Global Journal of Management and Business Research: B
Economics and Commerce
Volume 15 Issue 11 Version 1.0 Year 2015
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

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

By Antonio Kido-Cruz, Teresa Kido-Cruz & James Killough

Universidad Michoacana De San Nicolas Hidalgo, Mexico

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.

Keywords: *tourism industry, economic impact, multipliers.*

GJMBR - B Classification : *JEL Code : L83*

Strictly as per the compliance and regulations of:

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

Antonio Kido-Cruz [α], Teresa Kido-Cruz [σ] & James Killough [ρ]

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.

Keywords: tourism industry, economic impact, multipliers.

I. Introduction

The 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.

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 of estimating the direct and indirect effects as well as the induced effects of tourism on the economy, but this model presents a more complete economic structure since it includes inter-institutional transfers. A social accounting matrix is an extension of the input-output tables that provides an additional detail in the breakdown of consumers and factors of production, and it relates the calculation of added value with its distribution by institutional sectors (Ferri and Uriel, 2004).

d. The computable general equilibrium models (CGE)represent markets of goods, services and factors of production as well as productive sectors and demand groups (households). Each market, each sector and each household is governed by its own economic interests which are what determine its final behavior when faced with external shocks. These models generate a system of equations that characterize the production, consumption, trade and government activities within an economy. They incorporate the entire mechanism of the tourism satellite accounts, input-output model and the social

Author: e-mail: akido42@hotmail.com

accounting matrix, while also incorporating the mechanism to study congestion effects among activities, markets and sectors, and it is possible to estimate the direct, indirect and induced effects through multipliers (Dwyer and Forsyth P, 2010).

The general equilibrium models are not used specifically to estimate the contribution made by tourism to the GDP or to imports but rather to construct scenarios that simulate the potential impacts on the whole economic system associated with certain changes (arrivals, spending, taxation, etc.). The estimate of the impacts generated by tourism growth by use of these models shows, generally, numbers lower than those obtained through input-output models, because in the former the inter sectoral reallocation of resources and, as a consequence, displacement effects are possible.

II. Material and Methods

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

a) Research design

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

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

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

III. Results

a) Coding of journals

Table 1 describes the coding of articles selected from different journals analyzed. Six articles were selected from the journal Annals of Tourism Research (ATR), three from Economic Modelling (EM), ten from Tourism Management (TM)and three from the Journal of International Tourism Research (JITR).

Table 1 : Critical reading and coding of data

ATR	EM	TM	JITR
32: 367-385 (2004)	28: 473- 481(2011)	25: 307-317 (2004)	8: 347- 354 (2006)
33: 1099-1120 (2006)	32: 429-439 (2013)	27: 292- 305 (2006)	11: 311- 318 (2009)
35: 107-126 (2007)	41: 99- 108 (2014)	28: 1507-1517 (2007)	DOI: 10.1002/jtr.1990 (2014)
37: 136-153 (2009)		30: 232- 239 (2009)	
38: 630-650 (2010)		33: 133- 142 (2012)	
46:1-15 (2014)		33:790- 801 (2012)	
		34: 25-36 (2013)	
		40: 27- 34 (2014)	
		40: 126- 136 (2014)	
		48: 11- 20 (2015)	

These articles were numbered sequentially in the order of volumes, page numbers and year of publication in the journal. For example, the first article selected from Annals of Tourism Research is found in volume 32 on pages 367 to 385 with a length of 18 pages and was published in 2009. The first article selected from the journal Economic Modelling is found in volume 28 on pages 473-481 with a length of 9 pages and published in the year 2011. From Tourism Management, the first article corresponds to volume 25 covering pages 307 to 317 (10 pages long) and published in the year 2004, and finally in the Journal of International Tourism Research only three items were found, of which the first corresponds to volume 8 on pages 347-354 from the year 2009.

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

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

b) Characteristics and profiles of main authors

In order to describe and contrast some of the general characteristics of the authors with those found in the study of Zhao and Brent, the results on the characteristics and profiles of the main authors of this study are described in Table 2.

Table 2 : General characteristics of the authors

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 & Econometrics	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.	The George Washington University, Washington D.C.
Amit Sharma	Ph.D	Computer Science	Cornell University, Ithaca, NY	Iowa State University, Usa
Ana Isabel Guerra	Ph.D	Business and Economic Sciences	Universidad Autónoma De Barcelona	Universidad Autónoma De Barcelona
Larry Dwyer	Ph.d			University of New South Wales, NSW 2052, Australia

Jan Oosterhaven	Pd.D.	Economic Sciences,	University Of Groningen (RUG)	University Of Groningen (RUG)
Samuel Seongseop Kim	Ph.D.		Texas A&M University	The Hong Kong Polytechnic University
Susanne Becken	Ph.D.	Resource Management And Tourism	Lincoln University, New Zealand	Griffith University, Australia
Xianming Meng	Ph.D.		Northeastern University	Australian Research Council (ARC)
Ya-Yen Sun	Ph.D.			National University Of Kaohsiung
Luis Robles Teigeiro	Ph.D			
Andre Carrascal I.	Ph.D	Economics	University Of Santiago De Compostela	
K. Ali Akkemik*	Ph D.		Nagoya University, Japan	Kadir Has University
Djauhari Pambudi	Ph. D.			

