Tourism and economic growth: Does democracy matter?

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Tourism studies have shown a growing interest in the relationship between tourism and the economy, with relevant work exploring the causal direction of effects between a country's international tourism presence and its overall economic performance (see, Schubert et al., 2011; Chatziantoniou et al., 2013; Ivanov and Webster, 2013; Antonakakis et al., 2015, among others). The product of this enquiry is a mosaic of different, often opposing interpretations (e.g. tourism–led growth against economy–driven tourism) that render this area of research inconclusive and still open to discussion.

In their majority, relevant studies focus on specific destinations. However, a cross–sectional analysis of the tourism–economy dynamics allows for a more in–depth and comparative examination of different states (Dritsakis, 2012). In addition, it is plausible to argue that the use of panel data can decrease endogeneity through the consideration of specific country effects, omitted variables, reverse causality and measurement error. In this respect, some papers (Seetanah, 2011; Chang et al., 2012) explore multiple countries classified on certain criteria, mostly geographic or economic. This study introduces another factor to the said enquiry that has so far been neglected, namely, the destinations' quality of political institutions (or political regime).

The political economy literature has long established the effects of institutional quality on the relationship between economic growth and economic resources (see, *inter alia*, Rodriguez and Sachs, 1999; Mehlum et al., 2006; Acemoglu et al., 2008). Thus, we postulate that political regime (as approximated by the level of democracy) in a particular country can influence the

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economy–tourism relationship. Consequently, the aim of this paper is to examine the dynamic links between tourism and economic growth in 98 countries, classified according to the quality of their political institutions, over the period 1995-2011, using a panel Vector Autoregressive (VAR) approach.

The quality of the political institutions is approximated based on the scores provided by the Polity IV index (www.systemicpeace.org/polity/polity4.htm). Countries are classified as democratic and non–democratic (see Table 1). Non–democratic classification denotes authoritarian or hybrid regimes (i.e. a mix of anocratic and autocratic regimes), whereas democratic classification includes the democratic and full democratic political systems.

[Insert Table 1 around here]

Furthermore, tourism income (proxied, for robustness purposes, by per capita international tourism receipts, $ITRCPT$, per capita tourism expenditures, $ITEXP$, and per capita tourist arrivals, $ITARR$) and per capita real GDP (in 2005 US$, $GDPPC$) are obtained from the World Development Indicators database. The data sample is purely dictated by data availability.

Clearly, the relationship between tourism and economic growth is a process that takes place over time, thereby necessitating a dynamic rather static framework. Therefore studies focusing on the steady-state or long-run relationship between the two variables can mostly provide a partial understanding of this complex relationship. In contrast, our dynamic analysis allows for capturing the adjustment in tourism and economic growth transpiring over time.

In particular, the output of the panel VAR model enables us to construct panel impulse response functions that illustrate the time path of tourism (economic growth) following a shock to economic growth (tourism). We therefore can observe the whole dynamic process from the initial shock to the long-run steady-state of the series of interest.

The panel VAR methodology combines the traditional VAR approach, which treats all the variables in the system as endogenous. Further, the panel-data approach allows for detecting any unobserved individual heterogeneity. In its general form, our model is the following:

$$\Delta \ln Y_{it} = A_0 + A_1 \Delta \ln Y_{it-1} + A_2 \Delta \ln Y_{it-2} + ... + A_j \Delta \ln Y_{it-j} + BX_{it} + \mu_i + \lambda_t + \varepsilon_{it} \quad (1)$$

where Y_{it} is a vector of our key variables: $ITRCPT$ and $GDPPC$. We apply the Panel VAR on the first difference (Δ) of the natural logarithm (ln) of the series instead of on the level series of the aforementioned endogenous variables, as according to Table 2, the former series are station-

ary, while the latter are not. The autoregressive structure of model (1) allows all endogenous variables to enter the model with a number of j lags. The number of lags is determined with the use of the Akaike Information Criterion. X_{it} is a vector of the exogenous variables, which are used as control variables, comprising: (i) labour force participation rate, capturing labour input, (ii) gross fixed capital formation as a % of GDP, measuring capital input, and (iii) imports plus exports over GDP, capturing the degree of trade openness. The data for the exogenous variables come also from the World Development Indicators database. μ_i and λ_t denote country fixed-effects and time fixed-effects, respectively, and ε_{it} is the error term.

