

Economic Impact Assessment: A Review of Literature on the Tourism Industry

Antonio Kido-Cruz¹, Teresa Kido-Cruz² and James Killough³

¹ Universidad Michoacana De San Nicolas Hidalgo

Received: 12 February 2015 Accepted: 3 March 2015 Published: 15 March 2015

Abstract

By having a model of economic impact, it is possible to create scenarios to analyze in which sectors of the economy a demand/supply shock will result in the most benefit/loss for countries interested in promoting their tourism sector. Particularly useful in this task is the analysis of multipliers for gross domestic product, added value and employment. In developing countries, tourism plays an important role, and one would therefore expect to find corresponding studies on economic impact published in journals of high academic quality. However, upon observation of important tourism journals, it is witnessed that this is not the case for Latin America.

Index terms— tourism industry, economic impact, multipliers.

1 Introduction

he economic impact of tourism refers to changes in the economic contribution resulting from specific events or activities related to tourism.”These changes in the economic contribution generate three types of impacts or effects: direct effect, indirect effect and induced effect. The ability to estimate such impacts requires the development of an economic model” ??Dwyer et al., 2010).The main economic models used to measure these effects are: (a) the tourism satellite account (TSA); (b)the input-output model; (c) the social accounting model; and (d) the computable general equilibrium model. a) Brief review of the economic models of the economic contribution of tourism a. In the tourism satellite account, it is stated that it is an instrument designed to provide a systematic and integrated framework of information on tourism’s supply and demand rather than being the most accurate method of measuring the sector’s contribution to the added value or gross domestic product (GDP).In fact, the methodology developed for this is relatively simple; it considers only the direct effects. The basis for the calculation of tourism added value and tourism GDP in the tourism satellite account is the application of the ratio between the added value and the extent to which activities characteristic to tourism participate (UNWTO, 2014).It is important to mention that the TSA represents the theoretical and informative basis for the development of computable general equilibrium models.

Author: e-mail: akido42@hotmail.com b. Tourism spending generated by visitors to a tourist destination represents an injection of money into that tourist destination. This new injection of money leads to an increase in the direct effect as well as the indirect effect, which in turn impacts as an increase in economic activity of the tourist destination. Almost any industry is liable to be affected by a new injection of money to some extent by these direct and indirect effects. These effects are known as multiplier effects in the economy. A multiplier effect represents the number by which a given change in tourism activity generated by tourism spending is multiplied. The size of this multiplier effect will determine the impact of tourism (positive or negative) on macroeconomic aggregates such as the GDP, added value, level of income or sales, employment level and/or tax level.

The input-output multipliers are derived directly from the required coefficients of the matrix based on the input-output information tables. The added value multipliers measure the net change in the economic activity in each stage of production and represent the preferred measure, in this model, for assessing the economic contribution due to a shock on final demand ??Dwyer and Forsyth, 2010). c. The social accounting model is another means

45 of estimating the direct and indirect effects as well as the induced effects of tourism on the economy, but this
46 model presents a more complete economic structure since it includes inter-institutional transfers.

47 A social accounting matrix is an extension of the input-output tables that provides an additional detail in
48 the breakdown of consumers and factors of production, and it relates the calculation of added value with its
49 distribution by institutional sectors (Ferri and Uriel, 2004). d. The computable general equilibrium models
50 (CGE) represent markets of goods, services and factors of production as well as productive sectors and demand
51 groups (households). Each market, each sector and each household is governed by its own economic interests
52 which are what determine its final behavior when faced with external shocks. These models generate a system
53 of equations that characterize the production, consumption, trade and government activities within an economy.
54 They incorporate the entire mechanism of the tourism satellite accounts, input-output model and the social
55 accounting matrix, while also incorporating the mechanism to study congestion effects among activities, markets
56 and sectors, and it is possible to estimate the direct, indirect and induced effects through multipliers (Dwyer
57 and Forsyth P, 2010). The general equilibrium models are not used specifically to estimate the contribution made
58 by tourism to the GDP or to imports but rather to construct scenarios that simulate the potential impacts on
59 the whole economic system associated with certain changes (arrivals, spending, taxation, etc.).

