The Effects of World Heritage Sites and Governance On Tourist Arrivals: Worldwide Evidence

BADARIAH HAJI DIN[a], MUZAFAR SHAH HABIBULLAH[b,*]
AND S.H. TAN[c]

*aCollege of Law, Government and International Studies (COLGIS),
Universiti Utara Malaysia, Malaysia*
bFaculty of Economics and Management, Universiti Putra Malaysia, Malaysia
cFaculty of Management, Multimedia University, Malaysia

ABSTRACT

The tourism sector plays an important role in economic development. Its contributes foreign exchange earnings to the nation; tax revenue to the government; and provide job to the population as well as open-up business opportunities to serve the communities. Thus, international tourist arrival plays a central role in stimulating economic growth by ensuring substantial export income in the form of international tourist receipts to a destination country. A fundamental question that relates international visitors and the destination country is "why do some destination countries attract more visitors than others?" In this study, using a sample of 126 countries, we provide evidences that income, the number of world natural and cultural heritage sites, ethnic diversity and good governance are important factors influencing international visitors' destination choices (tourism demand).

*Corresponding author: E-mail: muzafar@upm.edu.my

INTRODUCTION

The tourism sector plays an important role in enhancing economic growth and promotes economic development of an economy. Its contributes foreign exchange earnings to the nation; tax revenue to the government collected from the tourism related activities; and provide job to the population as well as business opportunities to the communities. For many small developing countries, tourism constitute the largest income earner in terms of foreign exchange earnings often exceed a quarter of gross domestic product (GDP) (Maloney and Rojas, 2005), and for some small island developing states, tourism sector can contribute more that 50% of total GDP (Garin-Munoz, 2006). On the other hand, Eilat and Einav (2004) suggest that tourism can act as a vehicle to promote world peace by providing incentive for peacekeeping and by building 'a bridge between cultures.'

According to UNWTO (2016), international tourist arrivals have increased about 5% between 2014 and 2015, reaching a record of 1,186 million arrivals worldwide in 2015. In terms of the geographical destinations, Europe attracted 51% of the share of the international tourist arrivals, followed by Asia and the Pacific (23%), Americas (16%), Africa (5%) and the Middle East (5%). By attracting more international tourist to a country is importance in terms of tourism expenditure by the international visitors that counts as exports for the destination country. International tourism receipts are the earnings generated in destination countries from expenditure of the international visitors on accommodation, food and drink, local transport, entertainment, shopping and other services and goods. In term of international tourism receipts, Europe take up the largest share of about 36%, followed by Asia and the Pacific (33%), the Americas (24%), Middle East (4%) and Africa (3%).

Thus, international tourist arrival plays a central role in stimulating economic growth by ensuring substantial export income in the form of international tourist receipts to a destination country. A fundamental question that relates international visitors and the destination country is "why do some destination countries attract more visitors than others?" This is a pertinent question because the study of tourism and the knowledge of the factors influencing international visitors' destination choices (tourism demand) may be very important for tourism suppliers and policy makers.

The conventional international tourism demand model suggests factors influencing tourist to a destination country include tourists' income, tourism prices in a destination relative to those in the origin country, tourism prices in the competing destinations, transportation cost between the destination and the origin country, exchange rate between the currencies of the destination and the origin countries, weather and seasonal factors, marketing (promotional) expenditure, safety and political stability of the destination country, consumer tastes, consumer expectations, habit persistence, origin population as well as dummy variables on various special events and deterministic trends (see Song *et al*., 2010; Cho, 2010; Brida and Scuderi, 2013).

The purpose of the present study is to investigate the relationship between tourism and the world heritage sites (*WHS*) in 126 countries. In this study we assess the impact of the number of world heritage sites on tourism, as well as other factors such as income, ethnic diversity, and governance as explanatory variables. A world heritage site is a place listed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) with the initial purpose

to protect and maintain these tangible and intangible assets because of its culturally and/or naturally significant to humankind (Huang *et al.*, 2012; Yang *et al.*, 2010). Nevertheless, the *WHS* has now been widely used as a marketing tool in promoting tourism all over the world.

The paper is organized as follow. In the next section we discuss the literature related to tourism, and in section 3 is the method used in the analysis. Section 4 presents the results, while the last section contains our conclusion.