[Insert Table 2 around here]

Descriptive statistics of the endogenous variables (both in levels and in their growth rates) are presented in Table 3.

[Insert Table 3 around here]

We begin our panel VAR analysis with the full sample results illustrated in Figure 1. Our analysis is based on international tourism receipts as a proxy for tourism growth (as the results based on other proxies are qualitatively similar and available upon request).

[Insert Figure 1 around here]

We observe that, although there is a bidirectional relationship between tourism and economic growth in the short-run (i.e. during the first four years), in the long-run this turns into an economy–driven. Nevertheless, the consideration of the full sample can only lead us to draw some tentative conclusions, as the special qualities of our sample countries remain unmasked. Therefore, we need to observe the panel VAR results of countries classified by their level of democracy, as shown in Figure 2. As aforementioned, we have two classifications reflecting the different levels of political regimes.

[Insert Figure 2 around here]

As shown in Figure 2, an Economic–Driven Tourism Growth relationship is witnessed in countries with authoritarian or hybrid regimes (Non–democratic countries). The interpretation of such finding is twofold; first, it can be argued that in many instances authoritarian practices create a turbulent environment for economic activities and hence, for all economic sectors

including tourism (Fletcher and Morakabati, 2008). This incurs in non–democratic regimes as governments often employ a rent–seeking behaviour to gain political support rather than providing public goods (Plümper and Martin, 2003).

Second, it has been established by the political economy literature that it is common for economies which lack democracy to be controlled by a single individual or a small group of individuals. Such power imbalances hinder the economy to grow or spread the benefits of economic activity across society due to corruption (de Vaal and Ebben, 2011; Drury et al., 2006; Mo, 2001). Thus, we maintain that the way that the economy is controlled in nondemocratic states influences tourism growth negatively.

In contrast, countries with democracy or full democracy exhibit a bidirectional relationship. It is suggested that countries with democratic regimes are able to exploit the maximum capacity of their economies and consequently, are at a good position to support investment in their various sectors. Moreover, given that the benefits from each sector can be shared more fairly across society it is reasonable to argue that sectoral performance (in our case, tourism) could assist economic growth.

In short, these results highlight the importance of panel country investigation of the tourism–economy relationship based on criteria that move away from geographic and economic characteristics.

An interesting avenue for further research is to examine whether the tourism-growth nexus is sensitive to alternative country groupings based on the level of government effectiveness, tourism specialisation, or the degree of tourism competitiveness.

