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THE EUROPEAN TOURISM REGIONS: LOCATION AND ECONOMIC SIGNIFICANCE

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Abstract

Tourism is one of the largest and fastest growing industries, playing a key role in the economic growth of many European countries, with direct and indirect impacts on other economic sectors through multiplier effects. The national authorities are aware of its role and have given important steps attempting to influence the number of visitors, the timing and duration of visits. Nevertheless, little is known about the relative importance of tourism on a regional basis and little has been done regarding the creation of a truly common European tourism policy.

This paper aims at providing an analysis of European regions regarding the importance tourism activities have on their economic structure. For analysis purposes, we consider regions Nuts II from a group of European Union western countries: Portugal, Spain, France, Luxemburg, the Netherlands, Belgium, The United Kingdom, Germany, Italy, Austria, Greece, Denmark, Ireland and Finland.

We start by outlining a quantified analysis of tourism activities structure in each country by building a weighted tourist location index in order to provide a ranking of regions by the importance those activities have on each country's economic structure.

Finally, we analyse the basic trends of tourism policies international framework by focusing the main vectors of national policies, in particular, promotion, direct investment, subsidies, labour market intervention and regulation.

THE EUROPEAN TOURISM REGIONS: LOCATION AND ECONOMIC SIGNIFICANCE

1. Introduction

Tourism is one of the largest and fastest growing industries, playing a key role in the economic growth of many European countries, with direct and indirect impacts on other economic sectors through multiplier effects. The tourism sector has suffered an exponential growth all over Europe, in particular since the beginning of the 80s. It has become an extremely important engine of the growth process across European countries. The growth magnitude of this industry translates into a significant presence in economic activity and the positive evolution of the main supply and demand indicators. Over the last decade, the number of bed-places increased by 14,6% and the number of nights spent by non-residents in hotels and other similar establishments raised by 82,1% (source: Eurostat).

The increased relevance of tourism in the development processes of economies is mirrored in the increased importance given to its role at regional level. In fact, tourism activities are often considered regional alternatives to structural weaknesses that characterize most of the traditional economic sectors. National authorities are aware of its role and have given important steps attempting to influence the number of visitors, the timing and duration of visits. Nevertheless, little is known about the relative importance of tourism on a regional basis and little has been done regarding the creation of a truly common European tourism policy.

Therefore, this amazing dynamic, together with regional economies specialization, makes urgent the discussion on the tourism's potential for regional development and the situation of the sector at national level should not misleading the regional differences in tourism patterns that result from location factors and differences in regional productive structures.

The objectives of this paper are twofold. First, through the use of a weighted tourist location index, we provide a ranking of regions by the importance of tourism activities. This type of analysis allows us to assess the eventual relationship between the significance of tourism in a region and the region's economic importance. Second, we analyse the basic trends of tourism policies international framework by focusing the

main vectors of national policies, in particular, promotion, direct investment, subsidies, labour market intervention and regulation.

This paper is organised as follows. Section 2 briefly describes the data and its main stylized facts. Section 3 describes the regional tourism importance procedure adopted in this paper. Section 4 applies the methodology using the selected data and identifies the countries and regions in which tourism activities assume higher expression. Section 5 describes the main vectors of tourism national policies. Finally, Section 6 concludes the paper.

2. Data Sources and Description

To identify the relative importance of tourism activities in regions we follow a two-step procedure. First, we identify the absolute importance of tourism in each region. Second, we apply this information to assess each region's relative importance in the European context. Therefore, we need two types of data: regional data on tourism to perform the analysis in absolute terms and regional economic and social data to perform the analysis in relative terms.

We consider aggregate data and regional data for the administrative regions Nuts II of fifteen European Union member states: Belgium, Denmark, Germany, Finland, France, Greece, United Kingdom, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal, Sweden and Spain. Altogether, the analysis involves one-hundred and fifty seven regions Nuts II.

2.1 Tourism data

The data on tourism includes the main vectors directly related to the activity. We use data on number of bed places, number of nights spent by residents and non-residents in hotels and similar establishments, as well as on employment in a subgroup of the services sector in 2004. The activities included in the services sector are wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods; hotels and restaurants; transport, storage and communication. These activities are supposed to be impacted both directly and indirectly by tourism activities. Data on tourism demand and employment comes from statistical issues published by the

Eurostat, which is also available at <http://epp.eurostat.ec.europa.eu/>.