60 The estimate of the impacts generated by tourism growth by use of these models shows, generally, numbers
61 lower than those obtained through input-output models, because in the former the inter sectoral reallocation of
62 resources and, as a consequence, displacement effects are possible.

63 2 II.

64 3 Material and Methods

65 This research is basically a revision analysis which, according to some methodologists such as Luborsky (1994),
66 involves the discovery of patterns and categories in the information used.

67 4 a) Research design

68 Following the procedure of Xiao and Smith (2006), research papers from three databases included in the Virtual
69 Library of the Universidad Michoacana de San Nicolas de Hidalgo were consulted. Articles of a 10year period
70 (2004) (2005) (2006) (2007) (2008) (2009) (2010) (2011) (2012) (2013) (2014) (2015) in the
71 following journals were reviewed: Annals of Tourism Research (ATR), Economic Modelling (EM), Tourism
72 Management (TM) and Journal of International Tourism Research (JITR). These journals represent a wide range
73 in terms of their scope and reach of research in the area of tourism. The choice of this set of journals and the
74 time frame is mainly a reflection of the practicality and availability of sources as well as the factor of academic
75 impact. Pechlaner et al., (2004) analyzed 22 tourism and hospitality journals in terms of frequency of readers,
76 scientific relevance, practical relevance, reputation, and importance for the academic area of study, and they found
77 that, according to their criteria, "Annals of Tourism Research", "Journal of Tourism Research" and "Tourism
78 Management" were the top three choices.

79 Title, subtitle, keywords and summary (abstract) were taken into account during the initial selection of articles.
80 During the second stage of evaluation, the only articles considered were those explicitly containing the following
81 terms: "tourism satellite account models", "tourism input-output models", "tourism social accounting matrix"
82 and "computable general equilibrium models applied to tourism". Additionally, searches were performed for
83 "direct, indirect and induced tourism effects" or "tourism multipliers". It is important to mention that economic
84 impact models (tourism satellite account, input-output, social accounting and general equilibrium) that had as
85 a main theme references to environment, natural resources and/or sporting events were not included in this
86 evaluation as they were considered part of a matrix extension unlike measurements of the economic impact of
87 tourism.

88 Twenty-six articles met the criteria specified in the first round of selection. On closer examination, and
89 according to the selection criteria previously mentioned, only twenty-two articles were chosen for final analysis.

90 5 III.

91 6 Results

92 7 a) Coding of journals

93 Table 1 describes the coding of articles selected from different journals analyzed. Six articles were selected
94 from the journal Annals of Tourism Research (ATR), three from Economic Modelling (EM), ten from Tourism
95 Management (TM) and three from the Journal of International Tourism Research (JITR). These articles were
96 numbered sequentially in the order of volumes, page numbers and year of publication in the journal. For example,
97 the first article selected from Annals of Tourism Research is found in volume 32 on pages 367 to 385 with a length
98 of 18 pages and was published in 2009. The first article selected from the journal Economic Modelling is found in
99 volume 28 on pages 473-481 with a length of 9 pages and published in the year 2011. From Tourism Management,
100 the first article corresponds to volume 25 covering pages 307 to 317 (10 pages long) and published in the year

101 2004, and finally in the Journal of International Tourism Research only three items were found, of which the first
102 corresponds to volume 8 on pages 347-354 from the year 2009.

103 Zhao and Brent (2007) carried out research on academic leadership in tourism research worldwide, as measured
104 by the number of articles published in eight journals in the field of tourism between 1985 and 2004. Fifty-seven
105 researchers were identified as the most prolific since each of them published at least 11 articles in the period
106 under review.

