Tourism and economic growth: Does democracy matter?

Nikolaos Antonakakis[*][†]   Mina Dragouni [‡]   Bruno Eeckels[§]   George Filis[¶]

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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 (Schubert et al., 2011; Ivanov and Webster, 2013; Antonakakis et al., 2015). The product of this enquiry is a mosaic of four different interpretations (i.e. tourism–led growth, economy–driven tourism and bidirectional or no causality) that render this area of research inconclusive and still open to discussion. A detailed analysis of these hypotheses is offered by Brida and Pulina (2010) and Chatziantoniou et al. (2013).

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, 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; the destinations' quality of political institutions.

The political economy literature has established the effects of institutional quality on the relationship between growth and economic resources (see, Rodriguez and Sachs, 1999; Mehlum

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[*]Corresponding Author. Webster Vienna University, Department of Business & Management, Praterstrasse 23, 1020, Vienna, Austria, e-mail: nikolaos.antonakakis@webster.ac.at, phone: +43/1/313 36-4141, fax: +43/1/313 36-90-4141.

[†]University of Portsmouth, Economics and Finance Subject Group, Portsmouth Business School, Portland Street, Portsmouth, PO1 3DE, United Kingdom, e-mail: nikolaos.antonakakis@port.ac.uk.

[‡]University College London (UCL), Institute for Sustainable Heritage, The Bartlett, UCL Faculty of the Built Environment, Central House, 14 Upper Woburn Place, WC1H 0NN, London, UK.

[§]Bournemouth University, Department of Accounting, Finance and Economics, Executive Business Centre, 89 Holdenhurst Road, BH8 8EB, Bournemouth, UK.

[¶]Bournemouth University, Department of Accounting, Finance and Economics, Executive Business Centre, 89 Holdenhurst Road, BH8 8EB, Bournemouth, UK.

et al., 2006; Acemoglu et al., 2008), defined as the resource curse hypothesis. The latter maintains that non–democratic countries with resource abundance tend to grow at a lower pace compared to democratic ones, as benefits from these resources do not spillover to the wider economy but rather they are exploited by the country's elites. Even more, tourism resources are largely shaped by the political environment of a destination in terms of both policy (e.g. visa requirements, trade openness, taxes) and hospitality atmosphere (e.g. safety, security) (Kester and Croce, 2011). For example, there is evidence that extended political unrest observed in non-democratic countries has devastating results for tourism (Fletcher and Morakabati, 2008). Given that the political regime (as approximated by the level of democracy) in a particular country can influence both the economy and the tourism sector, we 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 driven by data availability.

Clearly, the relationship between tourism and economic growth is a process that takes place over time, thereby necessitating a dynamic rather than static framework. Therefore studies focusing on the steady-state or long-run relationship between the two variables might 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

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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 the level series of the aforementioned endogenous variables, as according to Table 2, the former series are stationary, 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 by 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 both the endogenous variables (both in levels and in their growth rates) and the control variables 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 (the results based on other proxies are qualitatively similar and available upon request. We have further explored the robustness of our results by collecting data on international tourism receipts as a % of GDP and the results lead to similar conclusions).

[Insert Figure 1 around here]

We observe that, although there is a bidirectional relationship between tourism and economic growth in the short- to medium-run (i.e. during the first eight 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 effects of countries' political regime remain masked.

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Therefore, we need to observe the panel VAR results of countries classified by their level of democracy.

[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 the economy is controlled in non–democratic states influences tourism growth negatively.

In contrast, countries with democratic regimes exhibit a bidirectional relationship. It is thus suggested that these countries 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.

Overall, the findings highlight the importance of panel country investigation of the tourism–economy relationship based on criteria that extend beyond pure geographic and economic characteristics, opening up new research questions for further investigation. For instance, an interesting avenue for further research is to examine whether constraints imposed to executives could moderate the effects of autocratic regimes on the tourism-growth relationship. Furthermore, it would be important to explore the said relationship using a wider spectrum of institutional qualities, e.g. military/religion in politics and civil liberties.