In terms of the countries' share of tourism variables in the European context, Germany, Italy, France, the UK and Spain are by far the most important countries. Together, they account for 76.5% of the total number of bed-places, 88.5% of the total number of nights spent by residents, 61.5% of the total number of nights spent by nonresidents and 77.5% of the total employment in the services sector.

Table 1: Countries' shares on tourism variables in 2004

Countries	Countries' Shares (%)			
	Bed-places	Nights by residents	Nights by non residents	Employment
Luxembourg	0.14	0.01	0.29	0.10
Denmark	0.70	0.70	1.18	1.61
Sweden	1.91	2.35	1.25	2.26
The Netherlands	1.91	1.97	3.61	4.79
Finland	1.21	1.43	0.93	1.30
United Kingdom	12.29	15.21	13.27	17.99
Austria	5.73	0.94	13.61	2.56
Belgium	1.23	0.58	2.54	2.48
Germany	16.17	22.62	9.04	19.65
France	12.72	16.87	8.38	13.76
Italy	20.09	19.54	23.97	13.81
Spain	15.19	14.29	6.81	12.30
Greece	6.71	1.90	9.45	3.14
Portugal	2.55	1.59	5.67	3.05
Ireland	1.45	1.25	1.94	1.19

Source: authors' calculation.

2.2 Economic and social data

Since countries, as well as regions, have different sizes it is necessary to calibrate the analysis with indicators of countries' (and regions') dimension in the European context. This will allow us to compare directly the importance of tourism among countries and regions of different sizes. We use the gross added value and the resident population as indicators of the economic importance of national economies. The data comes also from the Eurostat sources and is also available at <http://epp.eurostat.ec.europa.eu/>.

The countries with higher shares either in gross added value or resident population are again the same group described before as having the highest shares on tourism variables. In fact, the UK, Germany, France, Italy and Spain account for 78.6%

of the European gross added value and 79.1% of the total resident population.

Table 2: Countries' shares on GDP and resident population in 2004

Countries	Countries' shares (%)		Gross added value per capita	
	Gross Added Value	Population	EU-15=100	Ranking
Luxemburg	0.27	0.12	2.060	1
Ireland	1.48	1.05	1.263	2
Denmark	1.97	1.40	1.252	3
Sweden	2.82	2.33	1.079	4
The Netherlands	4.92	4.22	1.038	5
Finland	1.53	1.36	1.003	6
United Kingdom	17.41	15.50	1.001	7
Austria	2.37	2.11	0.998	8
Belgium	2.91	2.71	0.955	9
Germany	22.16	21.44	0.922	10
France	16.66	16.14	0.920	11
Italy	13.94	15.04	0.827	12
Spain	8.44	11.00	0.684	13
Greece	1.69	2.87	0.526	14
Portugal	1.44	2.72	0.472	15

Source: authors' calculation.

Attending to gross added value per capita, the numbers depict a different picture and a clear geographic pattern, in which it is possible to identify three groups. The first group of countries, with gross added value per capita above the European average is composed by the northern countries of Luxemburg, Ireland, Denmark, Sweden, the Netherlands, Finland and the United Kingdom, being Austria the exception as it is located in the center of the European mainland. The second group, with values marginally lower than the average is composed by Belgium, Germany and France. Finally, the third group is composed by southern countries as Italy, Spain, Greece and Portugal.

3. Methodological framework

The first step of our analysis consists in calculating a weighted structure of the tourism variables. The spatial patterns of tourism supply and demand, as well as the employment directly connected to the tourism sector are integrated in one single vector, called tourism vector weighted index (TVWI). This coefficient was firstly proposed by Silva and Silva (2003) and applied to the Portuguese regions (Nuts III). This indicator

summarizes all the tourism activity components and weights differently the vectors according to their relative importance in strengthening the tourist structure of each region. Therefore, it weights heavily the components which are more representative of tourism economy and generate higher potential impacts on the regions' economic structure, in particular the employment, the number of bed-places and the number of nights spent by non-residents in hotels and other similar establishments.

The TVWI for region i is obtained by the following expression:

$$TVWI = \frac{2BP_i + 3E_i + 2NN_i + NR_i}{8},$$

where, AH_i represents the regional share of bed-places; E_i represents the regional share of employment in the previous mentioned sectors; DE_i represents the regional share of the number of nights spent by non-residents; and DN_i represents the regional share of the number of nights spent by residents.

Since the regional structure of the considered variables is strongly affected by the regional economic and social dimensions, the previous coefficient is calibrated by the regional gross added value and population shares. This correction leads to the weighted tourist location index. This index is calculated for each region as

$$WTLI = \frac{TVWC_i}{(GAV_i + RP_i) / 2},$$

where, GAV_i represents the share of regional gross added value and RP_i represents the share of resident population. By this analysis we identify not only the absolute importance of tourism in each region, but also its importance relatively to the regions' dimension in terms of product and population.

