

# CHARACTERISATION OF TOURISM EXPENDITURE IN EU REGIONS

## 1. BACKGROUND AND RATIONALE

Tourism has been one of the first and most severely affected sectors since the start of the COVID-19 pandemic in Europe. National borders were locked, airplanes were grounded, and in most EU Member States even domestic tourism activities were suspended. Tourism and travel is an important component of the EU economy, making up nearly 10%<sup>1</sup> of total GDP and employment, up to 20-25% in Croatia, Cyprus, Greece and Portugal<sup>2</sup>. Variations in tourism dependency and flows can be substantial both at a national level and within countries regionally. Many EU regions are far more dependent on tourism than others, and while some regions host mostly domestic tourists, others chiefly rely on foreign, EU or non-EU, visitors. A refined territorial analysis by tourist origin helps to better understand these trends in the tourism sector, which is especially important during times of imposed travel restrictions.

Policies in response to the ongoing COVID-19 pandemic need to be both evidence-informed and tailor-made. This requires detailed analyses not only at country-level, but rather based on and adapted to the regional and sub-regional knowledge and situation. The goal of this study is to provide a detailed spatial snapshot of tourism in EU regions before the pandemic. The snapshot takes 2018 as a reference year (the year which the most recent statistical data was available) and looks at regional tourism expenditure as a proxy of main trends in tourism. It also covers seasonality (spring, summer, autumn, winter) and tourism typologies (cities, urban mixed, coastal, nature + mountain and rural).

## 2. DATA AND METHODS

The starting point of the study is the 2018<sup>3</sup> EUROSTAT data on tourism expenditure at national level categorised by origin as follows (Table 1):

- Domestic: EU residents spending holidays in their country of residence;
- Intra-EU: EU residents spending holidays outside their country of residence, but still within the EU;
- Extra-EU: Non-EU residents spending holidays in the EU.

<sup>1</sup> Direct, indirect and induced.

<sup>2</sup> World Travel & Tourism Council (2019), 'Country data'.

<sup>3</sup> Except for domestic trips in Poland (2017), Romania (2017) and Sweden (2016).

Table 1: Total tourism expenditure by destination country and origin type (2018). Colour coding: Reddish colours - High values; Whitish colours - Intermediate values; Blueish colours - Low values.

Destination country	Domestic trips: Thousand EUR	Inbound trips (EU-28): Thousand EUR	Inbound trips (extra-EU): Thousand EUR
<b>EU-28</b>	223,778,265	195,720,349	81,126,491
Austria	4,468,042	12,366,746	2,666,052
Belgium	815,480	3,813,537	971,823
Bulgaria	514,704	2,153,956	798,969
Croatia	629,660	6,450,378	1,028,151
Cyprus	188,478	1,391,233	769,898
Czechia	2,019,444	3,250,942	2,041,519
Denmark	5,239,946	2,554,021	1,317,760
Estonia	548,208	1,103,680	410,098
Finland	5,769,907	993,152	892,368
France	59,893,173	16,461,159	8,204,434
Germany	53,162,532	11,330,513	7,767,124
Greece	1,767,557	13,903,310	4,375,846
Hungary	951,287	2,055,153	1,032,015
Ireland	1,626,234	3,428,031	2,115,032
Italy	16,072,988	28,256,295	13,121,725
Latvia	121,972	511,577	342,516
Lithuania	196,316	387,714	301,382
Luxembourg	10,886	356,892	53,973
Malta	40,666	1,655,732	257,333
Netherlands	4,052,502	6,971,691	1,740,108
Poland <sup>(*)</sup>	5,884,894	4,182,878	2,012,559
Portugal	2,007,091	10,682,002	3,089,919
Romania <sup>(*)</sup>	1,918,579	2,111,558	1,323,471
Slovakia	1,001,815	691,127	215,432
Slovenia	240,756	758,102	265,074
Spain	26,072,789	41,966,436	9,016,189
Sweden <sup>(*)</sup>	5,444,758	3,946,932	4,575,887
United Kingdom	23,117,601	11,985,602	10,419,834

**The total EU-27 tourism expenditure in 2018 amounted to more than 455 billion EUR. Domestic tourism accounts for the largest share of total expenditure (44%), followed by intra-EU tourism (40%), while extra-EU tourism generates only 16%.**

Since no consistent data on tourism expenditure is available at regional level in the EU, these national values are disaggregated to regional level as a function of the total nights spent in accommodation facilities (available per NUTS 3 region)<sup>4</sup>. The underlying assumption is that tourism expenditure is higher in regions where more nights are spent.

