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To cite this version:

Riadh Ben Jelili, Adel Abdel-Azim Ebrahim. Tourism Competitiveness and Specialization in South Mediterranean Countries: A Panel Data Approach. Journal of development and economics policies, 2011. hal-03840536

HAL Id: hal-03840536

https://hal.science/hal-03840536v1

Submitted on 5 Nov 2022

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Journal of Development and Economic Policies, vol.13, No.1, 2011

Tourism Competitiveness and Specialization in South Mediterranean Countries: A Panel Data Approach

Riadh Ben Jelili and Adel Abdel-Azim Ebrahim[1]

Abstract

Given the impressive development of technology and transportation, the variety of destinations competing for domestic and international travelers is now much broader than in the past. The pressure exerted by competition is compelling South Mediterranean Countries' (SMCs) governments to reevaluate existing tourism resources and to capitalize on them to maintain a competitive edge. The objectives of this paper are to investigate the competitiveness in tourism of the SMCs for which data are available and to conduct an econometric analysis of the evolution of the countries' specialization in tourism in order to evaluate what causes these changes.

القدرة التنافسية والتخصص في السياحة في دول جنوب المتوسط:
منهج بيانات السلاسل الزمنية المقطعية

تسبب التطور الكبير في التكنولوجيات والنقل في إفراز مجموعة متنوعة من الوجهات السياحية المنافسة على الصعيدين المحلي والدولي أوسع بكثير مما كانت عليه في الماضي .فالضغوطات التي تمارس اليوم من قبل المنافسة على الدول العربية المتواجدة حول جنوب البحر المتوسط تفرض على الحكومات إعادة تقييم الموارد السياحية الموجودة في ظل استراتيجية تمكن من الحفاظ على ميزة تنافسية. تهدف هذه الورقة إلى تزويد صانعي السياسات في الدول المعنية ببعض المعطيات الموضوعية حول مقومات الميزة النسبية للقطاع السياحي تساعد على ترشيد إدارة هذا القطاع.

Keywords: Tourism Specialization; Destination Competitiveness; Dynamic Panel, Generalized Method of Moment, Mediterranean Countries.

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Introduction

At a time when tourism is the preeminent global industry and one of the most remarkable socio-economic phenomena, the Mediterranean basin − with its attractive landscapes, cultural heritage, traditional lifestyles together with a mild climate and beaches − is considered to be the most popular destination worldwide, accounting for 30% of international tourist arrivals and a third of total tourism revenues. In this area, tourism is regarded as a very significant economic activity contributing foreign exchange, increasing employment, stimulating new economic activity, leading to further economic gains and enforcing the political leaders in both the country of destination and the country of origin to establish good governance, approve more civil rights or open the country for international trade. Tourism also serves as a catalyst for diversifying economies, as new tourism infrastructure development may, in turn, help in the establishment of other services and industries.

These assumed effects are particularly relevant for South Mediterranean Countries (SMCs), which often have high rates of unemployment, relatively low levels and growth rates of GDP per capita, problematic governments and difficulties in entering international trade.

Because the traditional sun, sand, and sea mass tourist product of the South Mediterranean is experiencing a crisis with subsequent market shifts toward other regions and alternative tourist products, the region has begun to lose its share of the international travel market to upcoming destinations, especially the Asia-Pacific region. The time is ripe for SMCs, in particular, to evaluate their tourist industries in the context of long-run development strategies and to identify the elements that compose their competitiveness in the global tourist market. Competitiveness is defined as "the destination's ability to create and integrate value-added products that sustain its resources while maintaining market position relative to competitors" (Hassan, 2000).

Since the beginning of the 1990s, many SMCs have experienced major changes in its tourism exports volume, growth rate and structure. These disparate fluctuations have all influenced unevenly the relative competitive position of SMCs on the international tourism market and have been associated with changes in their trade balance. At the same time, the new and more heterogeneous European architecture has induced significant changes in SMCs' regional tourism competitiveness. The pressure exerted by the new environment is compelling the governments in these countries to reevaluate their existing tourism resources and to capitalize on them in order to maintain a competitive edge.

Against this background, the paper attempts to suggest a framework for assessing the international competitiveness of SMCs' tourism services for which data are available and conducting an econometric analysis of the considered countries' specialization in tourism.

The Evolution of SMCs' Tourism Competitiveness

Tourism may be considered as the only service activity that can potentially provide trading opportunities for all nations, regardless of their level of development. However, it is also a sector or industry where clearly, there is an unequal distribution of benefits that is largely dependent on the countries' ability to reinforce their performance in the global economy, which in turn, requires improving their competitiveness.

The discussion of competitiveness issue in the general economics literature has tended to stress competitive advantage, while minimizing the importance of comparative advantage as a source of competitiveness. When viewed in a tourism destination context, comparative advantage relates to inherited resources − such as climate, beaches, sea, flora, fauna, etc. − while competitive advantage relates to created items such as the tourism superstructure which includes facilities that have been developed especially to respond to the demands of visitors, the quality of management, skills of workers, government policy and so forth (Dwyer and Kim, 2003).

Existing literature clearly appreciates the importance of both comparative and competitive advantage within the tourism industry. As such, the importance of understanding the factors that determine the ability of a considered tourism destination to compete is being increasingly recognized from both a theoretical and managerial perspective. The major interest of this literature has been to investigate how destination competitiveness can be sustained as well as enhanced while maintaining a market position among other destination competitors. Additionally, studies have investigated the key determinants, environmental factors or strategies that affect the enhancement of destination competitiveness (Crouch and Ritchie, 1999; Kozak and Rimmington, 1999; D'Hauteserre, 2000; Hassan, 2000; Buhalis, 2000; Ritchie, Crouch and Hudson, 2001).

In this section, based on Hazari, Sahli and Sgro (2003) and Hazari and Sgro (2004), two aspects of competitiveness in tourism and travel-related services for a set of 16 Mediterranean destination countries (SMCs) including five Arab South Mediterranean countries (ASMs) namely Algeria, Egypt, Morocco, Syria and Tunisia were examined.

Overall External Competitiveness in Tourism

The overall external competitiveness of a country's tourism industry is defined as the country's ability to retain or increase its market share of tourism exports in terms of ground and travel components. This rather general concept encompasses price differentials coupled with exchange rate movements, productivity level of various components of the tourism industry (transport, accommodation, tour services, restaurants, and entertainment) and qualitative factors affecting the attractiveness of a destination.

The following index was calculated aiming at analyzing a country's net performance in tourism:[2]

$$CR_{tj} = \frac{X_{tj} / M_{tj}}{X_{tz} / M_{tz}} \qquad \text{(Equation 1)}$$

where CR_{tj} is labeled coverage ratio[3] for country *j*'s tourism industry relative to the reference area z. X_{tj} denotes exports of tourism services by country *j*; M_{tj} the imports of tourism services by country *j;* X_{tz} the total exports of tourism services by the reference area (World or the Mediterranean area); and M_{tz} the total imports of tourism services by the reference area.

Because of the absence of the data on volume price distribution in traded services, market shares were expressed in this index in value term. It is clear that the numerator of this index equation shows the exports of tourism divided by the imports of tourism by country *j* as a share of the denominator which represents the total tourism exports of the region divided by the total imports of the region.

Three possible cases may be distinguished:

Case 1: $CR_{tj} = 1$; country j will be said to be in equilibrium in the sense that it has the coverage ratio as the entire reference area;

Case 2: $CR_{tj} > 1$; in this case, country j is said to have competitive advantage in tourism in the sense it has a surplus relative to the reference area z; and

Case 3: $CR_{tj} < 1$; in this case, the country is said to have no competitive advantage in tourism since it has a deficit relative to the reference area z.

[2] An operative way of approaching the evolution in the competitiveness directly in any market (revealed competitiveness) involves examining the market share of the agents who participate. The evolution of the market share of any destination as approached by the considered index may be viewed as an indicator of the changes in the relative level of competitiveness. The calculation of this index, a simple quotient, is easy to calculate and its meaning is both relevant and simple.

[3] This ratio is equal to the slope of the right-hand segment linking the origin of the axes to the point representing the tourism industry.