First, by comparing the profile of academics versus non-academics, it is shown that the vast majority of these authors are academics in the sense that they are affiliated with colleges, universities or research institutions.

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

c) Research Methodology

The following characteristics of the published articles selectedare described in order to obtain certain homogeneity in the analysis: (1) topics and/or model used, (2) objective, place and time of research, (3) main results and/or multiplier effects.

d) GDP multiplier effects / employment / income / added value / taxes / sectoral interrelation of tourism

Six articles were selected from the journal Annals of Tourism Research. Two of these use the tourism satellite account, and four use a general equilibrium model.

In the first study, a tourism satellite account is used; it is published in 2004 and refers to the case of Tanzania. The study emphasizes the possibility of using a "bottom-up" approach when building a satellite account and points out the importance of being careful in the process of building a tourism account rather than just focusing on the final results.

The second study using the tourism satellite account is from the year 2009 and represents a review of the importance of the relationship between the tourism satellite account and System of National Accounts adopted by major multilateral development agencies around the world so that their results can be directly comparable with the main macroeconomic aggregates produced by the system, such as gross domestic product, added value and employment.

The third study is an application of a general equilibrium model for the UK in 2006.The model was used to examine and compare the effects of increases in the key factors of production: physical capital, human capital, innovation (represented by total factor productivity)and the competitive environment. The effects are calculated as the value of the change in welfare through variation in productivity. The article analyzes a 1% increase in physical capital, human capital and total factor productivity.

Two main points emerge from the results. First of all, in the case of tourism-related sectors, increases in productivity due to financial and physical capital are not substantial. This indicates that it is not important to prioritize increases in one type of capital over another. In the case of all economic sectors, the growth of human capital (labor productivity) is more beneficial than physical capital although, once again, the differences are not substantial.

This means that policies should not be formulated by focusing on one particular sector independently of the others but rather must take into account the effects on all of them. The results indicate that a 59% change in added value is obtained in the subsector of hotels and motels, while restaurants obtain 73%.

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

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

Another way to assess the impact of different sectors of the economy is to examine the unweighted added value multiplier by sector over time. In absolute terms, the government sector has the highest direct multipliers followed by the art and entertainment subsector and the rental real estate sector. The food and beverage sector has a relatively low multiplier placing it between 13th and 16th place in size, but the indirect multiplier is at 3rd and 4thplace in 2002 and 2005. The lodging sector is located between the 7th and the 13th place for direct added value multiplier compared to all other industries. However, the indirect multiplier lies at sixth and seventh place in periods after 2002. The transport sector has a low direct and indirect multiplier throughout the entire time period analyzed.

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

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

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

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

The exchange rate appreciation effect varies depending on the source markets and on the segments and purpose of the visit. For example, during the period 2000-2010, the changes in spending and in the number of international tourist visitors to Australia are not uniform. While some countries have experienced declines in the number of visitors, especially Japan and some European countries, there have been some real success stories, as is China. The number of Chinese tourists has increased, but the 45% appreciation of the Australian dollar against the Chinese renminbi is associated with a decline in spending per visitor of 38%. This phenomenon has also occurred in other main source markets: United Kingdom (- 29%), USA (- 44%), New Zealand (- 17%), Japan (- 32%) and Indonesia (- 29%).

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

The first study of general equilibrium refers to Hawaii's economy in the year 2011. The simulation of a 10% increase in Hawaii's tourist spending would cause an increase of 9.1% in gross state product and an increase of 2.1% in the total economy. Also it would cause a2.43% increase in the locality's employment.

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

An additional scenario modeling symmetrical effects (50% probability of a 10% increase in tourism and 50% probability of a 10% decline in tourism)

generates once again an overall marginal increase of2.7 million USD in economic welfare, reflecting the adverse character of the agents.

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

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

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

The second study focuses on the economy of Scotland and was published in 2006 using a general equilibrium model. The prognosis for change in the international tourism expenditure would increase the GDP to 34.3 million 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 a4.4 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 sinceit 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 $1million 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 by16.34% 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.

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 1996 and 1.325% of the GDP in 2002.

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 were117,983 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 demand price elasticity scenarios, the first assuming an elasticity of -0.5 and the second simulating the effects of an elasticity of -1.0. In the first scenario, with an elasticity of -0.5, a tourist tax increase of 17% has a positive impact (via tax collection) on the GDP of 2.21 million USD and a positive impact on welfare of $49.8 million.

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

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

Finally, the tenth article refers to a study of the social accounting matrix for 2014 in the region of Galicia in Spain. The main objective was to estimate the tourism demand's effect on the income of the region's inhabitants. The results show significant positive effects across all income groups. However, high-income households benefit more than those with low incomes, contributing to a slight increase in income inequality in the region.

