

# **Statistics on Tourist Movement on the Borders and Tourist Expenditure Survey (FRONTUR-EGATUR)**

**Methodology**

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## Introduction

Statistics on Tourist Movements at the borders and tourist expenditure is the result of reviewing the methodologies and integrating the statistics of Tourist Movements at Borders (FRONTUR) and the Tourism Expenditure Survey (EGATUR) in order to improve the coherence of tourism statistics, incorporate the updates in the international recommendations and pursue efficiency in measuring the proposed objectives.

Statistics on Tourist Movements at the Borders (FRONTUR) and the Tourism Expenditure Survey (EGATUR) were included in the National Statistical Plan 2013-2016 under the responsibility of the Ministry of Tourism, with codes 6563 and 6564, respectively. Since 1995 (FRONTUR) and 2004 (EGATUR), the Tourism Institute of Spain (Turespaña) has been the agency responsible for carrying out these operations, which were designed to discover the number of non-resident tourists coming into our country and the amount they spend here.

On 4 June, 2012 (Turespaña) and the National Statistics Institute (INE) signed a Collaboration Agreement on tourism statistics, to open a collaboration line aimed at analysing the feasibility of transferring competences from Turespaña to the INE on FAMILITUR, FRONTUR and EGATUR statistics.

In this context, an in-house working group was set up in the INE for the Project to Redesign Tourism Statistics (PRETUR) with representatives from the different units (tourism statistics, data collection, methods, sample design and IT).

This working group analysed the various operating components of the aforementioned surveys, creating a documentary base of the production processes used by Turespaña. It also proposed recommendations for improvements. The proposals of this working group, prepared in collaboration with Turespaña, were taken into account for preparing the new survey.

Based on the above work, it was decided to integrate the FRONTUR and EGATUR operations, because of their strong link. They share most phases of the statistical process (technical support, questionnaire, data collection,...) but give rise to two different statistical products that are disseminated in different ways.

The transfer of competences of FRONTUR and EGATUR concluded with the approval of Royal Decree 265/2015, whereby said transfer is set out in the National Statistical Plan 2013-2016. Therefore, the INE diffuses the results of this survey with the reference date of October 2015 onwards.

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## 1 Objectives

The main objectives of these statistical operations remain as follows:

- Measure the number of non-resident visitors in Spain who arrive in our country each month, distinguishing the different access routes (road, airport, port and railway), further distinguishing between tourists (who make at least one overnight stay in Spain) and day trippers (one-day visitors, who do not stay overnight).

- Discover the main characteristics of the trips made by these visitors: their main destination, accommodation type, country of residence, purpose of travel, the organisation of the trip (with or without a package holiday), ...
- Determine how much tourists and day trippers spend; that is, what they spend on their journeys and day trips, regardless of where it is paid (at origin or destination) and who pays it.

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## 2 Law and international reference framework

Although today there are European regulations requiring they be carried out as a whole, they are used to respond to one of the variables included in the *Regulation (EU) No 692/2011 of the European Parliament and of the Council of 6 July 2011 concerning European statistics on tourism*<sup>1</sup>. Specifically to comply with the information requirements of *Section 4 (Domestic tourism in non-market accommodation)* of Annex I (*Domestic Tourism*), which requests the 'number of overnight stays in non-rented accommodation in the reference year'. It is requested broken down by country of residence, if the country belongs to the European Union, adding a category 'Rest of the world' where overnight stays by the rest of the countries would be included.

These operations follow the definitions, classifications, recommendations and best practices of the United Nations Tourism Organization (UN Tourism), which are contained in the following documents: "*International Recommendations for Tourism Statistics 2008 (IRTS-2008)*"<sup>2</sup> and "*Tourism Satellite Account. Recommendations on the Conceptual Framework 2008*"<sup>3</sup>. Similarly, the Eurostat Methodological Manual for Tourism Statistics is used as a reference<sup>4</sup>

Moreover, their results are needed both for the Balance of Payments and for National Accounts, these two operations being regulated internationally.

