

Factors Affecting Tourism Demands in Selected OIC Countries

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Abstract

This study investigates factors affecting tourism demands in Selected OIC Countries for the period of 2004 to 2016. The economic variables used in this study are tourist receipts, GDP per capita, real exchange rate, population, Trade openness and Consumer Price Index. GLS method is applied in the research model in order to investigate the relationship between tourist receipts, GDP per capita, real exchange rate, population, Trade openness and Consumer Price Index. In this research, we find that GDP per capita, real exchange rate, population, Trade openness have a Positive impact on tourist receipts. These factors play a crucial role in tourism demand. The adoption of appropriate economic policies, in line with the tourism development policies, such as the appropriate rate of exchange, can help to reduce the travel costs and it enhances the competitive advantage of this industry. The results also showed that the Consumer price index (CPI) variable has a positive impact and almost equal to zero but it is insignificant in explaining tourism demand.

Keywords: Tourism demands, OIC, GLS method

Introduction

Tourism is considered one of the biggest and most versatile industries in the world and its growth pace has caused many social, economic and environmental changes. Many countries have successfully exploited such approach in order to significantly improve their current conditions and overcome some of their economic problems such as low income per capita, unemployment and shortage of foreign exchange earnings (DaiKarimzadeh et al. 2014). Tourism industry, in some Islamic countries, has helped raise the employment rate, increase foreign exchange earnings, extend international cooperation, and improve the economic status of those countries; hence, tourism is given a crucial role in the policy-making of the Organization of Islamic Cooperation (OIC) and among many Islamic countries (Roknoddin Eftekhari et al. 2009). Because of its developments and its growing role as a source of income for the members of OIC, tourism is now referred to as the main industry of the 21st century for those countries. Tourism, as an economic, social, and environmental power as well as a political phenomenon, is affected by complex factors and is politically and economically interwoven. Therefore, it can attract both domestic and foreign tourists. Consequently, OIC – as one of the main political and economic organizations of the world- has recently has put tourism industry under consideration in order to further expand cooperation among Islamic countries (especially for the south-south relationships). Organization of Islamic Cooperation

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has named 2010 as the “Islamic tourism” year aiming at changing tourism industry into an effective factor that helps develop interaction of cultures, dialogue among civilizations, and the establishment of fondness to lay the ground for deeper integration among Islamic nations (Arbabian et al. 2014). The members of OIC, including developing and under-developed countries, has faced many problems like low income per capita, unemployment and poverty; so, they need to resort to and develop tourism industry as one of the most prolific industries in the world to obviate their difficulties.

According to the World Tourism Organization (UNWTO), only 173 million out of 1204 billion tourists in 2015 visited Islamic countries. This is considered noticeably low as compared to the region’s potentials and capacities.

Attributable to the importance of tourism and the factors affecting tourism demands, this study investigates the factors affecting the tourism demand of OIC countries. To do so, a mixed approach (micro and macro factors) was applied and panel data from 2004 to 2016 were used. It is noteworthy that according to macro-economic approach, tourism demand patterns are explained based on the economic and social condition at the whole level (Sakai et al. 2000; Garin-Munoz, 2006; Santana-Gallego et al. 2011; Seetanah, 2011). While in micro-economic approach focus on effective variables on the individual level (Brida and Risso, 2009; Surugiu et al. 2011; Massidda and Etzo, 2012). Thus, the mixed-approach is a combination of these two micro and macro approaches (Naudé and Saayman, 2005; Eugenio-Martin et al. 2008; Leitão, 2010; Yang et al. 2010; Yang, 2012).

Literature Review

Extensive research has focused on describing Factors Affecting tourism. For example, Kuek et al. (2017) examined factors affecting the China Tourist Arrival in the United States. They used the economic and non-economic variables such as exchange rate, income (GDP growth per capita), terrorism and natural disaster over the period from the year 1990 to the year 2014. In this study, Autoregressive Distributed Lag (ARDL) method is applied in order to investigate the long run relationship between tourist arrival, exchange rate, income, terrorism and natural disaster. The results indicated that the increase in number of terrorism and the increase in the number of natural disasters have a negative impact on the tourist arrival from China to the United States. The results also indicated that there is a long run relationship between the tourist arrival, exchange rate and terrorism.

