

### **Malaysian Tourism Demand From the Middle East Market: a Preliminary Analysis**

Norlida Hanim Mohd Salleh  
[norlidahanim@gmail.com](mailto:norlidahanim@gmail.com)  
 School of Economics  
 Universiti Kebangsaan Malaysia

Abu Hassan Shaari Mohd Noor  
[ahassan@ukm.com](mailto:ahassan@ukm.com)  
 School of Economics  
 Universiti Kebangsaan Malaysia

Redzuan Othman  
[redzuano@gmail.com](mailto:redzuano@gmail.com)  
 School of Economics  
 Universiti Kebangsaan Malaysia

Mohd Safar Hasim  
[drmsafar@gmail.com](mailto:drmsafar@gmail.com)  
 Institute of West Asian Studies  
 Universiti Kebangsaan Malaysia

### **Abstrak**

Tragedi 11<sup>th</sup> September 2001 telah banyak merubah senario pelancongan global. Kebebasan aliran kemasukan pelancong ke destinasi-destinasi pelancongan mula terjejas apabila isu keselamatan diambil kira. Tambahan lagi sesetengah destinasi pelancongan utama telah pun mengenakan sekatan-sekatan serta peraturan yang ketat ke atas pelancong yang masuk bagi tujuan yang sama. Pelancong, terutamanya dari negara Islam, lebih berhati-hati dalam memilih destinasi percutian mereka. Statistik telah menunjukkan bahawa ketibaan pelancong Timur Tengah ke Amerika Syarikat telah jatuh secara mendadak selepas peristiwa tersebut. Sebagai contoh pada tahun 2000, kira-kira 249,260 orang pelancong dari Timur Tengah telah melawat Amerika Syarikat tetapi pada 2002 dan 2005, jumlah angka tersebut telah jatuh secara mendadak kepada 126,613 dan 144,131 masing-masing. Begitu juga dengan jumlah ketibaan mereka di UK di mana jumlah kedatangan mereka telah jatuh dari 429,000 hingga 360,000 dan 380,000 dalam jangka waktu yang sama. Pelancong daripada negara ini mula mencari destinasi-destinasi pelancongan alternatif sebagai tempat percutian mereka. Malaysia merupakan sebuah negara Islam yang menjadi salah satu destinasi pilihan mereka. Ini dibuktikan oleh dengan aliran kemasukan mereka yang meningkat ke Malaysia. Sebagai contoh pada tahun 1998 kira-kira 19,571 ketibaan telah direkodkan. Pada tahun 2002 dan 2005 jumlah ini telah meningkat kepada 126,239 dan 145,861. Kertas ini mengkaji secara statistik sama ada kejadian 11 September merupakan punca utama dalam mempengaruhi peningkatan kedatangan pelancong Timur Tengah ke Malaysia di samping faktor-faktor lain seperti perbelanjaan pelancong di Malaysia, pendapatan pelancong, perbelanjaan perjalanan bagi pelancongan alternatif dan kesan tragedi 11 September 2001. Untuk menganggarkan kepentingan faktor-faktor ini, kaedah analisis secara panel digunakan. Keputusan empirikal membuktikan bahawa kaedah/model Kesan Rawak adalah yang terbaik. Keputusan secara keseluruhan boleh diterima. Ia konsisten dalam teori permintaan pelancongan dan memenuhi keperluan statistik.

***Kata Kunci: Pelancongan Malaysia, Timur Tengah, Analisis Panel, Permintaan Pelancongan.***

## **Abstract**

The 11<sup>th</sup> September 2001 tragedy had greatly altered the global tourism scenario. The free flow of tourists to tourist destinations was to some extent had been restricted due to the safety and security reasons. In additions some major tourist destinations have imposed more restrictions and stringent regulations to the inbound tourists for the same reasons. Tourists especially from the Muslim countries were becoming more careful and selective in choosing their holiday destinations. Statistic has shown that the arrival of Middle East tourists to the United States had declined sharply after the incidence. For example in 2000 about 249,260 Middle East tourists visited the USA but in 2002 and 2005 the numbers had decreased sharply to 126,613 and 144,131 respectively. Similarly their arrivals to the UK, during the same period the numbers declined from 429,000 to 360,000 and 380,000. Tourists from this region started to find alternative destinations for their holidays. Malaysia as an Islamic country is one of their choices. Their arrivals to Malaysia have shown an increasing trend. For example in 1998 about 19,571 arrivals were recorded. By 2002 and 2005 the numbers had increased to 126,239 and 145,861. This paper is trying to investigate statistically did the 11<sup>th</sup> September incidence is a significant factor influencing the increasing of Middle East tourist arrivals to Malaysia besides other factors such as tourist expenses in Malaysia, tourist income, traveling expenses at alternative tourism destinations and dummy for September 11,2001 tragedy. In estimating the importance of these factors, panel analysis method will be utilized. Empirical results have shown that the Random Effects method/model is the best. Overall results are acceptable. They are consistent with tourism demand theory and satisfying the statistical requirement.