Table 1. Tourism Competitiveness Index (CR) in the Mediterranean Area

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Albania	1.71	1.76	1.18	1.27	2.86	0.63	0.76	0.59	0.49	0.51	0.52	0.50	0.55	0.57
Algeria	0.08	0.11	0.09	0.13	0.15	0.24	0.24	0.21	0.20	0.24	0.24	0.27	0.28	0.35
Croatia	1.48	1.85	2.18	2.11	1.48	2.07	2.33	2.15	4.22	3.59	4.66	5.07	4.56	5.11
Cyprus	1.96	1.78	1.66	1.66	1.73	1.79	1.77	1.73	1.53	1.28	1.27	1.23	0.97	0.87
Egypt	0.99	1.21	1.30	1.07	1.64	1.76	1.51	1.46	1.48	1.87	1.79	1.77	1.74	1.80
France	0.70	0.68	0.72	0.73	0.77	0.77	0.73	0.74	0.71	0.69	0.67	0.68	0.70	0.65
Greece	1.29	1.26	1.13	1.63	1.01	0.93	1.00	1.89	2.04	2.03	2.12	2.27	2.23	2.25
Israel	0.61	0.58	0.58	0.52	0.65	0.56	0.34	0.34	0.34	0.35	0.43	0.40	0.43	0.55
Italy	0.82	0.80	0.73	0.71	0.69	0.72	0.72	0.66	0.63	0.72	0.69	0.71	0.69	0.65
Malta	1.58	1.50	1.67	1.72	1.67	1.49	1.57	1.95	1.68	1.49	1.43	1.25	1.32	1.27
Morocco	1.90	2.46	2.08	1.80	1.73	2.05	2.30	2.19	2.07	2.27	2.61	2.91	2.85	2.35
Slovenia	0.86	0.94	1.01	0.88	0.80	0.85	0.86	0.82	0.81	0.84	0.89	0.85	0.95	1.00
Spain	2.17	2.20	2.13	2.06	1.99	1.93	1.82	1.75	1.78	1.53	1.38	1.33	1.30	1.32
Syria	1.17	1.06	0.85	0.81	0.75	0.74	0.78	0.59	0.55	1.25	1.67	1.70	2.04	3.23
Tunisia	2.89	3.15	3.20	3.39	3.52	2.91	2.92	2.80	2.51	2.60	2.98	2.81	3.10	3.55
Turkey	2.51	2.09	1.87	1.90	1.62	2.03	2.64	2.93	2.87	2.87	2.95	2.76	2.70	3.13

Source: Authors' calculations using the IMF database (2010).

Real Exchange Rate and Destinations Competitiveness

In general, competitiveness consists of two major components: (a) Price; and (b) Non-price component. It is understood that the real exchange rate (RER) influences the price component rather than the non-price component (quality, brand image, and marketing) which imposes considerable impact on trade and tourism services.

Basically, there are three elements constituting the price of tourism: (a) Cost of travel to the country of destination; (b) Exchange rate differentials between the origin country and the destination country; and (c) Cost of goods and services incurred after arrival.

In addition, consumer theory establishes that in order to take a decision to travel abroad, the international tourists should investigate certain price indices depending on their country of origin, consumption pattern, and the nature of their destination. However, this is not an easy task. This is because the effect of price changes is far more complex in tourism sector than the other economic sectors. This difficulty arises from the complexity of defining tourism prices which is a function of a package or a bundle of goods and services consumed by each tourist. Indeed, price indices for tourists simply do not exist (Witt and Witt, 1992).[4]

Hazari and Sgro (2004) claim that it is difficult to obtain volumes of data for a large sample of countries and for such a long observation period. Furthermore, it is not just destination holiday prices which are important but also, relative price differences between the destination and the origin country which result basically from the movements of the price level factor and nominal exchange rate factor. Both of them tend to move in opposite directions. However, when the two impacts exactly offset each other, then relative prices remain unchanged. This implies that changes in relative prices reflect either a short-term or a long-term imbalance between relative rates of inflation and exchange rates. This means that it is the actual movements in real exchange rates which provide a more reliable estimate.

Therefore, in this paper, the RER is used as the tool to examine how the destination's competitive position changes with regard to its movements. For this purpose and as in Hazari, Sahli and Sgro (2003), the RER is defined as follows:

$$RER_j = 100 * \left(\frac{GDPcurr_j / GDPppp_j}{GDPcurr_W / GDPppp_W} \right) \qquad \text{(Equation 2)}$$

where RER_j denotes real exchange rate relative to the world; $GDPcurr_j$ represents GDP of country j in international value (current international dollars and prices), and

[4] Morley (1994) investigated the evidence for the use of Consumer Price Index (CPI) for tourism prices, employing a variety of methods and data. For 10 important tourist destinations, price series for major tourist expenditure items were estimated. With a few exceptions, these were found to correlate very highly with the destination's CPI. The high correlations persisted even after linear time-trend effects were removed from the series.

$GDPppp_j$ denotes GDP of country j in volume in terms of purchasing power parity (constant dollars and international prices); while $GDPcurr_W$ represents world GDP in international value; and $GDPppp_W$ denotes world GDP in volume in terms of purchasing power parity (PPP). In other words, this index expresses the relationship between GDP in current dollars and GDP in volume in PPP, both for the country in question and the world as a whole. Based on the results of this index, a rise (fall) in the RER_j reflects a real appreciation (depreciation) in the currency of country j.

Table 2 reveals notable fluctuations in the RER during the period 1995-2008, which were caused *inter alia* by appreciation and subsequent depreciation of the US dollar. The currency fluctuations are supposed to have an impact on the indicator of the countries' competitive position (subsequently designated by POS) in the tourism industry − defined as the ratio of tourism balance in the travel and transport of passengers' items of each country's balance of payments to total international trade flows in tourism:

$$POS_{vj} = \frac{\left(X_{vj} - M_{vj}\right)}{\left(\frac{X_{vw} + M_{vw}}{2}\right)} \qquad \text{(Equation 3)}$$

where X_{vj} and M_{vj} are the country's receipts (exports) and payments (imports) on international tourism and transport of passengers; while X_{vw} and M_{vw} are the world's international receipts (exports) and payments (imports) on international tourism and transport of passengers.

Table 2. Real Exchange Rate Data

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Albania	30.82	35.64	30.18	34.23	39.08	39.66	42.33	44.16	48.87	56.73	58.29	58.49	61.36	61.49
Algeria	35.39	38.79	41.09	40.24	39.30	43.94	44.38	43.26	44.43	49.13	54.36	58.84	62.32	69.33
Croatia	68.83	69.78	68.86	74.18	68.71	62.60	66.50	72.04	80.85	86.77	87.78	89.73	94.89	102.72
Cyprus	101.58	102.31	99.30	104.42	101.78	93.63	96.25	101.51	115.74	122.79	122.57	123.77	128.85	135.23
Egypt	37.31	40.56	46.53	49.78	50.09	53.07	51.58	44.76	37.69	32.05	33.71	36.68	38.84	42.19
France	141.30	142.20	131.36	134.95	129.17	114.89	117.11	124.46	140.02	145.67	143.80	144.09	150.50	154.49
Greece	93.42	97.99	96.24	96.26	91.50	82.98	85.53	91.80	105.09	111.21	111.21	112.35	117.77	122.01
Israel	113.64	119.80	124.99	125.06	121.87	127.47	129.45	118.13	112.74	106.62	103.72	103.82	105.55	114.94
Italy	105.74	118.78	115.15	119.29	115.82	103.54	106.55	114.22	130.06	136.69	134.98	134.52	140.38	144.59
Lebanon	52.56	59.29	72.84	79.23	80.13	79.60	80.58	83.49	78.08	73.37	70.41	69.69	67.61	68.13
Malta	72.00	72.18	72.00	75.23	75.04	76.46	79.10	83.79	91.28	94.96	93.93	95.20	99.80	103.79
Morocco	63.26	63.57	61.87	70.84	69.85	64.98	63.35	64.85	69.23	70.29	68.91	68.41	71.30	74.68
Slovenia	88.60	87.66	84.12	89.04	86.58	75.52	77.46	83.21	93.84	97.21	95.25	95.08	100.90	105.56
Spain	97.28	100.58	92.95	96.08	94.18	85.47	89.01	96.38	110.83	118.07	119.13	121.30	127.53	131.62
Syria	27.99	32.93	35.50	36.01	38.93	46.79	49.97	48.53	45.62	43.86	46.71	51.07	55.57	67.30
Tunisia	61.40	63.20	60.33	62.12	61.40	55.61	56.07	57.33	59.37	58.67	56.13	55.08	54.73	56.41
Turkey	44.64	45.14	45.74	65.26	62.41	63.63	50.94	56.24	64.37	70.70	77.58	77.09	84.11	88.49

Source: Authors' calculations using World Development Indicators, World Bank (2010).

