

Publisher's notice

This *Tourism Economics* Fast Track paper has been peer-reviewed, revised and fully accepted for publication in *Tourism Economics*. However, this is an **unedited manuscript** and will undergo a rigorous editing process before its appearance in an issue of the journal. This means that this manuscript version of the paper may not conform to journal style in terms of presentation, spelling and other usages. It may also contain minor errors of typography, grammar, spelling, referencing, etc, all of which will be corrected in the processes of copy-editing and proofreading.

Tourism Economics operates a Fast Track online publication system so that papers can be published and made available almost immediately on final acceptance by the journal.

Citing this article

Each *Tourism Economics* Fast Track article is given a DOI. When the paper is assigned to an issue, this DOI will automatically be transferred to the article in the journal issue.

This version of the article may be cited using the DOI. Citations should include the author's or authors' name(s), the title of the article, the title of the journal followed by the words 'Fast Track', the year of Fast Track publication and the DOI. For example:

Smith, J. (2014), 'Article title', *Tourism Economics* Fast Track, DOI xxxxxxxx.

Once the paper has been published in an issue of the journal, the DOI will automatically resolve to that final version and the article can be cited in accordance with normal bibliographical conventions.

Article copyright © 2014 IP Publishing Ltd.

doi: 10.5367/te.2014.0412

Research note: WHICH GOD IS GOOD FOR TOURISM?

Johan Fourie ^{1a}, Jaume Rosselló ^b & María Santana-Gallego ^b

^a *Department of Economics,*

Private Bag XI, Matieland, 7602, Stellenbosch University, South Africa. Email:

johanf@sun.ac.za

^b *Departament d'Economia Aplicada (UIB)*

Campus UIB. Edifici Jovellanos Cra. Valldemossa. Km 7. 07122 Palma Mallorca. Spain.

Email: jrossello@uib.es and maria.santana@uib.es

Abstract

The authors posit that religion has a general impact on tourism that goes beyond the direct impact of religious pilgrimages. To that end, an augmented gravity model for international tourist arrivals is estimated. This makes it possible to assess how five major religions induce or constrain international tourism flows. The results provide evidence that the religious affiliations of both the origin and destination countries have significant explanatory power in global tourism flows, over and above pilgrimage.

Keywords: International tourism; Religion; Gravity model

JEL classification: A13; L83; Z12

¹ Corresponding Author. We would like to thank financial support from CICYT Program (Spanish Government) through the grants ECO2010-22143 and ECO2011-23189. Comments by Professor Jafar Jafari are gratefully acknowledged.

Introduction

Many aspects of our daily life are influenced by religious beliefs. It is therefore plausible to argue that these beliefs also affect our economic decisions to travel. One motivation for travelling is to visit religious attractions, places or events (pilgrimage). A broad literature supports the view that religion is a pull factor for tourists (della Dora, 2012). However, religion affects tourism not only directly, as in the case of pilgrimages, but also indirectly. Stausberg (2011) suggests considering the 'wider interfaces' between religion and tourism 'beyond the field of religious tourism in a narrow sense'.

Religious affiliation is a cultural attribute that shapes tourists' perceptions of their destination. Even if religion is not an explicit factor in a tourist's decision-making process, the fact that the dominant religion of a destination is the same as theirs may be a significant (but implicit) determinant of their choice. Previously, many researchers have analyzed the impact of a religious pilgrimage on tourism applied to a particular country and a particular event, but general conclusion on the effect of religion on tourism cannot be made.

Our paper makes a novel contribution in showing that these generalizations do, in fact, exist, and that they need deeper investigation. The hypothesis is therefore that tourists tend to visit regions that share a similar religious affiliations and hence with a similar culture (cultural proximity). However, tourism is also an activity that involves visiting different, unfamiliar and often remote regions, so the opposite hypothesis cannot be disregarded: that some tourists may prefer to visit countries that offer them a new experience. Such tourists may therefore prefer to spend their holidays in countries with different cultures, and in that case, sharing the same religion would have a negative impact on bilateral tourism flows. Moreover, religious fervor, like fundamentalism, might constraint tourism flows (Cohen, 1998). Consequently, it is important to ascertain the sign and size of these effects on a global scale.²

An important point to note here is that religious affiliation has strong historical roots which are influenced by past migration, colonialism and trade patterns. Furthermore, religion

² See also Fourie, Roselló and Santana-Gallego (2014) for a more comprehensive discussion of the impact of religious majorities and minorities on tourism.

might affect the political and economic institutions of a country. We address each of these concerns by controlling for a variety of historical and institutional variables.