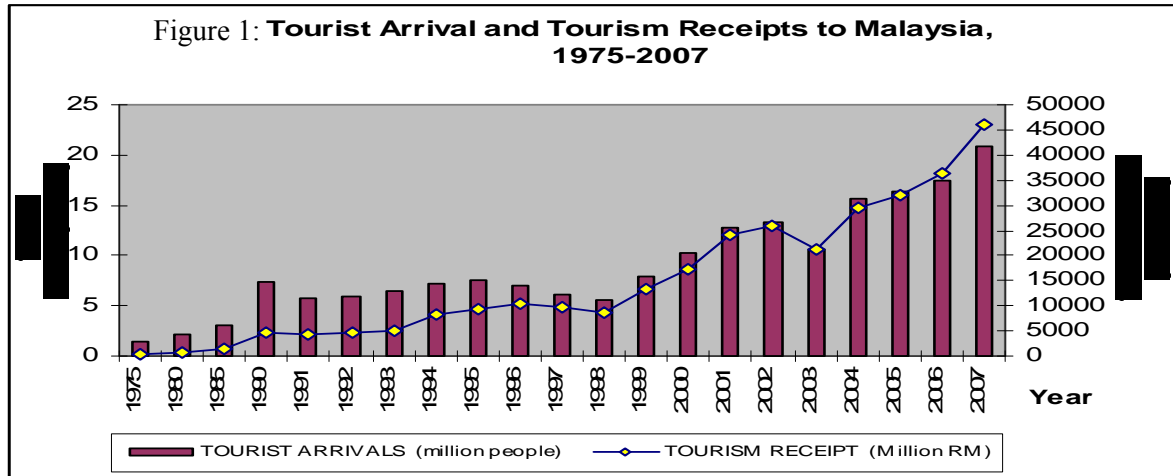
***Keywords: Tourism Malaysia, Middle East, Panel Analysis, Tourism Demand.***

## **Introduction**

The Malaysian economy was traditionally dominated by the primary commodities sector such as rubber, tin, palm oil and petroleum followed by the development of the manufacturing sector in the late 1970's. These two major sectors are very sensitive to the change in the international economic climate. Any shock to the world economy would severely affect the Malaysian economy. Due to several major global economic recessions especially in the early 1970's and 1980's the government had started broadening its economic base and the tourism sector was identified as one of the potential industries to be developed. For that purpose, a surge of development activities in the tourism industry were undertaken in the late 1980's and early 1990's. For instance, numerous incentives and assistance were provided especially to the private sectors to stimulate them involving in tourism.

As consequence of these incentives, promotions such as the declaration of Visit Malaysia Year (VMY) in 1990, 1994 2000, 2004 and most recently in 2007, total tourist arrivals had increased to 7.4 million in 1990, compared to 2.0 million and 4.8 million tourist arrivals in 1980 and 1989 respectively. Tourism receipts also recorded a positive increment from RM618.9 million in 1980 to RM2803 million in 1989 and RM4500 million in 1990. However, in 1991 the positive growth of tourism was affected. The total arrivals and total receipt dropped to 5.8 million and RM4300 million respectively. This negative growth was mainly due to the War Gulf and lack of aggressive promotion as compared to a year before. The growth of tourism recovered in 1992 and plotted positive growth between 2.9%-10.7%, and 6.9%-63.81% for tourist arrivals and tourism receipts respectively until 1995. In the real figures about 6.0 million tourist arrivals and RM459.5 million of tourism receipts was recorded in 1992 and 7.5 million tourist arrivals and RM9174.9 million of tourism receipts in 1995. The positive performance of tourism industry to some extent was caused by the Visit ASEAN Year in 1992 and VMY in 1994.

Again, in 1996 the number of tourist arrivals to Malaysia had dropped to 7.1 million, but still recorded a positive increase in tourism receipts to RM10,354 million. There was no specific reason can be given to this situation but might be due to the lack of promotions. The decrease in total arrivals and receipts continued in 1997-98. The major reason for the declining was due to incidence of the Asian economic crisis. After 1999 till 2007, the international tourist arrivals and tourism receipts showed a positive growth rates except in 2003, which may be due to the outbreak of SARS. Information pertaining to the international tourist arrivals and receipts are given as Figure 1.



