

## **Tourist Arrivals to Muslim Countries: Pre- and Post-September 11**

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The incident that occurred on 11 September 2001 changed tourist arrival patterns directly afterwards, not only in the United States but also in the Middle East. In the longer run, the negative media portrayal of Islam and Muslim countries after the 9/11 incident also effected tourist travel patterns. This paper examines whether the 9/11 incident affected tourist arrival patterns in Muslim countries using the bilateral tourism flows gravity model. The result indicates that the Muslim country effect was only visible after 2001. Before the September 11 incident, the patterns of tourist arrival between a pair of Muslim and non-Muslim countries were similar.

**Keywords:** 9/11, Islamic Tourism, Terrorism, Shariah Compliant Tourism, OIC.

### **1. Introduction**

The 9/11 incident took 2,996 lives.<sup>2</sup> It reduced confidence in the safety and security of travel (Flyod et al, 2004; Simmons Market Research Bureau, 2001), hence affecting tourists' decisions, particularly immediately after the incident. Tourists are sensitive to safety issues; they tend to change their travel destinations upon sensing irregularities (Brunt & Cousins, 2000). Globally, the incident reduced the number of tourist arrivals by 0.6% in 2001, the only decline since 1982 (WTO, 2002a). The reluctance to travel affected the tourism industry negatively, as hotel occupancy rates plummeted and business trips and vacations were cancelled. Even though the 9/11 incident took place in the United States, its effects were global, especially in the Middle East. The number of tourist arrivals in the Middle East was reduced, as the incident changed

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the perception about Muslim countries in a negative way. While North America confronted a 27% decline in international tourist arrivals from September until December 2001, the reduction in the Middle East was 30% (WTO, 2002a). Many tourists, especially those from non-Muslim countries, perceived the Muslim world as homogeneous and associated the perception from the incident with an entire region and religion (Santana, 2004).

However, Al-Hamarneh and Steiner (2004) suggested that the 9/11 incident was an opportunity for Islamic or Shariah-compliant tourism to thrive. Muslim tourists tend to feel unwelcome in non-Muslim countries due to the many negative portrayals by the Western media (Powell, 2011). Indeed, Muslim-friendly tourism initiatives have grown rapidly. In 2015, it was estimated that the Muslim travel market accounted for \$145 billion of international tourism spending (Tripfez, 2016). In addition to the negative media portrayals, the tightening of restrictions on visa approvals and additional security measures inconvenienced many travellers, especially those from Muslim countries.

The aim of this paper is to examine whether the 9/11 incident has changed the pattern of tourist arrivals from Muslim countries to Muslim countries. The incident had negatively affected the United States and Middle East countries in the short run, as indicated by the statistics. In the medium to long run, the incident is an opportunity for Muslim countries to divert tourists from Muslim countries who used to travel to non-Muslim countries, as suggested by Al-Hamarneh and Steiner (2004). This diversion will change the pattern of tourists travelling to Muslim countries by increasing the number of tourists from Muslim countries.

## **2. Background**

An initial reaction to the 9/11 incident was that tourists from Western Europe avoided travelling to the United States and the Middle East; instead, tourists chose domestic holidays which were perceived to be safer (WTO, 2002b). Exacerbating the negative reaction from the incident, many Western media outlets pointed to religion as the main factor causing the 9/11 incident (Kellner, 2004; Powell & Abadi, 2003), ignoring the fact that Muslims and Christians, especially in the Middle East, have peacefully coexisted for centuries (Maximiliano, 2014). The Western media portrayals about Islam and the Middle East are "often articulated

via frames of terrorism, fanaticism, Islamic radicalism and an overall threat to Western society" (Buzinde, 2014). These images created enmity between the East and the West (Powell & Abadi, 2003) and distorted attitudes towards Muslims and Islam. The media portrayals sustained the fear of terrorism, associating it repeatedly to Muslims and thus contributing to the reduction of arrivals to Muslim countries from non-Muslim countries. The negative media portrayals persuaded and affected tourist decisions, as travel decisions are usually not based on any kind of objective risk assessment, but on an individual's level of perceived safety (Santana, 2001).

However, the negative portrayals also swayed some Muslim tourists from travelling to non-Muslim countries, as the bad press created unease and feelings of unwelcome. Some Muslim tourists changed their travel destinations to places that are more welcoming, especially other Muslim countries, thus resulting in improvement in inter and intra Muslim country tourism. The additional stringent requirements with regards to visa and security checks further intensified the unwelcome feeling. In some cases, Muslim tourists changed their travel decisions and visited Muslim countries with similar religious and cultural backgrounds. Indeed, studies have shown that religion is an important determinant of tourist travel (Ghani, 2016; Fourie, 2015; Fourie, Rosello and Santana-Gallego, 2014). Tourists prefer to visit countries that are religiously and culturally similar. As suggested by Al-Hammarmeh and Steiner (2004), the incident has served as a catalyst for Shariah-compliant tourism. For example, Malaysia established the Islamic Tourism Centre (ITC) to spur Islamic tourism and has successfully attracted them, especially from the Middle East. Muslim-friendly tourism standards have also been introduced in Turkey, Malaysia and Croatia (COMCEC, 2017).