107 Of the total of 57 leading authors on tourism, all of them were identified as having a doctoral degree level which
108 would indicate a very strong correlation between doctoral-level education and academic leadership. These degrees
109 were awarded by a total of 40 universities, with special notice given to Texas A & M University from which a
110 total of 7 prominent researchers in the field of tourism have graduated. Moreover, it is worthy of special mention
111 that these seven researchers graduated from the same doctoral program offered by the university's Department
112 of Recreation, Park and Tourism Sciences. The University of Western Ontario takes second place with five of the
113 leading scholars in tourism, followed by Pennsylvania State University with 4, and four universities each providing
114 2, namely Clemson University, the University of Bradford, James Cook University and Monash University.

115 8 b) Characteristics and profiles of main authors

116 In order to describe and contrast some of the general characteristics of the authors with those found in the study
117 of Zhao and Brent, the results on the characteristics and profiles of the main authors of this study are described in
118 Table 2. First, by comparing the profile of academics versus non-academics, it is shown that the vast majority of
119 these authors are academics in the sense that they are affiliated with colleges, universities or research institutions.

120 Secondly, in terms of geographical distribution of these authors, it was found that English-speaking countries
121 or regions dominate since the media selected for this analysis are journals exclusively in English.

122 9 c) Research Methodology

123 The following characteristics of the published articles selected are described in order to obtain certain homogeneity
124 in the analysis: (1) topics and/or model used, (2) objective, place and time of research, (3) main results and/or
125 multiplier effects. d) GDP multiplier effects / employment / income / added value / taxes / sectoral interrelation
126 of tourism Six articles were selected from the journal *Annals of Tourism Research*. Two of these use the tourism
127 satellite account, and four use a general equilibrium model.

128 In the first study, a tourism satellite account is used; it is published in 2004 and refers to the case of Tanzania.
129 The study emphasizes the possibility of using a "bottom-up" approach when building a satellite account and
130 points out the importance of being careful in the process of building a tourism account rather than just focusing
131 on the final results. Economic Impact Assessment: A Review of Literature on the Tourism Industry tourism
132 satellite account and System of National Accounts adopted by major multilateral development agencies around
133 the world so that their results can be directly comparable with the main macroeconomic aggregates produced
134 by the system, such as gross domestic product, added value and employment. The third study is an application
135 of a general equilibrium model for the UK in 2006. The model was used to examine and compare the effects of
136 increases in the key factors of production: physical capital, human capital, innovation (represented by total factor
137 productivity) and the competitive environment. The effects are calculated as the value of the change in welfare
138 through variation in productivity. The article analyzes a 1% increase in physical capital, human capital and total
139 factor productivity.

140 Two main points emerge from the results. First of all, in the case of tourism-related sectors, increases in
141 productivity due to financial and physical capital are not substantial. This indicates that it is not important to
142 prioritize increases in one type of capital over another. In the case of all economic sectors, the growth of human
143 capital (labor productivity) is more beneficial than physical capital although, once again, the differences are not
144 substantial. This means that policies should not be formulated by focusing on one particular sector independently
145 of the others but rather must take into account the effects on all of them. The results indicate that a 59% change
146 in added value is obtained in the subsector of hotels and motels, while restaurants obtain 73%.

147 The fourth study reports a computable general equilibrium model and was implemented in Brazil in 2007.
148 The main results show that a 10% increase in foreign demand leads to increases in domestic prices of, on average,
149 around 0.7%, which reduces consumption by about 8.5%. The increase in the welfare of Brazil is around 106
150 billion USD, which means that the country benefits by \$45 for every \$100 of additional tourist spending (i.e., a
151 multiplier of 0.45 is reported). The study also emphasizes distributional effects of tourism in the country and
152 conclude that the lowest income household benefits but less than some higher income households.

153 In the fifth equilibrium model, the case of Fiji published in the year 2010 is studied. The analysis describes
154 an input-output model with the objective of estimating direct and indirect effects on the economy in a scenario
155 of an increase of 1 million USD in tourist spending for data in periods of boom and bust. The results indicate
156 that an increase of \$1 million in tourist spending increases revenues by \$219,000 during no expansion periods
157 (which would correspond to the year 1967), while \$1 million in tourist spending in the poststagnation phase
158 (2002) generates \$722,000.