Source: Annual Statistics Report. Tourism Malaysia.

Besides the above reason, in the real situation the increasing of tourist arrivals to any tourism destination including to Malaysia are caused by a lot of factors especially the economic factor. Besides, we cannot deny the importance of non-economic factors particularly safety and security of the tourists. International political instability and bombing incidents at various places around the globe have strong negative impact on tourist arrivals to those destinations. One of the most significant incidents was the tragedy of September 11, 2001 that had considerably changed the pattern of international tourist flow. Immediately after the disaster most of the Muslim tourists were facing somewhat restrictions to travel to the USA and European countries. Tourists from the Muslim countries which are mainly from the Middle East search for new and safer destinations. Malaysia with a strong Islamic image is one of the preferred destinations by these tourists.

According to World Tourism Organization the arrival of Middle East tourists to the United States had declined sharply after the September 11 incidence. For example in 2000 about 249,260 Middle East tourists had visited the USA but in 2002 the numbers had decreased sharply to 126,613 and started to increase to 144,131 in 2005. Similarly their arrivals to the UK, during the same period the numbers declined from 429,000 to 360,000 and 380,000 respectively. Their arrivals to Malaysia have shown a sharp positive growth. For instance in 1998 about 19,571 arrivals were recorded but by 2002 and 2005 the numbers had increased to 126,239 and 145,861. In 2007 the number had increased to 245,203, which was 19.4 percent increase as compared to 2006. Besides the increase in their arrivals, tourists from the Middle East market have a tendency to spend more and stay longer during their visit to this country (WTO, 2008).

Based on this scenario this article is trying to identify and estimate whether the incidence of September 11 was the significant factor causing Middle East tourists visiting Malaysia besides a few other economic determinants. Discussions of this paper are as follows; II) The importance of Middle East market to Malaysian tourism industry; III) Review of literature on the tourism

demand; IV) Methodology; V) Empirical results and conclusion. The demand for tourism will be estimated utilizing the panel analysis.

### **The Importance of Middle East Market to Malaysia Tourism Industry**

According to the World Tourism Organization the Middle East market is consisting of several countries namely Bahrain, Palestine, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Egypt and Yemen. However, not all countries are significant market to Malaysia. Only seven countries are considered in this analysis as tourist arrivals from these countries are quite sizeable. These countries are Jordan, Kuwait, Oman, Saudi Arabia, Syrian Arab Republic, United Arab Emirates and Egypt. The importance of the Middle East tourists to the Malaysian tourism industry can be viewed from several indicators such as number of tourist arrivals, tourism receipts, the average length of stay and potential of future tourism market.

In the past 13 years the arrival of tourists from the Middle East have shown an increasing trend especially after the tragedy of September 11. The decreasing in their numbers at the end of 1990's was mainly due to the world economic recession and natural calamity such haze. The same was true in 2003, the outbreak of SARS had caused the decreased in their arrivals.

Although in terms of total numbers Middle Eastern tourists are not so significant as tourists from Singapore or Thailand. However, an interesting fact to be accepted is the rate of their growth. As indicates in Table 2, on the average increase in tourist arrivals from this region was very much higher than the national average. For instance from 1995-2007, tourist arrivals from Middle East was at 14.3 percent as compared to only 9 percent for national average. The different in these figures are very much higher if comparison is made between before and after the 11 September incidence. From 2000-2007 the average increase of arrivals from Middle East market was at 23.5 percent as contrast to the national average at 10.8 percent. Given such development Middle East market is expected to be a major to Malaysian tourism in the future.

Other important indicators are the average length of stay (ALOS) and average spending of Middle tourists. The national ALOS was 7.2 and 6.0 in 2003 and 2004 respectively, whereas for the Middle East tourists their ALOS was 12.6 and 10.7 during the same period.

In terms of average spending/expenditure the Middle East tourists have a higher purchasing power than the overall tourists. In 2003 the average expenditure of Middle East tourists was RM3,503 as compared to RM2,013 for the overall tourists. In 2004 the number had slightly declined to RM2883 and RM1,888 respectively.