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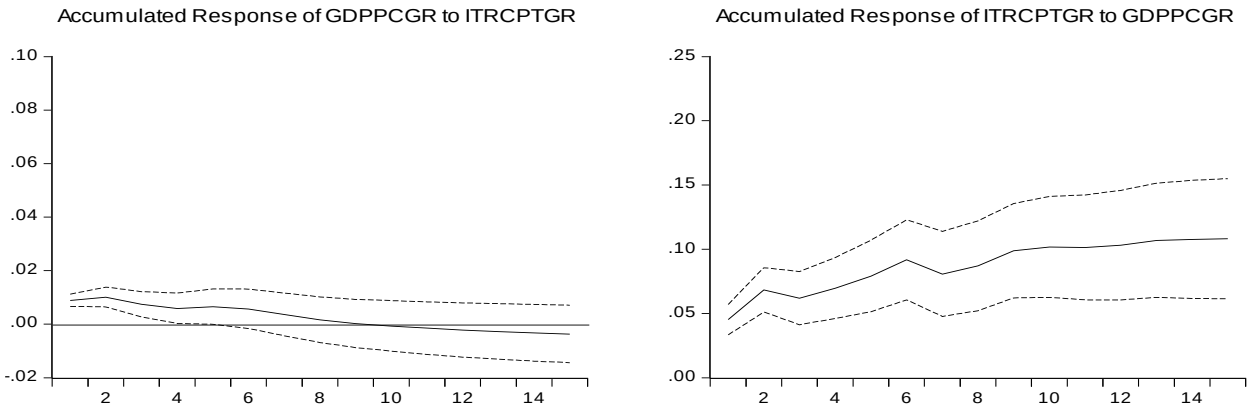
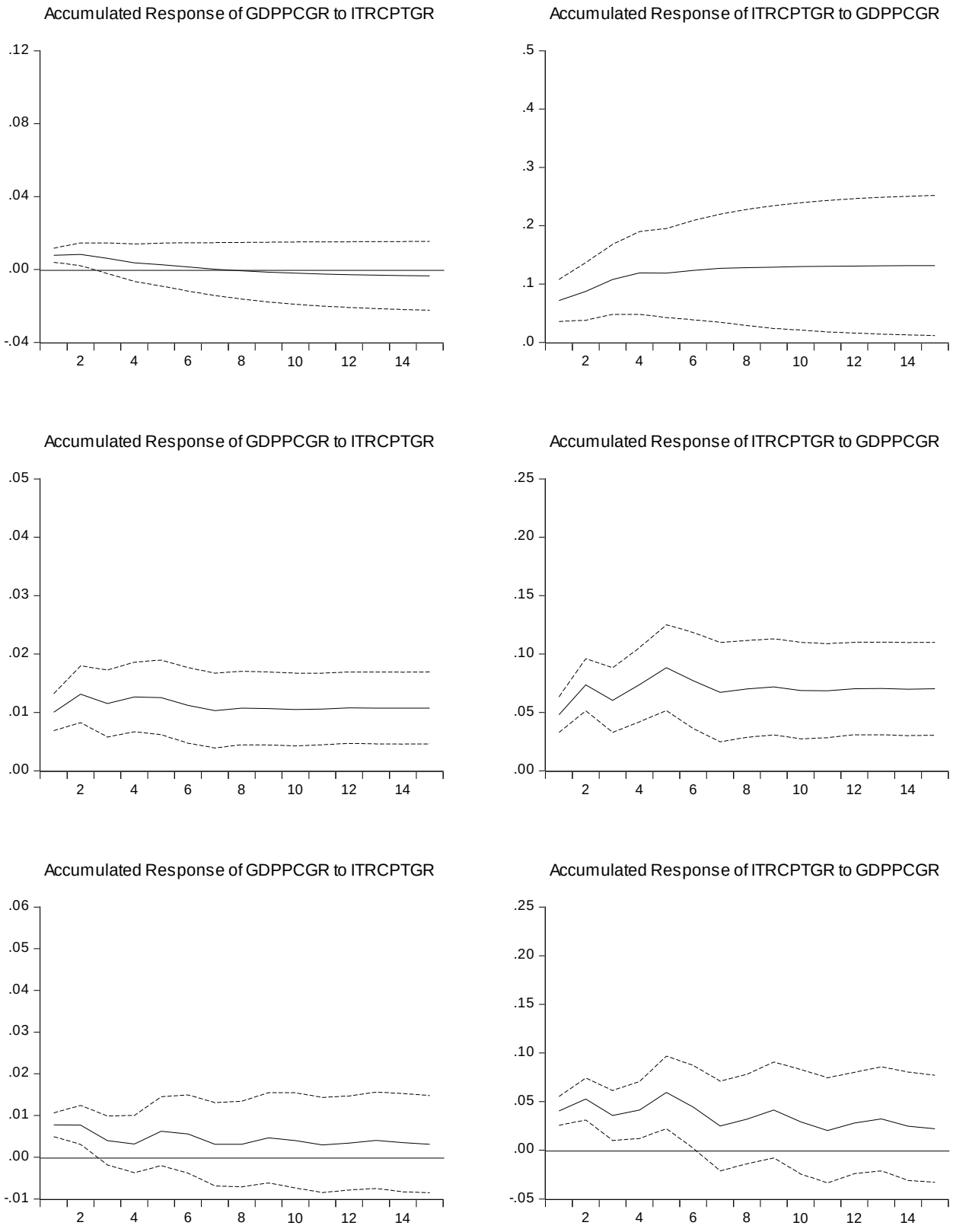
Figure 1: Impulse responses based on the full sample estimation for the period 1995-2011



Note: $GDPPCGR$ and $ITRCPTGR$ denote per capita real GDP growth and per capita international tourism receipts growth, respectively.

Figure 2: Impulse responses for the political regime classifications estimation for the period 1995-2011



Note: Impulse responses for Non–democratic and Democratic classifications are shown in the top and lower panels, respectively. $GDPPCGR$ and $ITRCPTGR$ denote per capita real GDP growth and per capita international tourism receipts growth, respectively.