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## 3 Research areas

### Scope of population<sup>5</sup>

The population under study consists of:

- Non-residents in Spain who enter or leave our country having made an overnight stay or not.
- Non-residents in Spain who pass through our country in transit.

On the other hand, the part of the survey that focuses on expenditure only covers spending by visitors (tourists and day trippers) who are not resident in Spain.

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<sup>1</sup> [Regulation \(EU\) No 692/2011](#)

<sup>2</sup> [IRTS-2008](#)

<sup>3</sup> [Tourism Satellite Account.](#)

<sup>4</sup> [Methodological Manual for Tourism Statistics of the European Union](#)

<sup>5</sup> The construction of the population frames is detailed in section 5.2 FRAME

Given the peculiarity of the population scope, it is assumed that it coincides with the population framework of the sample design.

When defining the population framework, different sources of information and administrative registers must be used, as there is no common framework of people entering our country. The sources used vary according to the way of entering our country; that is, whether the travellers arrive by road, airport, port or rail.

Chapter 5 of this document will detail the different population framework used.

### **Scope of study**

The study scope covers travellers crossing the borders of our country, paying special attention to visitors residing abroad.

Moreover, the visits (journeys and trips) of non-resident visitors in Spain will be studied, as well as the spending during visits classified as tourist visits:

A tourist visit is considered to be journey to a main destination which is distant from the person's habitual residence <sup>6</sup> (lasting less than a year), provided that the main reason for the trip, including business, leisure or other personal purpose, is other than to be employed in an business established in the place visited.

If the tourism trip involves at least one overnight stay outside the usual environment, it is considered a tourism journey.

If the tourism journey does not include an overnight stay (i.e. if the person leaves on the same day) it is considered to be a day trip.

### **Reference period:**

Information is collected on the journey that ends at the time of the interview. That is to say, it collects information from the trips that ended in the reference month.

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## **4 Analysis and sampling units**

The analysis units are the travellers, visitors (tourists and day trippers), journeys and day trips.

Defining the the sampling units is complicated because they do not refer to a traditional population frame. It is necessary to take into account the access points used by travellers entering Spain; that is, road border points, airports with international flights, seaports and railway lines originating abroad. Subsequently, the vehicles, flights, ships and trains (road, airport, port and railway, respectively) and, finally, the people travelling in them must be selected.

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<sup>6</sup> See section 6.1 for the definition of habitual residence

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## 5 Sample size <sup>7</sup>

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### 5.1 OBJETIVES

The objectives of this statistical operation are, firstly to get the monthly estimate of the number of non-resident visitors to Spain, distinguishing the various access routes (road, airport, port and railway), and the different types of travellers, tourists and day trippers, as well as the main features of the trips made by these visitors, including the main destination, purpose of travel, type of accommodation, country of residence and organisation of the journey (with or without a package holiday).

In addition, the results of the FRONTUR survey provide the population targeted by the EGATUR survey, which provides information on tourism expenditure of non-resident visitors.

Although the information for elevating the data, according to the objectives, corresponds to the data on entries into Spain; nevertheless, the surveys are conducted when travellers leave the country. This is so for operational reasons and because of availability of the information, thus considering that the population under study is made up of non-resident visitors who leave Spain during the month under study by any of the four entrance/departure routes.

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### 5.2 SAMPLING FRAME

The theoretical population framework consists of people crossing the borders into our country.

There is no framework for selecting the sample in the traditional sense used in sample surveys. Information is available from administrative registers managed by different agencies, which are the basis for estimating entry flows into Spain. The total of non-resident travellers in Spain is estimated using the FRONTUR survey as a basis and this information is, in turn, used to estimate the total expenditure of these people during their trips to our country.