**Table 1. Tourist Arrivals from Middle East To Malaysia  
(Total and yearly percentage change) 1995-2007**

Year	Tourist Arrivals			
	Total Middle East	Growth (%)	Overall Total (Million)	Growth (%)
1995	28,293	-	7.4	-
1996	27,580	-2.5	7.1	-4.0
1997	16,460	40.3	6.2	-12.7
1998	19,571	18.9	5.5	-11.3
1999	19,128	-2.2	7.9	43.6
2000	44,346	131.9	10.2	29.1
2001	107,775	143.0	12.7	24.5
2002	126,239	17.1	13.2	3.9
2003	78,324	-37.9	10.5	-20.4
2004	124,331	62.3	15.7	49.2
2005	145,861	17.3	16.4	4.5
2006	149,067	2.2	17.5	6.7
2007	153,643	3.1	20.9	19.4
Average Yearly	1995-2007	14.3	1995-2007	9.04
Change	2000-2007	23.5	2000-2007	10.8

Source: World Tourism Organization (Annual)

Given such indicators as mentioned above, in 2006 the Ministry of Tourism had appointed Tuan Razali Tuan Omar to be the Malaysian Tourism Director in Middle East and Iran. His major task is to promote Malaysia as a potential tourist destination to the prospective Middle East tourists and also the intermediary to report the progress. The Ministry of Tourism would like to have more Arabian tourists to choose Malaysia as their major tourist destination in terms of their long-haul vacation. Back in Malaysia, the Ministry of Tourism was already on the track in preparing Malaysia to accept Middle East's tourists. For example, the signages in Arabic have been placed at the Kuala Lumpur International Airport (KLIA) to guide travelers through various sections. Arabic-speaking staffs has also been assigned at the airport to assist Arab travelers. Hotels and restaurants in Malaysia have been urged to have employees who are fluent in the Arabic language. Currently, Malaysia is promoting the health tourism, Malaysia My Second Home programs, Feel at Home campaign and education tourism to the Middle East tourists. Malaysia had also joined the Arabian Travel Market (ATM) to strengthen its partnership and cooperation with more than the 240 tour agencies in the region.

### **Tourism Demand Analysis: Review of Past Study and Data**

Tourism demand analysis have been carried out since the 1960s. The early studies of demand have been utilized using the Ordinary Least Square (OLS) approach. Over the years other methods also had been applied such as the Cochrane Orcutt (CO), Almost Ideal Demand Function (AIDS), Generalized Least Square (GLS), and Co integration techniques. The details is shown such as shown in Figure 2.

Figure 2 is based on 107 reviewed of tourism demand since 1960 to 2006. However, this is only a part of studies under tourism demand and most of them are using the time series data. There are many more methodologies that had been applied especially the estimation of tourism demand using panel data analysis such as being done in this study.

Most of time series analysis requires data set for a long period. The problems arise when annual data is required. In many countries especially the Less Developed Countries data collection was very poor and accessibility of such data very limited. Thus in this study panel data set will be used mainly due to unavailability of sufficient time series data in order to allow for time series analysis. Panel data analysis still can used to estimate variables in most of economic model. At the same time panel data approach until recently was not being applied widely. In Malaysia there is no research in tourism demand utilizing this analysis. This study can be regarded as the first research using this analysis. However, in other countries there are several research on tourism demand that utilized this analysis as being done by Proenca and Soukiazis (2005); Kareem (2008); Naude and Saayman (2004); Sequeira and Nunes (2008); Muñoz (2006); Eugenio-Martin, Morales and Scarpa (2004); Aslan, et. al (2008); and Soukiazis and Proenca (2007).

Besides showing the methodologies, Figure 2 also shows the details of tourism demand variables (dependent and independent variables) that being used. The discussion of dependent and independent variables below are the included variables in this study only.

### **Dependent Variables**

Tourist arrivals have been used for many times as a dependent variable in tourism demand analysis. It has been supported by Witt and Witt (1995), Crouch et al. (1992), and Li (2004). Summary in Figure 2 shows that about 59 per cent of tourism demand model had used this variable. Other possible variables are tourist expenditure (32%), average length of stay (6%) and number of nights (3%).

### **Independent Variables**

Lim (2004) has reviewed about 100 empirical studies on tourism modeling and found that income and price were the most commonly used explanatory variable. Figure 1 also shows the importance of income (81%) and tourism price (65%) in tourism demand model. This is followed by traveling cost (53%), exchange rate (39%), dummy (29), time trend (18%), lagged dependent variables (16%) and population (13%), tourism price at substitute destinations (12%), marketing/advertisement (10%) and traveling cost to substitute destinations (3%).



Source: Norlida, 2009.



### **Data of this study**

This study used the most important variables as employed in other tourism demand model. The variables are tourism price, substitute price and income, along with the lag dependent variable and the September, 11 disaster for some reason as discuss below.

*Dependent variable:* Tourist arrivals will be used as a proxy for the tourism demand. Annual data are used for the period from 2000-2005. Data on tourist arrivals were collected from the Malaysia Tourism Statistical Report and WTO Statistical Book.

