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TOURISM AND THE ECONOMIC CRISIS IN GREECE - REGIONAL PERSPECTIVES

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Abstract - *The ongoing deep recession has largely affected the great majority of economic activities in Greece in the primary, secondary and service sector. Not surprisingly, therefore, tourism is not an exception to this pattern although any generalization should be treated with caution due to the complex character of the particular activity and the inherent asymmetries between domestic and inbound tourism. For this reason, the present paper aims at investigating the impact of the Greek economic crisis on inbound and domestic tourism flows (measured by nights spent in hotel accommodation establishments) in Greece at NUTS2 (i.e. periphery) and NUTS3 (i.e. prefecture) levels using also supportive evidence from a hotel supply point of view. Based on different spatial indexes, the paper assesses the tourism profile of each spatial unit under consideration and studies patterns of regional tourism concentration (convergence and divergence) for the period 2005-2012. Building on the results, a new geography of tourism seems to emerge in Greece where the clear losers are those regions, which had specialized predominantly in domestic tourism. From a policy perspective, this stresses the need to expedite the internationalization of the tourism profile of the regions in question to overcome the adverse effects of the economic crisis.*

Key words - TOURISM, GREECE, ECONOMIC CRISIS, NUTS2, NUTS3

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1. INTRODUCTION

Tourism is a major sector of the service economy at a world level. According to the United Nations World Tourism Organization (UNWTO) 1,087 million international tourist arrivals were recorded in 2013, accounting for 873 billion euros in tourism receipts, i.e. close to 803 euros per arrival (UNWTO, 2014). These figures refer solely to international tourism and hence do not include the significant economic impact of domestic tourism, which is admittedly, however, difficult to measure from a statistical point of view. Interestingly and in spite of all contestable methodological issues regarding the concept of the tourism multiplier (i.e. the equivalent of the Keynesian multiplier – for a related discussion *see* Stabler, Papatheodorou and Sinclair, 2010), tourism seems to account for 9% of world GDP and is responsible for one every eleven jobs when all direct, indirect, induced effects are considered (UNWTO, 2013). At a national level, Greece had 17.9 million international tourism arrivals (excluding cruise passengers), which accounted for 12.2 billion euros in 2013 (UNWTO 2014). This corresponded to 681 euros per arrival, i.e. 15.2% less than the world average. In any case, Greece has about a 1.5% share of the world tourism market and a 2.9% of the European one (SETE 2014); moreover, and when all different impacts are considered, tourism contributes by 16.4% to the Greek GDP generating 18.3% of total employment in the country (SETE 2014).

Ironically, perhaps, the importance of tourism for the Greek economy became widely acknowledged and understood by policymakers in the aftermath of the recent economic recession, which has been the severest suffered by Greece in the last fifty years. In particular, Greece has experienced six consecutive years of recession between 2008 and 2013 as a result of the austerity measures introduced to face the public debt crisis with devastating effects on the welfare of its citizens. In 2008, GDP per capita amounted to 20,795 euros while in 2013 this was reduced to 16,302 euros, i.e. a 21.6% decrease in just five years. Moreover, the unemployment rate rose from 7.6% in 2008 to 26.9% in 2013 and general government gross debt as a percentage of GDP from 112.9% in 2008 to 175.7% in 2013 (IMF 2014). All the above have naturally resulted in major discontent among Greek citizens setting the fundamentals for civil unrest unless the problem is successfully addressed the soonest possible. Inbound tourism (i.e. foreigners visiting Greece) is now treated as the potential *Deus ex Machina*, which can generate new wealth helping the country to overcome the crisis: after all, domestic tourism (i.e. Greeks visiting areas in Greece outside their usual residence) has primarily wealth redistribution effects within the country and is expected to have strongly suffered as a result of the economic crisis; while outbound tourism (i.e. Greeks visiting places abroad) has a negative impact on the current account balance and limited effects on total employment in Greece.

Yet, the majority of policymakers do not seem to realize that a sole focus on the aggregate scale of international tourism arrivals is likely to cause more problems than benefits. According to the World Economic Forum (2013) the ranking of Greece in the world tourism competitiveness index list has significantly deteriorated since the beginning of the crisis, as the country ranked 24th

in 2009 but only 32nd in 2013 out of 140 countries. Greece seems to offer a typical, non-sophisticated 4S (i.e. sea, sun, sand and sex) tourism product of low value-for-money in terms of price competitiveness (127th position) while the impact of bureaucracy on foreign direct investment is extremely negative (133rd position) as a result of lack of transparency in policymaking (118th position) and political rivalries at national and local level. Therefore, and given the overall concern about the environmental sustainability of the Greek tourism industry development (106th position), a simple reduction of labour costs and related tourism prices may have a short-term positive impact on tourism arrivals but a doubtful long-term effect on per capita tourism receipts, which is a good proxy for successful delivery of augmented service quality.

In addition, and before introducing any grandiose tourism plans, it is very important to properly assess the impact of the recent economic crisis on tourism in Greece at both national and regional levels. In fact, from a supply point of view, tourism in Greece is highly concentrated as 40% of hotel beds in 2013 (out of a total of 773,445) were located in just two areas namely the island (and NUTS2 administrative region) of Crete (166,370 beds) and the Dodecanese islands (143,864 – part of the South Aegean NUTS2 administrative region (Hellenic Chamber of Hotels 2014). This concentration is unlikely to have changed at least significantly over the last few years due to the significant time involved in building new hotels and the reluctance to close down existing ones. Nonetheless, concentration of demand in terms of inbound and domestic tourism may have been affected by the recent economic crisis for many reasons with subsequent repercussions for regional policy and future hotel supply initiatives. This paper aims at studying this important issue in further detail. In particular, section two reviews the available literature on the impact of economic crisis on tourism setting theoretical hypotheses regarding the possible evolution of inbound and domestic but also (albeit to a much lesser extent) of outbound tourism at national and regional levels. Section three reports the empirical results of the study, which puts the emphasis on the evolution of bed-nights spent by foreigners and Greek tourists in hotel accommodation establishments at national, NUTS2 and NUTS3 level between 2005 (i.e. shortly before the crisis) and 2012 (i.e. the last year of available data to date). Finally, section four summarises and concludes, acknowledging limitations and making suggestions for future research.

2. LITERATURE REVIEW AND HYPOTHESES AT ISSUE

The literature review is structured into two parts. The first discusses the impact of an economic crisis on tourism (with a very clear emphasis on leisure activities) while the second focuses on potential implications for Greek tourism, making a number of research hypotheses which are subsequently explored empirically.