## 3. RESULTS

**The average domestic tourism expenditure per NUTS 3 region (172 million euro) is slightly higher than that from intra-EU tourism (158 million) and 2.5 times more than the average extra-EU expenditure (61 million).**

<sup>4</sup> Batista e Silva, F., Herrera, M. A. M., Rosina, K., Barranco, R. R., Freire, S., & Schiavina, M. (2018). "Analysing spatiotemporal patterns of tourism in Europe at high-resolution with conventional and big data sources". Tourism Management, 68, 101-115.

### 3.1. Regional tourism expenditure

**Domestic tourism expenditure** is most important in France, followed by Germany, Spain, Finland, Sweden, Denmark, and some specific regions in Italy, Portugal (Algarve), and Austria (Alpine area). Latvia, Lithuania, Hungary, Croatia, Romania, Bulgaria, Greece and Belgium all have relatively low domestic tourism expenditures.

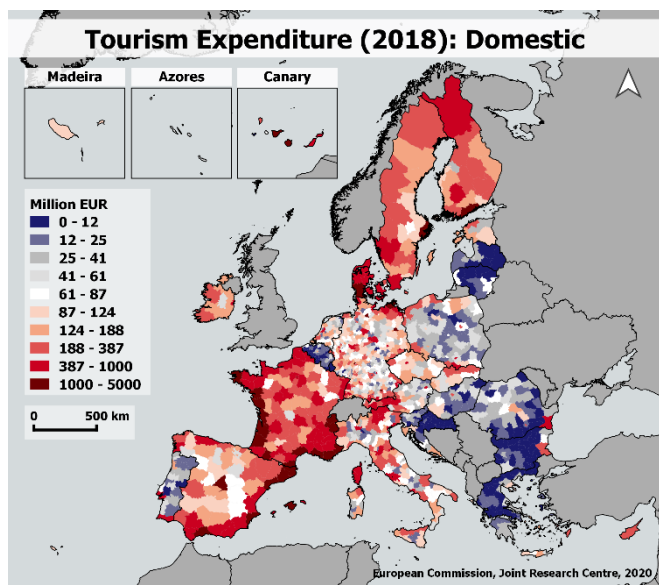


Figure 1: Total domestic expenditure in EU Member States in 2018, disaggregated at regional (NUTS-3) level.

**Intra-EU expenditure** is particularly important for Spain, Portugal, Italy and Greece. In addition, coastal regions of Croatia, Bulgaria, Romania and the Netherlands; Alpine regions of Austria and Italy; and a number of city and capital regions across the EU (e.g. Helsinki, Stockholm, Paris, Madrid, Rome, Venice, Vienna and Prague) enjoy high intra-EU expenditure. Intra-EU expenditure remains low in a number of inland regions in Bulgaria, Romania, Hungary, Croatia, Poland, Lithuania, Latvia and Germany.

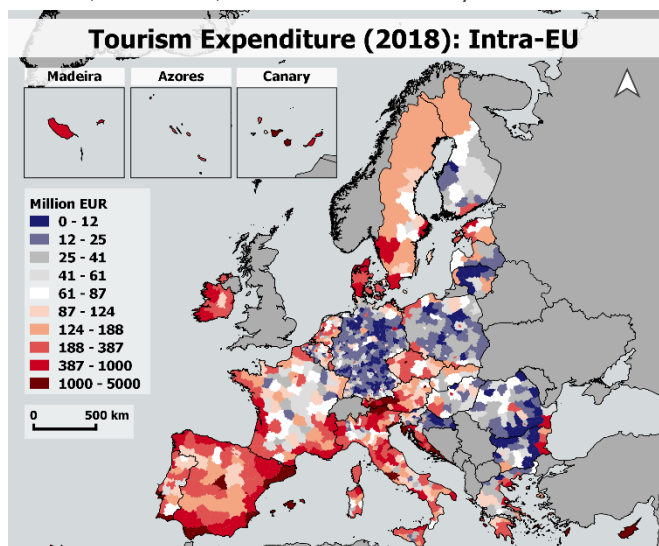


Figure 2: Total intra-EU expenditure in EU Member States in 2018, disaggregated at regional (NUTS-3) level.