### **3. Empirical Model**

This study uses the bilateral tourism flows gravity model to examine the effect of 9/11 on tourist arrivals to Muslim countries. The bilateral tourism flows gravity model was derived from the individual utility maximization model, as shown by Morley et al. (2014). It has been used to study different factors that explain tourist arrivals and expenditures (see Santana, Ledesma, Pérez & Cortés, 2010; Fourie & Santana-Gallego, 2011; Vietze, 2012; Fourie & Santana-Gallego, 2013; Ghani, 2016). Two bilateral tourism flows gravity models are used in this study:

$$\ln(Arrivals)_{ijt} = \beta_0 + \beta_1 \ln(GDP)_{it} + \beta_2 \ln(GDP)_{jt} + \beta_3 \ln(Dist)_{ij} + \beta_4 Border_{ij} + \beta_5 Lang_{ij} + \beta_6 Colony_{ij} + \beta_7 Muslim_{ij} + \beta_8 Sept11 + \beta_9 Sept11 * Muslim_{ij} + \varepsilon_{ijt} \quad (1)$$

$$\ln(Arrivals)_{ijt} = \alpha_0 + \alpha_2 \ln(GDP/Capita)_{it} + \alpha_3 \ln(GDP/Capita)_{jt} + \alpha_4 \ln(Pop)_{jt} + \alpha_5 \ln(Pop)_{it} + \alpha_6 \ln(Dist)_{ij} + \alpha_7 Border_{ij} + \alpha_8 Lang_{ij} + \alpha_9 Colony_{ij} + \alpha_{10} Muslim_{ij} + \alpha_{11} Sept11 + \alpha_{12} Sept11 * Muslim_{ij} + \mu_{ijt} \quad (2)$$

where  $i$  denotes the tourist destination country and  $j$  denotes the origin country of tourists.  $Arrivals_{ijt}$  is the number of tourists from origin country  $j$  to destination country  $i$  in year  $t$ ,  $GDP$  is the gross domestic product measured in constant USD, and  $GDP/Capita$  is gross domestic product per capita.  $Pop$  is population size.  $Dist_{ij}$  is the geographical distance in nautical miles between origin country  $j$  and destination country  $i$ .  $\ln$  indicates the value is in natural log.  $Border_{ij}$  indicates whether two countries are bordering each other.  $Lang_{ij}$  indicates whether the destination and origin country use the same language.  $Colony_{ij}$  indicates whether country  $i$  and  $j$  were colonized by the same colonizer.  $Muslim_{ij}$  indicates whether both countries are Muslim majority countries; it equals 1 when both countries  $i$  and  $j$  are OIC (Organisation of Islamic Cooperation) member countries and 0 otherwise. Membership in the OIC was used as a proxy for Muslim countries. After the United Nations (UN), the OIC is the largest intergovernmental organisation in the world, with 57 member states spread across four continents. The primary objective of the organisation is to strengthen solidarity and cooperation among member states. The variable  $Muslim$  will indicate whether there is a Muslim country effect (i.e. whether tourist arrivals to a pair of Muslim countries are higher than non-Muslim countries).  $Sept11$  is equal to 1 when the year is greater than 2001 and 0 otherwise, representing before and after the 9/11 incident. Equation (1) and (2) also include an interaction between  $Sept11$  and  $Muslim$  that measures whether the Muslim country effect depends on the 9/11 incident.

The period of study is 1995–2012. The arrival countries are OIC member countries, while the origin countries are all countries with data availability (151 countries). The data for bilateral tourist arrivals are from the United Nation World Tourism Organization (UNWTO). The data for GDP and population are from World Bank World Development Indicators.

Distance, common language, colony and border are from the Centre de recherche français dans le domaine de l'économie internationale (CEPII).