REVIEW OF RELATED LITERATURE

The demand for tourism or the determinants for international tourist arrivals goes beyond income of the origin country and tourism prices. In his study on Asia, the Americas, Europe and the Oceania, Cho (2010) found that demographic of the destination country (population), accessibility (by air), cultural and natural heritage, environmental condition (CO_2 emission), and infrastructure on road network, social factor, and distances are important determinants in tourism demand. Kester (2003) suggests that deficiency in facilities and accommodation, lack of image and poor perceptions, poverty, disease and conflict shy away visitors from a destination country. Gauci *et al.* (2002) include poor public health services, and fear of personal safety as obstacle to tourism. Cleverdon (2002) indicates that quality tourism products, strong marketing, efficient tour operators and good banking and communication facilities are important determinants for tourism demand. On the other hand, Naude and Saayman (2005) suggest that hotel capacity, malaria, political stability, internet usage, urbanization rate, and death rate are importance determinants of tourist arrivals in Africa.

The standard tourism demand model was derived from the classical framework of consumer demand theory; by consuming commodity (traveller destination) that possesses certain characteristics that generate utility for the consumer (traveller). However, Rugg (1973) argues that a traveller does not derive utility from consuming her travel destination, but rather from staying in a particular destination for some period of time, thus enjoying the destination's attributes. According to Sobhee (2006) increasing tourists to the small island developing states is due to its attractive unique flora and fauna. The tourists visit the islands because they enjoy viewing the richness of its lagoons, as well as derive much satisfaction by participating in sea-diving, snorkelling, game fishing and enjoying the wide variety of sea food. Thus, these environment amenities can be considered as one of the determinant of tourism destination choice, and the choice of destination is largely dependent on the features of the destination itself, such as sunshine, beaches, availability of sport and leisure facilities or the opportunity to enjoy a natural environment (see Klenosky, 2002; Loureiro *et al.*, 2012). Therefore, the factor natural endowments are important determinants of a destination's attractiveness.

In recent years, the question: "does world heritage sites really attract more tourists to a country?" has been subjected to numerous empirical studies. For example, to investigate the relationship between world heritage status and tourism in the OECD countries, Hall and Piggin (2001) distributed questionnaires to 95 World Heritage Site managers in 22 OECD countries. From the 44 returned questionnaires, Hall and Piggin (2001) analysed and concluded that more than 60% of the sites indicated that visitation increases since gaining *WHS* and the majority of

the visitations are to the natural sites. On another effort, Buckley (2004) collected and compiled data on six of Australian national parks and related them to the total number of visitors. The six parks include: Fraser Island, Kakadu, Uluru-Kata Tjuta, Southwest Tasmania, Shark Bay and the Central Eastern Rainforest Reserves. Buckley (2004) concludes that the world heritage sites do receive large numbers of visitors as well as large amount of tourism receipts.

Yang *et al*. (2010) analyse international tourist arrivals in China using annual provincial panel data over the 2000-2005 period. Yang *et al*. (2010) found that apart from income, exchange rates, population, geographical distances, infrastructure, accommodations, and health risk are important determinants for international tourist arrivals to China; more importantly, the world heritage sites as well as the sports sites are one of the major driving forces in promoting tourist arrivals. Despite that the estimated elasticity of *WHS*s is much higher than that of the sports sites; however, sports site has its own unique features which are attractive to foreign visitors. Furthermore, Yang *et al*. (2010) report that the cultural *WHS*s are found to exhibit a stronger impact on tourist arrivals than the natural heritage sites in China.

For Italy, Patuelli *et al*. (2013) examine the effects of world heritage sites on domestic tourism for a panel of 20 Italian regions over the period 1998 to 2009. They conclude that regions which are endowed in *WHS* are able to attract a greater number of tourists; an increase of one *WHS* in a region's endowment implies a 4% increase in tourist inflows. On another study, Di Lascio *et al*. (2011) investigate the impact of cultural tourism and art exhibitions on hotel arrivals for 52 Italian provinces over the period 2003 to 2007. They found out that temporary ancient art has negative influences on tourist arrivals; while modern art as well as contemporary art exhibitions have positive impact on tourist flow. On the other hand, Cellini and Ciccia (2013) conduct a time series analysis on the effectiveness of museums and monuments in attracting visitors in Italy for the period January 1996 to December 2010. They conclude that "the presence of these cultural sites is deemed to act as an engine for enhancing tourism flows or qualifying the tourism."