Borhan and Arsad (2016) examined the relationship between the number of international tourist arrivals to Malaysia from six European countries and economic variables. For this purpose, they were employed ARDL methods using quarter data over the period 1999 to 2014. The results indicated that there exist long-run cointegration between the number of international tourist arrivals and exchange rate, level of income, tourism price and substitute tourism price for all countries.

Gabriela and Smaranda (2015) Estimated demand for tourism in Romania during the years 1998- 2014. The results of this study showed that the cost of travel in the destination country has a negative effect and the exchange rate, per capita income and behavioural habits, have had a positive and significant effect on the tourism demand of this country.

Mordecki (2014) examined determinants of Argentinean tourism demand using Johansen-Juselius methodology in Uruguay during the years 1970- 2013. The findings of this study showed that real exchange rate, behavioural habits and the per capita income of tourists in the countries of destination have a positive and significant impact on tourism demand in Uruguay.

Pishbahar and Yadavar (2018) examined the factors affecting tourism demand in Aras free Zone using structural equation modelling in 2014. The results indicated that the demand for

tourism was affected by the satisfaction of business, religious, historical, and natural tourism and the facilities available, In other words, for increasing tourism demand, it should increase the quality and quantity of the facilities of Aras Free Zone, such as restaurants, tour services, health care, housing, parking and tourist guide.

Rasekhi and Mohammadi (2017) examined factors affecting tourism demand in the Caspian Sea littoral states using Panel data method during the period of 2000-2013. The results indicated that the per capita income, real exchange rate and trade liberalization has a positive effect on tourism. Also, other obtained results of this research show the economic instability has a significant negative effect on tourism demand.

Khoshnevis Yazdi and Gomami (2016) Estimated demand for tourism in Iran during using the ARDL model during the years 1987- 2014. They used the economic variables such as Nominal exchange rate, GDP, Consumer Price Index and oil price. The results indicated that GDP and Consumer Price Index has a positive effect on Tourism demand and Nominal exchange rate and oil price Index has a Negative effect on Tourism demand.

DaiKarimzadeh et al. (2014) examined Factors affecting the International tourism demand in Iran using ARDL approach during the period of 1976-2010. the results indicated that real income per capita, market exchange rate and Trade openness variables have a positive effect and consumer price index for goods and services in Iran and a dummy variable (revolution and war) have a negative effect on the number of inbound international tourism to Iran.

Despite several studies on tourism demand, there has been no study on tourism demand in OIC countries. While the countries of this organization have a great potential in attracting religious tourism and paying attention to factors affecting the demand for tourism in these countries can provide the ground for further development of this industry in these countries.

Materials and Methods

In this study based on panel data, the regression method is used. The balanced panel consists of annual data for Tourism demand in the 34 selected OIC countries, namely Albania, Algeria, Azerbaijan, Indonesia, Iran, Iraq, Bahrain, Bangladesh, Burkina Faso, Cameroon, Egypt, Gambia, Guyana, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Malaysia, Mali, Morocco, Niger, Nigeria, Oman, Pakistan, Qatar, Saudi Arabia, Senegal, Suriname, Tajikistan, Togo, Tunisia, Turkey, Uganda and Yemen for the period of 2004-2016.

The data are gathered and verified from various sources i.e. International Financial Statistics by IMF, World Bank (WDI) and UNCTAD¹.

Many studies were carried out to measure tourism demand using various parameters, including tourist arrivals, tourist expenditure and tourist receipts. In the present study to follow Kosnan et al. (2012) and Rasekhi and Mohammadi (2017) we employed Equation (1) which TR_{it} represents the tourist receipts of country i in the year t .

$$TR_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 POP_{it} + \beta_3 OPEN_{it} + \beta_4 CPI_{it} + \beta_5 EX_{it} + U_{it} \quad (1)$$

For estimation purpose, linear equation form of natural logs is expressed as

$$\ln TR_{it} = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln POP_{it} + \beta_3 \ln OPEN_{it} + \beta_4 \ln CPI_{it} + \beta_5 \ln EX_{it} + U_{it} \quad (2)$$

The variables of the research model are introduced in the table (1)

¹ United Nations Conference on Trade and Development (UNCTAD)

Table 1. variables of the research model

Variable	Description
Ln TR	The logarithm of tourist receipts OIC countries
Ln GDP	The logarithm of GDP per capita
Ln EX	The logarithm of the real exchange rate
Ln POP	The Logarithm of population
Ln open	The logarithm of Trade openness
Ln CPI	The logarithm of Consumer Price Index