Table 3. Evolution of Competitive Positions (POS) in the Tourism Industry

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Albania	0.011	0.014	0.004	0.008	0.035	0.020	0.034	0.019	0.005	0.012	0.009	0.008	0.016	0.019
Algeria	-0.033	-0.028	-0.023	-0.038	-0.033	-0.017	-0.017	-0.024	-0.023	-0.022	-0.023	-0.019	-0.016	-0.013
Croatia	0.196	0.299	0.396	0.420	0.342	0.408	0.518	0.549	0.935	0.825	0.859	0.877	0.868	0.970
Cyprus	0.327	0.279	0.266	0.272	0.297	0.291	0.304	0.283	0.262	0.224	0.206	0.193	0.157	0.124
Egypt	0.335	0.437	0.519	0.329	0.600	0.629	0.534	0.500	0.522	0.651	0.662	0.696	0.753	0.804
France	2.241	1.994	1.968	2.101	2.433	2.763	2.463	2.539	2.460	2.440	1.834	1.926	1.933	1.355
Greece	0.568	0.469	0.448	0.873	0.922	0.857	0.935	1.337	1.354	1.351	1.307	1.339	1.240	1.258
Israel	0.183	0.130	0.156	0.072	0.265	0.160	-0.192	-0.159	-0.140	-0.111	-0.055	-0.067	-0.051	0.033
Italy	2.793	2.635	2.333	2.129	1.906	1.922	1.844	1.515	1.428	1.879	1.457	1.655	1.355	1.021
Malta	0.122	0.106	0.114	0.118	0.117	0.092	0.093	0.102	0.102	0.090	0.077	0.070	0.073	0.068
Morocco	0.235	0.299	0.255	0.283	0.305	0.323	0.442	0.441	0.477	0.494	0.556	0.674	0.697	0.643
Slovenia	0.110	0.128	0.133	0.105	0.083	0.086	0.093	0.089	0.100	0.107	0.110	0.099	0.122	0.143
Spain	4.556	4.651	4.465	4.819	4.962	4.550	4.716	4.622	5.243	4.781	4.349	4.334	4.113	4.004
Syria	0.161	0.129	0.093	0.085	0.076	0.075	0.089	0.037	0.023	0.163	0.182	0.178	0.229	0.359
Tunisia	0.327	0.320	0.316	0.337	0.352	0.304	0.323	0.271	0.255	0.273	0.295	0.289	0.288	0.309
Turkey	0.856	0.871	1.050	1.068	0.713	1.080	1.549	1.775	1.787	1.819	2.074	1.790	1.713	1.936

Source: Authors' calculations using the IMF database (2010).

As may be seen in Figure 1 (Appendix 1. Graphics), there are no clear trends of these two ratios moving in opposite directions for most Mediterranean countries, i.e. an appreciation of the lagged RER is not systematically followed by a fall in POS and vice versa.

Table 4 summarizes the correlation coefficient between the two considered series for the 16 Mediterranean countries.

Table 4. Correlation Coefficient between RER_{t-1} and POS

Country	Correlation	T stat	P value
Albania	-0.0373	-0.1293	0.8989
Algeria	0.7184	3.5780	0.0030
Croatia	0.8721	6.1735	0.0000
Cyprus	-0.9303	-8.7856	0.0000
Egypt	-0.2363	-0.8423	0.4138
France	-0.7534	-3.9688	0.0014
Greece	0.5704	2.4054	0.0306
Israel	0.3540	1.3111	0.2109
Italy	-0.6647	-3.0816	0.0081
Malta	-0.8747	-6.2508	0.0000
Morocco	0.6180	2.7230	0.0165
Slovenia	0.5706	2.4071	0.0305
Spain	-0.5205	-2.1116	0.0532
Syria	0.5524	2.2957	0.0377
Tunisia	0.4759	1.8744	0.0819
Turkey	0.6779	3.1940	0.0065

The under or overvaluation of the country's currency seems to have a fundamental and significant impact on the POS of only European countries: Cyprus, France, Italy, Malta and Spain. Algeria, Syria and to a lesser extent, Morocco, witnessed a continuous appreciation of their local currency during the period under review. However, this appreciation does not seem to affect negatively their POS.

Tunisia and Egypt show the other way around which reflects a pronounced fluctuation ended by subsequent appreciation. As a matter of fact, Egyptian authorities before deciding to get rid of fixed exchange rate regime and shifting towards applying floating exchange rate regime in March 2003, was enforced to implement a big devaluation on a gradual basis until the nominal exchange rate settled down and its current level is around US$1/LE5.5 in 2008 from US$1/LE3.4 in year 1995.

It should be noted that the change in the POS of certain ASMs − such as Syria and Algeria since 2003 − is not the result of currency depreciation but rather the consequence of the government's total commitment to tourism development, given the enormous, largely unexploited potential.

This being said, the relationship between RER and country's POS in the tourism industry should be explored in a multidimensional framework with an econometric investigation of the sources of the competitive advantage.

Revealed Comparative Advantage in Tourism of SMCs

More than four decades ago, Balassa (1965) published a paper using for the first time, the measure or index of Revealed Comparative Advantage (RCA).[5] While various alternative measures have been proposed in the literature (Vollrath, 1991; Laursen, 1998; Hoen and Oosterhaven, 2006), the Balassa index remains the most popular (Yu *et al.*, 2009). The RCA index may be defined as:

$$RCA_{ij} = \frac{X_{ij} / \sum_i X_{ij}}{\sum_j X_{ij} / \sum_i \sum_j X_{ij}} \times 100 \qquad \text{(Equation 4)}$$

The numerator represents the percentage share of a given sector in national exports – X_{ij} is exports of the service sector i from country j. $\sum_i X_{ij}$ is the total exports of goods and services from country j. The denominator represents the percentage share of a given sector in the reference area exports (Mediterranean area or World) Thus, the RCA Index contains a comparison of national export structure (the numerator) with the reference area export structure (the denominator).

The index basically measures normalized export shares, with respect to the exports of the same industry in a group of reference countries. When RCA is greater than 100 for a given sector in a given country, the country is specialized in the goods (service) i, since it exports relatively more of the goods (service) than the reference zone. Therefore, it has a comparative advantage in that activity. If the index is smaller than 100, the country is not specialized and therefore, it has no comparative advantage. Thus, this is a method of indirect calculation that can be used to determine the kind of activities in which individual countries have comparative advantage.

Table 5 reveals pronounced differences in the degree of specialization among the considered Mediterranean countries. It shows that all ASMs countries are specialized in the tourism industry with the exception of Algeria for the entire period and Syria in years 2002 and 2003.

[5] Measuring comparative advantage and testing the Hecksher-Ohlin theory have some difficulties since relative prices under autarky are not observable. Given this fact, Balassa (1965) proposes that it may not be necessary to include all constituents affecting a country's comparative advantage. Instead, he suggests that comparative advantage is "revealed" by observed trade patterns, and in line with the theory, one needs pre-trade relative prices which are not observable. Thus, inferring comparative advantage from observed data is named "revealed" comparative advantage (RCA). In practice, this is a commonly accepted method of analyzing trade data.

The Mediterranean countries that have the highest market shares in tourism are not necessarily specialized in the tourism industry. For example, despite the fact that France, Italy and Spain are in the top rank of Mediterranean destinations in terms of tourism receipts and number of international visitors, their RCA's of tourism industry are significantly less than other countries with lower market shares but higher RCA's such as Morocco, Egypt and Tunisia.

An analysis of Table 5 also shows that both relatively rich OECD countries (Spain, Turkey and Greece) and less rich South Mediterranean countries (Croatia, Cyprus, Tunisia, Egypt, Morocco and Syria) are specialized in tourism industry. This implies that several sources of RCA in tourism may be considered.