**Extra-EU tourism expenditure** is roughly two to three times lower than domestic and intra-EU expenditure and is far more geographically concentrated. The majority of expenditure is in the summer months and takes place either in coastal regions (e.g. Algarve in Portugal; Malaga, Alicante, Barcelona, Mallorca and the Canary Islands in Spain, Cyprus, and many Greek islands), or in regions that host major cities popular with tourists (e.g. Lisbon, Madrid, Rome, Milan, Venice, Prague and Amsterdam). It is worth noting that several regions in Sweden and Ireland also enjoy important extra-EU expenditure. As can be expected, regions which attract few European tourists also register low extra-EU expenditure.

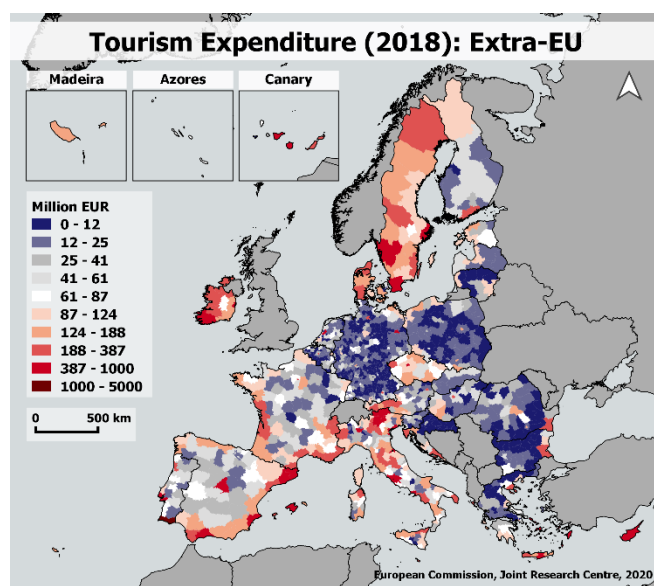


Figure 3: Total extra-EU expenditure in EU Member States in 2018, disaggregated at regional (NUTS-3) level.

The region with the highest domestic tourism expenditure is Paris (3.7 billion euro), while the largest intra-EU expenditure is encountered in the Spanish island of Mallorca (4.6 billion euro), and the Algarve in Portugal tops the list of regions with the highest extra-EU expenditure at more than 1 billion euro.

### 3.2. High/Low expenditure regions

Hotspots are formed where NUTS 3 regions with high tourism expenditure are surrounded by other NUTS 3 regions with high tourism expenditure. Hot spots therefore represent tourism-intensive and potentially tourism-dependent groupings of regions, which could be directly and severely affected by COVID-19 related travel and tourism restrictions. In order to detect high expenditure regions outside these spatial clusters, we also identified high expenditure regions that are surrounded by low expenditure regions; and outlier

regions with extreme total values<sup>5</sup>. This outlier approach revealed particular regions, including some capital cities (Berlin, Madrid, Lisbon, Paris, Rome, and Stockholm), well-known touristic regions (Algarve, Barcelona, Venice) and islands (Gran Canaria, Tenerife, Mallorca, Rhodes).

The outcome of the high/low expenditure analysis is shown in Figure 4. **Altogether, these 96 high regions account for a total revenue of almost 88 billion euro, roughly 19% of Europe’s estimated 455 billion euro of expenditure from tourism in 2018.**

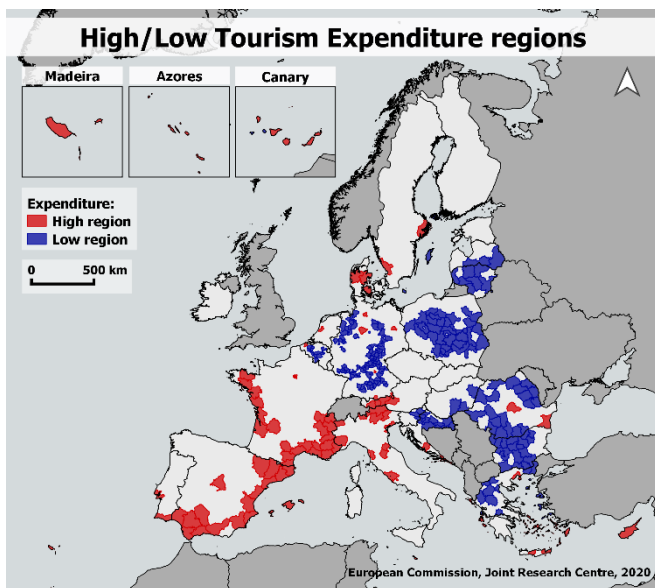


Figure 4: High/low regions based on the regional tourism expenditure in 2018.

