics.

The remainder of the paper is organized as follows. We begin in Section 2.0 by providing an overview of the Malaysian tourism industry, while Section 3.0 reviews some literature related to international tourism demand and flows. The entire Section 4.0 is devoted to describing the data and sketching the econometric models to examine the data. Section 5.0 presents the findings of the study. Finally, Section 6.0 concludes the paper.

2.0 OVERVIEW OF THE MALAYSIAN TOURISM INDUSTRY

As noted in the foregoing section, tourism industry is an important foreign exchange earner for Malaysia. Indeed, this sector has contributed significantly to the Malaysian economy not only in terms

of foreign exchange earnings but also in generating new businesses and of course, employment opportunities. In 1974 for example, Malaysia attracted only 1.2 million international tourist arrivals, whereas by 2007 this figure has increased to 20.9 million. In terms of income generated from foreign arrivals, during the same period the figure rose from RM0.35 billion to RM46.07 billion (see Table I).

Table 1: Malaysia. Tourist Arrivals and receipts (1974- 2007)

YEAR	TOURIST ARRIVAL	TOURISM RECEIPT (RM Million)
1974	1,165,270	353.9
1975	1,461,603	389.5
1976	1,451,441	275.2
1977	1,546,866	414.3
1978	1,880,646	450.0
1979	2,039,154	495.0
1980	2,250,509	713.1
1981	2,533,104	1,000.9
1982	2,774,698	1,131.5
1983	2,926,550	1,329.3
1984	2,947,314	1,426.1
1985	3,109,106	1,543.1
1986	3,217,462	1,669.2
1987	3,358,983	1,795.1
1988	3,623,636	2,011.7
1989	4,846,320	2,802.7
1990*	7,445,908	4,500.5
1991	5,847,213	4,282.6
1992	6,016,209	4,595.4
1993	6,503,860	5,065.8
1994**	7,197,229	8,298.3
1995	7,468,749	9,174.9
1996	7,138,452	10,354.1
1997	6,210,921	9,699.6
1998	5,550,748	8,580.4
1999 ^a	7,931,149	12,321.3
2000	10,221,582	17,335.4
2001	12,775,073	24,221.5
2002	13,292,010	25,781.1
2003	10,576,915	21,291.1
2004	15,703,406	29,651.4
2005	16,431,055	31,954.1
2006	17,546,863	38,200.0
2007***	20,900,000	46,070.0

Notes:

* *First Visit Malaysia Year Campaign*

** *Second Visit Malaysia Year Campaign*

*** *Third Visit Malaysia Year Campaign*

^a The "Malaysia ... Truly Asia" global campaign was launched in 1999 and until today it continues to be a tag line for Malaysia.

Source: *Malaysia Tourism Promotion Board (Planning and Research Division)*



Figure I: Malaysia: International Tourist Arrivals (1974-2007)

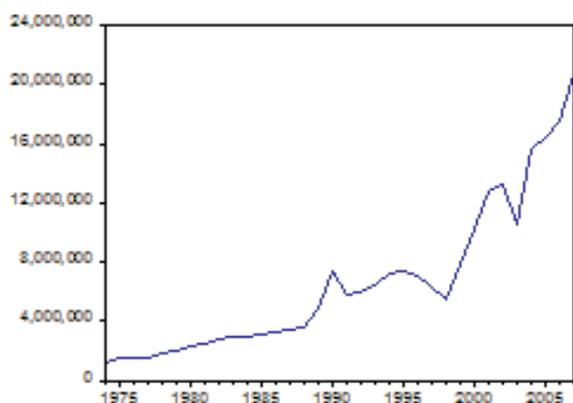
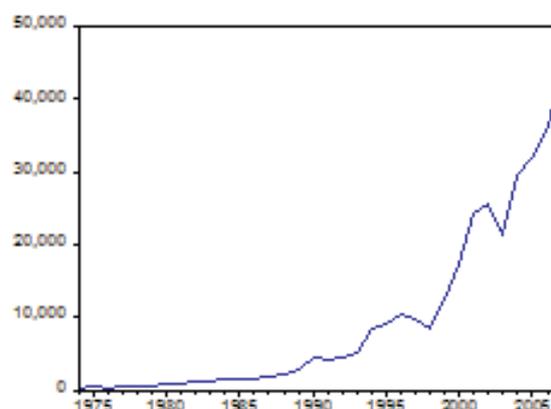


Figure II: Malaysia: International Tourism Receipts (1974-2007)



As charted in Figures I and II, international tourist arrivals as well as receipts have recorded remarkable increase since the late 1990s. We are of the view that such rapid increase could be attributed particularly to the well-known promotional campaign – the “Malaysia...Truly Asia” global campaign – initiated by the Government in 1999 (see also Table I).