According to the location index values, we can classify the regions in either one of the following groups: extremely intense location (for values above 10), intense location (for values between 1 and 10), moderate location (for values between 0.75 and 1), reduced location (for values between 0.25 and 0.75) and extremely weak location (for values under 0.25).

4. Identifying the European Tourism Regions

We start by introducing the results at the nation-wide level. Although this is not the focus of our discussion, we start with the aggregate analysis to bring a general perspective to the regional-level results that follow.

4.1 The country level analysis

The results of TVWI and WLTI are reported in Table 3. The empirical evidence points toward the idea that the macroeconomic structure of the countries is not positively correlated with their share in tourism demand and supply variables. In general, we observe precisely the opposite as the countries' position in TVWI ranking is more or less inverted when compared to what is observed with the gross added values per capita. Countries like Luxemburg, Ireland, Denmark, Sweden, the Netherlands and Finland which depict the highest shares of gross added value per capita are in the lowest positions regarding the tourism vector structure. This issue explains the changes in the ranking when the tourism relative measure of importance is calculated.

Table 3: Weighted tourism indexes

Countries	TVWI		WLTI	
	Value	Ranking	Value	Ranking
Austria	5.913	6	2.638	1
Greece	5.456	7	2.394	2
Portugal	3.400	9	1.634	3
Italy	18.637	1	1.286	4
Spain	11.899	5	1.225	5
United Kingdom	15.037	3	0.914	6
Finland	1.202	12	0.834	7
France	12.545	4	0.765	8
Luxembourg	0.148	15	0.763	9
Germany	16.496	2	0.757	10
Sweden	1.930	11	0.749	11
The Netherlands	3.421	8	0.749	12
Belgium	1.944	10	0.692	13
Denmark	1.162	13	0.689	14
Ireland	0.809	14	0.640	15

Source: authors' calculation.

The countries with higher gross added values, show lower dynamic in terms of tourism activity. This is the case of Germany, Sweden, the Netherlands, Belgium, Denmark and Ireland which are in the last six positions of the ranking. The middle

income group, composed by the UK, Finland and France and Luxemburg, is also located in the middle position of the location index ranking. At last, in the first positions of the ranking are Greece, Portugal, Italy and Spain, which occupy the lowest positions in gross added value, together with Austria.

4.2 The regional level analysis

We consider now the results of the location index at the regional level. The results for each country are reported in Tables 4 to 18.

Austria

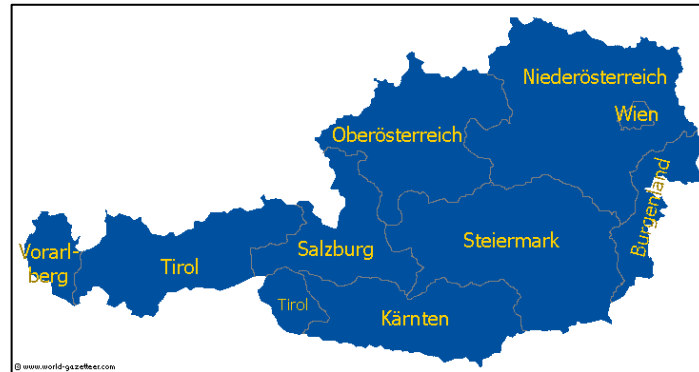
Austria is the first country of the WTLI ranking. The values range from 10.754 to Tirol, which is fourth in the ranking, to 1.045 to Niederösterreich. The disaggregate results justify the first position of the country at the European level since all regions report values for the location index above unity. Nevertheless, it is important to note that of the nine regions of the country, Tirol report an extremely intense location of tourism, with a value more than ten times above the combined regional shares of product and population. It also should be noted that other regions like Salzburg, Vorarlberg and Kärnten report values more than three times above the regions relative dimension. These results reflect the huge importance of tourism to all regions and in particular to these regions.

Table 4: Weighted tourism location index for Austria

Nuts II	WTLI	Ranking
<i>Austria</i>	<i>2.638</i>	<i>1</i>
Tirol	10.754	4
Salzburg	6.404	12
Vorarlberg	3.673	20
Kärnten	3.554	21
Burgenland	1.519	45
Steiermark	1.369	48
Wien	1.321	50
Oberösterreich	1.067	72
Niederösterreich	1.045	73

Source: authors' calculation.