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Figure 1: Cumulative Panel impulse responses based on the full sample (98 countries) estimation over the period 1995-2011

Response of economic growth to tourism growth

Response of tourism growth to economic growth
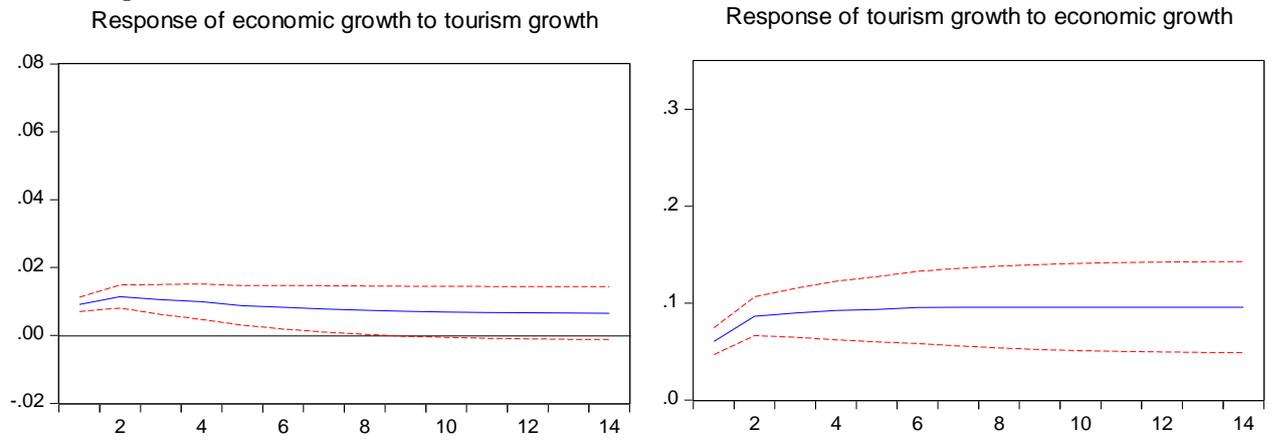
Note: Dashed lined denote the upper and lower two standard error bands.

Figure 2: Cumulative Panel impulse responses for the political regime classifications estimation over the period 1995-2011