Empirical Strategy and Results

The empirical analysis is based on an augmented gravity model for worldwide tourism flows. The gravity model is a widely-used and trusted empirical approach to measuring the contributions of various variables in explaining trade, foreign direct investment or, in our case, tourism. Moreover, gravity model for tourism can be derived from the consumer choice theory (Morley et al, 2014). Analytically, the model can be written as in equation [1]:

$$\begin{aligned} \text{LnTou}_{ijt} = & \beta_0 + \beta_1 \text{LnDistance}_{ij} + \beta_2 \text{LnGDPpc}_{it} + \beta_3 \text{LnGDPpc}_{jt} + \beta_5 \text{Colony}_{ij} + \beta_6 \text{Language}_{ij} + \beta_7 \text{Border}_{ij} \\ & + \beta_8 \text{LnRelPPP}_{ijt} + \beta_9 \text{Currency}_{ijt} + \beta_{10} \text{Island}_{ij} + \beta_{11} \text{Landl}_{ij} + \beta_{12} \text{Temp}_i + \beta_{13} \text{Temp}_j + \beta_{14} \text{PStability}_{it} + \\ & \beta_{15} \text{PStability}_{jt} + \beta_{16} \text{PRight}_{it} + \beta_{17} \text{PRight}_{jt} + \gamma' \text{R}_{ij} + \alpha_i + \delta_j + \lambda_t + \epsilon_{ijt} \end{aligned} \quad [1]$$

where Ln denotes natural logs; i and j indicate destination and origin countries, respectively and t is time. Table A.1 in the appendix summarizes the description and the source of the variables considered.

The dataset covers 172 countries as both origin and destination of tourism flows for 1995 to 2010 and it is estimated by using Fixed Effects-Ordinary Least Squares.

[Table 1 here]

Firstly, to establish whether sharing a common religion has an impact on global tourism flows, a dummy variable (*Religion*), that takes the value one if the countries in a pair share the same main religion, is defined. Results are presented in Table 1. In general, the explanatory variables have the expected signs and significance. Origin and destination income, sharing a colonial relationship, a common language and/or a common currency as well as temperature at destination have significant positive effects on tourism flows while distance between countries,

price competitiveness, and temperature at origin are significantly negative. Finally, measures of political stability and rights protection also appear to have an impact, although the impact is limited to the destination country

As presented in the first column, *Religion* is significantly positive, showing that sharing a common major religion increases tourism flows by a 60%. This coefficient, of course, also includes the tourism flows generated by pilgrimages. Thus, in order to show that religious effect is not only driven by pilgrimages, a dummy variable (*Pilgrim*) is added to capture tourism flows that have visiting sacred places as their primary aim. The results reported in the second column suggest that pilgrimages do indeed affect tourism flows, but once controlled, results also confirms that our variable of interest – *Religion* – changes little (increases tourism by a 52%). This finding proves that there is an indirect effect of religion on tourism beyond its effect on pilgrimages.

One coefficient, of course, masks considerable variation. We therefore investigate whether there are differences between religions in terms of its impact on tourism. With this aim, five dummy variables for the five main religions of the destination country are defined: *Christian*, *Islam*, *Buddhist*, *Hindu* and *Jew* take the value 1 if the destination country has Christianity, Islam, Buddhism, Hinduism or Judaism as its main religion, respectively.

[Table 2 here]

Results presented in Table 2 suggest that *Hindu*, *Christian* and *Buddhist* dummy variables are positive and significantly higher than the reference group (no major religion).³ Countries where Hinduism is the predominant religion tend to attract more tourists than those where the other religions are dominant. Countries where Christianity and Buddhism are main religions come second and third in tourist preferences, respectively. Finally, *Jew* and *Islam* dummy variables present a significantly lower effect than the reference group. Precisely, countries where Judaism or Islam is the predominant religion are less preferred by tourists.