The availability of records varies greatly according to the access route. The current situation is as follows:

- **Road:** the General Directorate of Traffic (DGT) provides information on the number of vehicles entering and leaving all border points. This data comes mainly from the loops installed at these points, which classify vehicles according to their length as small, medium and large. Furthermore, this information is contrasted with data from video cameras that are installed at major points of entry into our country.
- In order to estimate the number of people crossing the border, an operation called **VOLUME** is carried out to estimate the number of travellers entering Spain by type of vehicle and each vehicle's nationality is taken from its registration plate.
- **Airport:** there are two agencies that provide information for airports. AECFA (Spanish Association for the Coordination and Provisions of Slots) sends a file with each airport's

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<sup>7</sup> The sample sizes correspond to the period June 2024 - May 2025

arrivals flight schedule. Furthermore, AENA sends another with the list of flights that actually landed and the number of travellers in each. This information is supplemented with information on percentage structures –without identifying nationalities– of the passengers from airports situated in non-Schengen countries, provided by the General Directorate of the National Police.

- **Railway:** RENFE provides a file showing the number of passengers crossing the border together with the monthly number of passengers transported on the different international railway lines.
- **Port:** State Ports provides a file in which the number of passengers embarked and disembarked each month is registered for each Spanish port.

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### 5.3 SIZE OF THE SAMPLE

The sample size was calculated taking into account the available budget, the EGATUR (EG) survey is a sub-sample of the FRONTUR (FR) survey, and therefore there is a part of EG which is used for FR.

On this basis, the annual sample sizes established are as follows:

- **Road:** *85,074 surveys in FR, and, using a subsampling fraction of 35% we get 28,402 surveys for EG.*
- **Airport:** *317,671 surveys in FR, and, using a subsampling fraction of 26% we get 83,582 surveys for EG.*
- **Ports:** *32,408 surveys in FR, and, using a subsampling fraction of 30% we get 13,889 surveys for EG.*
- **Railway:** *8,621 surveys in FR, and, using a subsampling fraction of 14% we get 1,181 surveys for EG.*

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### 5.4 STRATIFICATION AND DISTRIBUTION OF THE SAMPLE

The first objective of FR is to produce a monthly estimate of the classification of travellers between tourists and day trippers, and tourists by: access road, type of accommodation, country of residence (15 countries: Germany, Belgium, France, Ireland, Italy, Netherlands, Portugal, United Kingdom, Switzerland, Russia, Nordic countries - Finland, Sweden, Norway and Denmark- Rest of Europe, USA, Rest of America, rest of the world) and Autonomous Community of main destination (7 Autonomous Communities, Andalusia, Balearic Islands, Canary Islands, Catalonia, Valencia, Madrid, rest of the Autonomous Communities)

Given the different behaviour of the various routes of entry/departure into and from the country, the sample is distributed separately for each of the sub-operations.

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## 5.4.1 Roads

### STAGE 1. FRONTUR Survey

In order to distribute the sample among the different months of the year and obtain a minimum per month, the number of interviews is distributed among border points (BP) by assigning a uniform part, 10 interviews a month in each BP, and the remainder proportional to the number of travellers (this is calculated as 80% of visitors and 20% of the estimated trippers) in each BP.

Since there are points with little movement of travellers corresponding to a very small sample, but which must be represented in the survey, we must group them when we define the strata.

To achieve the above objective, cluster analyses were conducted with the BPs using the following standard variables:

- Percentage of tourists/day trippers
- Nationality. The 11 nationalities considered in the calculations were taken from vehicle registrations
- Autonomous Community of Destination

The existence of motorways at the borders means there are border points where it is particularly difficult to compile survey data. Therefore, such points are treated in a different manner (Complementary Frontur Road is the name given to them), and, these strata are considered separately with the cells processed in a different way.