159 Another way to assess the impact of different sectors of the economy is to examine the unweighted added
160 value multiplier by sector over time. In absolute terms, the government sector has the highest direct multipliers

161 followed by the art and entertainment subsector and the rental real estate sector. The food and beverage sector
162 has a relatively low multiplier placing it between 13th and 16th place in size, but the indirect multiplier is at 3rd
163 and 4th place in 2002 and 2005. The lodging sector is located between the 7th and the 13th place for direct added
164 value multiplier compared to all other industries. However, the indirect multiplier lies at sixth and seventh place
165 in periods after 2002. The transport sector has a low direct and indirect multiplier throughout the entire time
166 period analyzed.

167 When performing a comparative analysis of forward and backward linkages of tourism sectors, it is found that,
168 in general, these sectors have weak forward links. The lodging industry presents a forward link index ranging
169 from 0.74 to 0.81, while in the food and beverage sector a Rasmussen index was estimated ranging from 0.77 to
170 0.87. The real estate and rental subsector is the sector with a tourist vocation that has strong forward linkages.

171 The sixth model refers to a general equilibrium model whose main objective was to analyze the impact on
172 tourism of the recent boom in mining activity in Australia and was published in the year 2014. This paper
173 examined how Australian tourism is affected by the country's mining boom. However, the effect is different
174 for each of the subsectors related to tourism. Tourism can be considered an input (export) industry and as an
175 output (import) industry. Domestic tourism and outbound tourism are imperfect substitutes for each other. The
176 exchange rate appreciation makes Australia a tourist destination with a higher price and therefore less competitive
177 from the perspective of the rest of the world.

178 The positive income effect since the mining boom produces a long-term benefit for domestic tourism (increasing
179 annually up to 0.49%). This occurs mainly by means of an increase in household incomes, consumption and the
180 additional demand for tourism services associated with the air and land transport sector.

181 The average long-term increase in outbound tourism (around 1.15% per year) is more than double the rate of
182 increase in demand for domestic travel.

183 The exchange rate appreciation effect varies depending on the source markets and on the segments and purpose
184 of the visit. For example, during the period 2000-2010, the changes in spending and in the number of international
185 tourist visitors to Australia are not uniform. While some countries have experienced declines in the number of
186 visitors, especially Japan and some European countries, there have been some real success stories, as is China.
187 The number of Chinese tourists has increased, but the 45% appreciation of the Australian dollar against the
188 Chinese renminbi is associated with a decline in spending per visitor of 38%.

189 10 Global Journal of Management and Business Research

190 Volume XV Issue XI Version I Year 2015

191 11 (B)

192 Economic Impact Assessment: A Review of Literature on the Tourism Industry This phenomenon has also
193 occurred in other main source markets: United Kingdom (-29%), USA (-44%), New Zealand (-17%), Japan
194 (-32%) and Indonesia (-29%).

195 Three articles were consulted from the journal Economic Modelling, two of which are about computable general
196 equilibrium models and one develops an input-output model.

197 The first study of general equilibrium refers to Hawaii's economy in the year 2011. The simulation of a 10%
198 increase in Hawaii's tourist spending would cause an increase of 9.1% in gross state product and an increase of
199 2.1% in the total economy. Also it would cause a 2.43% increase in the locality's employment.

200 The second general equilibrium model is applied to situations of uncertainty in the US economy in 2013. An
201 interesting scenario that models the role of uncertainty could be a hypothetical boom in tourism demand. Where
202 there is an asymmetric shock, the possibility of a future tourism demand increase results in a welfare loss of 2.7
203 million USD, which reflects the nonlinear behavior of the model.

204 An additional scenario modeling symmetrical effects (50% probability of a 10% increase in tourism and 50%
205 probability of a 10% decline in tourism) generates once again an overall marginal increase of 2.7 million USD in
206 economic welfare, reflecting the adverse character of the agents.