More recent studies by Su and Lin (2014) and Yang and Lin (2014) further support the positive effect of *WHS* on tourism. On one hand, Yang and Lin (2014) revisit the earlier work by Yang *et al*. (2010) by examining the effects of *WHS* on international tourist arrivals in China, using more advanced econometric techniques - the fixed-effects vector decomposition (FEVD) approach and the two-stage double fixed-effect (TSDFE) model. These two estimators are more superior than the pooled ordinary least squares, fixed effects, random effects, and Hausman-Taylor IV estimators, in particular, for the estimation of time-invariant or rarely changing variables in panel models. Their study supports the earlier findings by Yang *et al*. (2010) that *WHS*s has positive impact on international tourist arrivals in China. Also, their study further supports that cultural *WHS*s tend to exhibit a stronger tourism-enhancing effect than the natural *WHS*s. On the other hand, the study by Su and Lin (2014) although find support for the positive effect of world heritage sites on tourism, however, they found that world heritage natural site show stronger relationship with international tourist arrivals worldwide compared to the world heritage cultural sites.

METHODOLOGY

In this study, following the above literatures, we specify a cross-country tourism demand model as;

$$tourist\_arrival_i = \alpha_0 + \alpha_1 income_i + \alpha_2 WHS_{ij} + \alpha_3 ethnic\_diversity_i + \alpha_4\ governance_{ik} + \varepsilon_{ijk} \quad (1)$$

where ε_{ijk} is the error term, $tourist\_arrival_i$ = international tourist arrivals per capita in country i, proxy for tourism demand, $income_i$ = real gross domestic product per capita proxy for income in country i, WHS_{ij} = the number of UNESCO world cultural and natural sites (with j for cultural and natural sites) in country i, $ethnic\_diversity_i$ = a measure of ethnic fractionalization in country i, and $governance_{ik}$ = governance indicators (with k for six measure of governance indicators) proxy for the quality of the government, that could guarantee for safety in the destination country i. It is expected a priori $\alpha_{1,2,4} > 0$ and $\alpha_3 < 0$. All variables were transformed into natural logarithm before estimation except for *ethnic_diversity* and *governance*.

In this study, *WHS* is our key variable of interest. The number of world heritage natural sites, WHS_n (under 13th pillar-Natural resources) and the number of world heritage cultural sites, WHS_c (under 14th pillar-Cultural resources) were both obtained from The Travel & Tourism Competitive Report (TTCR) 2011 (Blanke and Chiese, 2011). The TTCR indicate that Australia and China has the least (1 each) number of world heritage natural sites and world heritage cultural sites, respectively; and the country that has the most number of world heritage natural sites and world heritage cultural sites are respectively, Denmark (105) and Angola (122).

In a tourism demand model, income is the most prominent factor determining tourist arrivals to a destination country. A wealthy destination country will have the impression that transportation system, facilities and accommodation, public health services, tour operators, banking and communication facilities are excellent and efficient compared to less developed countries (Naude and Saayman, 2005). A destination country with transportation and financial system and good facilities and accommodations would receive more visitors. Past research has generally used real GDP or income per capita to control for a country's level of economic development. Thus, higher income economies will attract more international tourist arrivals.

Ethnic diversity has been found to have negative effects on economic development and consequently lead to war and conflict (Collier and Hoeffler, 1998). Studies by Rodrick (1999), La Porta *et al*. (1999), Grafton and Knowles (2004) and Annett (2001) suggest that high levels of ethnic diversity tend to be associated with low investment, poor governance as a result of poor communication, low collective action and weak cohesion due to differences in ethnic groups' value system. Vigdor (2004) and Alesina *et al*. (1999) found that racially and ethnically fractionalized communities tend to have difficulty engaging in cooperative efforts and marginalize spending on public goods that could affect the tourism industry. In recent cross-country studies, Das and DiRienzo (2009, 2010, 2012) provide the evidence that ethno-linguistic diversity affect a country's tourism competitiveness negatively. Similar findings were supported by Vietze (2012). Vietze (2012) found that cultural proximity between the country of origin and the country of destination has a positive effect on the tourism flows between these countries. People from countries with the same language (English) have a higher demand for travelling to the US for vacation than people from other countries. Furthermore, tourists

coming from Christian countries prefer the US as a holiday destination much more strongly than people from Muslim countries. Thus, people's destination choice for a vacation country is driven by the demand for cultural similarity to the home country – presumably showing people's inherent fear of the new and the different.