The dependent variable is the value of inbound tourist receipts in OIC countries, GDP is GDP per capita which known as an indicator of the level of economic development which could promote tourism receipts. Therefore, an increase in tourist income will increase the number of tourist recipients. The result is expected greater than zero as tourist receipts increase when income increases. POP is a proxy for the country size of source countries, It is expected a positive sign as the larger the population, the more tourists from source country will demand to visit OIC countries and thus will increase tourist recipients. Trade openness has also been seen as an important factor in the growth and development of the tourism industry in the economy. So that it can increase access to the market for its goods and services and reduce domestic prices and improve the quality of its products. CPI / CPI_w To follow Musai (2013) the ratio of the consumer price index in OIC countries to the global consumer price index, instead of variable CPI. EX is the real exchange rate which a factor affecting the demand for tourism. This factor can contribute to the development of tourism by increasing the purchasing power of foreign tourists.

Results And Discussion

Unit root test

In order to investigate the stationarity of the variables, it is first necessary to do the unit root test in the panel data. For this study, we have chosen the Levin, Lin and Chu (LLC) test. The results are presented in the following table.

Table 2. Results of unit root tests of model variables

Variables	Levin, Lin and Chu	
	Statistics	Prob
Ln TR	(-7.6299)	0.000
Ln GDP	(-3.0644)	0.001
Ln EX	(-4.3423)	0.000
Ln POP	(-26.5943)	0.000
Ln open	(-2.1681)	0.015
Ln CPI	(-16.1433)	0.000

Table 2, presents the results of the Levin Lin and Chu (LLC) test. Panel unit root test at a level indicating that all variables are I(0), So it can be concluded the null hypothesis of unit root test is rejected at 95 percent critical value.

Chaw test and Hausman test

After the unit root test, it is necessary that the Chaw test to determine between pool data or panel data model and Hausman test to determine between the Fixed Effect or Random Effect model are done. Table 3 shows the results F test and the Hausman test.

Table 3. F-limer and Hausman test Results

Test	Statistic	Significance level
F-limer	91.88	0.0000
Hausman	54.75	0.0000

According to Table (3), F-Limer test indicates that the significance level is less than 5 Percent so the rejection of hypothesis (H0) and the model is Panel Data; also Hausman test indicates that the significance level is less than 5 Percent so the rejection of hypothesis (H0) and the model is fixed effects.

Testing for Heteroskedasticity and Serial Correlation

Finally, In order to examine the autocorrelation and heteroskedasticity in Panel Data, Wooldridge test and Modified Wald test are employed. The results are presented in table 4.

Table4. The Modified Wald test and Wooldridge test results

Test	Statistic	Prob
Modified Wald test for heteroskedasticity		
Chi-Sq (statistic)	0.0000	4878.76
Wooldridge test for autocorrelation		
F Statistic	0.0000	49.983

According to Table (4), Modified Wald test indicates the rejection of hypothesis (H0), Rejection of null hypothesis means that there is heteroscedasticity in the panel data, also, Wooldridge test results indicate that null hypothesis is rejected meaning that there is presence of serial correlation and it can be concluded that data have a first-order autocorrelation.

Model Estimation

As mentioned before, the model introduced in this paper is evaluated for Factors Affecting tourism demands using panel data and GLS method between 2004 and 2016 in OIC countries. The results of regression using GLS method in STATA12 software, are shown in Table 5.

The model with tourist receipts as the dependent variable has been estimated with the GLS method and autoregressive process in order to remove the autocorrelation and heteroscedasticity for OIC countries.

The results show that all estimators have the expected signs. The positive sign of GDP per capita is represented positive and significant relationship GDP per capita and tourist receipts in OIC countries. Since the above-mentioned function has a logarithmic format, the coefficients of the independent variables, which are also logarithmic, express the sensitivity and elasticity of the related independent variable, so the increase of one percent in the level of

per capita or increase in the level of income of the international tourists increases the demand for tourism by 0.94%. In other words, the elasticity of the income function for the flow of international tourism to OIC countries is equal to 0.94. Since this elasticity of income is between zero and one, travelling to OIC countries from the viewpoint of foreign tourists is ranked as a “necessity” and not a “luxury”. Hence, the demand to travel to OIC countries, in proportion to the income variation of the foreign tourist has a low elasticity. These results are consistent with the findings of other research (DaiKarimzadeh et al. 2014; Smeral, 2012); that shows GDP per capita has a significant and positive impact on tourism.