Figure 1: Map of regions Nuts II - Austria



Greece

Greece is ranked second in the location index ranking. The disaggregate results for the thirteen regions show a great variability. The values range from 18.067 to Notio Aigaio, which places this region in the top of the European ranking, to 0.695 to Dytiki Makedonia. This range of values includes a group of two regions with an extremely intense location of tourism, nine regions with an intense location, one region with moderate location and also one region with reduced location. Therefore, the results suggest that in most regions tourism assumes a huge importance as it exceeds the region's relative importance in product and population. The two only exceptions are Attiki and Dytiki Makedonia which are indicated in Figure 2.

Table 5: Weighted tourism location index for Greece

Nuts II	WTLI	Ranking
<i>Greece</i>	<i>2.394</i>	<i>2</i>
Notio Aigaio	18.067	1
Ionia Nisia	11.103	3
Kriti	9.832	5
Voreio Aigaio	4.141	19
Peloponnisos	1.789	33
Kentriki Makedonia	1.547	44
Stereia Ellada	1.403	47
Thessalia	1.318	51
Anatoliki Makedonia, Thraki	1.241	58
Dytiki Ellada	1.194	63
Ipeiros	1.127	69
Attiki	0.975	80
Dytiki Makedonia	0.695	125

Source: authors' calculation.

Figure 2: Map of regions Nuts II - Greece



Portugal

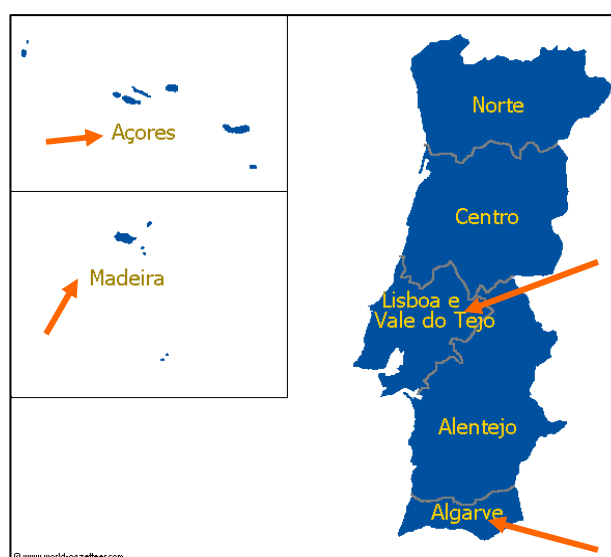
Portugal is ranked third in the location index ranking. The disaggregate results for the seven regions range from 12.144 in Algarve, which is ranked second in the European ranking, to 0.811 in Norte. The Algarve is the only region classified as having an extremely intense location of tourism; two other regions also reflect high values of the WTLI and are classified as having intense location of tourism. The remaining regions are of moderate location. Altogether, there are four regions with the WTLI above unity, in which the importance of tourism exceeds the relative dimension. These are the regions of Algarve, Lisboa e Vale do Tejo, Madeira and Açores. These regions are highlighted in Figure 3.

Table 6: Weighted tourism location index for Portugal

Nuts II	WTLI	Ranking
<i>Portugal</i>	<i>1.634</i>	<i>3</i>
Algarve	12.144	2
Região Autónoma da Madeira	7.804	9
Região Autónoma dos Açores	1.723	37
Lisboa e Vale do Tejo	1.304	54
Centro	0.967	81
Alentejo	0.859	92
Norte	0.811	100

Source: authors' calculation.

Figure 3: Map of regions Nuts II – Portugal



Italy

The country is ranked fourth in the location index ranking. The disaggregate results for the nineteen regions range from 6.093 in Trentino, which is ranked fourteenth in the European ranking, to 0.684 in Molise.

Table 7: Weighted tourism location index for Italy

Nuts II	WTLI	Ranking
<i>Italy</i>	<i>1.286</i>	<i>4</i>
Trentino	6.093	14
Valle d'Aosta/Vallée d'Aoste	4.556	16
Toscana	1.739	36
Emilia-Romagna	1.709	38
Liguria	1.688	40
Sardegna	1.638	41
Veneto	1.637	42
Lazio	1.280	56
Abruzzo	1.203	60
Calabria	1.197	62
Umbria	1.162	66
Marche	1.144	67
Friuli-Venezia Giulia	1.105	70
Campania	1.031	74
Sicilia	0.958	84
Basilicata	0.942	85
Lombardia	0.789	104
Piemonte	0.707	120
Puglia	0.704	122
Molise	0.684	127

Source: authors' calculation.

