The tourism-led-growth hypothesis for Uruguay*

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Abstract

This short paper analyses the effects in the long-run of tourism on the economic growth of Uruguay. Using quarterly data from 1987.I to 2006.IV, the study uses cointegration analysis and shows the existence of a cointegrated vector among Uruguayan real per capita GDP, Argentinean tourism expenditure (the principal source of tourism in Uruguay), and real exchange rate between Uruguay and Argentina. We also show that the causality relationship goes positively in one way from Argentinean tourism expenditure to real per capita GDP of Uruguay. Finally, we compare our study with similar papers also investigating the TLGH.

Keywords: economic growth; tourism earnings; Johansen cointegration test; Granger causality.
JEL Classification: C22, E01, F43, L83, O54

The importance of exports in the long-run economic growth of countries is well documented and empirically tested. This proves that exports can promote or cause long-run economic growth and is known in the literature as the Export Led Growth Hypothesis (ELGH). In many countries, foreign currency receipts from tourism exceed receipts from all other sectors. Some authors have recently proposed the tourism-led growth hypothesis (TLGH), maintaining that international tourism is a strategic factor for long-run economic growth (Shan and Wilson, 2001). As in the ELGH, international tourism is recognised to have a positive effect on long-run economic growth through different channels. First, tourism is a significant foreign exchange earner contributing to capital goods that can be used in the production process. Second, tourism has an important role in stimulating investments in new infrastructure and competition. Third, tourism stimulates other economic industries by direct, indirect and induced effects. Fourth, tourism contributes to the generation of employment and the rise in incomes. Fifth, tourism causes positive economies of scale. Finally, tourism is an important factor in the diffusion of technical knowledge, stimulation of research and development, and the accumulation of human capital.

The purpose of this study is to investigate the TLGH for Uruguay and to compare the results with similar papers. Although the tourism industry has grown significantly in Uruguay, tourism researchers have not paid much attention to the empirical assessment of the contribution that the tourism sector makes to the country. This note aims to answer the following questions. First, is there a long-run equilibrium relationship between tourism and economic growth in Uruguay? Second, if a stable long-run relationship exists, what is the direction of the causal relationship between these two variables?

Tourism in Uruguay

Uruguay is South America's smallest country. Situated between Brazil and Argentina, it has the lowest poverty level and the highest life expectancy in Latin America. Uruguay is recognised for its economic, political and social stability, its democratic tradition and high

* Our research was supported by the Free University of Bolzano, project *Dynamic Methods in Tourism Economics*.
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level of safety. These are the main reasons why rich Latin-Americans prefer to have holidays there. Uruguayan tourism has two main characteristics: a high dependency on Argentinean tourists and a strong seasonality. Argentines account for the majority of arrivals in Uruguay: more than the 60% of total tourists' arrivals and more than 50% of total tourism expenditure. If we consider, additionally, Uruguayan residents in Argentina, the percentage of tourists coming from this country expands to some 70% of total. This percentage is due to many reasons. First, Argentina and Uruguay are the most similar countries in the region, presenting a linked history. Secondly, Uruguayan beaches are the nearest ones to Argentina and they are more attractive, giving rise to a marked summer season. Third, tourism is mostly regional because of the long distances from Europe and the United States, access difficulties, lack of services required by international tourists, negligible of promotion, and restrictive transportation policies. Many of the visitors from Argentina own property in Uruguay, especially in the resort area of Punta del Este, a world-class beach resort, which receives a large portion of all summer tourists. Punta del Este can be considered as a unique example in Latin America of a tourism destination almost solely composed of second home tourists.

Several studies have analysed different topics on tourism in Uruguay. Among them Mantero et al. (2004), using the cointegration technique identified the determinants of tourist flows. They showed that disaggregated (by nationality) models provide relevant information to understand the past evolution of global tourism and the ability to predict it. Moreover, Robano (2000) examines the determinants of tourist expenditure between 1987 and 2000, and proves the existence of an equilibrium relationship between tourism services exports, Argentinean consumption and relative prices between Argentina and Uruguay. Finally, Armellini and Revertía (2003) concentrate their study on the contribution of tourism to value-added, employment and the level of salaries, between 1996 and 2002. Using national accounting they stress the importance of tourism for Uruguay.