2.1. Tourism and Economic Crisis – A Generic Approach

An economic crisis may affect tourism as a result of both economic and non-economic factors (Goh 2012). Using a traditional microeconomics approach, an economic crisis is expected to affect tourism as a result of changes in income

and prices. More specifically, an economic crisis has a recessionary effect on the economy leading to the reduction of GDP as well as of disposable income at a household level. Interestingly perhaps, in a world of rational, forward-looking individuals with perfect information, such a crisis should not affect tourism consumption: this is because the latter is not a function of current income but of permanent one as outlined by Modigliani and Brumberg (1954) and Friedman (1957) in their related theory. In essence, any adverse impacts caused by economic crises have already been discounted and incorporated into the consumption pattern of tourism and any other goods, as this depends on the income made by an individual throughout their entire life cycle. In reality, however, nobody has perfect information as the future is unknown and characterised by stochastic disturbances: moreover, the very idea of rationality of economic agents has been challenged long time ago; at best individual behaviour may be characterised by bounded rationality, where behaviour is intentionally rational but up to a certain extent only (Simon 1961). Consequently, tourism demand is expected to be largely affected not by permanent but by current income as argued by Keynes (1936) in his *ad hoc* yet powerful macroeconomic consumption function.

Having the above in mind, it may be consistently assumed that an economic crisis may have two major effects on tourism consumption as a result of a reduction in current income. The first is related to a cutback decision, i.e. individuals keep travelling to the same tourism destination and/or enjoying the same holiday characteristics in terms of accommodation, catering, etc. albeit to a lesser degree compared to the period before the crisis (Eugenio-Martin and Campos-Soria 2014, Page et al 2012, Smeral 2009). For example, instead of holidaying over a period of two weeks, people may now decide to travel away only for ten days. The second effect emerges as a result of substitution due to the income elasticity mechanism. Although tourism is generally regarded as an income elastic service, when different destinations and services are considered then the concept of inferiority (which is related to goods and services whose consumption increases when income falls) may become valid (Stabler et al 2010). In particular, an income reduction is expected to negatively affect relatively luxurious tourism destinations and/or services (e.g. a five star hotel) due their high income elasticity and positively destinations of low sophistication and/or tourism services of basic standards. Worryingly perhaps, and in case the Environmental Kuznets Curve hypothesis is valid, then consumers are also likely to move away from the consumption of more expensive, "green" tourism services favouring cheaper alternative activities and service providers who do not internalise the negative production externalities of tourism (Papatheodorou et al. 2010), thus leading to an environmental "race to the bottom" (Stabler et al 2010). Admittedly, the reality is even more complex as income elasticities are not constant over time but are usually asymmetrically affected by the business cycle because "the relative fall in tourism demand during a severe economic downturn –reflecting, as it does, the greater threat to a person's financial situation and job security– will be steeper than the relative increase in demand during an economic upturn of a similar magnitude" (Smeral 2010: 37).

In any case, however, the impact of income elasticity is likely to have important spatial connotations affecting among others the relation between outbound and domestic tourism. In particular, under the blanket assumption that outbound tourism is usually more income elastic than domestic tourism, an economic crisis is likely to make individuals switch away from international travel to the benefit of domestic destinations. As discussed by Sheldon and Dwyer (2010), this may have positive implications for the domestic tourism industry in terms of both employment and income. Domestic tourism is not an important generator of new income but predominantly contributes to the redistribution of income at a country level possibly to the benefit of remote regions with tourism interest as is the case of the Aegean islands in Greece. In periods of serious recession, however, domestic tourism is largely associated with a rise in VFR (Visiting Friends and Relatives) flows: therefore, people who previously travelled abroad on holidays now decide not only to stay at their home country but even to go to a relative's or friend's second/holiday house to avoid spending money on tourism accommodation and restaurants. In such a case, an economic crisis may negatively affect outbound tourism without benefiting (at least to a major extent) tourism providers at a domestic level. Moreover, the above is also a matter of spatial scale: travelling domestically in Luxembourg is a very different thing from travelling domestically in France due to a sheer difference in the size of the two countries. Similarly travelling abroad but within the European Union may be more expensive for the inhabitants of the Eastern Aegean Sea Islands who can visit Turkey (i.e. travelling outside European Union) simply by crossing the sea with a ferry, i.e. the role of border regions should be also somehow considered; whereas the very remoteness of the Canary Islands may explain to a large extent (in addition to the good climate) why people there may prefer to stay at home during their holidays.

In addition to the impact of an economic crisis on tourism as a result of changes in income, it is also important to consider the possible effect of changes in prices. In a neo-classical economic context, prices of goods and services as well as the remuneration rates of all factors of production is characterised by upward and downward flexibility. Hence, a decrease in tourism demand as a result of a reduction in income may also lead to a reduction in prices as tourism service providers try to stay competitive in the marketplace incentivising consumers accordingly (Ritchie et al 2010). Such a reduction in prices may prove financially sustainable provided that input production costs (especially wages) also decrease as a result of the recession. As a result of the above, real income (i.e. in terms of purchasing power) increases and the negative effects of the initial fall in nominal income on tourism demand are somewhat mitigated. Ironically perhaps, domestic tourism may now become more expensive as the substitution away from outbound tourism may put an upward pressure on local tourism prices; nonetheless, to the extent that the economic crisis is serious enough and the VFR tourism flow proves substantial such an effect is not likely to materialize.

In any case, the very assumption behind the flexibility characterising the price mechanism is the existence of competitive markets. Nonetheless, in the

case of imperfect competition the outcome may be different (Stabler et al 2010). More specifically, in good economic times powerful oligopolies may acquire supernormal profits by potentially abusing their position in the market due to a relaxed consumer mentality. Subsequently, these profits may be used to sustain the operations of these companies in a recessionary period without reverting to a price reduction. In fact, if the oligopolists expect that the economic crisis will be only of transitory nature, they may prefer to keep their prices constant instead of reducing them as it may prove too difficult to raise them again when the crisis is over as a result of potential customer discontent. This neo-Keynesian argument (Campell and Mankiw 1991) may explain price stability in the tourism sector even in a period of crisis. As argued by Papatheodorou (2004), tourism is characterised by a notable dualism in its market structure as large transnational conglomerates in transport, accommodation and tour operations co-exist with small traditional firms. While the latter belong to the competitive fringe and may decide to cut significantly their prices in a period of economic crisis, this may not be the case with transnational companies, which may decide to keep their prices constant, at least for a while, supported by their strong brand name in the market. Of course, if an economic crisis is no longer regarded as transitory but as permanent, then it is expected that all tourism service providers, including the large oligopolists, will respond accordingly.

The last argument highlights the very important role of expectations in shaping the behaviour of both tourism consumers and producers in a period of economic crisis. If people become pessimist about the future fearing that they may lose their job as a result of the recession then the end effect on tourism consumption may be far greater than what would be predicted by the current reduction in income [as discussed previously in Smeral (2010) but also in Alegre et al. (2013)]: in that case, price reductions are expected to have only a limited effect and people may switch towards the consumption of other goods and services altogether (Sheldon and Dwyer 2010). Of course not all consumers react in the same way as tourism behaviour is characterised by substantial heterogeneity (Nicolau and Masiero 2013). Moreover, the very fact that people have experienced rising incomes over an extended period of time, makes it difficult to predict the exact impact of an economic crisis on their consumer behaviour (Bronner and Hoog 2012) as both under-reaction (due to emotional denial of the new situation) and over-reaction (due to exaggerated fear) may emerge.