This study uses two measures of economic size: GDP and GDP per capita. Tourism is generally an individual-based or family-based activity; hence, it is appropriate to use GDP per capita to measure the purchasing power of tourists. Furthermore, the disaggregation of GDP into GDP per capita and population enabled this study to examine the effects of population size on the number of arrivals. The economic size of the country was expected to be positively related with the number of arrivals, as more of the origin country's residents can afford to visit other countries. This positive relationship is supported by many studies (see Zhang & Jensen, 2005; Croes & Vanegas, 2005). Several studies have also shown that international tourism is a luxury expense (Kim, Park, Lee & Jang, 2012; Lanza, Temple & Urga, 2003; Lim, 1997; Smeral, 2003); consequently, international tourist arrivals are positively related with income. Similar to GDP, population size was expected to have a positive relationship with tourist arrivals, as countries with higher populations are expected to have greater numbers of tourists (Fourie, Rosello & Santana-Gallego, 2015). Distance was expected to be negatively related with tourist arrival, since distance is related to cost, especially the cost of transportation. An increase in travel cost can lead to a decrease in tourist flow; however, as the cost of air travel decreases, its effect on tourist flow can also be expected to decrease (Fourie et al., 2015). Language, border and colony are expected to be positively related with arrival. The Muslim country dummy was expected to be positive, and the 9/11 incident was expected to increase the arrival of Muslim tourists to Muslim countries.

4. Result

**Table 1:** Interaction between Muslim Country and 9/11 Effect

	OLS	OLS	OLS	OLS	Random	Random	Random	Random
<i>GDP/Capita</i> <sup>D</sup>	0.678** (0.019)			0.674* (0.019)	0.962* (0.023)			0.915* (0.022)
<i>GDP/Capita</i> <sup>O</sup>	0.766** (0.018)			0.764* (0.018)	0.824* (0.020)			0.792* (0.020)
<i>Pop</i> <sup>D</sup>	0.697** (0.014)			0.697* (0.014)	0.846* (0.016)			0.812* (0.015)
<i>Pop</i> <sup>O</sup>	0.796** (0.016)			0.796* (0.016)	0.826* (0.018)			0.792 (0.017)
<i>GDP</i> <sup>D</sup>		0.695** (0.013)	0.694* (0.013)			0.901* (0.015)	0.858* (0.014)	
<i>GDP</i> <sup>O</sup>		0.782* (0.013)	0.781* (0.013)			0.831* (0.014)	0.794* (0.014)	
<i>Dist</i>	-1.557* (0.040)	-1.555* (0.040)	-1.556* (0.040)	-1.557* (0.040)	-1.607* (0.040)	-1.587* (0.039)	-1.583* (0.038)	-1.601* (0.039)
<i>Muslim</i>	0.174* (0.076)	0.181* (0.075)	0.013 (0.087)	0.003 (0.087)	0.161* (0.073)	0.175* (0.071)	0.052 (0.073)	0.043 (0.075)
<i>Sept11</i>			0.058* (0.025)	0.069* (0.025)			0.057* (0.015)	0.048* (0.015)
<i>Muslim*Sept11</i>			0.240* (0.059)	0.246* (0.059)			0.128* (0.033)	0.133* (0.033)
<i>ComLang</i>	1.494* (0.080)	1.500* (0.080)	1.507* (0.079)	1.502* (0.079)	1.795* (0.080)	1.834* (0.077)	1.803* (0.075)	1.770* (0.079)
<i>ComBorder</i>	1.926* (0.188)	1.949* (0.188)	1.950* (0.188)	1.924* (0.188)	1.898* (0.206)	1.830* (0.202)	1.833* (0.200)	1.896* (0.203)
<i>Colony</i>	0.969* (0.263)	0.966* (0.262)	0.974* (0.262)	0.977* (0.262)	0.815* (0.257)	0.7784* (0.253)	0.907* (0.250)	0.923* (0.254)
<i>Constant</i>	-16.903 (0.580)	-16.929 (0.579)	-16.901 (0.579)	-16.864* (0.580)	-22.418 (0.609)	-23.120 (0.623)	-21.245 (0.588)	-20.746* (0.582)
<i>R</i> <sup>2</sup>	0.63	0.63	0.63	0.63	0.64	0.64	0.64	0.64
Observation	57276	57609	57609	57276	57276	57609	57609	57276