Table 1: Democratic and Non–democratic countries

Democratic Countries	Acronym	Non–democratic Countries	Acronym
Albania	ALB	Algeria	DZA
Australia	AUS	Angola	AGO
Ausria	AUT	Armenia	ARM
Belgium	BEL	Azerbaijan	AZE
Bolivia	BOL	Bahrain	BHR
Brazil	BRA	Bangladesh	BGD
Bulgaria	BGR	Belarus	BLR
Canada	CAD	Burundi	BDI
Cape Verde	CPV	Cambodia	KHM
Chile	CHL	China	CHN
Colombia	COL	Croatia	HRV
Costa Rica	CRI	Egypt, Arab Rep.	EGY
Cyprus	CYP	Ethiopia	ETH
Czech Republic	CZE	Ghana	GHA
Denmark	DNK	Indonesia	IDN
Dominican Republic	DOM	Jordan	JOR
Equador	ECU	Kazakhstan	KAZ
El Salvador	SLV	Kenya	KEN
Estonia	EST	Kyrgyz Republic	KGZ
Finland	FIN	Lao PDR	LAO
France	FRA	Malaysia	MYS
Germany	GER	Morocco	MAR
Greece	GRE	Nepal	NPL
Guatemala	GTM	Pakistan	PAK
Honduras	HND	Russian Federation	RUS
Hungary	HUN	Sierra Leone	SLE
India	IND	Singapore	SGP
Israel	ISR	Sri Lanka	LKA
Italy	ITA	Sudan	SDN
Japan	JPN	Tanzania	TZA
Korea, Republic	KOR	Tunisia	TUN
Latvia	LVA	Yemen, Rep.	YEM
Lesotho	LSO		
Lithuania	LTU		
Macedonia, FYR	MKD		
Malawi	MWI		
Mali	MLI		
Mauritius	MUS		
Mexico	MEX		
Moldova	MDA		
Mongolia	MNG		
Namibia	NAM		
Netherlands	NLD		
New Zealand	NZL		
Nicaragua	NIC		
Norway	NOR		
Panama	PAN		
Paraguay	PRY		
Peru	PER		
Philippines	PHL		
Poland	POL		
Portugal	PRT		
Romania	ROM		
Slovak Republic	SVK		
Slovenia	SVN		
South Africa	ZAF		
Spain	ESP		
Sweden	SWE		
Switzerland	CHE		
Thailand	THA		
Turkey	TUR		
Ukraine	UKR		
United Kingdom	GBR		
United States	USA		
Uruguay	URY		
Venezuela, RB	VEN		

Notes: The classification of the countries follows the Polity IV index (www.systemicpeace.org/polity/polity4.htm.. Democratic countries have a score between 6 and 10, whereas Non–democratic countries have a score between -10 and 5.

Table 2: Panel unit root test results

		H_0: Unit root	
	Variables	LLC	IPS
All countries	GDPPC	14.3898 [1.0000]	13.9554 [1.0000]
	ITARR	6.32751 [1.0000]	12.3689 [1.0000]
	ITEXP	9.91348 [1.0000]	13.8862 [1.0000]
	ITRCPT	9.37332 [1.0000]	15.7990 [1.0000]
	GDPPCGR	-24.3474*** [0.0000]	-16.8728*** [0.0000]
	ITARRGR	-28.1292*** [0.0000]	-23.0880*** [0.0000]
	ITEXPGR	-28.7641*** [0.0000]	-23.3049*** [0.0000]
	ITRCPTGR	-26.6004*** [0.0000]	-21.6964*** [0.0000]
Democratic	GDPPC	16.7352 [1.0000]	13.0879 [1.0000]
	ITARR	6.45275 [1.0000]	10.0132 [1.0000]
	ITEXP	10.0450 [1.0000]	9.70755 [1.0000]
	ITRCPT	7.74476 [1.0000]	10.8190 [1.0000]
	GDPPCGR	-15.4104*** [0.0000]	-10.9596*** [0.0000]
	ITARRGR	-13.0589*** [0.0000]	-11.6446*** [0.0000]
	ITEXPGR	-13.7357*** [0.0000]	-12.7005*** [0.0000]
	ITRCPTGR	-14.5360*** [0.0000]	-12.0579*** [0.0000]
Non–democratic	GDPPC	6.27527 [1.0000]	10.9565 [1.0000]
	ITARR	4.30978 [1.0000]	7.73564 [1.0000]
	ITEXP	5.03177 [1.0000]	8.60994 [1.0000]
	ITRCPT	4.80054 [1.0000]	8.51076 [1.0000]
	GDPPCGR	-15.4186*** [0.0000]	-10.8160*** [0.0000]
	ITARRGR	-19.8876*** [0.0000]	-14.6368*** [0.0000]
	ITEXPGR	-17.8061*** [0.0000]	-13.6684*** [0.0000]
	ITRCPTGR	-14.8223*** [0.0000]	-12.7198*** [0.0000]