This consumer pessimism may also be reflected in reduced business confidence among tourism service providers who then decide to avoid any new investments in the sector with potentially detrimental effects on service quality as a result of the gradual degradation in the existing tourism infrastructure. Still, an economic crisis may also have a positive impact. Using a Schumpeterian argument, Papatheodorou et al (2010) argue that an economic crisis makes inefficient firms exit the market while at the same time it may provide the remaining tourism companies with the necessary time to undertake deep organizational restructuring due to low opportunity costs. Such a restructuring may set the fundamentals for increased efficiency in the future and hence assist tourism enterprises in exiting the crisis. The very assumption behind this argument,

however, is that the crisis will not last too long to deny any financial opportunity for restructuring altogether.

In conclusion, the implications of an economic crisis for tourism may be largely explained via the effects triggered by changes in income and prices. Still, these are by no means easy to predict while it is important in any case to consider the specificities of the market suffering from an economic crisis, as now discussed in the next sub-section of the paper.

2.2. Tourism and Economic Crisis – The Case of Greece

The economic crisis has largely affected Greek tourism as also discussed in the introduction of this paper. In the following, the possible implications are studied at two different levels, namely inbound and domestic tourism with reference also to outbound tourism.

Based on the analysis of the previous sub-section, and by making the very realistic assumption that the global economic crisis has affected Greece to a much larger extent than the tourism origin countries in Northern Europe but also elsewhere in the world, it is expected that Greek inbound tourism may be positively affected. This is because Greek tourism service providers may reduce their prices to gain competitiveness, while North Europeans may also switch away from long-haul sunlust destinations to the benefit of those in the vicinity, i.e. in the Mediterranean Region.

On the other hand, however, and while the international literature suggests that a crisis in a tourism destination may not have a negative effect in inbound tourism arrivals (Prideaux 1999) the very crisis in Greece has created very bad publicity for the country essentially destroying any good brand name achieved in the aftermath of the 2004 Olympic Games. As a result, increased perceived country uncertainty may discourage visitation leading to reduction of inbound tourism due to its inherent risk-aversion (Araña and León 2008). A fortiori, the economic crisis results in a decrease of demand for business tourism as the level of economic activity lowers. The latter may also result in a loss of scale economies, market exit and eventual monopolization of certain tourism and other services. Illustratively, back in 2008 (i.e. before the recession), the Athens – Chios (i.e. a Greek island off the Turkish Aegean coast in the area of Izmir) air route was serviced by three competing carriers, namely Olympic Airlines, Aegean Airlines and Athens Airways. This active competition had resulted in low prices and a relatively high level of service quality. Nonetheless, shortly after the recession started Athens Airways went bankrupt while later on Aegean Airlines pulled out of the market; moreover, in October 2013 Aegean was given the green light by the European Commission to acquire Olympic (which was facing very severe financial problems as a result of the crisis) leading to the creation of a monopoly in the majority of domestic routes in Greece with possibly negative repercussions on prices and quality.

All the above may then be taken advantage by international tour operators who may put great pressure on Greek tourism service providers to accept sub-

stantially reduced prices if they are to remain on the tourism map. If Greek tourism service providers succumb to this pressure, then inbound tourism is likely to rise from an arrivals perspective although the end result on tourism receipts may be difficult to predict. On these grounds, the following research hypothesis may be stated:

Hypothesis 1: As a result of the economic crisis, inbound tourism arrivals are expected to increase but related tourism receipts may decrease at least when considered at a per capita level.

Moreover, no clear classification into luxury and income-inferior tourism destinations can be made in Greece, at least when considering NUTS 2 and NUTS 3 levels of analysis. Consequently, the economic crisis is not expected to have resulted in a substantial change of the existing spatial pattern of inbound tourism. Hence, it is reasonable to make the following hypothesis:

Hypothesis 2: The economic crisis is not expected to have affected the existing pattern of inbound tourism spatial concentration at NUTS 2 and NUTS 3 levels.

As for domestic tourism in Greece, this may be positively affected by the economic crisis as a result of people switching away from the consumption of more expensive outbound tourism activities. Still, it is important to note that the nature of domestic tourism in Greece is very different from the one of outbound: the former is mainly related to sunlust, while the latter to wanderlust activities (i.e. primarily related to city-breaks for cultural and shopping tourism purposes). Hence, any expected substitution will be rather limited.

Moreover, the extent of economic crisis in Greece has led to the emergence of the 'staycation' phenomenon (as elsewhere in Europe too), where people prefer to spend their annual leave from work at home, i.e. not going away on holidays, in order to save money. In addition to the above, the impact of VFR tourism flows should be considered as Greeks who previously spent money staying in local tourism accommodation establishments (usually at much higher prices compared to those paid by foreign tourists as part of an inclusive package), now prefer to holiday as guests of their friends and relatives. Finally, domestic tourism is likely to have suffered as a result of the reduction in economic activity and business tourism. In fact, Greeks who usually stay in tourism accommodation establishments outside the high season are usually those engaged in business tourism activities such as industrial visits. Therefore, and given also that no clear classification into luxury and income-inferior tourism destinations can be made in Greece at least when considering NUTS 2 and NUTS 3 levels of analysis, the following hypotheses can be made:

Hypothesis 3: The economic crisis is expected to have negatively affected domestic tourism

Hypothesis 4: The economic crisis is not expected to have affected the existing pattern of domestic tourism spatial concentration at NUTS 2 and NUTS 3 levels.

As a final remark, it is important to note that inbound and domestic tourism in Greece show different patterns of spatial distribution. Leisure tourism in Greece is dispersed throughout the country with some emphasis on the islands while business tourism is expectedly located in the two main urban centres of Athens (part of the Region of Attiki at NUTS 2 and the Prefecture of Attiki at NUTS 3 levels) and Thessaloniki (part of the Region of Central Macedonia at NUTS 2 and the Prefecture of Thessaloniki at NUTS 3 level). On the other hand, inbound tourism (which is clearly of leisure nature) is predominantly concentrated on the Region of Crete (which has four prefectures at NUTS 3 level) and the Region of South Aegean (which has two prefectures at NUTS 3 level). As a result, the concentration of internal tourism (i.e. inbound + domestic) is less acute compared to inbound tourism. Nonetheless, as a result of the economic crisis, domestic tourism in both Athens and Thessaloniki is expected to have suffered considerably. Hence the final hypothesis to be made is as follows:

Hypothesis 5: The economic crisis is expected to have positively affected the existing pattern of internal tourism spatial concentration at NUTS 2 and NUTS 3 levels.