As a result of the above, the following strata, or groups of points, are defined:

1. E002: La Junquera A7  
R002: Porta Catalana A7  
C024: Service Area Montseny A7  
C025: Service Area Médol A7  
C026: Service Area La Plana Castellón A7
2. E006: Seo de Urgel N145
3. E001: Portbou N260  
E003: La Junquera N11  
E004: Puigcerdà Bourgmadame N152  
E005: Puigcerdà Llivia N154  
E007: Les N125 (territorio francés)

#### **Aragón**

4. E023: Canfranc Somport Tunnel

#### **Navarra**

5. E009: Valcarlos N135  
E010: Dantzarinea N121



### **País Vasco**

- 6. R011: Service Area Oiartzun A8
  - E011: Biriadou A8
  - C113: Pagozelai A15
  - C114: Cepsa Oiartzun
- 7. E012: Behovia N121
  - E013: Irún N1

### **Galicia**

- 8A.E014: Tui Puente Viejo N551
  - E015: Feces de Abaixo N532
  - E016: San Martín del Pedroso N122
- 8B.R024: Tui Puente Nuevo
  - C241: Service Area Sertui N550
- 8C.R015: Chav Motorway A-75
  - C151: Service Area O Viaxeiro A52

### **Castilla y León**

- 9. E017: Fuentes de Oñoro N620
  - E018: Valencia de Alcántara N521

### **Extremadura**

- 10. R019: Badajoz A5
  - E019: Badajoz-Las Bóvedas A5

### **Andalucía**

- 11. E020: Rosal de la Frontera N433
  - E021: Ayamonte A22

Difficult points are marked with an R.

The sample distribution is as follows:

1. **Between strata:** Proportional allocation to a total number of travellers estimated at 70% of tourists and 30% of day trippers.
2. **Between months:** the sample corresponding to each stratum has been distributed proportionally by months, according to the flows of vehicles with foreign license plates provided by the cameras.
3. **Between BPs:** Finally, each month's sample is distributed among BPs proportionally to the flow of vehicles from the point, and making a manual adjustment that takes into account the importance of the point.

## Vehicles with Spanish registration plates

Since FRONTUR is only carried out on vehicles with foreign registration plates, this operation is designed to obtain a coefficient to estimate the percentage of non-resident population travelling in vehicles with Spanish registration plates. This operation is only carried out in January, April, July and October.

For this purpose, a sample of 10% of the total FRONTUR sample is available and distributed proportionally among the most important points.

The distribution of the FRONTUR sample for vehicles with foreign and Spanish license plates is presented in the following tables.

## Vehicles with foreign license plates

	MONYH												All
	01	02	03	04	05	06	07	08	09	10	11	12	
All	2,785	2,888	3,147	3,780	3,859	3,700	5,246	5,647	3,794	3,626	3,005	3,488	44,964
Stratum													
1	642	749	807	1,107	1,207	1,123	1,671	1,835	1,080	1,017	754	935	12,928
2	266	260	295	278	293	249	343	333	327	340	321	316	3,622
3	255	285	303	335	330	321	364	396	329	322	261	293	3,794
4	34	43	43	64	80	59	93	87	57	53	39	55	707
5	117	120	134	169	172	153	189	228	186	177	134	29	1,808
6	363	408	445	554	520	511	999	968	507	515	410	515	6,716
7	405	354	400	424	459	433	467	523	361	445	383	415	5,068
8A	42	40	43	45	44	43	55	56	47	53	50	66	583
8B	256	229	254	276	288	297	354	454	320	227	191	360	3,505
8C	28	35	35	48	41	41	113	81	53	27	26	26	555
9	45	41	42	48	41	41	71	70	51	51	43	50	592
10	78	73	79	89	81	89	95	99	89	83	77	93	1,025
11	254	251	267	345	306	339	431	516	387	314	317	335	4,061

## Vehicles with Spanish registration plates

		MONYH				All
		01	04	07	10	
All		631	737	915	654	2,937
Stratum	88					
1	E002 La Junquera AP-7	100	99	87	373	392
2	84	60	80	77	300	302
3	67	67	69	64	268	276
5			74		74	70
6	80	105	114	91	390	368
7	132	129	148	131	540	487
8B	88	114	121	183	407	433
9		28	37		64	70
10	39	50	55	48	192	197
11	52	84	119	75	329	342

## STAGE 2. EGATUR Survey

In this operation, the EGATUR survey is a subsample of the FRONTUR survey.