The country accounts for fourteen regions of intense location of tourism, in which the WTLI assumes higher values. This reflects largely the importance of tourism to these regional economies. The remaining regions, which are located in the north and the south of the country, with lower values are highlighted in Figure 4.

Figure 4: Map of regions Nuts II – Italy



Spain

Spain is the fifth country of the ranking and is composed by nineteen regions. The results range from 6.290 in Illes Balears, which is assumed as the main tourism destination in the country and is ranked thirteenth, to 0.634 in Pais Vasco. The country accounts for eight regions of intense location of tourism, in which the importance of tourism activities exceeds the regions' relative dimension. These regions are indicated in Figure 5. There are also seven regions of moderate location and four regions of reduced location.

Table 8: Weighted tourism location index for Spain

Nuts II	WTLI	Ranking
<i>Spain</i>	<i>1.225</i>	<i>5</i>
Illes Balears	6.290	13
Canarias (ES)	2.483	29
Cantabria	1.314	52
Andalucia	1.301	55
Cataluña	1.257	57
Comunidad Valenciana	1.183	64
Galicia	1.031	75
Aragón	1.005	78
Principado de Asturias	0.963	82
Castilla y León	0.937	87
La Rioja	0.859	91
Región de Murcia	0.831	95
Comunidad de Madrid	0.801	102
Castilla-la Mancha	0.795	103
Extremadura	0.782	106
Ciudad Autónoma de Ceuta	0.734	113
Comunidad Foral de Navarra	0.708	118
Ciudad Autónoma de Melilla	0.654	130
Pais Vasco	0.634	132

Source: authors' calculation.

Figure 5: Map of regions Nuts II – Spain



The United Kingdom

The United Kingdom is the sixth country of the ranking and is composed by eleven regions. The results range from 9.659 in London, which is assumed as the main tourism destination in the country and is ranked sixth, to 0.499 in West Midlands. All regions of the country are classified as having intense location of tourism. These results imply that all regions report values for the WTLI above unity and reflect the huge importance of this activity for the regional economies' performance.

Table 9: Weighted tourism location index for the United Kingdom

Nuts II	WTLI	Ranking
<i>The United Kingdom</i>	<i>0.914</i>	<i>6</i>
London	9.659	6
Yorkshire and the Humber	9.489	7
South East	8.473	8
South West	7.677	10
North West including Merseyside	4.532	17
Eastern	3.033	23
East Midlands	2.845	25
Scotland	2.651	27
Wales	2.359	30
North East	1.698	39
West Midlands	1.568	43

Source: authors' calculation.

Figure 6: Map of regions Nuts II – United Kingdom



Finland

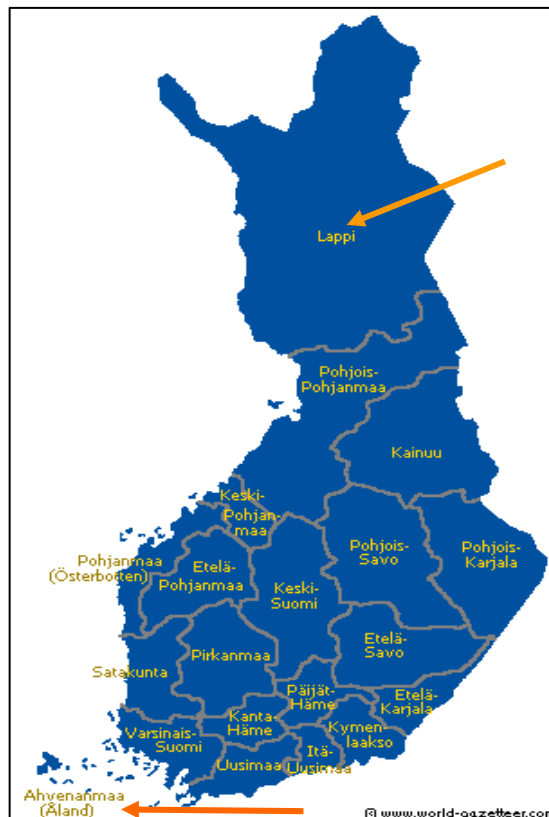
Finland is ranked seventh and accounts for five regions. The results range from 2.511 in Åland, which is assumed as the main tourism destination in the country but is ranked twentieth-eight, to 0.717 in Länsi-Suomi. Therefore, there isn't one single region of extreme intense location of tourism. Instead, two regions are considered as being of intense location, and other two regions of moderate location. Finally, one region is classified as of reduced location. Only two regions record values of the WTLI above unity. They are Åland, in the south and Pohjois-Suomi (Lappi) in the north of the country, as indicated in Figure 7.