The governance indicators were used to proxy for safety of the destination countries. A country with good governance will ensure political stability, absence of violence, social conflict and ethnic tensions (Sufrauj, 2011; Naude and Saayman, 2005; Eilat and Einav, 2004; Vietze, 2012). Thus, a destination country with good governance will make visitors feel safe and secured from any unwanted events or tragedies. In this study we used six governance measures – voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption were used which was based on the database - World Governance Indicators provided by the World Bank (Kaufman *et al*., 2008).

In this study the data for the number of international tourist arrivals (*tourist_arrival*), real gross domestic product per capita (*income*), were obtained from the World Development Indicators available in the World Bank database. Data for the six governance indicators were collected from the World Governance Indicators available at the World Bank database (info. worldbank.org/governance/wgi/index.asp). The data for ethnic diversity was obtained from Alesina *et al*. (2003) that provide ethnic fractionalization, language fractionalization and religion fractionalization indexes. Given that the index is a probability measure, it ranges from 0 to 1, such that countries values close to 0 are very homogenous in regard to ethnic, language and religion diversity. The reference year is 2011, and our sample consists of 126 countries.

THE RESULTS

The results in estimating Equation (1) is presented in Tables 1 to 4. In Table 1 we present the results with world heritage natural sites (WHS_n) as one of the explanatory variable; Table 2 with world heritage cultural sites (WHS_c); Table 3 with both world heritage natural and world heritage cultural sites; and Table 4 with total world heritage sites ($WHS_{(n+c)}$) as one of the independent variable. In this study all regression equations were estimated using ordinary least square and corrected for heteroscedasticity using Newey-West consistent standard error (Newey and West, 1987). In all tables we report the test for heteroscedastic errors (ARCH χ^2) and multicollinearity among the variables (*VIF*). Generally, in all estimated regressions, the null hypothesis of homoscedastic errors cannot be rejected at least at the 1% level. The variance inflation factor (*VIF*) clearly suggest that multicollinearity is not a problem in each regression equation estimated. In all cases the mean *VIF* is around 3 or less and this figure is lower than the cut-off threshold value of 10 (Hair *et al*., 2010; Rovai *et al*., 2014).

For our variable of interest – our results clearly indicates that the world heritage sites are important determinants that can induce tourists to a destination country. In Table 1 the estimated elasticity for WHS_n suggests that a 10% increase in the number of world heritage natural sites will increase tourist arrivals by 3.9% to 4.5%. On the other hand, the estimated elasticity for WHS_c in Table 2 suggests that a 10% increase in the number of world heritage cultural sites

will increase tourist arrivals by 2.7% to 3.7%. This results suggest, on average, that the world heritage natural sites dominates the world heritage cultural sites; and this is in contrast with the finding of Yang *et al*. (2010) and Yang and Lin (2014) for China, but, in support with Su and Lin (2014). By incorporating both WHS_n and WHS_c in all regression equations, our results in Table 3 indicate that the world heritage natural sites strongly dominates the world heritage cultural sites; where WHS_n is significant at 1% level in all estimated equations while WHS_c is not significant in all cases (the correlation coefficient between WHS_n and WHS_c is 0.53). Furthermore, results in Table 4 also indicate the important role of the total number of world heritage sites ($WHS_{(n+c)}$) as an attraction for visitors to a destination country. A 10% increase in the total number of world heritage sites will attract by 4.4% to 5.5% more tourists to a country.