*Independent variables:* The independent variables in this study are:

- i) Tourism price refers to the price of all goods and services consumed by tourists at the destination. The calculation of tourism price is based on the consumer price index (CPI) of the visited country divided by the CPI of the origin country (Salman, 2003; Lim, 2004; Dritsakis, 2004; and Toh, Habibullah and Goh, 2006). It is expected that tourism price and arrivals will have a negative relationship.
- ii) Tourism prices at the alternative tourism destinations are a substitute price. The calculation is similar to the estimating of tourism price, where the visiting destination now refers to the alternative tourism destination i.e. Indonesia. The important of substitute price has been proven in tourism study (see Martin and Witt, 1988; and Song et. al., 2003).
- iii) The income variable refers to the per capita income (Inc). Income is the most popular variable included in the tourism demand function (Lim and McAleer, 2002; Dritsakis, 2004; and Muñoz, 2006). Normally, the higher income will increase the total arrivals.
- iv) Lag dependent or repeat tourists variable is usually used on the international tourism demand as a proxy for informal promotion (word-of-mouth effect) (Dritsakis, 2004; Salman, 2003; Narayan, 2004; Toh, Habibullah and Goh, 2006), since the knowledge about the destination will be spread as people talk about their holidays. In the dynamic model of tourism demand analysis, the lagged dependent variable must be included. Neglected will tend to be overestimated the coefficients. Several authors point out that tourism demand analysis will suffer from this neglect of the dynamic structure (Morley, 1998).
- v) In this study a dummy variable is included namely the September, 11 disaster (d11<sub>2001</sub>). The importance of this variable in tourism demand study has been acknowledged by many researchers (Salman, 2003; Toh, Habibullah and Goh, 2006 and Norlida, et al. 2007a,b). This variable give different impact on tourism arrivals to different tourist destinations. With regard to the Middle East tourists, this incident is expected to give a positive impact upon their arrivals to Malaysia.

## Methodology and Model Specification

This study is utilizing the panel data analysis approach which integrates the spatial and temporal dimension. Spatial dimension in this study is the various Middle East countries selected whereas the temporal dimension is a series of observations for a set of variables such as tourist arrivals, income, tourism price and prices of alternative destinations that describing the cross-sectional units that are the countries selected in thus study for a certain time period.

Generally panel analytical models are divided into several methods or models. The most commonly used methods are constant coefficients models, fixed effect models and random effect models. In this paper estimation is made utilizing these three models.

In the constant coefficients models spatial and temporal effects are assumed to be insignificant. The significance of each variable in the model is considered the same in all the countries. Statistically their intercept and slope has similar coefficient for all countries. Since there is no spatial and temporal effects these data can be pooled and use the Ordinary Least Squares (OLS) to estimate the model. Thus, this model is also called the pooled regression model.

The fixed effects model which also known as the Least Square Dummy Variable Model - LSDV refers to model that have a constant slope but different intercept based on cross sectional unit such as different countries as being used in this study.

The Random Effects Model as discussed by Greene (2003), is a regression with random constant term. It is assumed that the intercept is a random outcome variable. This random outcome is a function of a mean value plus a random error. Error term of the cross sectional unit (in our case is countries selected) must be uncorrelated with the error of the variables used in the model. The equation to be estimated in this model is in equation 1.

$$LTa_t = \alpha_1 + \alpha_2 country_2 + \alpha_3 country_3 + \alpha_4 country_4 + \alpha_5 country_5 + \alpha_6 country_6 + \alpha_7 country_7 + \beta_1 LTa_{t-1} + \beta_2 LTP_{i,t} + \beta_3 LSP_{i,t} + \beta_4 LInc_{i,t} + \beta_5 d11_{2001} + \varepsilon_{i,t} \quad --- (1)$$

where:

- $LTa_t$  - the log of tourist arrivals from the country of origin to Malaysia in year t;
- $LTP_t$  - the log of tourism price from the country of origin to Malaysia in year t (also been called as tourism price in Malaysia);
- $LSPIn_t$  - the log of substitute price of country of origin to alternative tourism destination which refers to Indonesia in year t (also been called as tourism price in Indonesia);
- $LInc_{it}$  - the log of per capita income of country of origin in year t;
- $d11_{2001}$  - the dummy of September 11, 2001 disaster;
- $\beta_1, \dots, \beta_5$  - coefficient to be estimated;
- $\alpha_1, \dots, \alpha_7$  - country-specific effects respectively; and
- $\varepsilon_t$  - the error term

In this study a panel data set of seven countries from the Middle East market were selected for Malaysian tourism demand namely Jordan, Kuwait, Oman, Saudi Arabia, Syrian Arab Republic, United Arab Emirates and Egypt. Selection of these countries was based on their importance to Malaysian tourism industry.