(a) Non-democratic countries

Response of economic growth to tourism growth

Response of tourism growth to economic growth

(b) Democratic countries

Response of economic growth to tourism growth

Response of tourism growth to economic growth
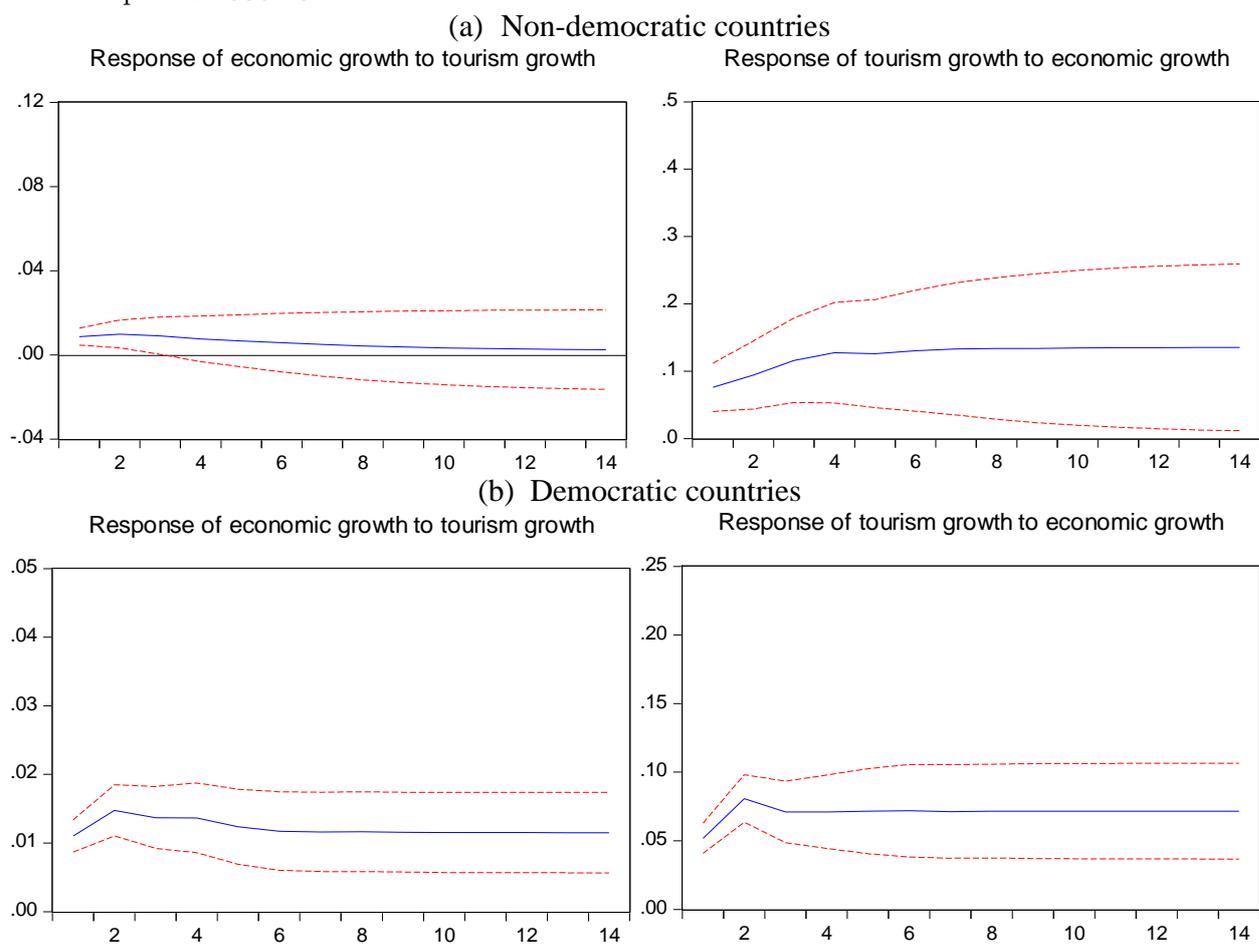
Note: Dashed lined denote the upper and lower two standard error bands.

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

| | Variables | H₀: Unit root | |
		LLC	IPS
All countries	GDPPC	14.9273 [1.0000]	14.5849 [1.0000]
	ITARR	6.38613 [1.0000]	12.2931 [1.0000]
	ITEXP	10.5711 [1.0000]	13.9148 [1.0000]
	ITRCPT	9.15499 [1.0000]	15.3101 [1.0000]
	GDPPCGR	-22.9591*** [0.0000]	-16.0302*** [0.0000]
	ITARRGR	-26.5981*** [0.0000]	-21.6933*** [0.0000]
	ITEXPGR	-26.3411*** [0.0000]	-21.3366*** [0.0000]
	ITRCPTGR	-24.1736*** [0.0000]	-19.8480*** [0.0000]
Democratic	GDPPC	0.33128 [0.6298]	7.63060 [1.0000]
	ITARR	1.55027 [0.9395]	6.94614 [1.0000]
	ITEXP	5.62630 [1.0000]	10.2915 [1.0000]
	ITRCPT	4.88539 [1.0000]	10.6755 [1.0000]
	GDPPCGR	-11.1086*** [0.0000]	-7.37000*** [0.0000]
	ITARRGR	-28.5028*** [0.0000]	-13.9675*** [0.0000]
	ITEXPGR	-15.4838*** [0.0000]	-11.9835*** [0.0000]
	ITRCPTGR	-19.5151*** [0.0000]	-12.9864*** [0.0000]
Non–democratic	GDPPC	6.56751 [1.0000]	10.3759 [1.0000]
	ITARR	6.18564 [1.0000]	8.48405 [1.0000]
	ITEXP	7.05923 [1.0000]	8.86300 [1.0000]
	ITRCPT	7.07785 [1.0000]	9.46524 [1.0000]
	GDPPCGR	-4.32970*** [0.0000]	-5.01834*** [0.0000]
	ITARRGR	-7.49895*** [0.0000]	-7.18152*** [0.0000]
	ITEXPGR	-8.44689*** [0.0000]	-8.35244*** [0.0000]
	ITRCPTGR	-6.88925*** [0.0000]	-6.38045*** [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