Table 10: Weighted tourism location index for Finland

Nuts II	WTLI	Ranking
<i>Finland</i>	<i>0.834</i>	<i>7</i>
Åland	2.511	28
Pohjois-Suomi (Lappi)	1.165	65
Itä-Suomi	0.893	90
Etelä-Suomi	0.786	105
Länsi-Suomi	0.717	115

Source: authors' calculation.

Figure 7: Map of regions Nuts II – Finland



France

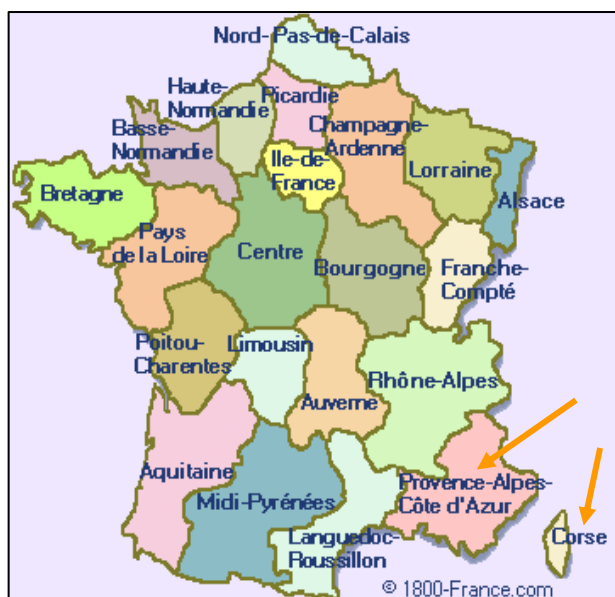
France is ranked eight and is composed by twenty-one regions. The results range in a narrow set of values. The highest value of 1.759 is achieved in Corse, which is ranked thirtieth-four, and the lowest of 0.578 is obtained in Lorraine. The country accounts for two regions of intense location of tourism, eight regions of moderate location and twelve regions of reduced location. Therefore, the country accounts for two only regions in which the importance of tourism exceeds their relative dimension. These are Corse and Provence-Alpes-Côte d'Azur, as indicated in Figure 8.

Table 11: Weighted tourism location index for France

Nuts II	WTLI	Ranking
<i>France</i>	<i>0.765</i>	<i>8</i>
Corse	1.759	34
Provence-Alpes-Côte d'Azur	1.002	79
Bourgogne	0.902	88
Alsace	0.899	89
Basse-Normandie	0.846	93
Languedoc-Roussillon	0.832	94
Auvergne	0.826	96
Île de France	0.823	97
Rhône-Alpes	0.775	107
Poitou-Charentes	0.766	108
Aquitaine	0.726	114
Centre	0.707	119
Champagne-Ardenne	0.704	121
Bretagne	0.698	123
Limousin	0.677	129
Pays de la Loire	0.649	131
Franche-Comté	0.615	135
Nord - Pas-de-Calais	0.602	138
Haute-Normandie	0.600	139
Picardie	0.579	141
Lorraine	0.578	142

Source: authors' calculation.

Figure 8: Map of regions Nuts II – France



Luxemburg

Luxemburg is ranked ninth in the European country level ranking but it constitutes one single region with a location index of 0.763. Therefore, as a region Nuts II it is classified as being of moderate location in the tourism activity.

Table 12: Weighted tourism location index for Luxemburg

Nuts II	WTLI	Ranking
<i>Luxemburg</i>	<i>0.763</i>	<i>9</i>
Luxemburg (Grand-Duché)	0.763	109

Source: authors' calculation.

Germany

The country is composed by fifth teen regions and is ranked tenth. The results range from 7.575 in Nordrhein-Westfalen, which is ranked eleventh, to 0.088 in Bremen. Therefore, the regions' classification includes the intense location category, with eleven regions, the moderate location with one single region and finally the extremely weak location category, with two regions. The most important regions in terms of tourism location are Nordrhein-Westfalen, Hessen, Bayern and Sachsen. Only

four regions record values for the WTLI lower than unity. These regions are indicated in Figure 10.