Table 5. Regression result

variable	Coefficient	Z	P-Value
Ln GDP	0.94	17.13	0.000
Ln POP	0.79	17.51	0.000
Ln CPI	0.00000937	0.04	0.967
Ln EX	0.58	3.25	0.001
Ln open	0.78	7.37	0.000
Intercept	-5.60	-3.43	0.001
Prob		0.000	
χ^2 Wald		534.97	

On the other side, the model findings indicate that population is an important key factor in the tourism demand function. In other words, The more a country in terms of population is larger and more densely populated, The more tourism demand will be, because population increase pave the way to providing expertise in the provision of tourism services and also in the populous countries such as India and China we will see the attraction of more ethnicities because of the variety of costumes.

According to the results, the population has a positive impact on the demand for tourism. If the population increases 1%, the tourist revenue increases by 0.79%. So that the travel incentive to this is due to benefit from tourism services, especially hotel services, leisure and entertainment. These results are consistent with the findings of other research (Kosnan et al. 2012; Hanafiah et al. 2011), that shows population has a significant and positive impact on tourism.

The Consumer price index (CPI) variable has a positive sign and almost equal to zero but it is insignificant in explaining tourism demand. it could be said that the international demand for travel to OIC countries is not sensitive to the fluctuations of Consumer price index (CPI) and the function of demand for tourism, in relations to the cost has an inelasticity. These results are consistent with the findings (Khoshnevis Yazdi and Gomami, 2016).

The real exchange rate has a positive effect on Tourism demand of OIC countries So that the elasticity of this variable is 0.58, In other words, by increasing the real exchange rate, foreign purchasing power is expected to increase and demand travel and tourism will increase. These results are consistent with the findings of other research (Loganathan et al. 2013; Yang et al. 2010) that shows the real exchange rate has a significant and positive impact on tourism.

Trade openness has a positive impact on Tourism demand, So that by 1% increase of Trade openness in OIC countries, the incentive to travel to these countries has increased, and as a result, tourism demand will increase by 0.78%. These results are consistent with the findings of other research (Rasekhi and Mohammadi, 2017).

Conclusion and Recommendation

Tourism plays an important role in any country's economy. Therefore, it is important to pay close attention to tourism demand and all of the determinants. This study investigates factors affecting tourism demands in Selected OIC Countries during the period 2004 – 2016. For this purpose, we estimated a panel data model using the GLS approach. The unit root test (LLC) is used to confirm the stationarity of all variables. After confirming that all variables are stationary at the level, Hausman test to decide between pool data and panel data and Chow test to decide between fixed and random effects are applied. Finally, Wooldridge test and Modified Wald test are performed to investigate the existence of the autocorrelation and heteroskedasticity.

Results obtained indicate that elasticity of income is between zero and one, Therefore, tourism in these countries considered as a necessity good. The policy implication of this result is that in order to attract more tourists to these countries, suppliers of tourism products and services should improve the quality of their services and promote their brand. Also, rising real exchange rates will increase the demand for tourism in these countries. Therefore, the real exchange rate as the power of the competitiveness of goods and tourism services should become in a way that tourism services of the country have the global competition ability. This issue is very important and effective in expenses associated with the accommodation expenses. Trade openness has a positive impact on Tourism demand, Therefore, the development of trade in these countries could lead to an increase in demand for tourism.