The importance of income is clearly shown in all tables with income variable consistently show positive and statistically significant at the 1% level. The positive relationship between income and tourist arrivals would suggest that a 10% increase in the wealth of the nation would induce 5.2% to 7.1% more tourists to a country (see Table 4). However, on the other hand, countries with diverse ethnicity unfortunately would receive less number of tourists' inflow. For example, as shown in Table 4, the variable *ethnic_diversity* is negative and statistically significant at the 5% level in all six estimated equations. Our results support the earlier findings by Das and DiRienzo (2012) and concur to Vietze (2012) that people prefer to visit countries of "cultural similarity to their home country."

Table 1: Results of cross-country analysis on tourism demand with world heritage natural sites

Independent variables	Dependent variable, *tourist_arrival*					
	Corruption	Government effectiveness	Political stability & absence of violence	Rule of law	Regulatory quality	Voice & accountability
constant	-8.6035***	-7.4576***	-7.5969***	-8.1507***	-7.4131***	-9.0459***
	(5.82017)	(4.9431)	(5.3177)	(5.1219)	(5.2980)	(5.7917)
income	0.6640***	0.51114***	0.5714***	0.6083***	0.5111***	0.7091***
	(4.9381)	(3.5661)	(4.6837)	(4.1092)	(3.9196)	(4.8730)
WHS_n	0.4379***	0.4497***	0.3855***	0.4379***	0.4351***	0.4531***
	(4.7964)	(5.0825)	(4.0585)	(4.7833)	(4.8324)	(5.1104)
ethnic_ diversity	-1.0947**	-0.9679*	-0.9971*	-1.0450*	-1.0333*	-1.0995**
	(2.0179)	(1.8212)	(1.9124)	(1.9544)	(1.9204)	(2.0735)
governance	0.1929	0.5114***	0.5185***	0.3022**	0.5537***	0.1465
	(1.5357)	(3.0401)	(3.7783)	(2.0878)	(3.5520)	(1.0703)
adjusted R²	0.5696	0.5871	0.6054	0.5742	0.5941	0.5679
SER	1.1199	1.0969	1.0724	1.1139	1.0875	1.1221
ARCH χ² (1)	0.3840	0.3911	0.0758	0.3050	0.3853	0.3249
mean VIF	2.1568	2.4644	2.0334	2.4356	2.3458	2.5511
Observations	126	126	126	126	126	126

Notes: Asterisks (*),(**),(***) denote statistically significant at 10%, 5% and 1% respectively. SER denotes standard error of regression. ARCH χ^2 (1) denotes the first-order autoregressive conditional heteroscedasticity test. *VIF* denotes variance inflation factors. All variables are in natural logarithm except for *ethnic_diversity* and governance indicators.

Table 2: Results of cross-country analysis on tourism demand with world heritage cultural sites

Independent variables	Dependent variable, tourist_arrival					
	Corruption	Government effectiveness	Political stability & absence of violence	Rule of law	Regulatory quality	Voice & accountability
constant	-8.4187***	-7.1016***	-7.0610***	-7.7890***	-7.0057***	-8.7079***
	(5.4412)	(4.6086)	(5.0706)	(4.8688)	(4.8935)	(5.5332)
income	0.6891***	0.5189***	0.5652***	0.6111***	0.5126***	0.7165***
	(4.7572)	(3.4323)	(4.5923)	(3.9286)	(3.6585)	(4.7432)
WHS_c	0.3533***	0.3605***	0.2713***	0.3560***	0.3442***	0.3687***
	(3.4287)	(3.6662)	(2.6463)	(3.6134)	(3.7203)	(3.7600)
ethnic_diversity	-1.4739**	-1.3458**	-1.2873**	-1.4130**	-1.3878**	-1.4897**
	(2.4965)	(2.3095)	(2.3465)	(2.4304)	(2.3925)	(2.6078)
governance	0.1183	0.4687***	0.4926***	0.2716*	0.5203***	0.0918
	(0.8491)	(2.7438)	(3.7458)	(1.8211)	(3.2786)	(0.6776)
adjusted R^2	0.5524	0.5695	0.5856	0.5583	0.5765	0.5519
SER	1.1421	1.1200	1.0990	1.1345	1.1109	1.1428
ARCH χ^2 (1)	0.2665	0.2590	0.0451	0.2174	0.2773	0.2330
mean VIF	3.0419	3.0419	2.1867	2.9840	2.8370	3.0307
Observations	126	126	126	126	126	126

Notes: Asterisks (*),(**),(***) denote statistically significant at 10%, 5% and 1% respectively. SER denotes standard error of regression. ARCH χ^2 (1) denotes the first-order autoregressive conditional heteroscedasticity test. *VIF* denotes variance inflation factors. All variables are in natural logarithm except for *ethnic_diversity* and governance indicators.