Table 5. Tourism RCA Index in Mediterranean Countries

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Albania	189.0	206.2	124.1	171.7	291.3	438.7	421.6	409.7	349.6	361.6	370.4	381.9	396.1	409.4
Algeria	2.4	2.6	1.6	5.7	4.9	3.5	3.9	4.2	3.3	4.0	3.0	3.1	2.9	3.5
Croatia	150.0	196.1	255.6	258.0	244.3	248.8	271.3	275.1	339.8	303.2	316.2	321.5	322.0	340.5
Cyprus	354.1	327.3	340.7	337.3	331.6	322.2	319.1	307.5	281.9	259.6	252.8	250.9	249.5	232.8
Egypt	176.8	208.3	232.6	179.0	253.4	223.9	189.4	194.3	197.5	218.6	207.9	208.4	219.9	190.8
France	71.1	71.7	63.6	63.9	65.1	75.9	73.6	73.0	71.6	76.3	73.2	74.1	77.8	75.0
Greece	150.7	129.3	124.0	196.7	239.5	230.7	229.7	243.7	208.7	193.8	195.5	191.5	183.4	181.4
Israel	103.1	96.6	100.0	91.5	100.7	77.5	55.3	46.5	43.1	41.8	45.9	43.5	44.2	50.4
Italy	85.3	83.5	88.8	85.5	79.8	75.2	69.8	68.0	66.8	66.5	65.3	66.5	63.2	62.3
Malta	216.8	219.3	236.0	222.5	201.7	158.6	175.3	160.1	163.1	164.4	158.0	142.5	146.8	180.6
Morocco	131.9	157.3	147.3	165.6	165.2	171.1	209.8	196.0	202.0	208.7	221.5	253.5	259.6	231.0
Slovenia	88.2	98.9	99.4	85.5	76.1	73.6	73.5	68.4	69.0	67.8	67.0	60.8	62.6	97.2
Spain	166.4	165.0	161.6	165.0	162.7	150.6	152.8	143.1	143.1	141.9	143.6	146.0	143.4	140.5
Syria	288.8	216.5	183.0	183.4	159.5	123.0	120.9	89.3	94.6	145.8	136.6	130.2	159.9	226.1
Tunisia	184.4	187.4	190.9	194.2	190.1	177.6	169.7	145.5	134.1	141.7	152.7	157.4	149.5	134.8
Turkey	119.3	117.9	127.6	104.6	85.3	110.6	146.9	153.4	143.0	132.0	146.4	127.1	120.0	120.7

Source: Authors' calculations using the IMF database (2010).

Econometric Analysis of Tourism Specialization

The earlier investigation has allowed the description of the general framework within which tourist flows take place and to assess the state of competitiveness and specialization in tourism of certain SMCs. This section uses some of the findings presented above for an econometric analysis of the evolution of specialization in tourism in the considered region.

Model Specification

The empirical model is based on the partial equilibrium theory to account for any agglomeration or clusters effects in the tourism industry across countries (Zhang and Jensen, 2007):

$$DTS_{jt} - DTS_{jt-1} = \lambda\left(DTS_{jt}^{*} - DTS_{jt-1}\right) \qquad \text{(Equation 5)}$$

Equation 5 indicates that the change in the degree of tourism specialization (DTS_{jt}) in destination country *j* is proportional to the gap between its desired level (DTS_{jt}^{*}) and actual level. It may be rearranged to form:

$$DTS_{jt} = (1-\lambda)DTS_{jt-1} + \lambda DTS_{jt}^{*} \qquad \text{(Equation 6)}$$

Where the term (1− λ) measures the adjustment and is assumed to be positive, as the adjustment process should be both stable and non-fluctuating. Finally, the empirical model requires the determinants of the desired levels of DTS to be specified. Following Hazari *et al* (2003), the desired levels of DTS may be expressed as follows:

$$DTS_{jt}^{*} = f\left(GDPpc_{jt}, RER_{jt-1}, CHPOPM_{jt}, TIRM_{jt}\right) \qquad \text{(Equation 7)}$$

Taking into account Equation 6 and adopting a linear representation of Equation 7, the equation to be tested is given below:

$$DTS_{jt} = (1-\lambda)DTS_{jt-1} + \beta_1 GDPpc_{jt} + \beta_2 RER_{jt-1} + \beta_3 CHPOPM_{jt} + \beta_4 TIRM_{jt} + \varepsilon_{jt} \qquad \text{(Equation 8)}$$

Where ε_{jt} is the stochastic error.

The variable to be explained corresponds to the degree of tourism specialization and is defined as the international tourist receipts divided by the GDP in country *j* as a share of the total international tourist receipts of the reference Mediterranean area divided by the total GDP of the reference area.

The evolution of the dependent variable is explained by the following exogenous variables:[6]

GDPpc: Gross domestic product per capita of country *j* for the year *t* in current dollars, widely accepted as being a good indicator of a nation's personal disposable income and a major economic determinant of domestic and international tourism spending,

RER: The real exchange rate of country *j* for the year *t-1* (to take account of adjustment lags) relative to the rest of the world as a good proxy for the relative cost of living in destination countries. It is argued that potential visitors are well informed on exchange rates but relatively uninformed on general price levels in destination countries. Prior to travel, cost of living in the destination country may therefore be judged by exchange rate movements rather than by shifts in general price levels.

CHPOPM: The hotel function rate corresponds to the ratio of accommodation supply to host population, which is based on the dual relationship between the number of bed places available and the population of country *j* and that of the reference zone. This index can give a reasonably good estimate of the relative importance of tourism in country *j*, because the number of bed places determines the number of people directly employed in this sector.[7] Therefore, the higher the hospitality function index, the more important is tourism's role in job creation in the local economy.

TIRM: The tourist intensity rate is defined as the ratio of the number of international tourists visiting country *j* and its permanent population and that of the reference area. This is an indicator of social-carrying capacity, which expresses both the level of tolerance on the part of the host population and the quality of the international tourist experience in the host country.

It is difficult to predict *a priori* the sign of each coefficient because, with the exception of the *RER* whose action seems to be clear (non-significant variable or negative sign), in theory, all the other variables may influence specialization in tourism in one or another direction. It is likely that this depends heavily on the characteristics of each country, and particularly on the development of its tourist industry.

Generalized Method of Moments (GMM) Dynamic Panel Regression Results

When lagged dependent variable is included as regressor, the usual estimation procedures, like fixed effects Ordinary Least Squares or random effects Generalized Least Squares, are asymptotically valid only when there are a large number of observations in the time dimension. This is far from being the case in this paper where

[6] Appendix 2 presents basic descriptive statistics regarding endogenous and exogenous variables.

[7] For most international standard hotels, the ratio of rooms (or equivalent bed places) to employees ranges from 0.5 to 2, often depending on the availability and cost of labor (Oppermann and Chon, 1997).

the time period 1995-2008 only covers 14 years. The current available response to this problem is to first difference the equation to remove the individual effects and then estimate by instrumental variables, using as instruments the values of the dependent variable lagged two or more periods (Arellano and Bond, 1991). This treatment leads to consistent but not efficient estimates. This is because it does not make use of all the available moment conditions (Garin-Munoz, 2007).

To solve this problem, the Arellano-Bond Generalized Method of Moment (GMM) approach to dynamic panel estimation is used (Bond, 2002).[8] This approach has better small-sample properties, providing for more accurate estimation in small samples. Also, as long as the time series component is small, as in this case, the estimator does not require time stationarity.

Table 6 reports the estimation results obtained using the econometric software Eviews 7. Despite the usual reservations that must be expressed with regard any empirical analysis of international tourism (Hazari and Sgro, 2004), the results are very promising. All the variables are significant at the 1% level and correctly signed. The relevance and validity of instruments (H_0 in Sargan test) is also accepted which gives support to the model.

The results seem to confirm the argument that the specialization in tourism is positively correlated with le level of income per capita GDP. This positive result could be explained by the representative demand theory of Linder (1961) according to which the country's international specialization depends on the existence of a sufficiently high level of domestic demand.

The estimated coefficient of price competitiveness RER_{t-1} also proves to be significant and has the expected negative sign. Appreciation of the *RER* has effectively an adverse impact on a country's specialization in tourism for the panel of Mediterranean countries. The important sensitivity to relative prices is indicative of a tourism specialization based on products that are both more substitutable and exposed to greater competition in the considered area. The results corroborate the hypothesis that travelers are sensitive to relative price but not indifferent to the nature of the destination in the Mediterranean basin.

Regarding the hotel function variable – *CHPOPM* − the coefficient is significantly positive. The higher the hospitality function index, the more important is the tourism's role in job creation in the local economy and the more specialized in tourism the considered country is.

The estimated coefficient for the tourism density rate *TIRM*, used as a measure for tourism carrying capacity, is significantly positive. Carrying capacity has long been

[8] The Arellano–Bond estimator was designed for small T-dimension and relatively large N-dimension panels. In large T panels, a shock to the country's fixed effect − which shows in the error term − will decline with time. Similarly, the correlation of the lagged dependent variable with the error term will be insignificant.

debated in the literature (Butler, 1999; Saarinen, 2006) and its practical application is a source of controversy. The limits in tourism development and specialization depend on the characteristics of the tourist product and the type of environmental impacts derived from the activity. The estimated positive impact indicates that tourists visiting Mediterranean countries are still attracted by high densities of people and do not perceive overcrowding in this area of the world.

Finally, the estimated value of the adjustment coefficient (47%) gives evidence of a rather low adjustment process between the actual variation of the degree of tourism specialization in tourism and the desired level.