³ A major religion is the one which presents a highest percentage of affiliated population, but greater than 40%

To go deeper, the impact of religious affiliation through country pairs is investigated. Twenty-four country-pair dummies are created to simultaneously evaluate the pulling power of the main religion of the origin country (six alternatives) and that of the main religion of the destination country (four alternatives).⁴ As an example, *Christian-Islam* takes the value one when the main religions are Christian at destination and Islam at origin.

[Table 3 here]

Results reported in Table 3 show that tourists prefer to visit countries with the same dominant religious affiliation as their own. This result is especially important for Hinduism and Islam. However, when the origin and destination religions are different, the evidence for the effect of religious affiliation by country pairs is mixed. All tourists, regardless of the main religion of the destination country, prefer to visit countries where Christianity, Buddhism or Hinduism is the dominant religion. Muslim destinations do not attract many tourists from different religions and even have a negative impact. Christian tourists have a stronger preference for visiting countries with different religion apart from Islam, while Jewish tourists present a very negative impact on visiting Muslim countries. In general, these results suggest that although tourists like visiting countries with a similar religious beliefs, there is large variation in how the dominant religion attracts tourists from regions that do not share the same religion.

Conclusions

We have shown that religious affiliation is a significant factor in determining global tourism flows. These large preferences cannot be explained simply as the result of specific religious attractions or events. Instead, the results suggest that, over and above pilgrimage, tourists exhibit a religious affinity in their choice of destination. This supports new evidence which shows that tourists prefer to visit destinations that share some cultural and historical similarities with their home countries (Fourie and Santana-Gallego 2013). The main

⁴ Since Israel is the only country that presents a Jewish majority, Judaism is not considered as destination.

contribution is to suggest that this cultural linkage may be largely through religious affiliation and these religious affinities are global and applicable to all of the five major religions. Moreover, the large effects cannot be explained by controlling for any of the standard gravity variables or other cultural and historic links between countries. While it may not surprise us that tourists tend to prefer destinations that practice the same religion as their own country, the inter-faith religion dummies suggest that there is large variation between religions.

REFERENCES

- Cohen, E., (1998), 'Tourism and religion: A comparative perspective', *Pacific Tourism Review*.
Vol 2, pp 1-10.
- della Dora, V., (2012), 'Setting and Blurring Boundaries: Pilgrims, Tourists, and Landscape in Mount Athos and Meteora', *Annals of Tourism Research*, Vol 39, pp 951-974.
- Fourie, J. and Santana-Gallego, M., (2013), 'Ethnic reunion and cultural affinity', *Tourism Management*, Vol 36, pp 411-420.
- Fourie, K., Roselló, J. and Santana-Gallego, M., (2014), 'Religion, Religious Diversity and Tourism', *Kyklos*, forthcoming.
- Morley, C., Roselló, J. and Santana-Gallego, M. (2014), 'Gravity models for tourism demand: theory and use', *Annals of Tourism Research*, Vol 48, pp 1-10
- Rose, A.K., (2011), 'The Olympic effect', *The Economic Journal*, Vol 121, pp 652–677.
- Stausberg, M. (2011), '*Religion and tourism: crossroads, destinations and encounters*'. London and New York: Routledge.

Table 1. Religion effect on tourism

Vble	Coeff.	Coeff.
Constant	-9.204	-8.985
LnDistance _{ij}	-1.515	-1.515
LnGDPpc _{it}	0.645	0.645
LnGDPpc _{jt}	0.210	0.206
Colony _{ij}	0.796	0.813
Language _{ij}	1.107	1.095
Border _{ij}	1.174	1.154
LnRelPPP _{ijt}	-0.294	-0.294
Currency _{ijt}	1.283	1.298
Island _{ij}	-0.260	-0.263
Land _{ij}	-0.340	-0.341
Temp _i	0.783	0.774
Temp _j	0.344	0.342
PStability _{it}	0.149	0.149
PStability _{jt}	0.020	0.021
PRights _{it}	-0.042	-0.042
Prights _{jt}	-0.001	0.001
Pilgrim _{ij}		2.243
Religion _{ij}	0.467	0.418
N. Obs	125936	125936
Adjusted R ²	0.8359	0.8372

Notes: Origin, destination and year fixed effects are not reported
Standard errors robust to heteroskedasticity are computed by using Huber-White estimator
Bold variables are significant at one per cent