Panel data/analysis have been chosen since the pool time-series/cross-section data set with seven most important markets as the observational units increase the range variation of variables because there are differences across countries in demographical and income characteristic. Furthermore, it will increase the degrees of freedom ( $n=42$ ) as compared to the time series or cross sectional data only since the time periods of the study is limited from 2000-2005. It also can control for omitted variable bias, give more data information and reduce the multicollinearity effects and hence will lead to the accuracy coefficient estimations (Hsiao, 2003 and Muñoz, 2006). Panel analysis also allows for dynamic specification.

The arrivals of Middle East tourist to Malaysia have been collected from the Yearbook of Tourism Statistics, World Tourism Organization 2007 edition, while the other variables from International Financial Statistics (IFS), and World Bank (World Development Indicator, 2008).

### **Empirical Results and Policy Implication**

For empirical results, equation 1 is estimated all three methods using the panel data analysis. Detailed results are reported in Table 2. From the table column 2 presents the pooled data using OLS method, column 3 reports the results of the Fixed Effects or LSDV estimation and each Middle East country in this study is used as individual dummies. Through this procedure the structural difference of the countries studied will be captured in the constant term. Column 4 shows the results of the random effects estimation utilizing GLS method which assumed difference in structure of the countries to be stochastic.

Overall results are good. All three alternative methods have similar signs and consistent with the demand theory and fulfill the statistical requirements. Utilizing Redundant test, Fixed Effects estimation is better than the OLS estimation but from the Hausmen Test, Random Effects estimation is found to be better than Fixed Effects estimation. Thus the Random Effects model can be considered as the best model. Using the Bruesh Pagen (BG) test Random Effects estimation is free from problem of serial autocorrelation. However, its explanatory variable ( $R^2$  adjusted) is slightly lower ( $R^2$  adjusted =0.68) than the Fixed Effects (LSDV) method.

Coefficients of all variables in Random Effects are statistically significant at 90 percent confident level. The sign of the coefficients are consistent with the demand theory. For example tourist's income (LInc) has a positive effect to their arrival to Malaysia. In term of value, for every 10 percent increase in their income will be followed by 3.8 percent increase in total arrivals.

Expenses during their visiting in Malaysia (LTP) have negative effects on arrivals. For every 10 percent increase in cost of traveling in Malaysia will cause 21.4 percent reduction in arrival of Middle East tourists to Malaysia. In economic jargon, price elasticity of tourism demand is elastic.

**Table 2. Estimation Results of Panel Data Analysis**

Explanatory Variables	Pooled (OLS)	Fixed Effects (LSDV)	Random Effects (EGLS)
Constant	-13.73 (-1.69)		-13.73 (-1.60)
D1-Jordan		-37.72** (-2.19)	
D2-Kuwait		-49.62** (-2.09)	
D3-Oman		-45.62** (-2.10)	
D4-S.Arabia		-46.62** (-2.08)	
D5- Syria		-36.38** (-2.17)	
D6-UAE		-53.22** (-2.10)	
D7-Egypt		-38.23 (-2.21)	
LInc	0.38* (3.26)	6.18** (6.62)	0.38* (3.80)
LTP	-2.14** (-1.99)	-1.02 (-0.77)	-2.14** (2.03)
Dumi01/02	0.63** (2.51)	0.79* (3.26)	0.63** (2.97)
LSPIn	-1.91*** (1.75)	-0.04 (-0.03)	-1.91*** (-1.81)
LTa(t-1)	0.47* (4.64)	0.08 (0.89)	0.47* (4.19)
R <sup>2</sup> -adjusted	0.68	0.83	0.68
Redundant test		Reject Ho	
Hausmen test			Fail to reject Ho
Durbin Watson	1.66	2.16	1.66

Note : Cross-section weights (PCSE) standard error & covariance corrected.

One of the interesting results in this study is the effect of September 11 incidence. As expected this incidence did give a positive impact on the flow of Middle East tourists to Malaysia. The result is statistically significant at 5 percent significant level.

Another important variable is cost of visiting at alternative destinations (LSPIn). In this research Indonesia is taken as a rival destination to Malaysia. The result has shown that Indonesia is found to be a competitor market to Malaysian tourism. For every 10 percent decrease in cost of visiting to Indonesia, Malaysia will loose about 19.1 percent of total tourist arrivals from Middle East. To these tourists, Malaysia and Indonesia are substitute destinations.

Lag dependent ( $LTa_{(t-1)}$ ) are also play an important role in this demand model. This variable is a proxy to repeated tourists or informal tourism promotion. It has a positive impact on the total arrival and it is statistically significant at 95 percent significant level.