207 The third input-output study includes as case studies Brazil, the United States and China and was published
208 in 2014. The results show that a 10% increase in final demand generates an average multiplier effect of 1.5 on the
209 Brazil's GNP, highlighting the refined petroleum subsector with a multiplier of 1.96 in contrast to the electrical
210 and optical equipment sub sector which has a multiplier of 1.72. In the case of China, the average effect on the
211 economy is 2.09, with the highest multiplier effect (2.61) on the electrical and optical equipment sub sector and
212 the least effect (2.39) on construction. Finally, the US economy would experience an average multiplier effect of
213 1.76, where the food and beverage sector has a multiplier of 2.02 and the textile sector 1.77.

214 Ten articles were selected from the journal Tourism Management, five of which use general equilibrium models,
215 and five of which use input-output models.

216 The first study published in 2004 documents the advantages and disadvantages of the use of input-output
217 models versus the computable general equilibrium model, indicating a preference for the use of the latter.

218 The second study focuses on the economy of Scotland and was published in 2006 using a general equilibrium
219 model. The prognosis for change in the international tourism expenditure would increase the GDP to 34.3 million
220 GBP and generate 3,737 full time jobs in Scotland. The UK government would receive 58.3 million GBP in tax

revenue. The additional expenditure by visitors from the United States would lead to an increase in GDP of up to 6.3 million and would generate 677 additional jobs. Finally, the effects of the appreciation of the US dollar against the pound sterling would lead to a 4.4 million reduction of the Scottish GDP.

The third case study corresponds to the economy of Taiwan in 2007. The objective was to model the effect of the installed capacity on the country's tourism industry under an input-output model. In 1999, the average occupancy rate was 62% and the proportion of jobs in relation to total sales was 0.4972. This proportion would rise to 0.6681 if the employment rate decreased by 42%. Furthermore, this ratio would drop to 0.3436 if the employment rate increased to 87%. The proportion of revenue in relation to total sales is less sensitive to changes in hotel occupancy since they range between 0.38 and 0.44 in reference to the same variation range in employment rate (between 42% and 87%).

By using the information from income multipliers in relation to sales, it is found that the type I multipliers (direct and indirect effects) remain constant with respect to occupancy rates, while type II multipliers (direct, indirect and induced effects) may vary up to 73% in relation to the base year when occupancy rates fluctuate between 42% and 87%. The variation is due to the change in income rates (the percentage of sales is transferred as compensation to employees) in the hotel sector, which subsequently leads to significant induced effects.

The type I employment multiplier differs substantially since it stands within the range of 1.01 (for every 1 million USD in sales) with an occupancy rate of 42% up to a multiplier of 0.56 jobs per \$1 million in sales with an occupancy rate of 82%. The type I income multiplier is more stable since it has a range with a maximum difference of 6% in relation to the base amounts for hotel occupancy which were defined as between 42% and 82%.

These mixture of results are summarized as business exercising constant economies of scale, I-O impacts are unbiased but for services following economies of scale traditional I-O models are biased and they must be taken into account.

The fourth article was published in 2009 and uses a general equilibrium model applied to the country of Bali. The objective was to measure the effect of a decline in international tourism on the economy of Bali due to a series of bombings. The results suggest that in Bali the GDP could decline 2.33% while in Jakarta and Yogyakarta the corresponding quantities are 0.35% and 0.27%. Employment in Bali fell by 4.93%, household consumption decreased around 4.68%, investment dropped by 6.79%, exports fell by 16.34% and imports suffered a decline of 8.95%. The fifth study refers to a general equilibrium model applied in New Zealand and was published in 2012. It models the effect that an increase in oil prices would have on tourism. The available gross national income decreases by 1.7% when, as an international reference, the international price of oil doubles; in addition, there is a 9% decrease in the real value of exports from tourism services. As a result of rising oil prices, there are several impacts due to the exchange rate and elasticities, but it is clear that this phenomenon affects all segments of visitors to New Zealand, particularly visitors from the UK.