Table 6. Arellano-Bond Dynamic GMM Estimation

Variable	Coefficient	t-Statistic**	Prob.
DTS(-1)	0.469	12.651	0.00
GDPPC1	0.008	5.216	0.00
RER(-1)	-1.326	-3.949	0.00
CHPOPM	1.319	7.458	0.00
TIRM	0.913	6.317	0.00
Effects Specification			
Cross-section fixed (first differences)			
Number of observations			192
J-statistic (Sargan test)			13.503
Instrument rank			16
Sargan test, Chi2* p-value			0.262

*Sargan test of over-identifying restrictions (Null: Instruments are valid).
An important aspect of specifying a GMM estimator is the choice of the weighting matrix, the results are obtained based on White period weighting matrix which is a heteroskedasticity consistent estimator of the long-run covariance matrix.
**Two-step results using robust standard errors corrected for finite samples.

Conclusion

The empirical analysis of tourism in SMCs provides a comprehensive overview of price and non-price countries' competitiveness. Firstly, it is shown that the size effect measured by the income potential makes large OECD Mediterranean countries (France, Italy, Spain and Greece) major players in terms of tourism market shares. The influence of the RER on the countries' specialization or positions in the tourism market has also been shown. Depreciation stimulates the Mediterranean country's tourism industry by making other destinations more expensive and increasing the competitiveness of the local destination. Even if tourism in the Mediterranean basin remains to a large extent

governed by the existence of certain resources like sea, sun and cultural heritage, other factors also play an important role like technological factors, social dimension, destination degree of maturity and the level and the quality of domestic demand.

Tourism in the South Mediterranean region is highly dependent on the few, large, mass market tour operators situated in the North European tourist-originating countries. Price competition is intense both between the tour operators and between the SMCs themselves. As a matter of fact, tourism development projects in most SMCs have been increasingly shaped as self-contained enclaves in the form of coastal resort complexes and all-inclusive packaged tours, providing a range of on-site services and highly dominated by few tour operators.

One important drawback of enclave tourism is that it generally produces tourism experiences which are devoid of a strong sense of local culture, making the experience interchangeable with tourism to other destinations. The result is that often such tourism destinations are required to compete on price rather than on quality against other similarly generic destinations. Indeed, the mass tour operators' marketing strategy is often geared towards large numbers, low prices and getting the maximum return from every operation. In this context, the intense competition within SMCs and between the Mediterranean area and the rest of the World produces an ever competitive spiral of downward pressure on prices. The growing and excess capacities in Mediterranean countries make matters even worse.

Countries like Tunisia, Morocco, and to a lesser extent Egypt, heavily need tour operators for volume because the tourism industry has become too important and too large part of their economies. Ideally, these ASMs need to go for alternative sources of higher value-added and more information-based tourism. Yet this, by definition, would move them away from mass tourism and cause severe shocks and disruptions to their economies.

Hence, a dilemma exists and the problem seems to be a deeper and a more basic one of economic development in the SMCs. Why have these countries allowed themselves to become heavily dependent on tourism as a main industry in their economies, and on mass tourism as the main vehicle in the tourism industry itself? Was it possible for tourism in the SMCs not to grow so quickly on mass tourism? The answer to these questions can probably shed some light on the future role that price competitiveness should assume in tourism and in the local economies of the South Mediterranean countries.

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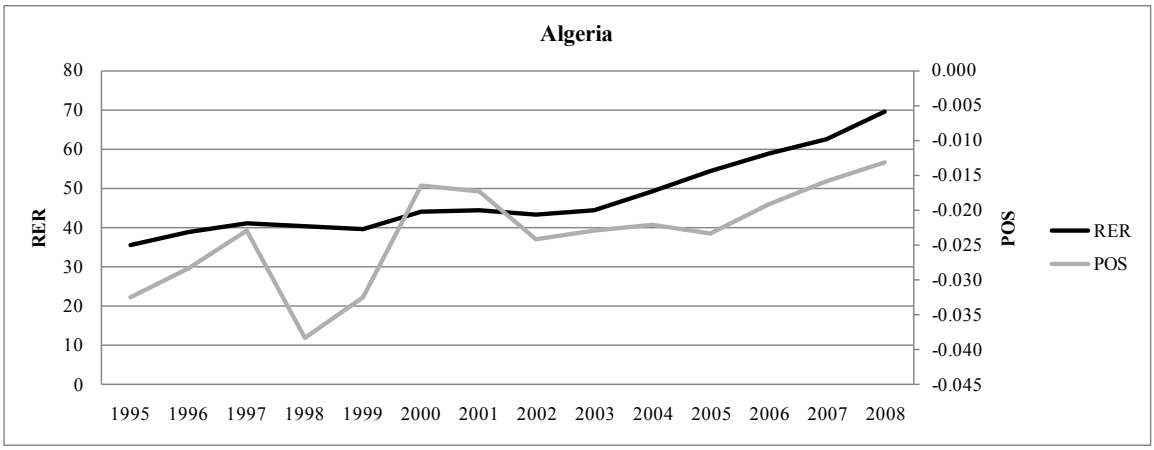
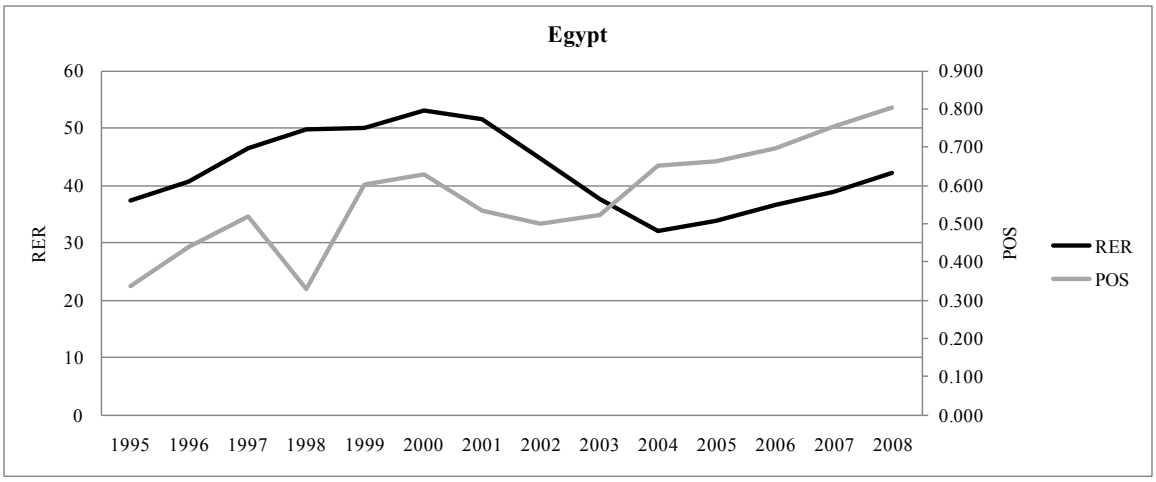
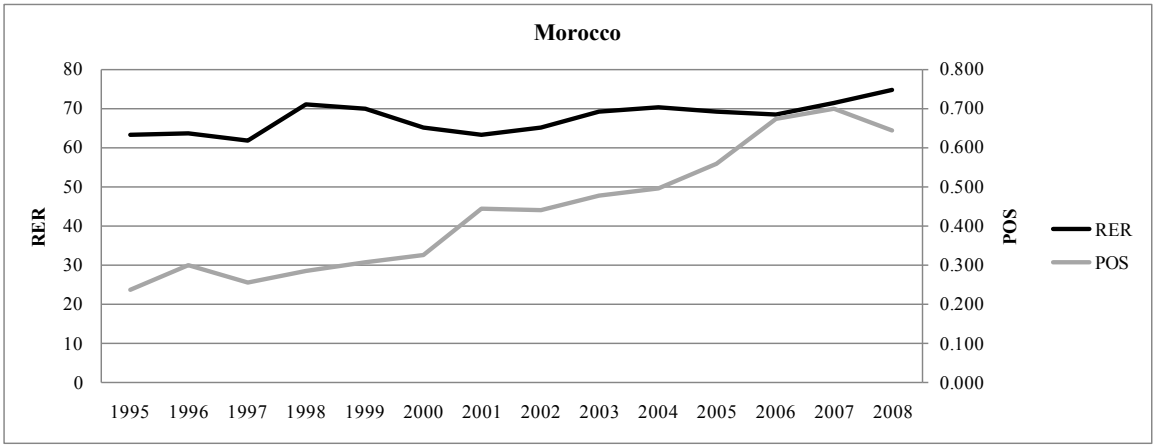
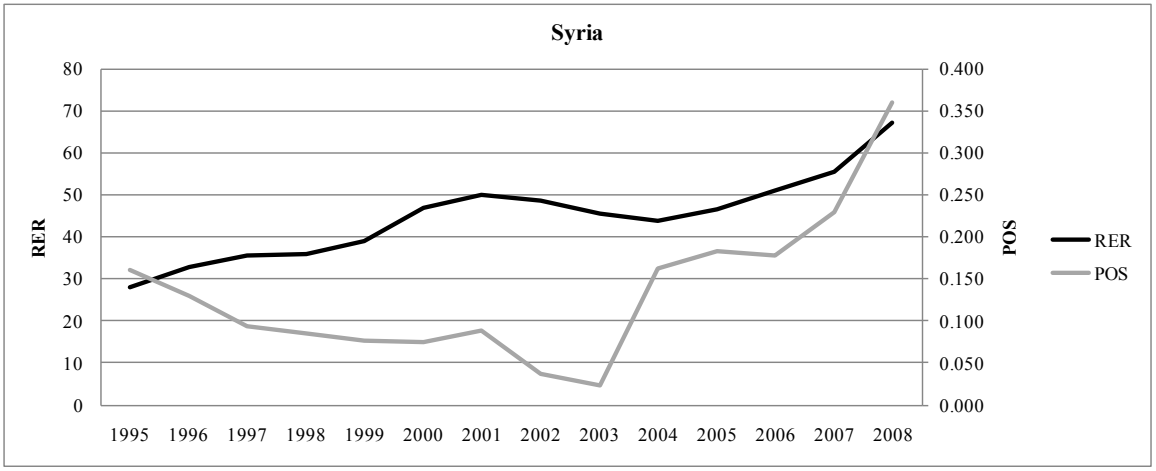
Appendix 1. Graphics