Table 13: Weighted tourism location index for Germany

Nuts II	WTLI	Ranking
<i>Germany</i>	<i>0.757</i>	<i>10</i>
Nordrhein-Westfalen	7.575	11
Hessen	4.698	15
Bayern	4.300	18
Sachsen	3.099	22
Schleswig-Holstein	2.856	24
Niedersachsen	2.791	26
Rheinland-Pfalz	1.873	32
Baden-Württemberg	1.752	35
Berlin	1.448	46
Hamburg	1.358	49
Sachsen-Anhalt	1.199	61
Brandenburg	0.960	83
Thüringen	0.708	117
Saarland	0.166	156
Bremen	0.088	157

Source: authors' calculation.

Figure 10: Map of regions Nuts II – Germany



Sweden

Sweden is the eleventh country of the ranking and is composed by eight regions. The results range within a small set of values, from 0.942 in Mellersta Norrland, which is assumed as the main tourism destination in the country but is ranked eightieth-six, to 0.622 in Östra Mellansverige. These values suggest a reduced importance of tourism activities in regional economies. Therefore, regions' classification accounts for five regions of moderate location and three regions of reduced location. Such results imply that all regions record values for the WTLI lower than unity.

Table 14: Weighted tourism location index for Sweden

Nuts II	WTLI	Ranking
<i>Sweden</i>	<i>0.749</i>	<i>11</i>
Mellersta Norrland	0.942	86
Stockholm	0.820	98
Övre Norrland	0.803	101
Västsverige	0.756	110
Norra Mellansverige	0.752	111
Småland med öarna	0.715	116
Sydsverige	0.695	124
Östra Mellansverige	0.622	134

Source: authors' calculation.

The Netherlands

The Netherlands is the twelfth country of the ranking and is composed by twelve regions. The results range from 1.312 in Noord-Holland, which is assumed as the main tourism destination in the country but is ranked fiftieth-three, to 0.446 in Groningen. Three regions are considered as being of intense location, one single region is classified as being of moderate location and eight regions are of reduced location. This means that the WTLI assumes values above unity in only three regions, which are indicated in Figure 11.

Table 15: Weighted tourism location index for the Netherlands

Nuts II	WTLI	Ranking
<i>The Netherlands</i>	<i>0.749</i>	<i>12</i>
Noord-Holland	1.312	53
Flevoland	1.230	59
Zeeland	1.068	71
Limburg (NL)	0.818	99
Friesland	0.738	112
Drenthe	0.625	133
Gelderland	0.568	144
Noord-Brabant	0.568	145
Zuid-Holland	0.537	147
Utrecht	0.516	150
Overijssel	0.512	151
Groningen	0.446	154

Source: authors' calculation.

Figure 11: Map of regions Nuts II – The Netherlands



Belgium

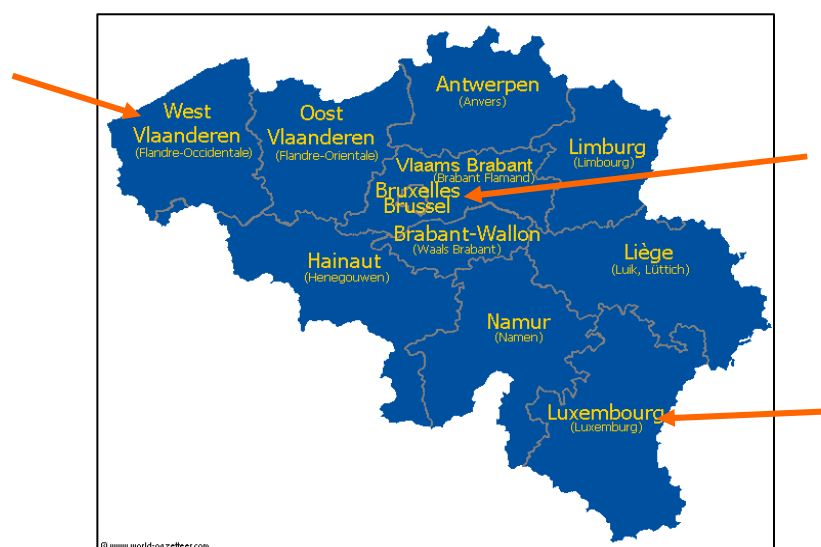
The country is ranked thirteenth in the location index ranking. The disaggregate results for the eleven regions range from 1.135 in Prov. West-Vlaanderen, which is ranked sixtieth-eight in the European ranking, to 0.414 in Prov. Hainaut. The country accounts for three regions of intense location of tourism and eight regions with reduced location.

In the first group are the Prov. West- Vlaanderen, the Arr. de Bruxelles-Capitale and the Prov. Luxembourg located in the northwest, the center and the southeast of the country, respectively.