References

- Arbaban, S., Rafat, B. and Ashrafiyan Pour, M. (2014). Relationship between International Tourism and Economic Growth (Case Study: Selected Countries of OIC). *Quarterly Journal of Economic Growth and Development Research*, 4(13), 116-97.
- Brida, J. G. and Risso, W. A. (2009). A dynamic panel data study of the German demand for tourism in South Tyrol. *Tourism and Hospitality Research*, 9(4), 305-313.
- Eugenio-Martin, J. L., Martin-Morales, N., & Sinclair, M. T. (2008). The role of economic development in tourism demand. *Tourism Economics*, 14(4), 673-690.
- Gabriela, T. and Smaranda, S. (2015). Analyzing the Mountain Tourism Demand in Romania over the last two Decades. *Annals of the University of Oradea: Economic Science*, 25(1), 696-705.
- Garín-Munz, T. (2006). Inbound international tourism to Canary Islands: a dynamic panel data model. *Tourism management*, 27(2), 281-291.
- Hanafiah, M. H., Harun, M. F. and Jamaluddin, M. R. (2011). Trade and tourism demand: A case of Malaysia. In *International Conference on Business and Economic Research*. Malaysia.
<https://data.worldbank.org/>
<https://unctad.org/en/Pages/statistics.aspx>
<https://www.imf.org/external/index.htm>
- Khoshnevis Yazdi, S., Gomami, M. (2016). Estimating the Function of Tourism Demand in Iran. , 6(12), 1-12.
- Kosnan, S. S. A., Ismail, N. W. and Kaniappan, S. R. (2012). Demand factors for international tourism in Malaysia: 1998-2009. *Prosiding Perkem VII, Jilid*, 1, 44-50.
- Kuek, V. Z. H., Cheng, C., Loo, C., Wong, L. Y. and Tses, K. K. (2017). A Study of The Factors Affecting the China Tourist Arrival in the United States (Doctoral dissertation, UTAR).
- Leitão, N. C. (2010). Does trade help to explain tourism demand? The case of Portugal. *Theoretical and Applied Economics*, 17(3), 63–74.
- Massidda, C., and Etzo, I. (2012). The determinants of Italian domestic tourism: A panel data analysis. *Tourism Management*, 33(3), 603-610.
- Mordecki, G. (2014), Determinants of Argentinean Tourism Demands in Uruguay, Working Paper: 1-17.

- Musai, M. (2013). A Study of Demand Factors on Foreign Tourism in Iran. *IAU International Journal of Social Sciences*, 3(4), 35-42.
- Naudé, W. A. and Saayman, A. (2005). Determinants of tourist arrivals in Africa: a panel data regression analysis. *Tourism Economics*, 11(3), 365-391.
- Pishbahar, E. and Yadavar, H. (2018). Effective Factors on Tourism Demand of Aras Free Zone: Using Structural Equation Modeling (SEM) Approach. *Iranian Journal of Agricultural Economics and Development Research*, 48(4), 557-572. doi: 10.22059/ijaedr.2018.65229
- Rasekhi, S. and Mohammadi, S. (2017). Factors Affecting Tourism Demand in the Caspian Sea Littoral States. *Tourism Management Studies*, 12(38), 63-81. doi: 10.22054/tms.2017.6434.1148.
- Roknoddin Eftekhari, A., Beshami, B., Sojasi Ghaidari, H. and Hassanpour, Y. (2009). Role of Member Countries of Organization of Islamic Conference (OIC) in Global Tourism. *Geopolitics*, 5(15), 138-168.
- Sakai, M., Brown, J. and Mak, J. (2000). Population aging and Japanese international travel in the 21st century. *Journal of Travel Research*, 38(3), 212-220.
- Santana-Gallego, M., Ledesma-Rodríguez, F. and Pérez-Rodríguez, J. V. (2011). Tourism and trade in OECD countries. A dynamic heterogeneous panel data analysis. *Empirical Economics*, 41(2), 533-554.
- Seetanah, B. (2011). Assessing the dynamic economic impact of tourism for island economies. *Annals of Tourism Research*, 38(1), 291-308.
- Smeral, E. (2012). International tourism demand and the business cycle. *Annals of Tourism Research*, 39(1), 379-400.
- Surugiu, C., Leitão, N. C. and Surugiu, M. R. (2011). A panel data modeling of international tourism demand: Evidences for Romania.
- Yang, Y. (2012). Agglomeration density and tourism development in China: An empirical research based on dynamic panel data model. *Tourism Management*, 33(6), 1347-1359.
- Yang, C. H., Lin, H. L. and Han, C. C. (2010). Analysis of international tourist arrivals in China: The role of World Heritage Sites. *Tourism management*, 31(6), 827-837.
- DaiKarimzadeh, S., Ghobadi, S. and Foroudastan, N. (2014). Factors affecting the International tourism demand in Iran: ARDL approach. *Tourism Management Studies*, 8(23), 131-154.
- Borhan, N. and Arsad, Z. (2016, October). Determining factors affecting tourism demand for Malaysia using ARDL modeling: A case of Europe countries. In *AIP Conference Proceedings* (Vol. 1782, No. 1, p. 050005). AIP Publishing.