3. METHODOLOGY AND EMPIRICAL RESULTS

In the following, the validity of the above discussed research hypotheses is assessed diagrammatically based on secondary data analysis. First, the evolution of inbound tourism at a national scale between 2005 and 2013 is assessed using data collected from the UNWTO, the IMF and the Bank of Greece. This is complemented by an analysis of key features in hotel supply. Subsequently, the evolution of nights spent by inbound, domestic and all internal tourists in hotel accommodation establishments between 2005 and 2012 at NUTS2 level (13 regions) is analysed using data collected from the Hellenic Statistical Authority. Nights spent by domestic tourists in hotel accommodation establishments cannot capture the substantial effect of VFR flows but is the best possible proxy to somehow measure domestic tourism. Finally, the evolution of the concentration pattern exhibited by inbound, domestic and total internal nights spent in hotel accommodation establishments between 2005 and 2012 at both NUTS 2 and NUTS 3 levels (51 prefectures) is discussed based on calculations of the Gini coefficient: this ranges between zero and one, taking the former value in case of an equal distribution and the latter in case of total polarization. A similar analysis is also undertaken at NUTS2 level for the available hotel supply to provide an integrated approach and hence enhance the understanding of developments in tourism demand.

3.1. Analysis at National Level

Graph 1 shows the evolution of five different time series with respect to inbound tourism in Greece over the period 2005-2013 namely arrivals, nominal receipts, per capita receipts (i.e. nominal receipts divided by arrivals), real receipts (i.e. deflated nominal receipts) and real per capita receipts (i.e. real receipts divided by arrivals). It is evident from the graph that while arrivals (14.7 million in 2005 as compared to 17.9 million in 2013) and nominal receipts (13.7

billion USD in 2005 as compared to 15.9 billion USD in 2013) have risen over time, this is not the case of the other three series, which are of crucial importance when strategic sustainability issues are also considered. Illustratively, real per capita receipts fell from 929.9 USD in 2005 to 745.6 USD in 2013 in constant 2005 prices, i.e. a reduction of 19.8%! Thus, it seems that Hypothesis 1 is empirically validated, at least diagrammatically.

Graph 1. Inbound Tourism in Greece, 2005-2013
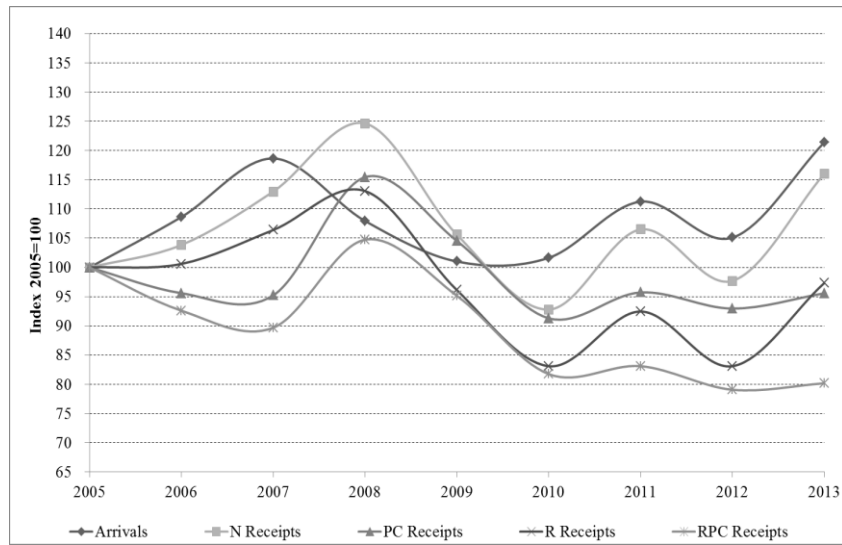
Source: UNWTO, IMF, Bank of Greece - compiled by the authors.

Graph 2. Operating Hotel Beds in Greece, 2006-2012
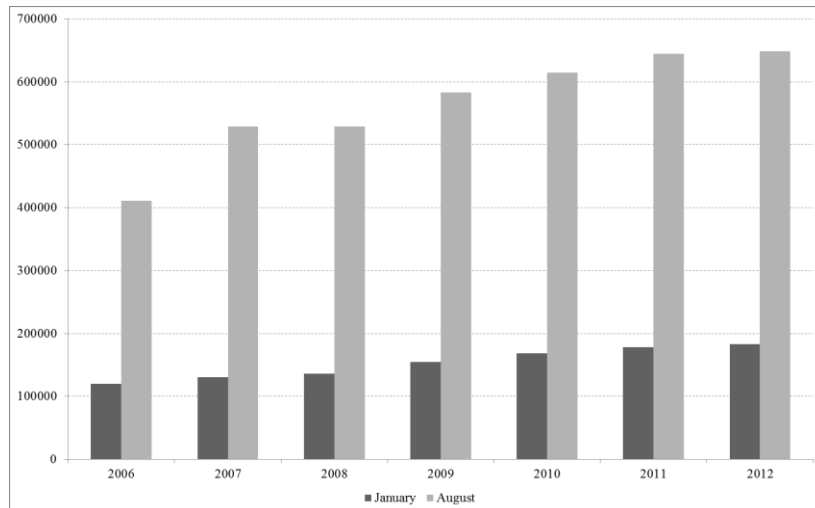
Source: Hellenic Statistical Authority - compiled by the authors.

Graph 2 shows the evolution of hotel beds available for sale (i.e. in operation) over the period 2006 – 2012 in January and August. Because of the seasonality characterizing the Greek tourism product, studying bed availability in both the off-peak and the peak period is justified. As expected, bed availability in August is much higher than in January with the related ratio ranging between 3.41 and 4.05 over the period examined. In both months, there is a clear increasing trend which levels off in 2012. One could possibly argue that there is still an increase in capacity well after the economic crisis has started. This is because a building process has been probably under development well before the financial crisis emerged; therefore the completion of the investment might have taken place in either 2011 or 2012. In any case, SETE has often argued against the pathology of overcapacity characterizing the Greek hotel accommodation market. This is also consistent with the negative trend exhibited by real per capita tourism receipts as discussed earlier.

Table 1. Hotel Supply in Greece, 2013

|	5*	4*	3*	2*	1*	Total
Units 2013	361	1277	2358	4203	1478	9677
% Units 2013	3,73	13,20	24,37	43,43	15,27	100,00
Rooms 2013	57878	100289	95674	119157	28334	401332
% Rooms 2013	14,42	24,99	23,84	29,69	7,06	100,00
% Rooms 2009	11,60	25,30	23,60	31,80	7,70	100,00
Beds 2013	117555	194010	183722	223932	54226	773445
% Beds 2013	15,20	25,08	23,75	28,95	7,01	100,00
Beds/Unit 2013	325,64	151,93	77,91	53,28	36,69	79,93
% 1-20 Rooms 2013	12,20	34,80	37,60	42,80	65,40	42,80
% 21-50 Rooms 2013	13,00	24,10	35,50	45,90	32,70	37,30
% 51-100 Rooms 2013	15,50	15,30	19,90	10,30	1,70	12,20
% Over 101 Rooms 2013	59,30	25,80	7,00	1,00	0,10	7,80
% Seasonal 2013	48,50	48,70	44,90	59,40	56,60	53,60
% All-Year Round 2013	51,50	51,30	55,10	40,60	43,40	46,40
RevPAR Aug 2013	176,06	114,33	68,11	55,99	46,57	102,16
RevPAR Aug 2011	156,90	107,42	69,99	62,67	48,51	100,16
Employees / Room Aug 2013	0,62	0,38	0,25	0,18	0,12	0,36

Source: Hellenic Chamber of Hotels (2014).