For the Journal of International Tourism Research only three articles were selected. The first refers to China in2006 and uses an input-output model with type II multipliers. The results show that 1.64% of the gross national product, 1.40% of household income and 1.01% of employment depends on international tourism.

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

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

IV. Conclusions

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

Bibliography

1. Akkemik, K. (2012).“Assessing the importance of international tourism for the Turkish economy: A social accounting matrix Analysis”. *Tourism Management* 33:790-801.
2. Becken, S. and Lennox, J. (2012).“Implications of a long-term increase in oil prices for tourism”. *Tourism Management* 33:133-142.
3. Blake, A., Sinclair, M. and Campos, J. (2005).“Tourism productivity. Evidence from the United Kingdom”. *Annals of Tourism Research* 33 (4): 1099-1120.
4. Blake, A., Dubarry R., Eugenio-Martin, J., Gooroochurn, N., Hay, B., Lennon, J., Sinclair, M., Sugiyarto, G. and Yeoman, I.(2006).“Integrating forecasting and CGE models: The case of tourism in Scotland”. *Tourism Management* 27: 292-305.
5. Blake, A., Arbache, J., Sinclair, M. and Teles, V.(2007).“Tourism crisis management: US response to September 11”. *Annals of Tourism Research* 35 (1): 107-126.
6. Carrascal, A. and Fernandez, M. (2015).“Tourism and income distribution: evidence of a developed economy”. *Tourism Management* 48:11-20.
7. Dwyer, L., Forsyth, P. and Spurr, R. (2004).“Evaluating tourism´s economic effects: new and old approaches”. *Tourism Management* 25: 307-317.
8. Ferri, J. and Uriel, E. (2004). “Evaluación del impacto económico del turismo: de un modelo keynesiano a un modelo clásico”. *Papeles de Economía Española* 102: 68-90
9. Forsyth, P., Dwyer, L., Spurr, R. and Pham, T. (2014).“Is Australian tourism suffering Dutch disease?”*Annals of Tourism Research* 46:1-15.
10. Forsyth, P., Dwyer, L., Spurr, R. and Pham, T. (2014).“The impact of Australia´s departure tax: Tourism versus the economy”. *Tourism Management* 40:126-136.
11. Frechtling, D. (2009). “The Tourism Satellite Account”. *Annals of Tourism Research* 37 (1): 136-153.
12. Guerra, A. and Sancho, F. (2014). “An operational non-linear input-output system”. *Economic Modelling* 41: 99-108.
13. Kim, S. and Chon, K. (2009).“An economic impact analysis of the Korean exhibition industry”. *Journal of International Tourism Research* 11: 311-318.
14. Konan, D. (2011).“Limits to Growth: Tourism and Labor Regional Migration”. *Economic Modelling* 28: 473-481.
15. Luborsky, M. (1994).“The Identification and Analysis of Themes and Patterns”. In J. Gubrium, y A. Sankar (Eds.),*Qualitative methods in aging research* (189–210). Thousand Oaks: Sage.
16. Meng, X., Siriwardana, M. and Pham, T. (2013).“A CGE assessment of Singapore´s tourism policies”. *Tourism Management* 34: 25-36.
17. Oosterhaven, J.and Fan, T. (2006).“Impact of international tourism on the Chinese economy”. *Journal of International Tourism of Research* 8: 347-354.
18. Pambudi, D., McCaughey, N. and Smyth, R. (2009).“Computable general equilibrium estimates of the impact of the Bali bombing on the Indonesian economy”. *Tourism Management* 30: 232-239.
19. Pechlaner, H., Zehrer, A., Matzler, K. and Abfalter, D.(2004). “A ranking of international tourism and hospitality”. *Journal of Travel Research* 42 (4): 328-332.
20. Pratt, S. (2010).“Economic Linkages and Impacts Across the TALC”. *Annals of Tourism Research* 38 (2): 630-650.
21. Pratt, S., Blake, A. and Swann, P. (2013). “Dynamic general equilibrium model with uncertainty: Uncertainty regarding the future path of the economy”. *Economic Modelling* 32: 429-439.
22. Pratt, S. (2014). “Potential Economic Contribution of Regional Tourism Bevelopment in China: A comparative analysis”. *Journal of International Tourism Research* DOI: 10.1002/jtr.1990.
23. Sharma, A.and Olsen, M. (2005).“Tourism satellite account: Implementation in Tanzania”. *Annals of Tourism Research* 32 (2): 367-385.
24. Sun, Y. (2007).“Adjusting Input-Output Models for Capacity Utilization in Service Industries”. *Tourism Management* 28: 1507-1517.
25. United Nations World Tourism Organization (2014). *Statistics and tourism satellite account.*www.statistics.unwto.org. [25, November, 2014].
26. Xiao, H. and Smith, S. (2006). “Case study in tourism research: A state of art analysis”. *Tourism Management* 27: 738-749.
27. Zhao, W. and Brent, J. (2007).“An investigation of academic leadership in tourism research: 1985-2004”. *Tourism Management* 28: 476-490.