The interest of this paper as its title implies, is to examine the demand for tourism in Malaysia by tourists from four major industrial countries. These countries are the U.K, the U.S, Germany and Japan.

Table II displays tourist arrivals and tourism receipts from these four major industrial countries. Interestingly, as shown in the table, arrivals as well as receipts from the U.K and Japan are outstanding not only in terms of absolute values but also in percentage growth. As far as the U.K is concerned, this phenomenon could perhaps be explained by the fact that it has a long traditional (historical) relationship with Malaysia. Japan on the other hand, is an Asian country – located (geographically) relatively very near to Malaysia. And hence, travel cost to Malaysia is relatively low. Japan is also a major trading partner of Malaysia (and hence, this indicates the increasing popularity of business tourism?).

Table II: Malaysia: Growth of Tourist Arrivals and Tourism Receipts from Four Major Industrial Countries, 2004-2005

COUNTRY	TOURIS T ARRIVAL 2004	TOURIS T ARRIVAL 2005	GROWT H (%)	TOURIS M RECEIPT 2004 (RM MIL.)	TOURIS M RECEIPT 2005 (RM MIL.)	GROWT H (%)
U.K	204,406	240,031	17.4	618.7	914.6	47.8
JAPAN	301,429	340,027	12.8	760.4	651.8	-14.3
GERMAN Y	53,783	59,344	10.3	127.1	152.3	19.9
U.S	145,094	151,354	4.3	400.2	418.2	4.5

Source: *Malaysia Profile of Tourists by Selected Markets 2005*

3.0 LITERATURE REVIEW

In recent years there has been a growing interest in estimating tourism demand model (see among others, Narayan, 2003; Salman, 2003; Song *et al.*, 2003; Eilat & Einav, 2003; Proenca & Soukiazis,

2005; Garin-Munoz, 2007; Saayman & Saayman, 2008; and Halicioğlu, 2008). However, accuracy of tourism demand estimates has always been limited by the nature of the data and methodology.



Tourism demand is generally measured in terms of number of tourist arrivals, from the country of origin to a destination country, or in terms of expenditures, by tourists from the country of origin in the destination country. Besides, tourist nights spent in the destination country are an alternative measure.

Investigations into the demand for tourism have generally involved the estimation of the relative importance of particular variables, which determine the level and pattern of tourist expenditure such as income, relative prices, exchange rates and transport costs (Sinclair & Stabler, 1997). The theory of tourism economics suggests that income and price-type factors are likely to play a central role in determining the demand for international tourism. Appropriately, international tourism is generally viewed to be a luxury product (Bond & Ladman, 1972).

In examining travel and transportation flows for 14 industrial countries by using aggregate travel expenditure model, Bond (1979) found that in most of the countries in his sample, travel has a very high income elasticity and can be considered as a luxury goods. Moreover, travel expenditures were detected to be strongly influenced by changes in price and exchange rates with a time lag of up to 2 years.

In another study on income elasticity of international tourism demand, Little (1980) estimated a set of individual disaggregated demand equations for travels to 10 major countries by residents of the United States (U.S). The study has documented the following income elasticity of international tourism demand by U.S tourists: Japan and Spain are destinations detected to have the highest income elasticity, whereas Canada, Italy and France are among the destinations that have the lowest. Results of the study also indicate that U.S travelers are as sensitive to changes in relative prices as they are to relative exchange rates.

Different from the two studies that we have reviewed above, White (1985) on the other hand, is the one who examined international tourism demand from regional perspective. The study involves examining the flow from the U.S to Western Europe by employing a complete system of demand equation. Findings of the study could be summarized as follows:

a) Tourists from the U.S view Norway, Sweden, Denmark, Spain and Portugal as “luxury destinations” that might expect to receive an increase share of the traveler’s budget;

b) price elasticity of tourism demand is relatively low for France, Belgium, Netherlands and Luxembourg;

c) high price substitution effects are detected for tourist from France, the United Kingdom and Germany.