Table 1 presents some key statistics regarding hotel supply in Greece in 2013; comparison with previous years is also made in several cases. In particular, the total number of hotel units in Greece amounted to 9,677 in 2013 – almost half of them (i.e. 43.43%) belonged to the 2* category confirming the widespread perception that the majority of Greek hotels aim primarily at the price-conscious budget traveller who is likely to have been adversely affected by the financial crisis. This is consistent with the reduction of Revenue Per Available Room (RevPAR) in the case of 1*, 2* and 3* hotels between 2011 and 2013; illustratively, for 2* hotels this reduction was close to 10.6%, i.e. from 62.67 down to 55.99 euros. Quite different is the case of upmarket hotels. Although 5* hotels represent a tiny part of the overall number of hotel units (3.73%), their share in the number of rooms and beds is much higher, i.e. in the

area of 15%, as 59.30% of them have over 101 rooms. In fact, a typical 5* hotel has 8.8 times the beds of a 1* hotel, i.e. 325.64 vis-à-vis 36.69. Interestingly, the share of 5* hotels in the total number of available rooms increased between 2013 and 2009, i.e. to 14.42% from 11.60%: moreover, and given that the RevPAR for 5* and 4* hotels increased between 2011 and 2013 by 12.21% and 6.4% respectively raises hope that the decline of real per capita international tourist receipts shown in Graph 1 will be eventually reversed. To support the above it should be also noted that the majority of 5* hotels operate all-year round sustaining employment 5.1 times more than 1* hotels, which are usually very small, family-owned businesses facing substantial financial problems as a result of the recent crisis.

3.2. Analysis at Regional Level

Map 1 presents the thirteen (13) administrative regions of Greece at NUTS2 level. The Region of Attica and the Region of Central Macedonia are character-ized by the existence of large urban centres, namely Athens and Thessaloniki respectively. Both cities have a large number of hotels to cater primarily for domestic business tourism. Likewise, the Region of Crete and the Region of South Aegean are very popular among inbound tourists and many hotels in these regions operate solely on a seasonal basis.

Map 1. Administrative Regions of Greece
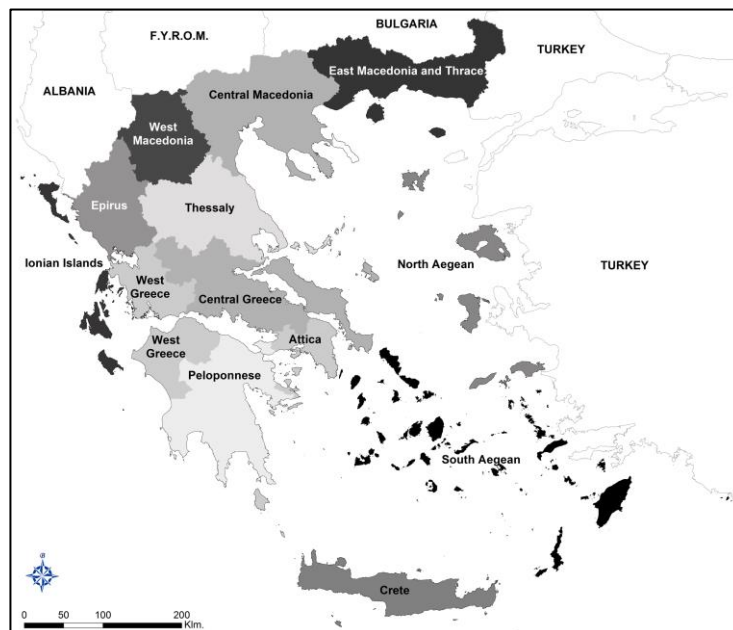
Graph 3 shows the evolution of domestic hotel nights at NUTS2 level over the period 2005-2012. This clearly reflects the impact of the economic crisis. There is a peak in 2009 followed by a sudden and substantial decrease since then which continues up to 2012. The decrease in the number of nights is on

average 30% when comparing 2012 to 2009. As expected Attica and Central Macedonia dominate the picture, but the Ionian Islands seem to be the region most severely affected by the crisis in relative terms experiencing an almost 40% decrease in the nights spent by domestic tourists. Having the above in mind, Hypothesis 3 is largely validated.

Building on Graph 2, Graph 4 shows the evolution of hotel supply (i.e. available beds for sale) in January over the period 2005-2012. Given that January is very representative of the off-peak season, studying the evolution of hotel supply during that month provides a good proxy of the hotel supply available primarily for domestic tourists. As expected and similarly to Graph 3, Attica and Central Macedonia dominate the picture. Nonetheless, and in contrast with Graph 3, supply shows an upward trend in all regions throughout the period (which somewhat stabilizes between 2011 and 2012) possibly due to construction inertia and lag effects discussed earlier in Graph 2. As a result, hotel occupancy rates have decreased to the detriment of profitability in an era of severe financial crisis. Illustratively, occupancy rate in Attica (Central Macedonia) was 27.9% (24.4%) in January 2009 and 23.4% (21.7%) in January 2012.

Graph 5 shows the evolution in the number of inbound hotel nights at NUTS 2 level between 2005 and 2012. This exhibits an upward trend up to 2011 especially in the regions of Crete and South Aegean, which are very popular with inbound tourists due to their exceptional sunlust product – on the other hand, 2012 was associated with a reduction in the majority of the regions with the exception of Central Macedonia. Stability characterizes the pattern of the Ionian Islands; the region of Attica, on the other hand, had been severely affected by the negative publicity as a result of the civil unrest and violence in the streets which is reflected into the number of hotel nights that decreases constantly since 2008. Graph 6 shows the evolution of internal (i.e. domestic + inbound) hotel nights at NUTS 2 level over the period 2005 - 2012. The regions of Crete and South Aegean account for over 40% of total nights spent in Greece. The region of South Aegean and Attica are the ones recording the most severe decrease in the nights spent over the period under consideration.

Graph 7 shows the evolution of hotel supply (i.e. available beds for sale) in August over the period 2005 – 2012. Given that August represents the peak season par excellence, studying the evolution of hotel supply during that month provides a good proxy of the hotel supply available to both domestic and inbound tourists. Because of the seasonal nature of the tourism product and the great weight of inbound tourism in the internal market, Crete and South Aegean dominate the picture followed by the Ionian Islands, Central Macedonia (where in addition to Thessaloniki, tourists visit the very popular area of Halkidiki) and Attica. In the majority of regions, hotel supply exhibits an upward trend, although in the case of Attica, a plateau seems to have been reached since 2009. Yet, the substantial reduction of total nights in 2012 has caused a dramatic reduction in occupancy rates at least in the main metropolitan region. Illustratively, occupancy in Attica was 48.5% in August 2009 but only 40.8% in August 2012! Similarly, occupancy in Crete (South Aegean) was 83.2% (84.7%) in August 2009 and 82.7% (78.8%) in August 2012.