Table 3: Results of cross-country analysis on tourism demand with both world heritage natural and cultural sites

Independent variables	Dependent variable, *tourist_arrival*					
	Corruption	Government effectiveness	Political stability & absence of violence	Rule of law	Regulatory quality	Voice & accountability
constant	-9.0798***	-7.8351***	-7.8657***	-8.5528***	-7.7830***	-9.4148***
	(5.7925)	(4.9959)	(5.2927)	(5.1894)	(5.3684)	(5.8421)
income	0.6905***	0.5253***	0.5847***	0.6244***	0.5263***	0.7200***
	(4.9149)	(3.5357)	(4.7427)	(4.0827)	(3.9077)	(4.8787)
WHS_n	0.3455***	0.3526***	0.3348***	0.3403***	0.3454***	0.3494***
	(3.0163)	(3.2638)	(3.3729)	(3.0453)	(3.0834)	(3.1837)
WHS_c	0.1700	0.1773	0.0977	0.1791	0.1645	0.1884
	(1.3921)	(1.5771)	(0.9336)	(1.5764)	(1.5472)	(1.6378)
ethnic_diversity	-1.2555**	-1.1275*	-1.0902**	-1.2076**	-1.1809**	-1.2673**
	(2.1274)	(1.9621)	(2.0361)	(2.0891)	(2.0385)	(2.2163)
governance	0.1543	0.4976***	0.4930***	0.2845*	0.5347***	0.1372
	(1.1207)	(2.8524)	(3.5794)	(1.8844)	(3.3452)	(1.0307)

Table 2 (Cont.)

adjusted R²	0.5718	0.5901	0.6040	0.5772	0.5963	0.5716
SER	1.1171	1.0929	1.0743	1.1100	1.0847	1.1173
ARCH χ² (1)	0.4080	0.3879	0.0840	0.3182	0.4001	0.3457
mean VIF	2.6378	2.8002	2.0818	2.7480	2.6696	2.8289
Observations	126	126	126	126	126	126

Notes: Asterisks (*),(**),(***) denote statistically significant at 10%, 5% and 1% respectively. SER denotes standard error of regression. ARCH χ² (1) denotes the first-order autoregressive conditional heteroscedasticity test. *VIF* denotes variance inflation factors. All variables are in natural logarithm except for *ethnic_diversity* and *governance* indicators.

Table 4: Results of cross-country analysis on tourism demand with total world heritage sites

Independent variables	Dependent variable, *tourist arrival*					
	Corruption	Government effectiveness	Political stability & absence of violence	Rule of law	Regulatory quality	Voice & accountability
constant	-9.5204***	-8.2173***	-8.1374***	-8.9333***	-8.1181***	-9.7961***
	(5.8016)	(5.1028)	(5.2869)	(5.2869)	(5.4491)	(5.9690)
income	0.6909***	0.5207***	0.5786***	0.6188***	0.5167***	0.7126***
	(4.8344)	(3.4822)	(4.7028)	(4.0057)	(3.7828)	(4.8189)
$WHS_{(n+c)}$	0.5350***	0.5436***	0.4404***	0.5356***	0.5258***	0.5549***
	(4.2460)	(4.3884)	(3.2846)	(4.2816)	(4.3924)	(4.5122)
ethnic_ diversity	-1.4175**	-1.2873**	-1.2645**	-1.3591**	-1.3360**	-1.4229**
	(2.5361)	(2.3404)	(2.3919)	(2.4705)	(2.4242)	(2.6138)
governance	0.1226	0.4732***	0.4699***	0.2640*	0.5208***	0.1127
	(0.9098)	(2.7789)	(3.4885)	(1.7495)	(3.3134)	(0.8400)
adjusted R²	0.5690	0.5864	0.5991	0.5744	0.5931	0.5691
SER	1.1207	1.0979	1.0808	1.1137	1.0889	1.1206
ARCH χ² (1)	0.3559	0.3337	0.0666	0.2766	0.3472	0.3031
mean VIF	2.7587	3.0497	2.2648	2.9857	2.8057	3.0705
Observations	126	126	126	126	126	126

Notes: Asterisks (*),(**),(***) denote statistically significant at 10%, 5% and 1% respectively. SER denotes standard error of regression. ARCH χ² (1) denotes the first-order autoregressive conditional heteroscedasticity test. *VIF* denotes variance inflation factors. All variables are in natural logarithm except for *ethnic_diversity* and governance indicators.