Song *et al.* (2003) in investigating the demand for tourism in Hong Kong found that the most important factors determining tourism demand are the cost of tourism in Hong Kong, income of the tourist’s country of origin, the cost of tourism in the competing destinations and the ‘word of mouth effects’.

Narayan (2003) in his attempt to identify the determinants of tourist expenditure in Fiji however, found that in the long-run real GDP of the tourist’s country of origin positively affect tourist’s expenditure in Fiji. (The price of tourism and the transportation cost (airfares) on the other hand, have a negative effect on tourist’s expenditure). In the short run, the coups d’etat (in 1987 and 2000) brought negative effect on tourist’s spending in Fiji.

Salman (2003) in examining the monthly tourism flows to Sweden from American, European and Scandinavian countries by using cointegration analysis, indicate that income, exchange rate and tourism price are significant in influencing international tourists flows to Sweden.

For the Malaysian data, a study by Ishak (2006) was among the most recent one. However, in investigating factors that might influence inbound tourists from Japan and South Korea to Malaysia, the (time-series) data were analyzed only from the Ordinary Least Square (OLS) perspective. Income level in tourist’s country of origin, the cost of tourism in Malaysia and exchange rate are found to be the major factors that influenced tourism demand in Malaysia.

To generalize, previous studies have identified a number of major determinants of international tourism demand: income level in the tourist’s country of origin, relative price of tourism, the price of tourism in substitute destinations and exchange rate. Are these variables also significant in determining the demand for tourism in Malaysia by tourists from the U.K, the U.S, Germany and Japan (when the panel data analysis technique is employed)?



4.0 DATA AND METHODOLOGY

In the present study one attempt to identify the major factors influencing inbound tourists from four major industrial countries; namely, the U.S, the U.K, Germany and Japan to Malaysia in based on balanced panel data set consisting of tourist arrivals from these countries. The sample period for the study spans from 1994 through 2004. The data was obtained from the Malaysian Tourism Promotion Board (Planning and Research Division); *Annual Report of Bank Negara Malaysia* (the Malaysian Central Bank); *the Statistical Yearbook* (various issues) published by the Malaysian Department of Statistics and the *IMF International Financial Statistics Yearbook*.

The model developed for the study is based on the neoclassical economic theory, which postulates that income and price type factors are likely to play a central role in determining the demand for international tourism. Such economic variables have even become the focus of most past studies on international tourism demand. Several more recent empirical works however, have claimed that the behavior of tourists might also be affected by non-economic and other exogenous factors, such as special events, political factors, social conflict, terrorism and natural disasters. Given such a scenario of developments in theory and empirical works, the variables to be considered and estimated in the present study are specified in the following reduced-form function:

$$Y = \beta_0 + \beta_1 X + \beta_2 Z + \varepsilon \quad (1)$$

The dependent variable (Y) in the above model is the number of tourists who travel from the country of origin *i* (four major industrial countries) to country *j* (Malaysia). Variable X in this case is made up of the following: the level of real gross domestic product of country *i* during year *t*, the cost of tourism in relative prices for a tourist from country *i* to Malaysia in year *t*, cost of tourism in the substitute destinations *k* (i.e, Singapore, Thailand, Indonesia and the Philippines). Further, Z in the model represents the dummy variables that are used to capture the effects of the 1997/98 Asian financial crisis and the "Malaysia...Truly Asia" tourist promotion campaign initiated by the Malaysian government. Lastly, ε is the stochastic error term.

The relative price of tourism in this model is defined as a ratio of the consumer price index of the host country (CPI_{jt}) to that of the country of origin (CPI_{it}) adjusted by the relative exchange rate (ER_{ijt}) to obtain a proxy for the real cost of living (See Kulendran, 1996; Salman, 2003). Accordingly, the relative price of tourism in Malaysia, defined in the proxy terms by the relative consumer price index can be expressed as follows:

$$PM_{jt} = \frac{CPI_{jt} / ER_{ijt}}{CPI_{it}} \quad (2)$$

Where:

PM_{jt} = Relative price of tourism in country *j* (Malaysia)

CPI_{jt} = Consumer price index for country *j* (Malaysia)

CPI_{it} = Consumer price index for country *i* (tourist's country of origin)

ER_{ijt} = Exchange rate between currency country *j* (Malaysian Ringgit) and currency country *i* (tourist's country of origin)

Another variable, the price of tourism in substitute destinations (*k*), refers to the relative price of tourism in Singapore, Thailand, Indonesia and the Philippines. In this connection, there are two possibilities: (i) If an increase in the price of tourism in Malaysia is found to have caused an increase in the demand for tourism in Singapore, Thailand, Indonesia and the Philippines, then these countries could be considered to be substitute destinations for Malaysia; (ii) If on the other hand, an increase in the price of tourism in Malaysia is subsequently followed by a decrease in the demand for tourism in these countries, then these countries could be viewed as complementary destinations for Malaysia.