Table 16: Weighted tourism location index for Belgium

Nuts II	WTLI	Ranking
<i>Belgium</i>	<i>0.692</i>	<i>13</i>
Prov. West-Vlaanderen	1.135	68
Prov. Luxembourg (B)	1.011	76
Arr. de Bruxelles-Capitale/Arr. van Brussel-Hoofdstad	1.006	77
Prov. Vlaams Brabant	0.679	128
Prov. Namur	0.604	137
Prov. Liège	0.589	140
Prov. Antwerpen	0.571	143
Prov. Limburg (B)	0.554	146
Prov. Oost-Vlaanderen	0.531	148
Prov. Brabant Wallon	0.493	152
Prov. Hainaut	0.414	155

Source: authors' calculation.



Denmark

Denmark is ranked fourteenth in the European country level ranking but it constitutes one single region with a location index of 0.689. Therefore, according to our scale, it is classified as being of reduced location in the tourism activity.

Table 17: Weighted tourism location index for Denmark

Nuts II	WTLI	Ranking
<i>Denmark</i>	<i>0.689</i>	<i>14</i>
Denmark	0.689	126

Source: authors' calculation.

Ireland

The country is ranked fifteenth in the location index ranking. The country accounts only for two regions, namely the region of Southern and Eastern and the region of Border which report values for the location index of 0.611 and 0.517, respectively. Therefore, both regions are classified as being of reduced location.

Table 18: Weighted tourism location index for Ireland

Nuts II	WTLI	Ranking
<i>Ireland</i>	<i>0.640</i>	<i>15</i>
Southern and Eastern	0.611	136
Border	0.517	149

Source: authors' calculation.

4.3 The Main European Tourism Regions

This paper analyzes empirically the relative importance of tourism activities for fourteen European countries at the aggregate and regional levels. More specifically, this paper presents a measure of the significance of tourism relatively to the countries' dimension in terms of product and population, and relatively to the regions' dimension. In doing so, we attempt to uncover the diversity behind the aggregate results and to identify the relative importance of tourism activities to regional economies.

The empirical analysis in this paper is based on data set on tourism supply and demand variables for 2004. Methodological speaking, we calculate a weighted location index, which accounts for the significance of tourism variables in each region relatively to regions' economic and social dimensions.

Empirical results at the aggregate level suggest the existence of four groups of countries according to tourism importance of their economic structure. The first group, in which the index assumes values above one there are Austria, Greece, Portugal, Italy and Spain. Surprisingly, with the exception of Austria, these countries present lower performance in terms of macroeconomic variables. These countries are considered as having intense location of tourism activities. The second group, in which the index assumes values between unity and 0.75, includes the United Kingdom, Finland, France, Luxemburg and Germany. These countries are considered as having moderate location of tourism. Finally, the third group, with lower values, include Sweden, the Netherlands, Belgium, Denmark and Ireland. In these countries, we find a reduced location of tourism activities.

The pattern of results at the aggregate level opens the door to the next stage of our analysis: the index values calculation at the regional level. In fact, we found that the aggregate results mask a wide disparity of results at the regional level. In Austria, all regions are considered as having extreme intense location or intense location of tourism. In Greece, the classification ranges from the extremely intense location to reduced location. In Portugal, the classification ranges from the extremely intense location to moderate location. In Italy, Spain, Finland, France, the Netherlands and Belgium it goes from intense location to reduced location. In the UK, tourism is considered as having an intense location in all regions. In Luxemburg, there is a moderate location of tourism activities and in Germany, the classification ranges from intense location to extremely weak location. In Sweden it goes from moderate location to reduced location. In Denmark and Ireland, there is a reduced location of tourism activities.

The analysis allow us to establish a ranking of the European regions on the basis of the importance tourism has on their economic structure. Tourism presents an extremely intense location in Tirol in Austria, Notio Aigaio and Ionia Nisia in Greece, and Algarve in Portugal. In these regions, the location index assumes values of more than ten times the regions' average dimension. Other regions also deserve a special remark for the index high values. These regions are Salzburg, Vorarlberg and Kärnten in Austria, Kriti and Voreio Aigaio in Greece, Madeira in Portugal, Valle d'Aosta/Vallée d'Aoste in Italy, Canarias in Spain, London, Yorkshine and the Humber, South East, South West, North West, Eastern, East Midlands, Scotland and Wales in the UK, Åland in Finland, Nordrhein-Westfalen, Hessen, Bayern, Sachsen, Schleswing-Holstein and Niedersachsen in Germany.