Lastly but not least is the role of governance indicators in affecting tourist arrivals. Interestingly, government effectiveness, political stability and absence of violence, rule of law, and regulatory quality are consistently showed positive and statistically significant at least at the 10% level. These results clearly suggest that international tourists prefer countries that are safe, economically and politically stable.

CONCLUSION

In this study we have estimated a tourism demand model using cross-country analysis for 126 developed and developing economies. We investigate the relationship between income, world heritage sites, ethnic diversity and governance with international tourist arrivals. Our results suggest that all variables were highly significant and have the expected positive sign except for ethnic diversity which show a negative sign with international tourist arrivals. Our interest in the role of world heritage sites clearly suggests its importance as a tool to boost tourist attractions to a destination country. Thus, one policy implication is that the tourism authorities can exploit the world heritage sites listed in UNESCO World Heritage Sites as promotional tools to lured visitors and enhance the growth of the tourism industry.

ACKNOWLEDGEMENTS

REFERENCES

Alesina, A., Baqir, R. and Easterly, W. 1999. Public goods and ethnic divisions. *Quarterly Journal of Economics,* 114(4), 1243-1284.

Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., and Wacziarg, R. 2003. Fractionalization. *Journal of Economic Growth,* 8, 155-194.

Annett, A. 2001. Social fractionalization, political instability and the size of the government. *IMF Staff Papers,* 48(3), 561-592.

Blanke, J. and Chiese, T. (Eds.) 2011. *The Travel & Tourism Competitiveness Report 2011.* Geneva: World Economic Forum.

Brida, J.G. and Scuderi, R. 2013. Determinants of tourist expenditure: A review of microeconometric models. *Tourism Management Perspectives,* 6, 28-40.

Buckley, R. 2004. The effects of world heritage listing on tourism to Australian national parks. *Journal of Sustainable Tourism,* 12(1), 70-84.

Cellini, R. and Cuccia, T. 2013. Museum and monument attendance and tourism flow: A time series analysis approach. *Applied Economics,* 45, 3473-3482.

Cho, V. 2010. A study of the non-economic determinants in tourism demand. *International Journal of Tourism Research,* 12, 307-320.

Cleverton, R.G. 2002. Tourism development in the SADC region: the opportunities and challenges. *Development Southern Africa*, 19(1), 7-28.

Das, J. and DiRienzo, C.E. 2009. Global tourism competitiveness and freedom of the press: A nonlinear relationship. *Journal of Travel Research,* 47(4), 470-479.

Das, J. and DiRienzo, C.E. 2010. Tourism competitiveness and the role of diversity: A cross-country analysis. In V. Mladenov and Z. Bojkovic (Eds.). *Latest Trends on Cultural Heritage and Tourism.* Greece: WSEAS Press. pp.19-27.

Das, J. and DiRienzo, C.E. 2012. Tourism competitiveness and the role of fractionalization. *International Journal of Tourism Research,* 14, 285-297.

Di Lascio, F.M.L., Giannerini, S., Scorcu, A.E., and Candela, G. 2011. Cultural tourism and temporary art exhibitions in Italy: A panel data analysis. *Statistical Methods & Applications,* 20, 519-542.

Eilat, Y. and Einav, L. 2004. Determinants of international tourism: a three dimensional panel data analysis. *Applied Economics,* 36(12), 1315-1326.

Hall, C.M. and Piggin, R. 2001. Tourism and world heritage in OECD countries. *Tourism Recreation Research*, 26(1), 103-105.

Huang, C.H., Tsaur, J.R. and Yang, C.H. 2012. Does world heritage list really induce more tourists? Evidence from Macau. *Tourism Management,* 33, 1450-1457.