### 3.3. Tourism expenditure per capita

Figure 5 gives the average regional tourism expenditure per capita by country. **The five highest values are all above 2500 euro/capita: Malta (5687), Austria (3698), Greece (3197), Cyprus (2719) and Spain (2707).** The countries with the lowest expenditure per capita are Romania (236 euro/capita), Lithuania (281), Poland (317), Slovakia (349) and Bulgaria (400).

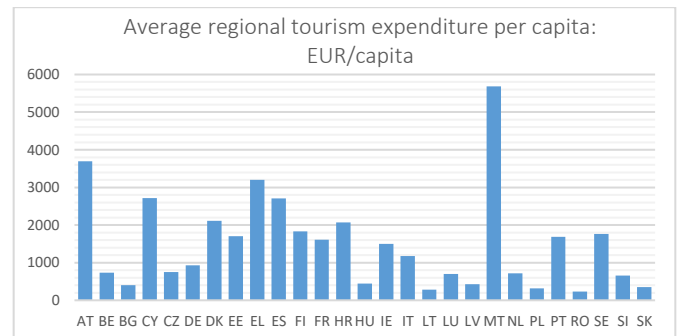


Figure 5: Average regional tourism expenditure per capita in EU Member States in 2018.

### 3.4. Expenditure by regional tourism typology

European regions can be classified in five tourism typologies according to the dominant geographic and landscape characteristics of accommodation rooms in a region. These five types are cities, coastal zones, nature and mountain areas, rural zones, and urban mixed. This last typology includes all regions having high shares of tourism accommodation in cities, but also relevant shares in other areas<sup>6</sup>.

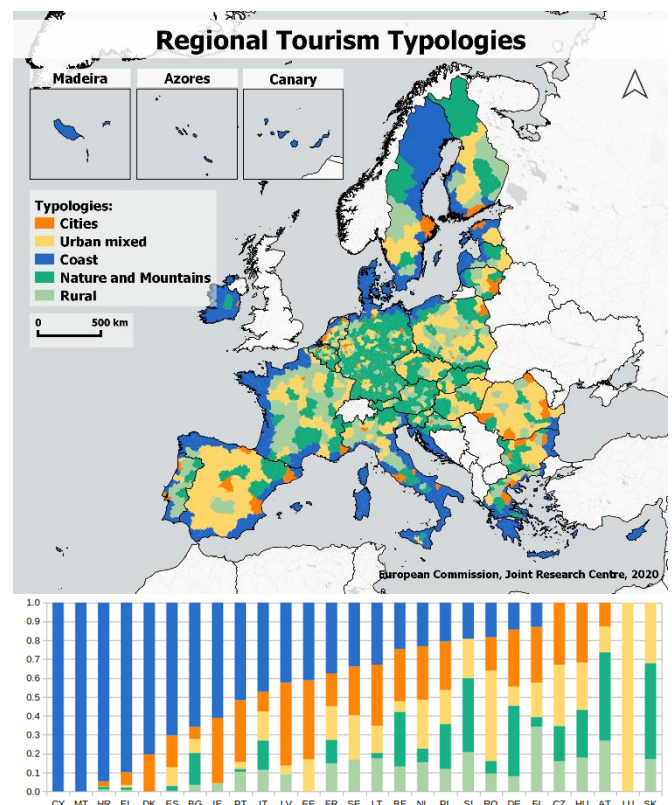


Figure 6: Regional tourism typologies spatial distribution and proportion of national night-spent per typology.

The regional characterisation of tourism in the EU was further refined by assessing variations by season and

<sup>5</sup> Delimited by calculating the local auto-correlation. Ref. Anselin, L. (1995). "Local indicators of spatial association – LISA". Geographical Analysis, 27, 93-115. In order to detect outliers with extreme high expenditure values, we looked at regions outside the interquartile range and with a z-score > 3.

<sup>6</sup> Batista e Silva F, Barranco, R, Proietti, P, Pigaiani, C, Lavalle, C (2020). A new regional tourism typology based on hotel location. Annals of Tourism Research. In press.

tourist origin across the typologies. **While expenditure is highest in summer for all typologies, coastal regions experience an exceptional summer peak, reaching over 73 billion euro (Figure 7) and representing 41% of the annual tourism expenditure in those regions.** Any travel restrictions during summer could therefore have a significant impact on these EU coastal regions.