Given the importance of the country of residence and taking into account the very different behaviour of these, according to the BP and the border area in question, various fractions were determined by sampling the BP variables, country of residence, month and type of traveller.

For this reason, the BPs have been grouped into two groups: French border and border with Portugal. The volume of tourists and trippers was calculated, distinguishing between French and Other Countries and Portuguese and Other Countries, respectively.

To reach the 35% sample of FR, the following sampling fractions are obtained, according to the border, traveller type and country of residence:

	Percentages:	Tourists_France	Tourists_Others	Trippers_Francia	Trippers_Others
		France	Population	24.7	8.5
	Sample	0.25	0.9	0.25	0.9
	Percentages:	Tourists_Portugal	Tourists_Others	Trippers_Portugal	Trippers_Others
		Portugal	Population	19.9	3.2
	Sample	0.3	0.9	0.28	0.9

### 5.4.2 Airports

The estimated sample collected at airports, according to the table in section 5.2 is 317,671 interviews for FR and 83,582 for EG.

In this case the EG sample is not a subsample of FR, they are independent samples at the time of the collection and the distribution of EG comes from that of FR taking into account that the EG sample is 26% of FR

The sample distribution is as follows:

- A. **Between strata:** the sample is distributed among strata assigning 20% uniformly and the rest proportionally to the total number of travellers in CONOPER.
- B. **Between months:** the sample corresponding to each stratum has been distributed by months, assigning 40% uniformly and the rest proportionally, according to CONOPER data. In this way, the summer months are strengthened with more travellers.
- C. **Between relationships:** within each stratum/month and given the importance of nationalities (relationships), the sample has been distributed according to the percentage of travellers by country of destination of the flight. Relationships representing less than 2% have not been taken into consideration. Once these have been removed, the sample has been distributed allocating 30% uniformly and the rest proportionally to the number of passengers per country of destination of the flight.

Notwithstanding the above, and taking into account the importance of the presence of Chinese people in Spain and the new flights that have been created, the following nationalities have been included as separate relationships: China, Japan, Qatar, the United Arab Emirates, Ireland, and Nordic countries in Denmark, Sweden, Norway and Finland have separated.

Subsequently, from January 2019 onwards, a new nationality was incorporated: Poland.

- D. **Between airports:** the stratum sample is distributed between airports allocating 20% uniformly and the rest proportionally to the number of airport travellers. In the distribution, the relations of the flights that arrive at each airport have been taken into.

Only airports with a traveller flow of over 1.5% of the total number of travellers in the stratum are taken into account. Finally, the distribution is adjusted manually taking into account the number of flights at the airport. The airport groups that are considered in each stratum are:

<b>Airport groups</b>	
<b>Stratum 1</b>	01 Alicante 49 Castellón 50 Murcia 35 Valencia
<b>Stratum 2</b>	08 Fuerteventura 10 Gran Canaria 16 Lanzarote 17 La Palma 33 Tenerife Norte 34 Tenerife Sur
<b>Stratum 3</b>	02 Almería 07 Córdoba 11 Granada 14 Jerez 20 Málaga 21 Melilla 32 Sevilla 48 Ceuta
<b>Stratum 4</b>	13 Ibiza 22 Menorca 24 Mallorca
<b>Stratum 5</b>	03 Asturias 06 Bilbao 15 A Coruña 29 San Sebastián 30 Santander 31 Santiago 37 Vigo 38 Vitoria
<b>Stratum 6</b>	04 Badajoz 18 Madrid Barajas T1 T2 T3 28 Salamanca 36 Valladolid 40 Torrejón 41 León 42 Albacete 43 Logroño 46 Burgos
<b>Stratum 7</b>	05 Barcelona T2 09 Girona 25 Pamplona 26 Reus 39 Zaragoza 47 Huesca Pirineos
<b>Stratum 7A</b>	05 Barcelona T1