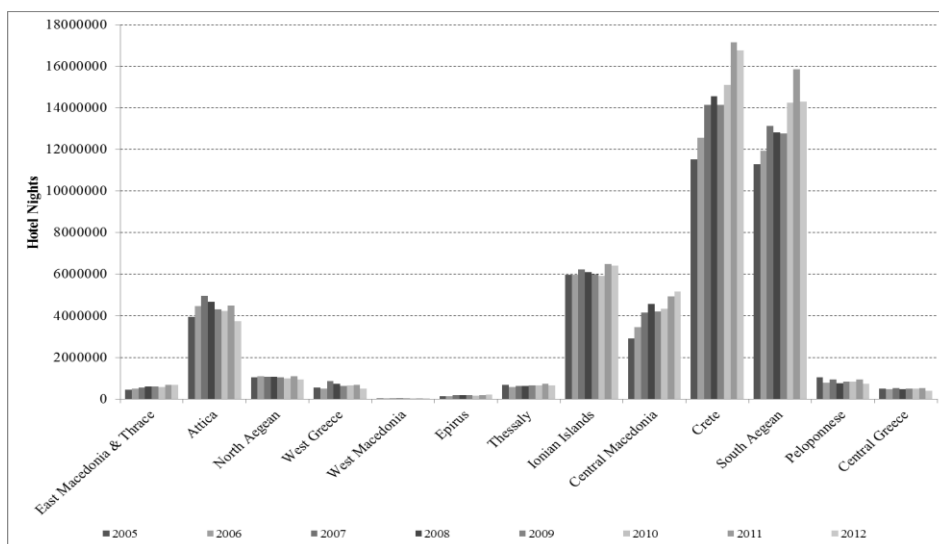**Graph 3. Domestic Hotel Nights in Greek Regions, 2005-2012**
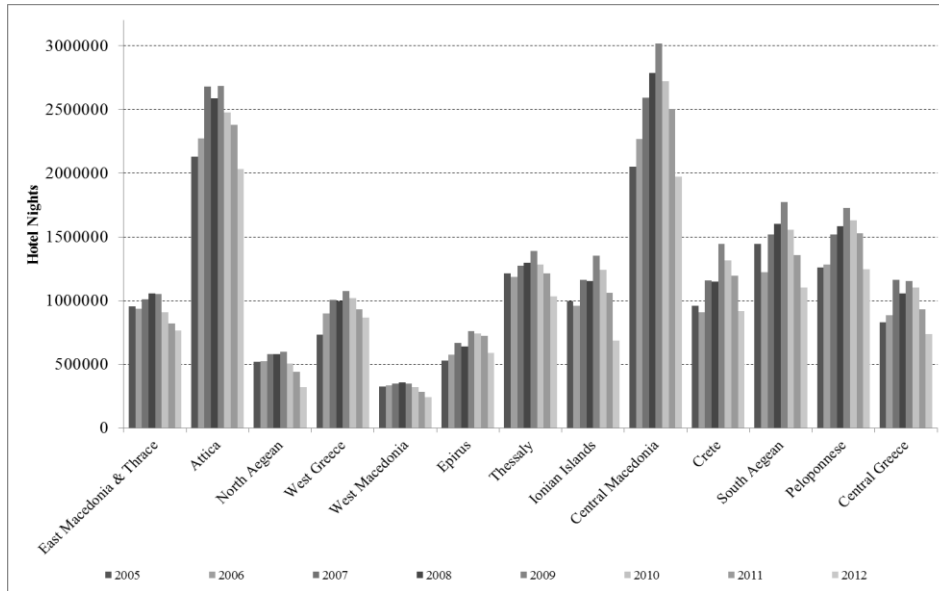
Source: Hellenic Statistical Authority - compiled by the authors.

Graph 4. Hotel Supply in Greek Regions, 2005-2012 (January)
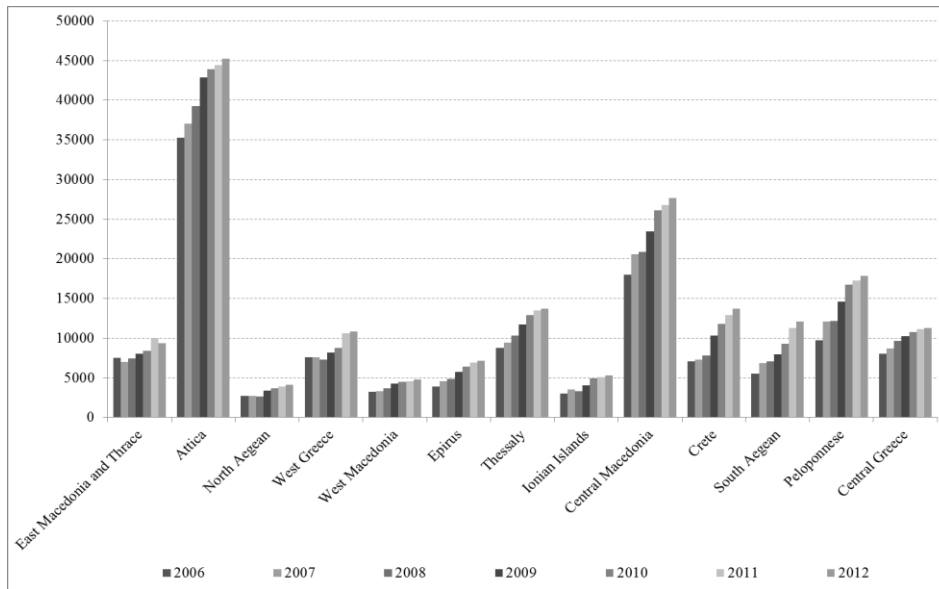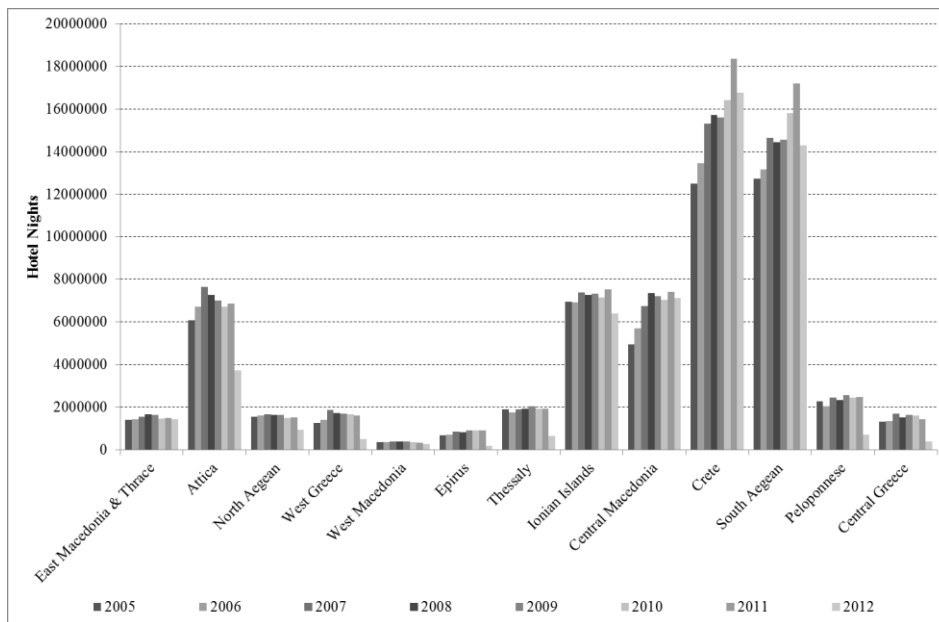

Source: Hellenic Statistical Authority - compiled by the authors.