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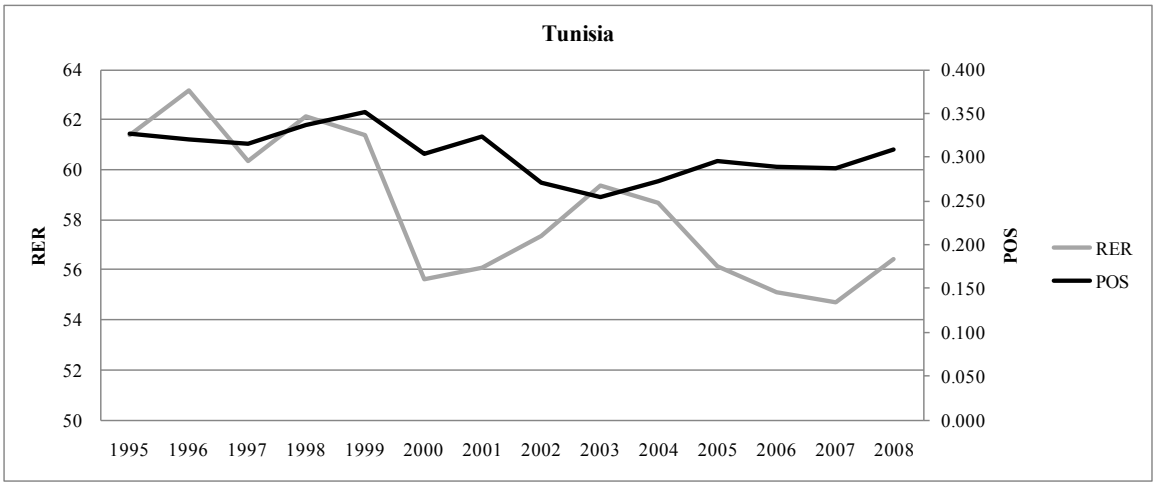
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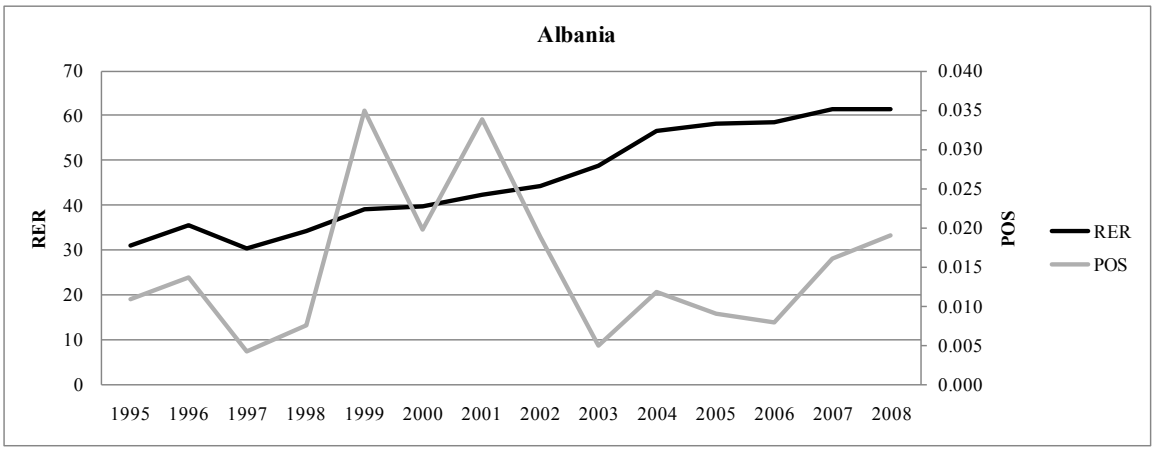
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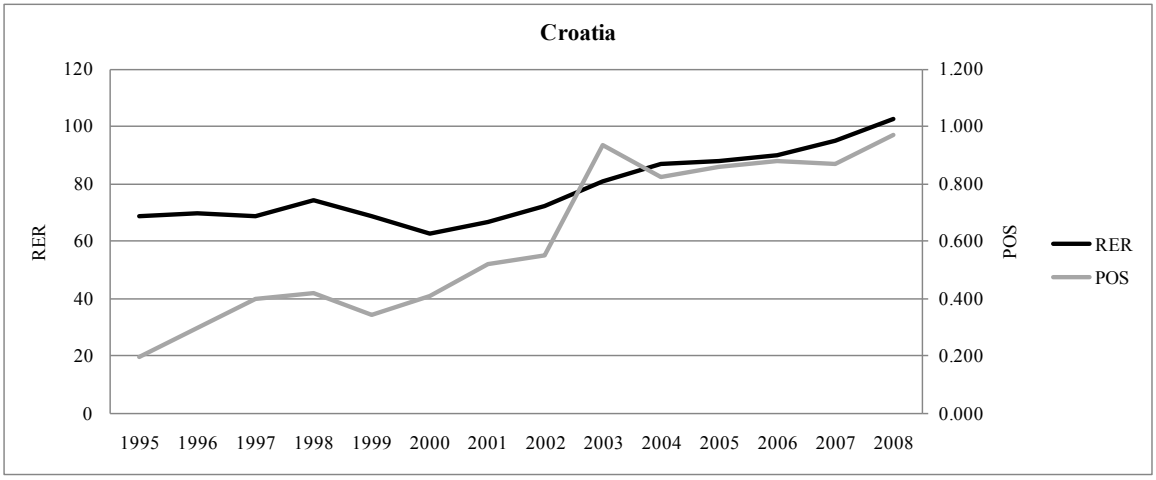
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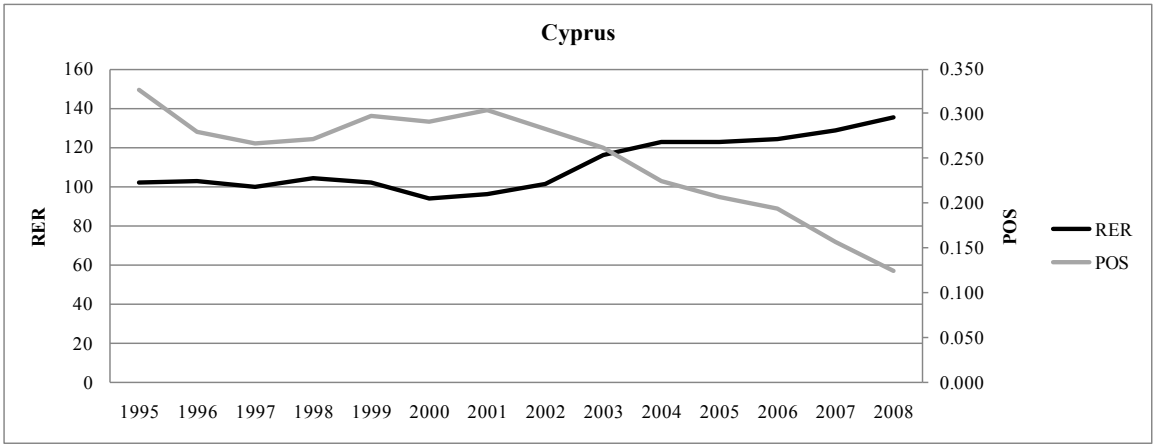
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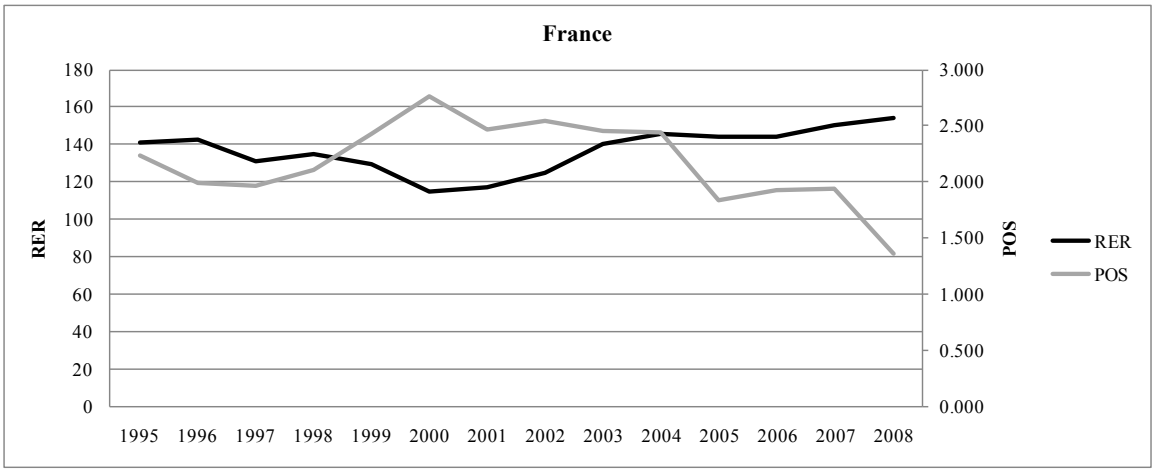
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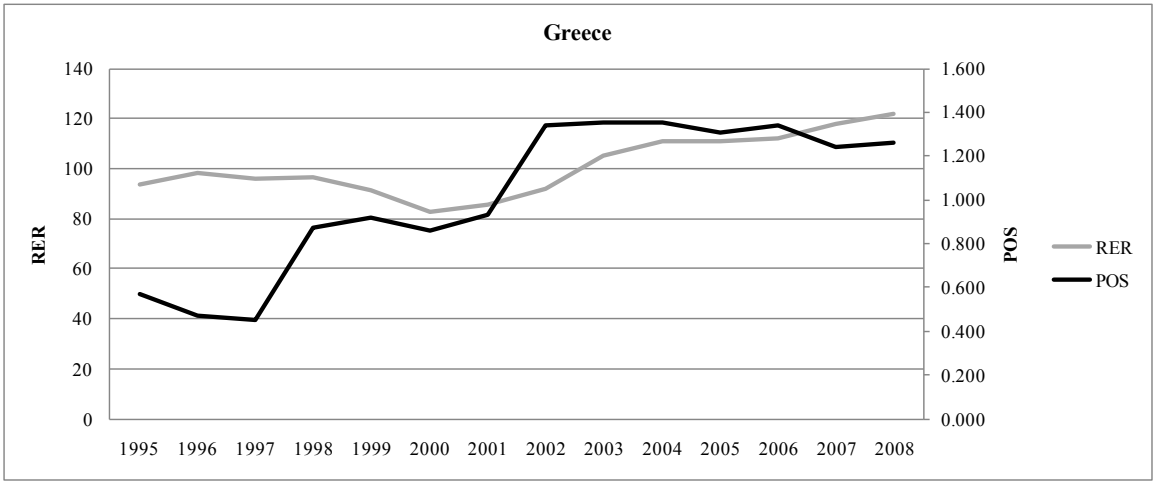