Methodology and Empirical Results

We consider a quarterly data temporal series from 1987: IQ to 2006: IVQ. We obtained quarterly data of the Index of Physical Volume provided by the Central Bank of Uruguay (from now on BCU) as a measure of the real domestic product and the numbers of the employed people in the Urban Zone of the Permanent Households Survey ("Encuesta Continua de Hogares" ECH) provided by the National Institute of Statistics. We obtained the real total expenditure of the Argentinean tourists (from 1996) by considering the expenditure in current dollars by the nominal average exchange rate, divided by the quarterly Consumption Price Index (CPI). In order to enlarge the series period until 1987 we added the rate of growth of the Real Expenditure in tourism at constant prices of 1997. These data were provided by the BCU and the Ministry of Tourism. We first proceeded to identify the order of integration of the series by applying the ADF and the KPSS unit root tests, detecting that the series were integrated of order 1. Then we applied the cointegration test proposed by Johansen (1988), which identified a unique cointegration relationship among the *GDP*, the real Expenditure (*RE*) made by the Argentineans and the real bilateral exchange rate between Uruguay and Argentina (*RERA*) (see table 1).

We found that the real expenditure variable was weakly exogenous ($Chi^2(1)=1.81$, *p-value=0.17*). This is an important result, allowing us to draw inference in respect to the effects of the real expenditure of Argentinean tourists on economic growth. Equation (1) shows the cointegrating relationship considering the exogeneity and Table 2 shows the Granger (1988) long-run causality among the variables.

$$(GDP\,per\,capita) = 3.317 + 0.421(RE) - 0.482(RERA) \quad (1)$$
$$[-3.743] \qquad [5.125]$$

Equation (1) shows that the elasticity of the *GDP* per capita with respect to real expenditure is 0.42 i.e. an increase of 100% in real expenditure produces an increase of 42% *GDP* per capita, in the long-run. Note that the fact that the share of *GDP* generated by tourism (i.e., *T/GDP* where T is the portion of *GDP* generated by the tourist sector) is low, does not contradict the fact that the elasticity (*E*) of *GDP* with respect to tourism can be high. The reason for why this is not a contradiction, is that *E* is the product of two factors: the ratio *T/GDP* and the derivative $\frac{\partial GDP}{\partial T}$:

$$E = \frac{\partial GDP}{\partial T}\frac{T}{GDP}$$

In addition, a low share *T/GDP* can be compensated by a high $\frac{\partial GDP}{\partial T}$ to produce a high value of E. Then when *T/GDP* is low and E is high, an increment of one unit in T can produce a high impact on the growth of GDP, because of the magnitude of $\frac{\partial GDP}{\partial T}$. This appears to be the case of Uruguay.

Comparing results

In this section, we compare our study with similar papers also investigating the TLGH. We summarize the results in Table 3. The papers included in the table have been selected for the econometric approach. The table shows the direction of causality and the elasticity of per capita GDP with respect to tourism. Even when there are differences, the elasticities found in this study are in line with the results of previous work. Note the comparison with other Latin American countries. It is also important to note that in all the cases where the coefficient of adjustment is available, the values for developed countries are very close to each other. The same characteristic is noted for non-developed countries.

Conclusions

Tourism is considered as an important source of foreign exchange earnings, employment of domestic labour and a source of growth for a country. Many governments these days recognize the important role of tourism in both economic growth and social progress, and this is why they try to exploit their tourism potential. The purpose of this paper is to analyse the impact of the tourism sector on the economic growth of Uruguay. Tourism is a key aspect of the Uruguayan economy for its importance in creating value-added, employment and income. Two elements characterize the tourist activity in Uruguay: its noted seasonality and its dependency on tourists coming from Argentina.

The cointegration analyses confirm the hypothesis of a positive relationship linking real per capita GDP, real expenditure of Argentinean tourists, and the relative price between the two countries (corrected for the exchange rate between Uruguay and Argentina). The real expenditure of Argentinean tourists is weakly exogenous, and the Granger causality test suggests that causality is from real expenditure of tourists to GDP per capita. The elasticity of

the GDP per capita with respect to e real expenditure is 0.42 percentage points, which means that a 100% increase in the real expenditure produces, in the long-run, an increase of 42% in GDP per capita. The results are in line with previous studies for Latin-American countries and confirm the hypothesis of exports as the engine for economic growth.