For model estimation, ordinary least squares (OLS) method is used for two reasons: to check the goodness of fit; and to ensure that the OLS assumptions are not violated. Thus, the pooled OLS model to be estimated is as follows:

$$\ln TAR_{it} = \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Pm_{it} + \beta_3 \ln Ps_{kt} + \beta_4 \ln Pt_{kt} + \beta_5 \ln Pi_{kt} + \beta_6 \ln Pp_{kt} + \beta_7 D_{AFCt} + \beta_8 D_{mtat} + \varepsilon_{it} \quad (3)$$

where the subscript *i* is for countries, *t* is for time and \ln denotes the natural logarithm (\log_e).



$\ln \text{TAR}_{it} = \text{Log}_e$ of the number of tourist who travel from the country of origin i to country j (Malaysia);

$\ln Y_{it} = \text{Log}_e$ for the real gross domestic product of country i (in dollars) during year t ;

$\ln P_{m_{it}} = \text{Log}_e$ for the cost of living in relative prices for a tourist from country i to Malaysia at time t ;

$\ln P_{s_{kt}} = \text{Log}_e$ for the price of tourism in the substitute destination k (Singapore) for tourists from the country of origin i , in year t ;

$\ln P_{t_{kt}} = \text{Log}_e$ for the price of tourism in the substitute destination k (Thailand) for tourists from the country of origin i , in year t ;

$\ln P_{i_{kt}} = \text{Log}_e$ for the price of tourism in the substitute destination k (Indonesia) for tourists from the country of origin i , in year t ;

$\ln P_{p_{kt}} = \text{Log}_e$ for the price of tourism in the substitute destination k (the Philippines) for tourists from the country of origin i , in year t ;

D_{AFC} = Dummy variable: to capture the effect of the 1997/98 Asian financial crisis, taking the value of 1 if observation in 1998 through 2000 and 0 if otherwise;

D_{mta} = Dummy variable: to represent the “Malaysia... Truly Asia” global campaign, taking the value of 1 if observation in 1999 through 2004 and 0 if otherwise; and

ϵ_{it} = The stochastic error term

Because the model is in double logs, the estimated coefficients can be considered as representing the elasticity of demand, except for the dummy variable. Further, to control for country specific individual effects, the model is specified as a panel data regression with fixed-effects or random-effects. Moreover, since the sample for the study is drawn from a population (not all industrial countries are included in the sample due to data unavailability), it would be appropriate to assume that individual-specific inter-

cepts are randomly distributed across-sectional units. On the other hand, since this study focuses on four industrial countries, it would also be reasonable to assume that the model is constant for the group of countries and thus the fixed-effect estimators is applicable.

The fixed-effects model assumes that slopes are common, but the intercepts vary across countries. Therefore, equation (2) below is used for fixed effects estimation.

$$\ln \text{TAR}_{it} = \alpha_i + \beta_1 \ln Y_{it} + \beta_2 \ln P_{m_{it}} + \beta_3 \ln P_{s_{kt}} + \beta_4 \ln P_{t_{kt}} + \beta_5 \ln P_{i_{kt}} + \beta_6 \ln P_{p_{kt}} + \beta_7 D_{AFCt} + \beta_8 D_{mtat} + \mu_{it} \quad (4)$$

where i denotes the cross-sectional unit representing international tourism flows to Malaysia from four major industrial countries and t (as usual) denotes the time period. In this equation, α_i is unobserved heterogeneity which is specified in this study as country effect. Unobserved country effect here is referred to as a fixed effect since the value is fixed over time.

For the fixed-effects model, it is assumed that there is an arbitrary correlation between α_i and the explanatory variables, X_{it} in each time period, or $\text{Cov}(X_{it}, \alpha_i) \neq 0$, for all t and i . The error term μ_{it} is known as idiosyncratic error or time-varying error: It represents unobserved factors that change over time and affect $\ln \text{TAR}_{it}$.