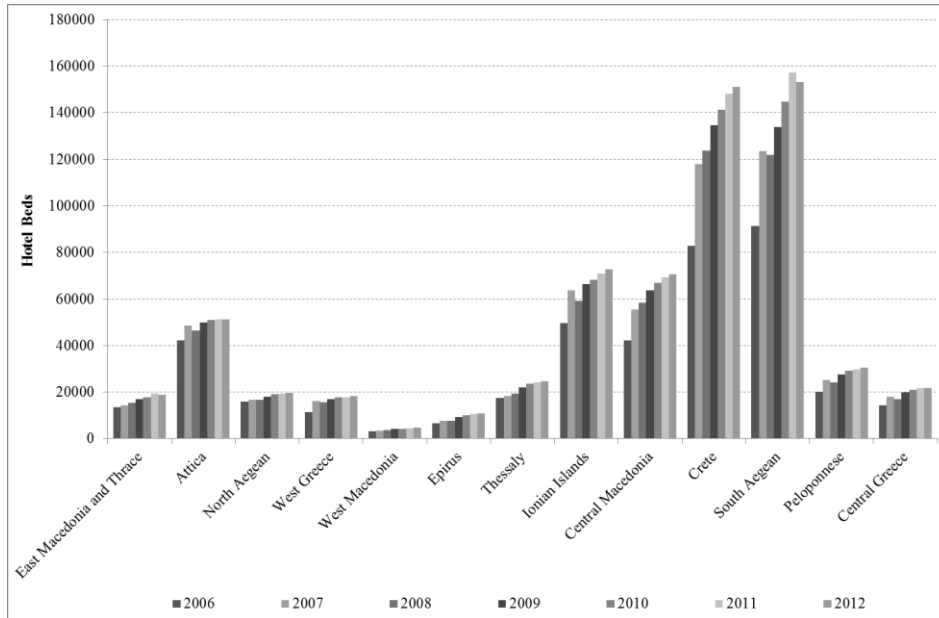**Graph 5. Inbound Hotel Nights in Greek Regions, 2005-2012**

Source: Hellenic Statistical Authority - compiled by the authors.

Graph 6. Internal Hotel Nights in Greek Regions, 2005-2012

Source: Hellenic Statistical Authority - compiled by the authors.

Graph 7. Hotel Supply in Greek Regions, 2005-2012 (August)

Source: Hellenic Statistical Authority - compiled by the authors.

3.3. Spatial Concentration Analysis

To further highlight the evolution of tourist flows and hotel supply, a spatial concentration analysis has been undertaken based on the Gini coefficient. In fact, the economic geography literature has considered alternative indexes to measure spatial concentration traffic flows, such as the coefficient of variation, the Gini index, the Herfindahl − Hirschman Index (HHI) and Theil's entropy measure (Curry and George 1983, Frenken 2007, Novotný 2007, Papatheodorou and Arvanitis 2009). The main advantage of the Gini coefficient is that it does not require the existence of a homogeneous (product and/or geography-wise) market (as is the case with the HHI for example), hence it may be applied in a rather universal context. Based on Papatheodorou and Arvanitis (2009), the Gini index in this paper is defined as:

$$G = \left| 1 - \sum_{i=1}^{N} (\sigma X_i - \sigma X_{i-1})(\sigma Y_i + \sigma Y_{i-1}) \right| \tag{1}$$

where *N* is the number of administrative regions under consideration (i.e. 13 at NUTS2 and 51 at NUTS3 level), σX is the cumulative percentage of the number of regions considered each time and σY is the cumulative tourist (or hotel supply) market share of regions appearing in descending order. The coefficient takes values between zero (when absolute equality occurs) and one (in the context of the most unequal distribution). Moreover, in the present case is constant

and equal to 1/N, taking values 1/13=7.69% for NUTS2 and 1/51=1.96% for NUTS3 regions. Consequently, equation (1) reduces to:

$$G = \left| 1 - \frac{1}{N} \sum_{i=1}^{N} (\sigma Y_i + \sigma Y_{i-1}) \right|$$

(2)

Having the above in mind, Graph 8 shows the evolution of the Gini coefficient for hotel nights at NUTS2 level over the period 2005-2012. Domestic nights (domhot) concentration is far less than inbound (inthot); both, however, exhibit limited fluctuation over time. On the other hand, internal (tothot) lies in between of the two but exhibits a clearly upward trend over the last few years. Graph 9 shows similar results at NUTS3 level, although the upward trend for internal concentration is in this case less pronounced. As a result, it seems that both graphs validate Hypotheses 2, 4 and 5.