**Table 2:** Muslim Country Effect Pre and Post 9/11

	Before 2001				After 2001			
	OLS	OLS	Random	Random	OLS	OLS	Random	Random
<i>GDP/Capita</i> <sup>D</sup>		0.718 (0.022)		0.673 (0.025)	0.652 (0.020)			0.943 (0.020)
<i>GDP/Capita</i> <sup>O</sup>		0.739 (0.021)		0.724 (0.020)	0.777 (0.018)			0.809 (0.018)
<i>Pop</i> <sup>D</sup>		0.723 (0.016)		0.690 (0.016)	0.685 (0.015)			0.796 (0.015)
<i>Pop</i> <sup>O</sup>		0.773 (0.019)		0.764 (0.018)	0.806 (0.016)			0.848 (0.017)
<i>GDP</i> <sup>D</sup>	0.723 (0.015)		0.685 (0.016)			0.681 (0.013)	0.860 (0.013)	
<i>GDP</i> <sup>O</sup>	0.756 (0.016)		0.745 (0.015)			0.794 (0.013)	0.831 (0.013)	
<i>Dist</i>	-1.527 (0.047)	-1.532 (0.047)	-1.508 (0.044)	-1.511 (0.044)	-1.570 (0.041)	-1.571 (0.040)	-1.588 (0.040)	-1.617 (0.041)
<i>Muslim</i>	0.014 (0.088)	0.003 (0.088)	0.040 (0.083)	0.025 (0.083)	0.246 (0.078)	0.248 (0.077)	0.204 (0.074)	0.185 (0.077)
<i>ComLang</i>	1.581 (0.092)	1.584 (0.092)	1.615 (0.087)	1.621 (0.087)	1.458 (0.080)	1.469 (0.079)	1.784 (0.079)	1.747 (0.084)
<i>ComBorder</i>	1.637 (0.221)	1.613 (0.222)	1.666 (0.213)	1.633 (0.214)	2.095 (0.190)	2.118 (0.189)	1.917 (0.215)	1.977 (0.220)
<i>Colony</i>	0.925 (0.280)	0.924 (0.280)	1.061 (0.278)	1.059 (0.278)	1.016 (0.270)	1.009 (0.269)	0.827 (0.269)	0.845 (0.275)
<i>Constant</i>	-17.248 (0.708)	-17.310 (0.706)	-16.455 (0.708)	-16.538 (0.712)	-16.608 (0.587)	-16.670 (0.585)	-22.089 (0.593)	-21.563 (0.600)
<i>R</i> <sup>2</sup>	0.61	0.61	0.62	0.62	0.64	0.64	0.64	0.64
Observation	18437	18437	18437	18437	38839	39172	39172	38839

**Table 3:** Yearly Muslim Country Effect (1995 - 2012)

Year	<i>Muslim</i>	Year	<i>Muslim</i>
1995	-0.068 (0.120)	2004	0.327*** (0.095)
1996	-0.046 (0.118)	2005	0.166** (0.091)
1997	-0.053 (0.110)	2006	0.285*** (0.086)
1998	0.115 (0.106)	2007	0.251*** (0.094)
1999	-0.016 (0.098)	2008	0.308*** (0.096)
2000	0.039 (0.098)	2009	0.232*** (0.089)
2001	0.113 (0.092)	2010	0.171** (0.089)
2002	0.213*** (0.096)	2011	0.202*** (0.082)
2003	0.183*** (0.093)	2012	0.360*** (0.081)

Table 1 reports the results from ordinary least squares with clustered standard error and random effect with robust standard error for the two set of equations. All of the coefficients behave as expected except for *Muslim*. The discussion of the results is concentrated only on the variables *Muslim*, *Sept11* and their interaction term, as the behaviour of the other variables are as expected (i.e. a negative relationship for the distance and a positive one for the other variables). The coefficient for *Muslim* was positive when *9/11* and the interaction term were not included; however, when both were added, *Muslim* was statistically non-significant. This means that the effect of Muslim countries on the arrival of tourists to Muslim countries depended on the 9/11 incident. Before the 9/11 incident, the Muslim country effect was not important in explaining arrivals to Muslim countries; the behaviour of tourist arrival depended on whether the pair of countries were Muslim countries only after the 9/11 incident.

Table 2 breaks up the period of study into pre- and post-2001. The result in Table 2 is based on an estimate that excludes the variable *Sept11* and the interaction between *Muslim* and *Sept11*. The variable *Muslim* is significant only after 2001, and it is not statistically significant before 2001. This result further supports the Table 1 data suggesting that the Muslim country effect depends on the 9/11 incident, where the incident has changed the pattern of arrival from Muslim countries to Muslim



countries. Table 3 further supports the conclusion from the results in Table 1 and Table 2 when yearly cross-section regressions are estimated. The coefficients for *Muslim* are statistically significant only after 2001.

## **5. Conclusion**

Negative media portrayals of Islam and Muslim countries after the 9/11 incident changed the pattern of tourist arrivals in Muslim countries. The Muslim country effect was only visible after 2001, as the number of arrivals from a pair of Muslim countries was more than the non-Muslim pair only after the 9/11 incident, after taking into account the "gravity" factors. Given these results, it should be no surprise that Muslim-friendly tourism initiatives have been introduced by many hotels in many countries, not only in Muslim countries, to attract Muslim tourists.

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