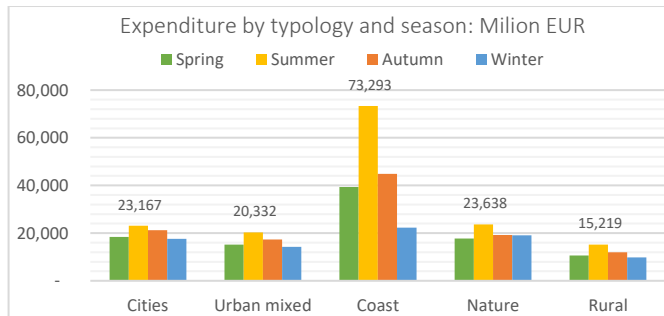


Figure 7: Tourism total annual expenditure by typology and season for 2018.

**The majority of tourism expenditure in coastal regions originates from foreign EU-residents (83 billion euro) (Figure 8), while domestic tourism represents the major expenditure source for the remaining typologies.**

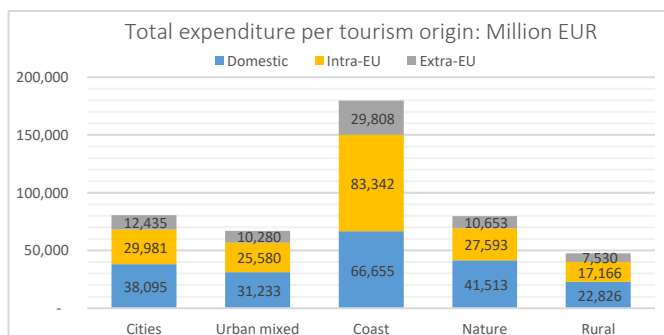


Figure 8: Tourism total annual expenditure by typology and tourism origin in 2018.

### 3.5. Expenditure by regional vulnerability

The tourism vulnerability index<sup>7</sup> is calculated taking into account two indicators: tourism intensity and seasonality. Tourism intensity is computed as the ratio of regional tourists per resident. Seasonality is the degree to which touristic activity is concentrated in one season. Regions with more tourists per inhabitant (higher intensity) and where touristic activity is concentrated in shorter periods (higher seasonality) are considered more vulnerable. EU regions were

<sup>7</sup> Batista e Silva, F., Herrera, M. A. M., Rosina, K., Barranco, R. R., Freire, S., & Schiavina, M. (2018). "Analysing spatiotemporal patterns of tourism in Europe at high-resolution with conventional and big data sources". *Tourism Management*, 68, 101-115.

classified in four categories according to the relative vulnerability of their tourism sectors, ranging from Low, to Medium, High and Very High.

Figure 9 shows that a major part of tourism expenditure is located in regions with very high vulnerability. In addition, **regions with very high vulnerability are more dependent on intra-EU and extra-EU expenditure than less vulnerable regions, meaning that the impact from border closures might be particularly hard-felt in those regions.** Concerning domestic markets, the total number ranges from around 31 to 77 billion domestic expenditure. Intra-EU expenditure ranges from almost 29 billion to more than 94 billion euro. Extra-EU expenditure ranges from roughly 11 billion to more than 33 billion euro.

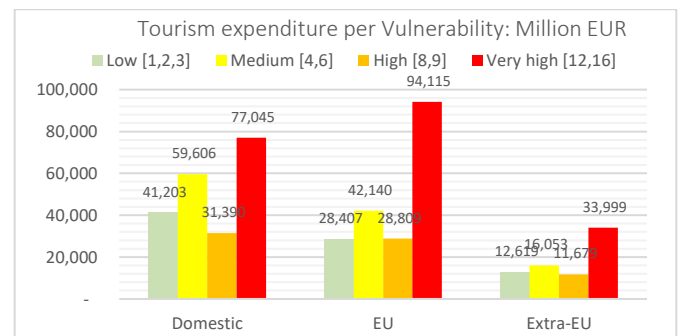


Figure 9: Tourism total annual expenditure per Vulnerability class.

## 4. CONCLUSION AND FOLLOW-UP

This study provides a quantitative overview of tourism expenditure in the EU before the COVID-19 crisis. The characterisation can be used as a baseline, to be compared with alternative impact scenarios. Such comparisons can directly support specific policy decisions, such as the lifting of travel restrictions (internal, within the EU and to the rest of the world) and the de-escalation and recovery phases planned by the European Commission. Envisaged future developments include the refinement of regional characterisation with additional related indicators.

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