12 Global Journal of Management and Business Research

The sixth study was published in the year 2012 and carried out a study of social accounting matrix for the Turkish economy. The main objective of the study was to estimate the impact on the economy as measured by product, added value and tourism employment. The total expenditure of foreign tourists was about 1.3 million USD in 1996 and about \$1.9 million in 2002. The full impact of international tourism expenditure on production was 1.054% of total production in 1996 and 1.049% of total production in 2002. The total impact of international tourism demand on the global added value was 0.896% of the GDP in Finally, the impact on employment as a percentage of total employment was 0.58% in 1996 and 0.61% in 2002. As for the number of job positions, there were 117,983 positions in 1996 and 130,541 positions in 2002. One billion new Turkish Liras (YTL) in spending by international tourists generates 0.9 jobs in 1996 and 0.8 in 2002.

The seventh document examines a general equilibrium model for the economy of Singapore in 2013. The main objective was to evaluate the impact on the national economy by the public policy on tourism. The simulation results show that the policies are effective, but the effectiveness varies between the different policies. In terms of the real GDP, the tax refund policy on tourists' purchases and the policy of subsidies on investment in the tourism industry have a similar effect, but the first generates less tax revenue for the state. Considering the same loss of tax revenue from tourism subsidy policies, the policy of tourism expenditure deduction from both goods and local tourism services can significantly induce a higher GDP growth.

If total tourism expenditure is considered rather than real GDP, the tax deduction policy on purchases is higher than the other two subsidy policies. At the sectoral level, the basic tourism sectors and those closely related to tourism experience positive effects with the three types of policies analyzed especially the lodging and clothing sectors. However, most of the manufacturing sectors and those unrelated to tourism are negatively affected, with the exception of the electricity and real estate sectors and nonprofit sectors. Generally speaking, the policy of tax deduction on the purchase of tourism goods and services is more effective than the policy of subsidy on investment in the tourism industry and the subsidy policy of support and development assistance with events and tourism fairs.

The eighth article applied a general equilibrium model in Australia for the year 2014. The objective was to analyze the impact on the economy before and after the implementation of a fee charged to passengers departing from the country. The overall effect of the increase in the price of visiting the country is modeled under two

283 demand price elasticity scenarios, the first assuming an elasticity of -0.5 and the second simulating the effects of
284 an elasticity of -1.0. In the first scenario, with an elasticity of -0.5, a tourist tax increase of 17% has a positive
285 impact (via tax collection) on the GDP of 2.21 million USD and a positive impact on welfare of \$49.8 million.

286 However, this same increase has a negative impact on the tourism industry. The tourism product declines \$8.5
287 million, the real tourism GDP suffers a fall of \$4.5 million and a total of 66 full-time direct jobs are lost. Under
288 the scenario of a -1.0 price elasticity of the tourism demand, the positive effects on the domestic product and
289 welfare of the whole economy are \$4 million and 51 million respectively, mainly due to the increased tax collection.
290 The tourism sector loses 12.3 million in its product, and the real tourism product decreases to 6.46 million. A
291 total of 95 direct jobs are no longer generated. The results confirm that the tourism industry will be negatively
292 affected, although the Australian economy will gain in general. Therefore, a conflict of interest is likely between
293 the tourism sector in particular and the whole economy. The study aims to inform on the positive and negative
294 effects of an increase on the tax for departing the country.

295 The ninth study was applied in 2014 to the hotel and restaurant sector for a group of OECD member countries.
296 The objective was to estimate the tourist multipliers in their respective economies. The result is a description of
297 the process for obtaining the multiplier for the industry of hotels and restaurants with high explanatory power.
298 The significant explanatory variables found are: population, GDP per capita, and percent of imports on the
299 GDP.

300 Finally, the tenth article refers to a study of the social accounting matrix for 2014 in the region of Galicia in
301 Spain. The main objective was to estimate the tourism demand's effect on the income of the region's inhabitants.
302 The results show significant positive effects across all income groups. However, high-income households benefit
303 more than those with low incomes, contributing to a slight increase in income inequality in the region. Economic
304 Impact Assessment: A Review of Literature on the Tourism Industry with type II multipliers. The results show
305 that 1.64% of the gross national product, 1.40% of household income and 1.01% of employment depends on
306 international tourism.