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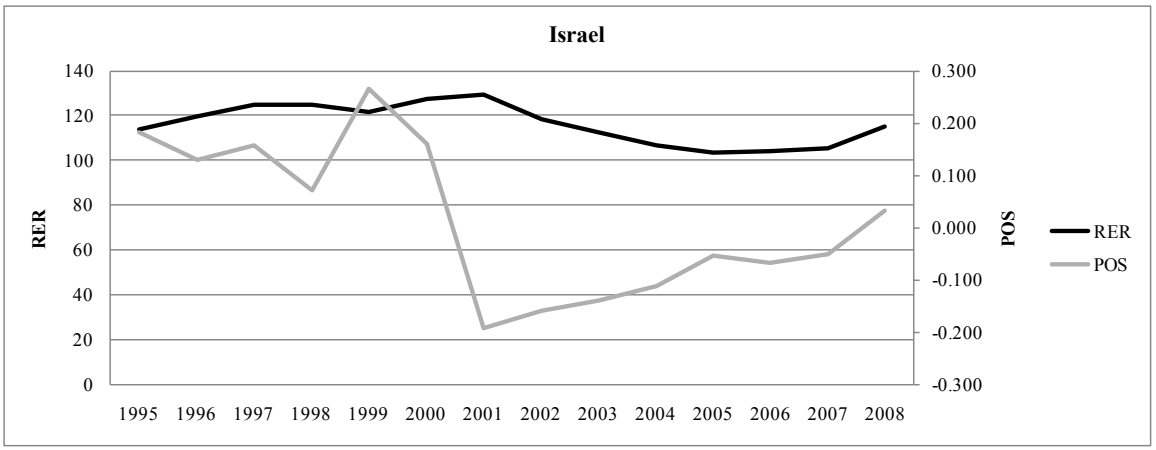
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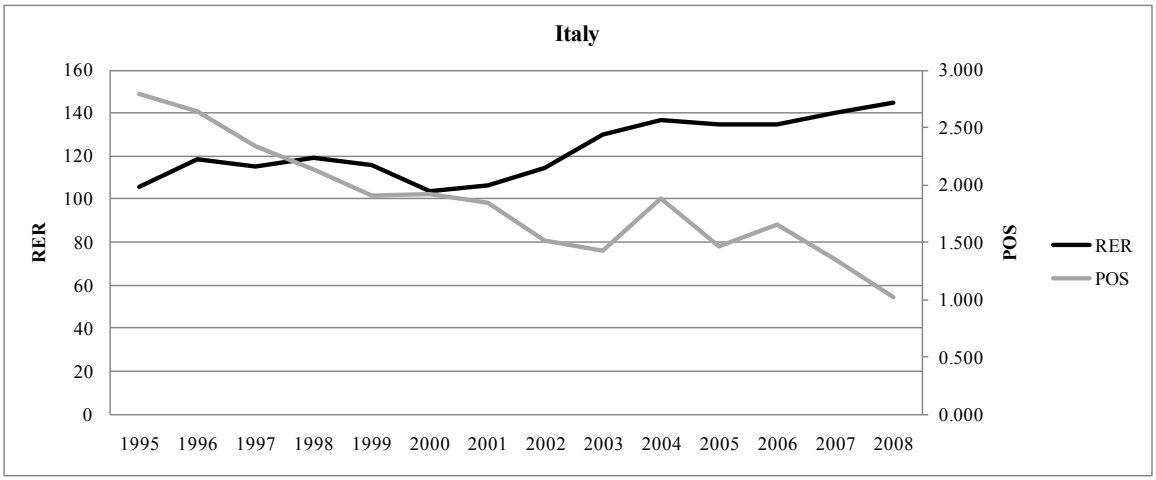
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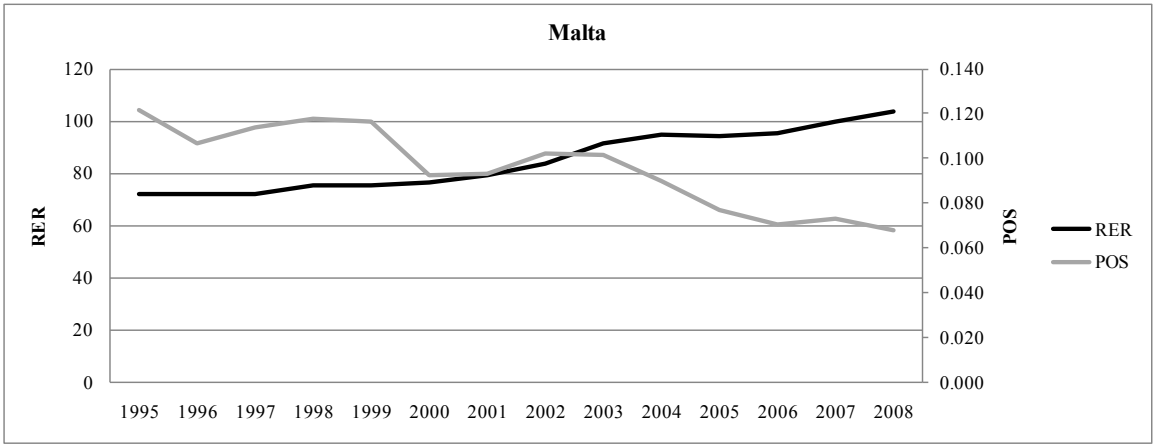
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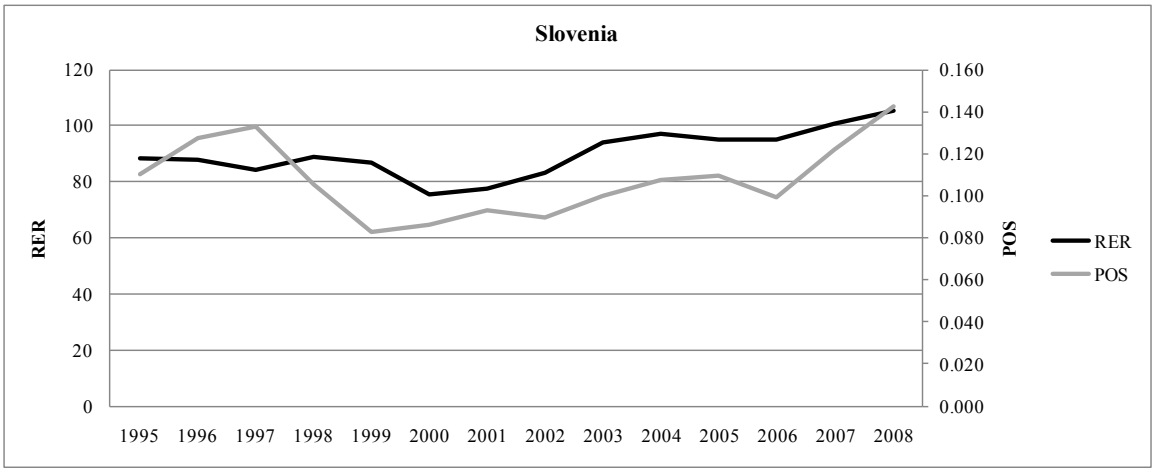
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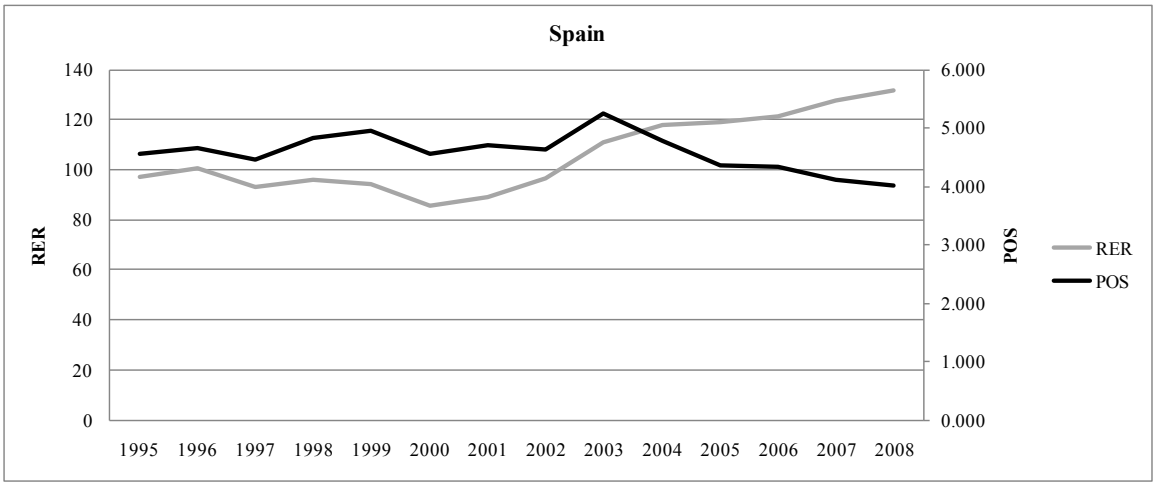
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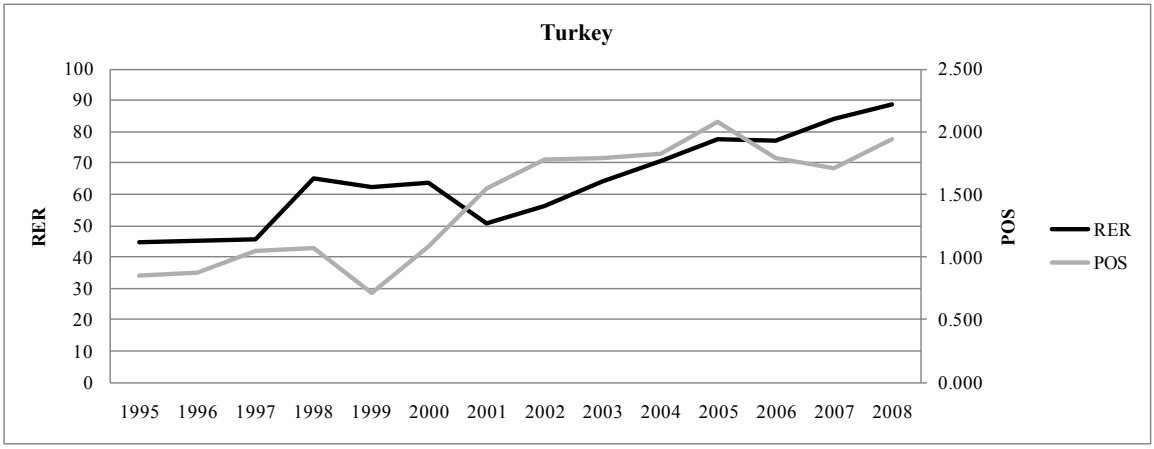