Endnotes

1) In 2006, protests blocked roads and bridges connecting Uruguay and Argentina, and provoked a significant impact on Argentine arrivals which were down significantly. Meanwhile Brazilian arrivals grew tremendously between 2003 and 2006, because the real exchange becomes more benefit for Uruguay. The same occurred with tourists from Europe, and other countries of America and North America, because of the improved of tourism promotion.

Tables

Trace test		
Hypothesis	*Trace Statistic*	*Critical Value*
None*	84.03	29.797
At most 1	12.00	15.495
Maximum Eigenvalue		
Hypothesis	*Max-Eigen Statistic*	*Critical Value*
None*	72.029	21.132
At most 1	11.986	14.265
* denotes rejection of the hypothesis at the 0.05 level		

Table 1. Cointegration tests for real per capita GDP, RE, RERA

Null Hypothesis	**F-statistic**	**Probability**
RE does not cause GDP per capita	4.31006	0.000*
GDP per capita does not cause RE	1.48464	0.184
RERA does not cause GDP per capita	1.07597	0.393
GDP per capita does not cause RERA	0.77272	0.628
RERA does not cause RE	1.49464	0.180
Real Expenditure does not cause RERA	1.08133	0.389
* Denotes rejection of the hypothesis at the 0.05 level. Source: Own calculations		

Table 2. Granger Causality Test (LR)

Country	**Period**	**Periodicity**	**Causality**	***E***	**Paper**
Spain	1975-1997	quarterly	*A*	0.30	Balaguer and Cantavella (2002)
Mexico	1980-2007	quarterly	*A*	0.69	Brida et al. (2008a)
Colombia	1907-2007	quarterly	*A*	0.51	Brida et al. (2009)
Spain	1964-2000	annual	*C*	1.07	Cortez-Jimenez and Paulina (2006)
Italy	1954-2000	annual	*C*	0.08	Cortez-Jimenez and Paulina (2006)
Greece	1960-2000	quarterly	*C*	0.31	Dritsakis (2004)
Mauritius	1952-1999	annual	*C*	0.77	Durbarry (2004)
High and medium income Latin American Countries	1985-1998	annual	*A*	-	Eugenio-Martin et al. (2004)
Low income Latin American Countries	1985-1998	annual	*N*	-	Eugenio-Martin et al. (2004)
42 African countries	1995-2004	annual	*A*	0.03	Fayissa et al. (2007)
Hawaii	1953-1970	annual	*A*	-	Ghali (1976)

Turkey	1963-2002	annual	*A*	-	Gunduz and Hatemi (2005)
Turkey	1960-2006	annual	*N*	-	Katircioglu (2008)
Taiwan	1971-2003	annual	*C*	-	Kim et al. (2006)
OECD countries	1977-1992	annual	*A*		Lanza et al. (2003)
OECD countries	1990-2002	annual	*A*	0.36	Lee and Chang (2008)
non OECD countries	1990-2002	annual	*C*	0.50	Lee and Chang (2008)
Cyprus	1975-2001	annual	*C*	-	Louca (2006)
Fiji	1970-2000	annual	*B*	-	Narayan (2004)
Amami islands (Japan)	1976-2001	annual	*A*	-	Noriko and Mototsugu (2007)
Spain	1960-2003	annual	*C*	0.06	Nowak et al. (2007)
Korea	1975-2001	quarterly	*B*	-	Oh (2005)
Portugal	1993-2001	annual	*A*	0.01	Proença and Soukiazis (2008)
China	1987-1998	monthly	*C*	-	Shan and Wilson (2001)
Uruguay	1987-2006	quarterly	*A*	0.42	Present study
Note that *E* denotes the elasticity of per capita GDP with respect to tourism, *A* denotes unidirectional causality from tourism to economic growth, *B* denotes unidirectional causality from economic growth to tourism, *C* denotes bidirectional causality between tourism and economic growth and *N* denotes no evidence for causality.					

Table 3: Previous empirical results for the TLGH

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