307 The second is an article published in 2009 for the case of South Korea after applying an input-output matrix
308 to the exhibition industry. In summary, the total exhibition receipts of US\$645.7 million produced US\$1.2 billion
309 in output; 21 692 full-time equivalent jobs, US\$260 million in personal income for residents, US\$577.4 million in
310 value-added, US\$54.2 million in indirect tax and US\$104.3 million in imports.

311 The third article was published in 2014 and used an input-output model to measure the impact of tourism in
312 the different provinces of China. Due to the larger multiplier effects, the most economically developed provinces
313 will experience greater economic benefits as a result of new increases in tourism. However, some economically
314 less developed provinces also experience benefits from an increase in tourism. Increases in visitor arrivals in these
315 provinces have the potential to benefit both the tourism sectors as well as the sectors that demand and supply
316 inputs and services to these industries. This is an attractive source of economic development in less developed
317 provinces.

318 IV.

319 13 Conclusions

320 After reviewing and describing the published works, it is important to note that of all the selected articles almost
321 50% refer to studies based on input-output models and social accounting while the remaining 50% are based on
322 computable general equilibrium models. Only two studies were found for a Latin American country: Brazil. No
323 studies were found for Mexico. The effects of tourism on the economy are clearly displayed whether one type of
324 model or another is used. However, changes in supply and/or demand in an economy could modify input-output
325 structures through price factors, productivity of factors of production and input ratio, making important to work
326 with the dynamics of the markets when necessary.

327 14 Bibliography

328 1



Figure 1:

1

ATR EM TM JITR

Figure 2: Table 1 :

2

NAME	ACADEMIC DEGREE	DISCIPLINE	UNIVERSITY WHERE DEGREE WAS OBTAINED	UNIVERSITY WHERE EMPLOYED
Denise Elby Konan	Ph.D.			
Adam Blake (appears in three articles)	Ph.D.	Economics & Econometri cs	University Of Nottingham	Bournemouth University
Stephen Pratt (appears in three articles)	Ph.D.		University Of Nottingham	The University Of The South Pacific
Peter Forsyth (appears in three articles)			Monash University, Australia	
Douglas C. Frechtling	Ph.D.	Philosophy	The George Washington University, Washington D.C.	

Figure 3: Table 2 :