Figure 1. Tourism price competitiveness for Mediterranean countries, 1995-2008.

Appendix 2. Descriptive Statistics

Table 7. Basic Descriptive Statistics, 1995-2008

		DTS		GDPpc		RER		CHPOPM		TIRM	
Country	Obs.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Albania	14	268.58	129.18	1832.73	1057.22	43.61	11.27	11.21	3.86	59.02	54.52
Algeria	14	4.89	1.41	2401.88	1064.30	45.41	7.95	15.52	0.74	6.24	1.54
Croatia	14	432.78	99.03	7743.22	3534.55	74.55	11.92	263.95	29.22	258.59	85.93
Cyprus	14	582.08	125.79	16485.50	5639.27	107.68	12.35	674.26	49.01	567.64	72.12
Egypt	14	181.50	54.07	1288.39	270.08	42.06	7.07	21.56	5.86	15.26	4.55
France	14	69.52	4.00	30167.65	7450.37	135.31	10.79	134.42	17.21	234.83	15.41
Greece	14	158.04	38.04	17424.49	6725.16	98.62	11.07	355.65	7.52	227.24	14.59
Israel	14	89.61	32.81	19600.52	2785.53	115.30	9.81	98.63	6.42	57.08	21.81
Italy	14	71.73	10.69	25537.12	6453.35	120.37	12.62	206.73	2.97	125.92	7.55
Malta	14	597.98	165.00	12181.25	3839.08	82.14	10.71	623.01	52.05	570.58	68.72
Morocco	14	222.72	62.20	1671.14	498.34	66.37	3.96	22.95	2.23	29.82	6.04
Slovenia	14	166.04	28.62	14581.22	5532.12	87.34	9.12	95.21	6.37	117.94	20.28
Spain	14	152.62	13.48	20621.87	7209.76	102.97	13.59	198.46	21.46	220.25	7.14
Syria	14	225.08	74.91	1336.04	509.82	41.98	8.72	13.45	0.58	25.54	9.92
Tunisia	14	292.42	41.33	2531.22	601.37	58.57	2.82	131.62	5.35	104.99	5.93
Turkey	14	114.20	23.79	4996.41	2357.55	60.53	13.95	36.82	5.99	36.52	10.56

Source: Authors' calculations using Eviews 7 software.