The random-effects model assumes that intercepts are drawn from a common distribution, and the error term consists of two components: an error term unique to each observation and constant over time (α_i); and, an error term representing the extent to which the intercept of a given cross-sectional unit varies from the overall intercept (μ_{it}). The model then takes the following form:

$$\ln \text{TAR}_{it} = \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln P_{m_{it}} + \beta_3 \ln P_{s_{kt}} + \beta_4 \ln P_{t_{kt}} + \beta_5 \ln P_{i_{kt}} + \beta_6 \ln P_{p_{kt}} + \beta_7 D_{AFCt} + \beta_8 D_{mtat} + v_{it} \quad (5)$$

where $v_{it} = \alpha_i + \mu_{it}$, and it is defined as the composite error term, which is serially correlated across time (Baltagi, 2005).

Unlike the fixed-effects estimator, the random-effects estimator is inconsistent if the error term α_i and the regressors are correlated. Thus, it is assumed that the unobserved effect, α_i is uncorrelated



with each explanatory variable in each time period; and hence, it can be addressed as follows:

$Cov(X_{it}, \alpha_i) = 0, \quad t = 1, \dots, 11$ (i.e, 1994-2004); and $i = 1, \dots, 4$ (i.e referring to 4 major industrial countries)

5.0 RESULTS AND DISCUSSION

The results of data analysis are presented in Table III. The coefficients in each column i.e columns (2) through (7) differ in the assumptions on the non-observable individual effect. Columns (2) and (3) refer to pooled OLS model; (based on the assumption that all countries react in the same manner after a change in the values of the explanatory

variables and that the non-observable individual characteristics, α , are the same for all tourism routes). For columns (4) and (5), the individual effects are treated as fixed, whereas for columns (6) and (7), the values are considered random and form part of the error term.

If there exist country effects in the regression model, the pooled OLS or equation (1), does not effectively estimate the linkage between the independent and dependent variables. Thus, to analyze the significance of country-effects, the F-test is used for this purpose. Besides, in order to verify whether the fixed-effects approach is better suited for the analysis than the random effects approach, the Hausman specification test has been used.

Table III: Tourism Demand by Tourists from Four Major Industrial Countries: Results of Estimates Based on Equation (1) and (2)

Variable	Pooled OLS		One-way fixed effects		Random-effects	
	Eq.1	Eq.2 ^a	Eq.1	Eq.2 ^a	Eq.1	Eq.2 ^a
Constant	18.842** (2.489)	18.526** (2.413)			14.427*** (5.830)	14.454*** (5.753)
RGDP	0.243** (2.005)	0.252** (2.040)	0.490** (2.529)	0.494** (2.442)	0.416 (2.320)	0.411** (2.222)
Pm _{t-1}		0.004 (0.533)		-0.0001 (-0.074)		0.00007 (0.034)
Pm	-0.548*** (-2.832)	-0.551*** (-2.817)	0.038 (0.569)	0.038 (0.561)	0.032 (0.485)	0.032 (0.473)
Ps	-2.104 (-0.643)	-1.878 (-0.564)	-1.325 (-1.444)	-1.333 (-1.421)	-1.331 (-1.450)	-1.327 (-1.415)
Pt	-0.125 (-0.100)	-0.174 (-0.138)	0.539 (1.520)	0.539 (1.497)	0.553 (1.560)	0.553 (1.536)
Pi	0.346 (1.336)	0.341 (1.304)	-0.0397 (-0.521)	-0.039 (-0.508)	-0.043 (-0.566)	-0.433 (-0.560)
Pp	2.267 (1.144)	2.228 (1.112)	1.396** (2.494)	1.399** (2.454)	1.376** (2.461)	1.374** (2.414)
D _{AFC}	0.087 (0.327)	0.081 (0.301)	0.105 (0.076)	0.105 (1.366)	0.099 (1.311)	0.098 (1.279)
D _{mta}	0.668 (1.644)	0.661 (1.611)	0.477*** (4.130)	0.478*** (4.066)	0.484*** (4.190)	0.484*** (4.125)
R ²	0.264	0.269	0.948	0.947	0.264	0.269
Adjusted R ²	0.096	0.077	0.929	0.927	0.096	0.077
Hausman statistics			8.97			
Overall Significance (F-Test)	1.57	1.40	52.73***	46.84***		
LM Test					99.63***	97.14***
Autocorrelation 1 st order			1.918			
Notes:						
1. ^a represent results for model 2 (Eq. 2) with lagged price variable.						
2. Figures in parentheses are t-values						
3. ***: significant at 1%; **: significant at 5%; *: significant at 10%						