- [()] , 10.1002/jtr.1990. 2004. 2011. 2004. 2006. 2006. 2013. 2006. 2009. 2007. 2014. 2007. 2014. 2009. 2009. 2010. 2012. 28 p. .
- [Meng et al. ()] ‘A CGE assessment of Singapore’s tourism policies’. X Meng , M Siriwardana , T Pham . *Tourism Management* 2013. 34 p. .
- [Pechlaner et al. ()] ‘A ranking of international tourism and hospitality’. H Pechlaner , A Zehrer , K Matzler , D Abfalter . *Journal of Travel Research* 2004. 42 (4) p. .
- [Sun ()] ‘Adjusting Input-Output Models for Capacity Utilization in Service Industries’. Y Sun . *Tourism Management* 2007. 28 p. .
- [Kim and Chon ()] ‘An economic impact analysis of the Korean exhibition industry’. S Kim , K Chon . *Journal of International Tourism Research* 2009. 11 p. .
- [Zhao and Brent ()] ‘An investigation of academic leadership in tourism research’. W Zhao , J Brent . *Tourism Management* 2007. 28 p. .
- [Guerra and Sancho ()] ‘An operational non-linear input-output system’. A Guerra , F Sancho . *Economic Modelling* 2014. 41 p. .
- [Akkemik ()] ‘Assessing the importance of international tourism for the Turkish economy: A social accounting matrix Analysis’. K Akkemik . *Tourism Management* 2012. 33 p. .
- [Xiao and Smith ()] ‘Case study in tourism research: A state of art analysis’. H Xiao , S Smith . *Tourism Management* 2006. 27 p. .
- [Pambudi et al. ()] ‘Computable general equilibrium estimates of the impact of the Bali bombing on the Indonesian economy’. D Pambudi , N Mccaughy , R Smyth . *Tourism Management* 2009. 30 p. .
- [Pratt et al. ()] ‘Dynamic general equilibrium model with uncertainty: Uncertainty regarding the future path of the economy’. S Pratt , A Blake , P Swann . *Economic Modelling* 2013. 32 p. .
- [Pratt ()] ‘Economic Linkages and Impacts Across the TALC’. S Pratt . *Annals of Tourism Research* 2010. 38 (2) p. .
- [Ferri and Uriel ()] ‘Evaluación del impacto económico del turismo: de un modelo keynesiano a un modelo clásico’. J Ferri , E Uriel . *Papeles de Economía Española* 2004. 102 p. .
- [Dwyer et al. ()] ‘Evaluating tourism’s economic effects: new and old approaches’. L Dwyer , P Forsyth , R Spurr . *Tourism Management* 2004. 25 p. .
- [Oosterhaven and Fan ()] ‘Impact of international tourism on the Chinese economy’. J Oosterhaven , T Fan . *Journal of International Tourism of Research* 2006. 8 p. .
- [Becken and Lennox ()] ‘Implications of a long-term increase in oil prices for tourism’. S Becken , J Lennox . *Tourism Management* 2012. 33 p. .
- [Blake et al. ()] ‘Integrating forecasting and CGE models: The case of tourism in Scotland’. A Blake , R Dubarry , J Eugenio-Martin , N Gooroochurn , B Hay , J Lennon , M Sinclair , G Sugiyarto , I Yeoman . *Tourism Management* 2006. 27 p. .
- [Forsyth et al. ()] ‘Is Australian tourism suffering Dutch disease?’. P Forsyth , L Dwyer , R Spurr , T Pham . *Annals of Tourism Research* 2014. 46 p. .
- [Konan ()] ‘Limits to Growth: Tourism and Labor Regional Migration’. D Konan . *Economic Modelling* 2011. 28 p. .
- [Pratt ()] ‘Potential Economic Contribution of Regional Tourism Development in China: A comparative analysis’. S Pratt . 10.1002/jtr.1990. *Journal of International Tourism Research* 2014.
- [Statistics and tourism satellite account.www. statistics.unwto.org United Nations World Tourism Organization (2014)] ‘Statistics and tourism satellite account.www. statistics.unwto.org’. *United Nations World Tourism Organization* 2014. November, 2014. 25.
- [Luborsky ()] ‘The Identification and Analysis of Themes and Patterns’. M Luborsky . *Qualitative methods in aging research*, J Gubrium, A Sankar (ed.) (Thousand Oaks; Sage) 1994. p. .
- [Forsyth et al. ()] ‘The impact of Australia’s departure tax: Tourism versus the economy’. P Forsyth , L Dwyer , R Spurr , T Pham . *Tourism Management* 2014. 40 p. .
- [Frechtling ()] ‘The Tourism Satellite Account’. D Frechtling . *Annals of Tourism Research* 2009. 37 (1) p. .
- [Carrascal and Fernandez ()] ‘Tourism and income distribution: evidence of a developed economy’. A Carrascal , M Fernandez . *Tourism Management* 2015. 48 p. .
- [Blake et al. (2007)] ‘Tourism crisis management: US response to’. A Blake , J Arbache , M Sinclair , V Teles . *Annals of Tourism Research* 2007. September 11. 35 (1) p. .
- [Blake et al. ()] ‘Tourism productivity. Evidence from the United Kingdom’. A Blake , M Sinclair , J Campos . *Annals of Tourism Research* 2005. 33 (4) p. .
- [Sharma and Olsen ()] ‘Tourism satellite account: Implementation in Tanzania’. A Sharma , M Olsen . *Annals of Tourism Research* 2005. 32 (2) p. .