The distribution of the sample by months and strata is as follows:

	Month												Total
	01	02	03	04	05	06	07	08	09	10	11	12	
	FR	FR	FR	FR	FR	FR	FR	FR	FR	FR	FR	FR	
Total	19,129	15,468	17,061	19,332	20,174	20,542	22,338	22,016	21,305	20,560	16,618	17,368	231,911
Stratum													
1	2,005	1,643	1,876	2,250	2,314	2,314	2,548	2,465	2,396	2,335	1,798	1,902	25,899
2	3,905	3,024	3,127	2,886	2,583	2,583	2,803	2,748	2,671	3,292	3,184	3,346	35,911
3	2,073	1,734	1,991	2,372	2,454	2,454	2,638	2,554	2,565	2,511	1,914	2,024	27,285
4	1,425	1,398	1,664	2,810	3,853	3,853	4,375	4,215	3,858	3,367	1,404	1,427	33,045
5	549	462	518	646	655	661	775	751	712	631	495	568	7,468
6	2,484	1,893	2,066	2,107	2,151	2,132	2,213	2,255	2,264	2,294	1,999	2,079	25,861
6A	2,601	2,005	2,179	2,206	2,247	2,241	2,367	2,393	2,364	2,331	2,196	2,292	27,389
7	1,779	1,426	1,557	1,781	1,934	2,026	2,140	2,144	2,108	1,987	1,565	1,631	22,097
7A	2,307	1,883	2,082	2,275	2,316	2,278	2,479	2,490	2,367	2,451	2,064	2,099	26,956

The final list of destination countries of flights is as follows:

Cod	Países de destino
2	Germany
3	Belgium and Luxembourg
4	France
5	Italy
6	Netherlands
7	The United Kingdom
8	Russia
10	Rest of Europe
11	USA and Canada
12	Rest of America
13	Japan
14	Rest of the world
15	China
16	United Arab Emirates
17	Qatar
18	Ireland
19	Poland
91	Norway
92	Denmark
93	Sweden
94	Finland

The overall theoretical EG sample is about 26% of the FR sample.

The final size of the EG sample by months and strata is as follows:

	Month												Total
	01	02	03	04	05	06	07	08	09	10	11	12	
	EG	EG	EG	EG	EG	EG	EG	EG	EG	EG	EG	EG	
Total	6,905	5,583	6,158	6,978	7,282	7,415	8,064	7,947	7,691	7,422	5,999	6,270	83,714
Stratum													
1	721	593	677	812	834	835	920	890	865	863	649	687	9,349
2	1,410	1,091	1,129	1,042	933	932	1,012	992	964	1,100	1,149	1,208	12,963
3	748	626	719	856	888	886	952	922	926	904	691	731	9,849
4	514	505	601	1,014	1,269	1,391	1,579	1,521	1,393	1,120	507	515	11,929
5	198	167	187	233	236	239	280	271	257	244	179	205	2,696
6	897	683	746	760	776	770	799	814	817	801	722	750	9,335
6A	939	724	787	796	811	809	854	864	854	829	793	827	9,887
7	642	515	562	643	698	731	773	774	761	724	565	589	7,976
7A	833	680	751	821	836	822	895	899	855	836	745	758	9,731

At airports in the Canary Islands (stratum 2), the type of flight, regular or charter, was also taken into account when selecting the sample. The selection comprises 60% scheduled flights and 40% of charter flights.

As in the case of roads, and in order to achieve a good representation of the sample, 35% of the interviews were conducted on Saturday or Sunday.