Moreover, Graph 10 shows the evolution of the Gini coefficient for hotel supply in January and August at NUTS2 level over the period 2005-2012. Changes in both cases are minimal albeit of different direction. In particular, concentration in January is modest and somewhat downward sloping possibly because of the reduction in occupancy rates experienced by Attica, the dominant region in January. This very reduction may also explain the upward trend in August as the balancing effect of Attica over the dominance of Crete and South Aegean has decreased as a result of the crisis.
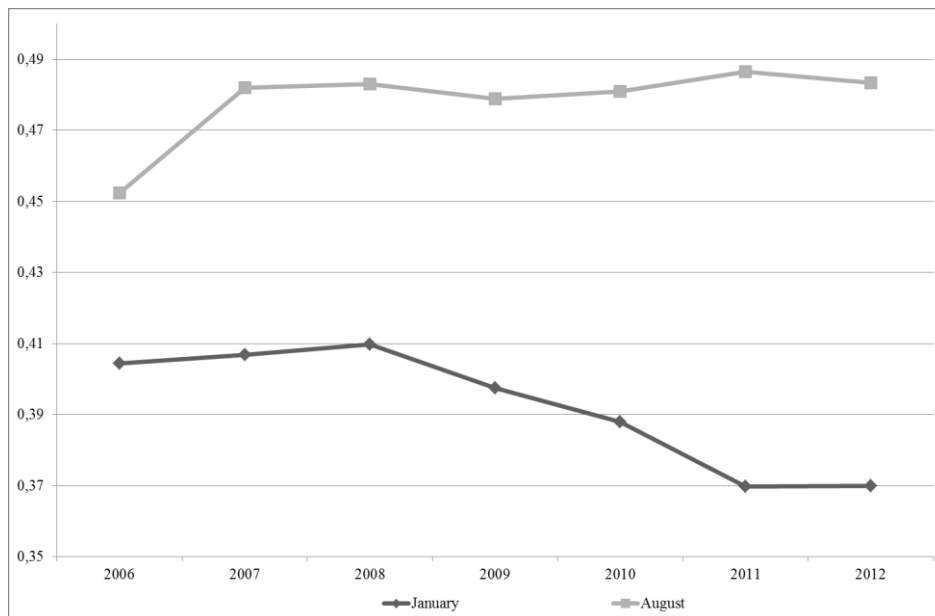
Graph 8. Gini Coefficient for Hotel Nights at NUTS2 Level, 2005-2012
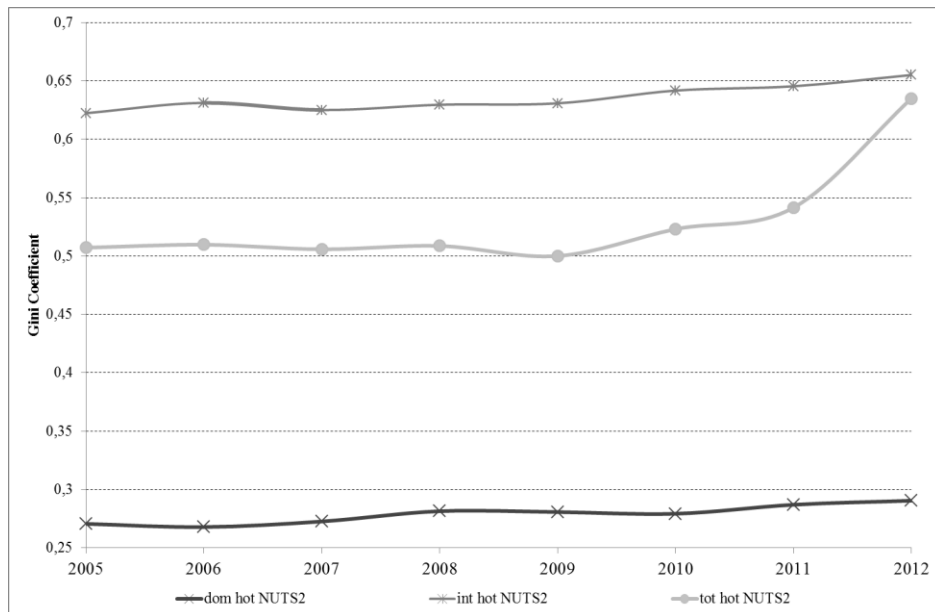
Graph 9. Gini Coefficient for Hotel Nights at NUTS3 Level, 2005-2012
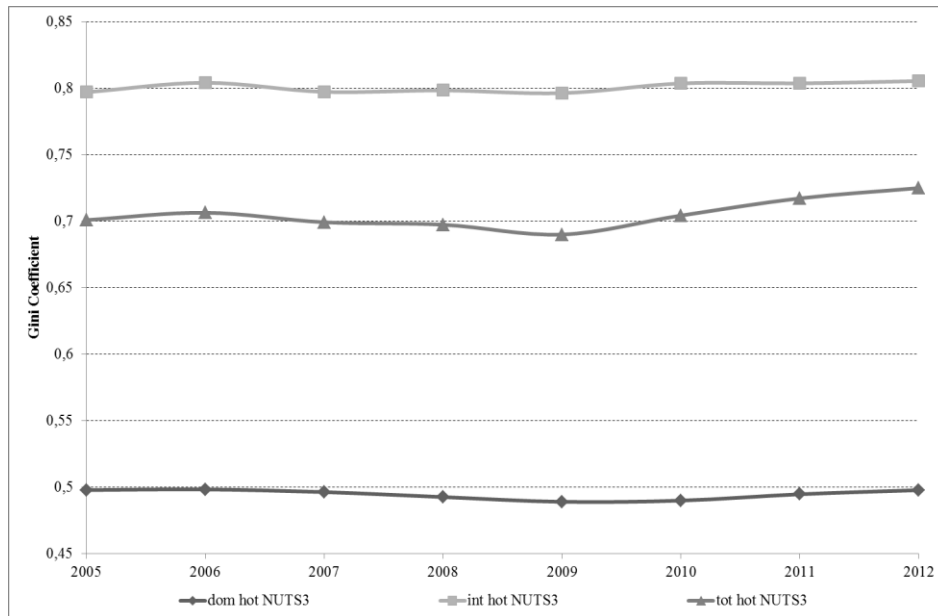
Graph 10. Gini Coefficient for Hotel Supply at NUTS2 Level, 2005-2012

4. CONCLUSIONS

This paper aimed at analyzing the impact of the current economic crisis on Greek tourism. Emphasis was put on inbound and domestic tourism over the period 2005-2012. The related diagrammatical analysis based on nights spent in hotel accommodation establishments as well as of the available hotel supply reveals that the large majority of the research hypotheses made in the theoretical part of the paper have been validated. Although a diagrammatic analysis has certain limitations as it does not allow for a full evaluation of the economic crisis on tourism, still it seems legitimate to argue that the areas that have traditionally specialized in domestic tourism have been severely hit compared to tourism destinations focusing predominantly on inbound tourism. This has undoubtedly important implications for regional policy. In particular, while domestic tourism is eventually expected to recover as the economy rebounds, this process is likely to be slow and painful especially due to the high rate of unemployment at national and regional levels. Thus, the government and local authorities should assist these regions in their effort to overcome the negative effects of the crisis. Working together with tour operators and other bodies focusing on inbound tourism to promote these areas to the international tourism market may possibly be a way forward in order to increase the aggregate tourism flows in these regions. Nonetheless, diversification of spatial functionality may also prove beneficial, especially by encouraging these areas to also focus on primary sector products of high added value for export reasons. If successful, such a policy will help these areas overcome their current disadvantage but also set the fundamentals to better face future crises which are sector-specific and/or geographically dependent. Future research is worth focusing on this important issue of strategic spatial risk management.

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CRISE ÉCONOMIQUE ET TOURISME EN GRÈCE

Résumé - *Cet article cherche à étudier les impacts de la récession qui frappe la Grèce depuis 2008 sur le tourisme étranger et domestique (mesuré par les nuitées) au niveau NUTS2 (région) et NUTS3 (préfecture). En s'appuyant sur différents indicateurs de concentration spatiale, l'article montre les processus d'évolution des régions grecques en matière de tourisme entre 2005 et 2012. Les résultats obtenus montrent que les régions qui enregistrent les plus grandes pertes à l'issue de la crise sont les régions qui avaient particulièrement investi dans le tourisme domestique.*

Mots clés - TOURISME, RÉGIONS, GRÈCE, CRISE ÉCONOMIQUE