The numbers in brackets denote p-values. The LLC and IPS tests are the panel unit root test of Levin et al. (2002) and Im et al. (2003), respectively, performed using the Newey–West bandwidth selection with Barlett Kernel, and the Schwartz Bayesian Criterion is used to determine to optimal lag length. *, ** and *** indicate rejection of the null hypothesis at the 10, 5 and 1 percent levels of significance, respectively.

Table 3: Descriptive Statistics - Full sample & by political regime

All (98) countries								
	Mean	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	JB	Obs.
GDPPC	11494.08	87716.7	125.267	15058.36	1.805935	6.176781	1851.967*	1921
ITARR	0.899331	103.5508	0.001305	2.757344	27.56917	1004.059	80454658*	1921
ITEXP	1157.565	1298055	0.931889	29622.63	43.71802	1914.489	2.93E+08*	1921
ITRCPT	950.1868	310652.3	0.211532	7193.892	41.58684	1789.989	2.56E+08*	1921
GDPPCGR	0.026852	0.322496	-0.192922	0.039761	-0.063636	8.598306	2362.244*	1808
ITARRGR	-0.027283	1.285837	-3.187505	0.228891	-3.931493	50.49608	174600.3*	1808
ITEXPGR	-0.01051	2.391994	-4.056758	0.275857	-1.848721	40.66897	107924.2*	1808
ITRCPTGR	-0.00541	3.486144	-3.693053	0.287256	-0.927068	39.35676	99835.66*	1808
Democratic (66) countries								
	Mean	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	JB	Obs.
GDPPC	2914.466	34378.9	125.267	5270.849	3.547442	16.6335	5354.087*	544
ITARR	0.874653	103.5508	0.001814	4.748821	18.82236	403.5606	3668960*	544
ITEXP	2662.718	1298055	1.216888	55655.98	23.24171	541.4484	6620648*	544
ITRCPT	910.451	310652.3	0.211532	13324.07	23.15748	538.8291	6556512*	544
GDPPCGR	0.03672	0.322496	-0.155308	0.044906	0.688853	10.09238	1113.6*	512
ITARRGR	-0.040458	1.285837	-3.187505	0.334261	-3.505746	32.99917	20247.7*	512
ITEXPGR	-0.042826	1.597482	-4.056758	0.380428	-2.677258	29.33492	15406.91*	512
ITRCPTGR	-0.025152	3.486144	-3.693053	0.420858	-0.606085	26.3205	11633.39*	512
Non–democratic (32) countries								
	Mean	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	JB	Obs.
GDPPC	5627.282	37582.7	203.053	7428.607	2.834821	10.96911	2642.375*	663
ITARR	0.446066	21.86591	0.001305	1.203505	11.69013	177.1885	853288.5*	663
ITEXP	195.5019	4556.744	0.931889	356.0236	5.448195	47.07758	56950.71*	663
ITRCPT	266.3676	6726.391	1.351238	462.8785	6.816638	76.60701	154806.6*	663
GDPPCGR	0.027245	0.150109	-0.192922	0.040107	-0.97212	6.514741	419.4704*	624
ITARRGR	-0.034254	0.768641	-2.289284	0.206598	-3.025277	29.18194	18774.69*	624
ITEXPGR	-0.000734	2.391994	-2.23065	0.266079	1.106608	29.7708	18760.93*	624
ITRCPTGR	-0.00225	1.704141	-2.398752	0.257225	-1.232902	20.37821	8010.138*	624

$GDPPC$, $ITARR$, $ITEXP$ and $ITRCPT$, denote per capita per capita real GDP (in 2005 US$), per capita tourist arrivals, per capita tourism expenditures, and per capita international tourism receipts, respectively, and $GDPPCGR$, $ITARRGR$, $ITEXPGR$ and $ITRCPTGR$ are the aforementioned series' growth rates (i.e. first difference of natural logarithm). JB denote Jarque-Bera. * indicates 1 percent level of significance.