	Mean	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	JB	Obs.
All (98) countries								
GDPPC	10672.99	67804.5	128.237	14145.37	1.576145	4.612506	819.0915*	1568
ITARR	0.612896	11.19878	0.001676	1.156	5.39709	39.65699	95402.93*	1568
ITEXP	376.3349	22462.88	1.087189	851.1204	14.0744	322.5176	6721746*	1568
ITRCPT	474.409	7733.959	0.211532	647.9018	2.677959	16.58524	13931.98*	1568
GDPPCGR	0.028263	0.322496	-0.192922	0.039838	-0.021168	9.191927	2504.994*	1568
ITARRGR	-0.027719	1.285837	-3.187505	0.24114	-3.851872	47.16394	131307*	1568
ITEXPGR	-0.01055	2.391994	-4.056758	0.287179	-1.798854	39.42994	87552.18*	1568
ITRCPTGR	-0.00486	3.486144	-3.693053	0.300824	-0.916928	37.57509	78321.58*	1568
LFPR	62.18304	89.6	40.2	9.046837	0.434307	3.638251	75.90787*	1568
GFCF	22.49449	74.8206	2.42436	6.468157	1.340439	9.076116	2881.611*	1568
TRADE	82.63711	439.657	14.9328	46.48579	2.864539	18.27516	17388.65*	1568
Democratic (66) countries								
GDPPC	14414.75	67804.5	203.053	15509.73	1.113801	3.22553	220.5754*	1056
ITARR	0.581091	8.789772	0.001676	0.708935	4.213261	36.26021	51798.89*	1056
ITEXP	426.6602	3261.766	1.087189	527.7268	1.982339	7.456105	1565.324*	1056
ITRCPT	538.8883	4259.059	1.676084	594.2463	1.875461	7.893876	1672.855*	1056
GDPPCGR	0.024163	0.150109	-0.192922	0.036455	-0.843171	6.958935	814.7443*	1056
ITARRGR	-0.021542	1.109634	-2.289284	0.179259	-2.66923	33.60166	42458.26*	1056
ITEXPGR	0.005098	2.391994	-2.23065	0.227258	1.060532	33.98314	42435.98*	1056
ITRCPTGR	0.004979	1.704141	-2.398752	0.219831	-1.07386	24.01315	19631.26*	1056
LFPR	61.21752	83.4	41	6.391246	0.144499	3.776868	30.22994*	1056
GFCF	22.43741	74.8206	5.38532	5.834778	2.138966	13.8388	5974.329*	1056
TRADE	80.91521	209.891	14.9328	34.47269	0.583907	2.928754	60.23014*	1056
Non–democratic (32) countries								
GDPPC	2955.623	34378.9	128.237	5323.753	3.542489	16.57037	4999.505	512
ITARR	0.678496	11.19878	0.001814	1.747536	4.118651	20.70113	8131.911	512
ITEXP	272.5389	22462.88	1.216888	1276.876	12.7043	199.0947	834106.6	512
ITRCPT	341.4204	7733.959	0.211532	729.3053	3.854143	26.33616	12885.2	512
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
LFPR	64.17441	89.6	40.2	12.67863	0.091287	2.179024	15.08981	512
GFCF	22.61221	57.7091	2.42436	7.614878	0.513988	4.67487	82.38772	512
TRADE	86.18853	439.657	17.8586	64.45404	2.994865	14.02607	3358.958	512

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). *LFPR*, *GFCF* and *TRADE* denote labour force participation, gross fixed capital formation as a % of GDP and imports plus exports as a % GDP, respectively. JB denote Jarque-Bera. * indicates 1 percent level of significance.