With regard to policy implications this study would suggest that all the stakeholders in tourism industry whether the government or private sectors must work hand in hand to ensure that cost of visiting Malaysia must be reasonable and competitive with its neighborhood destinations particularly Indonesia. Therefore, the government must always monitor the pricing system in related sectors that provide services to tourists. Since the price elasticity of tourism demand is elastic, any small increase in prices of services required by tourist would cause a substantial decrease in their arrival to this country. Because of Indonesia and Malaysia are substitute destinations, any price increases in Malaysia or price decreases in Indonesia would penalize Malaysia in terms of receiving less inbound tourists especially from the Middle East.

Since repeated tourist also is an important variable the government must ensure that all services providers give the best services to the inbound tourists in order to encourage them to visit Malaysia in the future. Malaysia also has to diversify its tourism products to attract more repeated visited as well as new visitors. Malaysia has a great potential to be an important tourist destination among the Middle East tourists because of its Islamic image.

## **Conclusion**

The major purpose of the study is to identify and estimate factors that influencing tourists from the Middle East to visit Malaysia. This study has to employ the panel data analysis in order to avoid the problem of getting sufficient time series data besides it has several advantages. In general the estimated results are quite good which is consistent with the demand theory and satisfying the statistical requirements. Among the important findings are the tragedy of September 11 is an important variable that promote the incoming of Middle East tourists to Malaysia. Changes in cost of traveling in Malaysia would have significant impact on the inbound tourists to this country. The Middle East tourists consider Malaysia and Indonesia as substitute destinations. In order to make Middle East market as a dominant contributor to the inbound tourists to Malaysia, measures must be taken to make Malaysia is worth for money and a safe tourist destination.

## **References**

- Aslan, Alper, Kaplan, Muhittin and Kula, Ferit (2008). International Tourism Demand for Turkey: A dynamic panel data approach" MPRA (Munich Personal RePEc Archive) Paper No. 10601. <http://mpra.ub.uni-muenchen.de/10601>. Retrieved on January, 5 2008.
- Crouch, Geoffery. I., Schultz, L., and Valerio, P. (1992). Marketing International Tourism to Australia: A Regression Analysis. *Tourism Management*, 13(2),196-208.

- Dritsakis, N. (2004) Cointegration Analysis of German and British Tourism demand for Greece. *Tourism Management*, 25, 111-119.
- Kareem, Olayinka Idowu. (2008). "A Panel Data Analysis of Demand For Tourism In Africa" Ibadan journal of social science. <http://www.africametrics.org/documents/.../Kareem%20DEMAND%20tourism.pdf>. Retrieved on January 2008.
- Soukiazis, E. and Proenca, S. (2007). "Tourism As an Alternative Source of Regional Growth Inpertugal: A panel data analysis at NUT II and III levels". *Portuguese Economic Journal*, 7(1), 43-6.
- Green, W.H. (2003). *Econometric Analysis*, 5<sup>th</sup> edition. New York: Macmillan.
- Hsiao, C. (2003). *Analysis of Panel Data*. Second edition. Cambridge University Press.
- Eugenio-Martin, J.L., Morales, N.M., and Scarpa, R. (2004). "Tourism and economic growth in Latin America countries : A Panel Data Approach" Working Papers with number 2004. [http://paper.ssrn.com/sol3/papers.cfm?abstract\\_i=504482](http://paper.ssrn.com/sol3/papers.cfm?abstract_i=504482). Retrieved on January 2008.
- Kou, H-I, C.L. Chang, C.C Chen and M. McAleer. "Avian Flu and International Tourism Demand: A panel data analysis" pages 1892-1898. Department of Applied Economics [www.mssanz.org.au/MODSIM07/papers/32\\_s22/AvianFlu\\_s22\\_Kuo\\_.pdf](http://www.mssanz.org.au/MODSIM07/papers/32_s22/AvianFlu_s22_Kuo_.pdf). Retrieved on January, 5 2008.
- Li, G. (2004). *Tourism forecasting-an almost ideal demand system approach*, Unpublished Ph.D thesis, University of Surrey.
- Lim, C., & McAller, M. (2002). A cointegration analysis of annual tourism demand by Malaysia for Australia. *Mathematics and Computer in Simulation*, 59, 197-205.
- Lim, C. (2004) The Major Determinants of Korean Outbound Travel to Australia. *Mathematics and Computers in Simulation*, 64, 477-485.
- Martin, C.A., and Witt, S.F. (1988) Substitute Prices in Models of Tourism Demand. *Annals of Tourism Research*, 15(2), 255-268.
- Morley, C.L. (1998) A Dynamic International Tourism Demand Model. *Annual of Tourism Research*, 25, 70-84.
- Muñoz, T.G. (2006) Inbound International Tourism to Canary Islands: a dynamic panel data model. *Tourism Management*, 27, 281-291.
- Narayan, P.K. (2004) Fiji Tourism Demand: The ARDL Approach to Cointegration. *Tourism Economics*, 10(2), 193-206.
- Narayan, P.K. (2005) The Saving and Investment Nexus for China: Evidence from cointegration test. *Applied Economics*, 37, 1979-1990.