Table 2. Religion in the destination country

Variables	Coeff	Coeff
<i>Pilgrim_{ij}</i>		2.243
<i>Christian_i</i>	2.221	2.235
<i>Islam_i</i>	-1.203	-1.207
<i>Hindu_i</i>	2.697	2.644
<i>Buddhist_i</i>	1.975	1.965
<i>Jew_i</i>	-0.579	-0.584
N. Obs	125936	125936
Adjusted R ²	0.8334	0.8372

Estimates are based on the same model presented in Table 1
 These results are available upon request

Table 3. Religion by country pairs

Variables	Coeff	Coeff
<i>Pilgrim_{ij}</i>		2.193
<i>Christian-Christian_{ij}</i>	1.342	1.346
<i>Christian-Muslim_{ij}</i>	1.372	1.396
<i>Christian-Hindu_{ij}</i>	1.293	1.31
<i>Christian-Buddhist_{ij}</i>	1.404	1.426
<i>Christian-Jew_{ij}</i>	1.961	1.987
<i>Christian-Other_{ij}</i>	1.344	1.362
<i>Muslim-Christian_{ij}</i>	-0.775	-0.763
<i>Muslim-Muslim_{ij}</i>	0.455	0.387
<i>Muslim-Hindu_{ij}</i>	-0.140	-0.144
<i>Muslim-Buddhist_{ij}</i>	-0.782	-0.770
<i>Muslim-Jew_{ij}</i>	-1.847	-1.855
<i>Muslim-Other_{ij}</i>	-0.876	-0.872
<i>Hindu-Christian_{ij}</i>	3.237	3.234
<i>Hindu-Muslim_{ij}</i>	3.406	3.392
<i>Hindu-Hindu_{ij}</i>	3.919	3.367
<i>Hindu-Buddhist_{ij}</i>	3.026	2.595
<i>Hindu-Jew_{ij}</i>	2.900	2.937
<i>Hindu-Other_{ij}</i>	2.976	2.959
<i>Buddhist-Christian_{ij}</i>	2.495	2.501
<i>Buddhist-Muslim_{ij}</i>	2.290	2.292
<i>Buddhist-Hindu_{ij}</i>	2.174	2.174
<i>Buddhist-Buddhist_{ij}</i>	2.375	2.382
<i>Buddhist-Jew_{ij}</i>	2.840	2.842
<i>Buddhist-Other_{ij}</i>	2.405	2.408
N. Obs	125936	125936
Adjusted R ²	0.8387	0.8399

Estimates are based on the same model presented in Table 1
 Results are available upon request

APPENDIX

Table A. 1. Variable Description

Variable	Description	Source
<i>Tourist</i>	Tourist arrivals at destination i from origin j	Tourism Factbook Database
<i>GDPpc</i>	Country's per capita real GDP	
<i>RelPPP</i>	Purchasing Power Parity conversion factor of country i relative to country j	World Development Indicators
<i>Distance</i>	Distance (in kilometers) between country i and country j	
<i>Colony</i>	Countries in the pair share a colonial relationship	GeoDist Database by CEPII
<i>Language</i>	Countries in the pair share a common spoken language	
<i>Border</i>	Countries in the pair share a common land border	
<i>Currency</i>	Countries in the pair share a common currency	
<i>Island</i>	At least one country in the pair is an island	Rose (2011)
<i>Landl</i>	At least one country in the pair is a landlocked country	
<i>Temp</i>	Annual mean temperature of the country	Tyndall Centre for Climate Change
<i>PStability</i>	Political stability Indicator. -1 (less political stability) to 4 (more political stability)	The Worldwide Governance Indicators
<i>PRights</i>	Degree of the political rights indicator. Ranged from 1 (strong political rights) to 7 (weak political rights)	The Freedom House
<i>Pilgrim</i>	Share of the population in the origin country affiliated to each of the five major religions visiting the five countries' which the most visited sacred sites per religion: St. Peter's Basilica (Italy); Mecca (Saudi Arabia); Lumbini (Nepal); Varanasi (India) and Western Wall (Israel)	The World Factbook by the Central Intelligence Agency
<i>R_{ij}</i>	Set of variables measuring religion affiliation	The World Factbook by the Central Intelligence Agency