Garin-Munoz, T. 2006. Inbound international tourism to Canary Islands: a dynamic panel data model. *Tourism Management,* 27, 281-291.

Gauci, A., Gerosa, V. And Mwalwanda, C. 2002. Tourism in Africa and the multilateral trading system: Challenges and opportunities. Background paper for the Economic Commission for Africa, Addis Ababa.

Grafton, R.Q. and Knowles, S. 2004. Social capital and national performance: A cross country analysis. *Journal of Environment and Development*, 13(4), 336-370.

Hair, J., Black, W.C., Babin, B.J. and Anderson, R.E. 2010. *Multivariate Data Analysis* (7th Edition). New Jersey: Pearson Educational International.

Kaufman, D., Kraay, A. and Mastruzzi, M. (2008). Governance matters VII: Governance indicators for 1996-2007. *World Bank Policy Research June 2008.* Washington, DC: The World Bank.

Kester, J.G.C. 2003. International tourism in Africa. *Tourism Economics,* 9(2), 203-221.

Klenosky, D.B. 2002. The "Pull" of tourism destinations: A means and investigation. *Journal of Travel Research,* 40, 385-395.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. 1999. The quality of government. *Journal of Law, Economics and Organization,* 15(1), 222-279.

Loureiro, M.L., Macagno, G., Nunes, P.A.L.D. and Tol. R. 2012. Assessing the impact of biodiversity on tourism flows: an econometric model for tourist behaviour with implications for conservation policy. *Journal of Environmental Economics and Policy,* 1(2), 174-194.

Maloney, W.F. and Rojas, G.V.M. 2005. How elastic are sea, sand and sun? Dynamic panel estimates of the demand for tourism. *Applied Economics Letters,* 12, 277-280.

Naude, W.A. and Saayman, A. 2005. Determinants of tourist arrivals in Africa: a panel data regression analysis. *Tourism Economics,* 11(3), 365-391.

Newey, W.K. and West, K.D. 1987. A simple, positive semi-definite, heteroskedasticity and autocorrelation consistent covariance matrix. *Econometrica,* 55(3), 703-708.

Patuelli, R., Mussoni, M. and Candela, G. 2013. The effects of world heritage sites on domestic tourism: A spatial interaction model for Italy. *Journal of Geographical System*, 15, 369-402.

Rodrick, D. 1999. Where did all the growth go? External shocks, social conflict and growth collapses. *Journal of Economic Growth,* 1, 149-187.

Rovai, A.P., Baker, J.D. and Ponton, M.K. 2014. *Social Science Research Design and Statistics: A Practitioner's Guide to Research Methods and IBM SPSS Analysis.* USA: Waterfree Press LLC.

Rugg, D. 1973. The choice of journey destinations: a theoretical and empirical analysis. *The Review of Economic Statistics,* 20, 64-71.

Sobhee, S.K. 2006. Fisheries biodiversity conservation and sustainable tourism in Mauritius. *Ocean & Coastal Management,* 49, 413-420.

Song, H., Li, G., Witt, S.F. and Fei, B. 2010. Tourism demand modelling and forecasting: how should demand be measured? *Tourism Economics,* 16(1), 63-81.

Su, Y.W. and Lin, H.L. 2014. Analysis of international tourist arrivals worldwide: The role of world heritage sites. *Tourism Management*, 40, 46-58.

Sufrauj, S. 2011. Islandness and remoteness as resources: evidence from the tourism performance of Small Remote Island Economies (SRIES). *European Journal of Tourism, Hospitality and Recreation,* 2(1), 19-41.

UNWTO. 2016. *UNWTO Highlights.* Madrid: World Tourism Organization.

Vietze, C. 2012. Cultural effects on inbound tourism into the USA: A gravity approach. *Tourism Economics*, 18(1), 121-138..

Vigdor, J.L. 2004. Community composition and collective action: Analyzing initial mail response to the 2000 census. *The Review of Economics and Statistics,* 86(1), 303-312.

Yang, C.H. and Lin, H.Y. 2014. Revisiting the relationship between world heritage sites and tourism. *Tourism Economics,* 20(1), 73-86.