- Norlida Hanim Mohd Salleh, Ahmad Shuib, Siong-Hook Law, Zaleha Mohd Noor, and Sridar Ramachandran. (2007a). An ARDL Model of Tourism Demand for Malaysia by Major ASEAN Countries, *IJUM Journal of Economics and Management*, 15(1), 1-26.
- Norlida Hanim Mohd Salleh, Redzuan Othman and Sridar Ramachandran. (2007b). Malaysia's Tourism Demand from Selected Counteris: The ARDL Approach to Cointegration. *International Journal of Economics and Management*, 3(1), 39-57.
- Norlida Hanim Mohd Salleh. (2009). Factors that Affecting Malaysia Tourism Demand. Unpublished Ph.D thesis, University Putra Malaysia.
- Salman, A.K.(2003) Estimating Tourism Demand Through Cointegration Analysis: Swedish data. *Current Issues in Tourism*, 323-338.
- Proenca, S and Soukiazis, E. (2005). "Demand for Tourism in Portugal: A Panel Data Approach". Discussion Paper, No. 29. at [www4.fe.uc.pt/ceue/working\\_papers/israelias\\_29.pdf](http://www4.fe.uc.pt/ceue/working_papers/israelias_29.pdf). Retrieved on January 2008.
- Song, H., and Witt, S.F. (2003) Tourism forecasting: The General-To-Specific Approach. *Journal of Travel Research*, 42, 65-74.
- Song, H., and Witt, S.F. (2006) Forecasting International Tourists Flows to Macau. *Tourism Management*, 27, 214-224.
- Sequeira, T.N., and Nunes, P.M. (2008). "Does Country Risk Influence International Tourism? A Dynamic Panel Data Analysis" *The Economic Record*, vol 84 No.265, 223-236.
- Sequeira, T.N., and Campos, C. (2005). "International Tourism and Economic Growth: A Panel Data Approach" Working Papers 2005. [http://paper.ssrn.com/sol3/papers.cfm?abstract\\_i=855985](http://paper.ssrn.com/sol3/papers.cfm?abstract_i=855985). Retrieved on January, 5 2008.
- Toh, R.S., Habibullah, K., and Goh, L. (2006) Japanese Demand for Tourism in Singapore: A cointegration approach, *Tourism Analysis*, 10, 369-375.
- Naude, W.A, and Saayman, A. (2005). "The Determinants of Tourist arrivals In Africa: A Panel Data Regression Analysis" Source: *Tourism Economics*, Volume 11, Number 3, September 2005, pp. 365-391(27).
- Witt, S.F. and Witt, C.A. (1995). Forecasting Tourism Demand: A Review of Empirical Research. *International Journal of Forecasting*, 11, 447-475.
- World Tourism Organization. (2002). *Compendium of Tourism Statistics (1996-2000)*. Madrid, Spain
- World Tourism Organization. (annual). *Yearbook of Tourism Statistic*, World Tourism Organization, Madrid, Spain.
- World Bank. (2008). *World Development Indicator 2008*. Washington D.C.: World Bank.

### **About the Authors**

Dr Norlida Hanim Mohd Salleh is a Lecturer at School of Economics, Universiti Kebangsaan Malaysia. Email: [norlidahanim@gmail.com](mailto:norlidahanim@gmail.com).

Dr Redzuan Othman, ia an associate professor at the School of Economics, Universiti Kebangsaan Malaysia. Dr Redzuan ia also an associate researcher at the Institute of West Asian Studies (IKRAB), Universiti Kebangsaan Malaysia. Email: [redzuano@gmail.com](mailto:redzuano@gmail.com)

Dr Abu Hassan Shaari Mohd Noor is an associate professor at the School of Economics, Universiti Kebangsaan Malaysia. Email: [ahassan@ukm.com](mailto:ahassan@ukm.com)

Dr Mohd Safar Hasim, is a professor at the School of Media and Communication Studies, Universiti Kebangsaan Malaysia. He is also an Associate Principle Fellow at the Institute of West Asian Studies, Universiti Kebangsaan Malaysia. Email: [drmsafar@gmail.com](mailto:drmsafar@gmail.com)