In comparing the pooled OLS model with the fixed effects model, the null hypothesis that (the recipient-effects) equal to zero is rejected at the 0.05 level of significance. This implies the presence of country-effects in the model. The Hausman statistic of 8.97 indicates that we can reject the hypothesis that the individual effect is uncorrelated with the regressors. Hence, the fixed-effects model is more appropriate.

Moreover, in term of goodness-of-fit, fixed-effects model is considered good since its R^2 is higher than R^2 of random-effects model. Based on R^2 value, 94.8 per cent of time variation in the $\ln TAR_{it}$ is explained by the time variation in the explanatory variables. Then, we select equation (1) of the fixed-effects model and the main results are displayed in Table III.

As in most previous empirical studies, income appears to be the most important determinant of international tourism demand. The estimated coefficient of income elasticity is +0.490 and this is statistically significant at 5 percent level. The theory of demand suggests that a commodity is normal if it has a positive value of income elasticity, whereas a negative value indicates that it is an inferior good.

Income elasticity greater than unity characterizes luxury goods, where budget shares increase with increases in income. On the other hand, necessities, having elasticity values between zero and one, experience falls in their budget shares with increases in income. Referring to the present study (see Table III, column 5), the estimated income elasticity which is positive - between zero and one ($0 < E_y < 1$) - proves the hypothesis that tourism demand in Malaysia is generally regarded as a "normal necessity" or low-market destination (Divisekera, 2003).

However, contrary to expectation, the relative price of tourism in Malaysia is insignificant, with estimated price elasticity between one and zero. The comparison of this result with those of the previous studies is not straightforward. The reason is that different studies have used different measures of price and this explains why the estimates of price elasticity vary considerably.

To explore the possibility that prices do not only have an instantaneous effect but also past prices can affect current tourist flows we have estimated the same model by adding lagged price as a regressor. This analysis is based on equation (2) and the results are presented in Table III (see columns 3, 5 and 7).

Statistical test suggests that it is not significant. This implies that the relative prices of tourism in Malaysia are not significantly influential in determining the flow of international tourists to Malaysia.

Regarding the price of tourism in substitute destinations, finding of the study reveals that the price of tourism in the Philippines is positively significant. The positive signs indicate that the Philippines is a substitute destination for Malaysia (see column 5). Correspondingly, an increase in the arrivals of international tourists in Malaysia could be expected when there is an increase in price of tourism in the Philippines. However, for Singapore, Thailand and Indonesia, the estimated price elasticity indicates that these countries are insignificant in explaining tourism demand in Malaysia.

The effect of the 1997/98 Asian Financial Crisis turned out to be insignificant in determining tourism demand in Malaysia by tourists from industrial countries. Surprisingly, however, the Malaysian government international tourism promotional campaign (under the popular theme of 'Malaysia... Truly Asia') is found to be significant in all equations (see columns 4, 5, 6 and 7). This suggests that the campaign is effective in attracting international tourists from the four major industrial countries to Malaysia.

5.0 CONCLUSIONS

Tourism industry is an important sector for the Malaysian economy. As charted in Figures I and II, this sector has been growing steadily in recent years. [To recapitulate, findings of this study suggest that income level in tourists' country of origin, price of tourism in the substitute destination (the Philippines) and the 'Malaysia... Truly Asia' global campaign, are (significantly) influential in determining the demand for tourism in Malaysia by foreign tourists].

The policy implication of these findings could be conceived as follows: If we were to see tourism sector to continue playing its role as an increasingly important foreign exchange earner for Malaysia, then promotional campaign such as the "Malaysia... Truly Asia" global campaign¹ needs to be intensified. In planning and implementing such a campaign however, economic, socio-political as well as socio-cultural developments and events in the tourists' country of origin as well as substitute destination(s) (that might change through time or might be seasonal in nature) should be taken into consideration.



Note: ¹ Our evidence (see Tables I and III) indicates that this global campaign has been effective and successful in accelerating the growth of international tourist arrivals to Malaysia.

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