#### 5.4.3 Ports

Following a similar process to that of roads and airports, the estimated sample according to section 5.2 is 32,166 for FR and 13,786 para EG.

The distribution of the sample is done separately for travellers in regular and cruise line passengers.

Following a process similar to that of roads and airports, the final sample is shown in the following table:

	Frontur only	Egatur	Total
Regular line	17,314	7,420	24,734
Cruise ship	15,094	6,469	21,563
Total	32,408	13,889	46,297

The distribution of the sample in the case of both regular and cruise lines has been carried out as follows:

1. **Between strata:** the distribution is made according to the passenger data provided by State Ports, assigning 50% uniformly and the rest proportionally.
2. **Between months and ports:** the sample of each stratum is distributed between months and ports proportionally to the flow of travellers.

On regular lines, disembarked travellers are considered and on cruise ships, transit travellers.

In this case the EG sample is not a subsample of FR, they are independent samples at the time of the collection (similar to airports) and the distribution of EG comes from that of FR taking into account that the EG sample is 30% of FR

Considering the different behaviour of the ports in the various months of the year and the different types of lines, and in order to obtain an efficient monthly sample, the ports have been grouped into the following strata:

STRATA	PORTS
Stratum 1	P014-A Coruña P012-Avilés P007-Bilbao P011-Ferrol-San Cibrao P012-Gijón P017-Marín y Ría de Pontevedra P019-Pasajes P021-Santander P025-Vigo P026-Vilagarcía
Stratum 2	P001-Alicante P005-Baleares P006-Barcelona P008-Cartagena P009-Castellón P023-Tarragona P024-Valencia
Stratum 3	P002-Almería P004-Bahía de Cádiz P010-Ceuta P013-Huelva P016-Málaga P018-Melilla P045-Motril P022-Sevilla
Stratum 4	P028-Las Palmas P031-Santa Cruz de Tenerife
Stratum 5	P003-Bahía de Algeciras

The distribution of the FR sample on a regular line by month is presented in the table below:

Stratum	Total	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
1	2,580	86	74	116	236	285	292	404	391	331	211	68	86
2	3,087	141	107	219	239	234	226	377	719	401	168	135	122
3	3,689	188	107	153	122	156	115	323	1,464	549	163	163	185
5	7,958	509	340	471	473	462	415	706	2,295	995	450	390	452
Total	17,314	924	628	959	1,071	1,137	1,048	1,810	4,869	2,276	993	756	844

Stratum 4 does not appear in the above table as it corresponds to the stratum of Canary Islands ports where only cruises are studied.

The sample of FR-Cruises by stratum calculated according to the available information is the following:

FR-CRUISES	MONTH												
Strata	Total	1	2	3	4	5	6	7	8	9	10	11	12
1	2,656	55	0	75	229	299	323	194	333	493	492	113	49
2	6,889	160	115	170	470	863	775	875	911	846	960	460	254
3	2,985	122	94	129	306	310	153	243	273	343	417	446	148
5	2,564	330	276	332	254	41	47	14	42	103	258	548	318
Total	15,094	423	406	555	1,141	1,099	1,199	1,395	1,683	1,863	2,596	1,720	1,013

In the case of Cruises, the sample has been distributed by months and ports according to the forecasts for them, although this will be adjusted with the updated information available.

In the case of Egatur, the sample by strata is:

EGATUR-CRUISES	MONTH												
Strata	Total	1	2	3	4	5	6	7	8	9	10	11	12
1	1,212	13	23	21	152	105	133	70	132	204	248	69	40
2	2,836	29	18	55	144	226	300	407	443	415	462	212	126
3	1,270	22	4	60	114	109	63	114	123	150	222	224	64
5	1,151	117	129	101	79	30	17	7	23	30	180	233	205
Total	6,469	181	174	238	489	471	514	598	721	799	1,112	737	434

While the sample by regular lines is:

EGATUR-REGULAR	MONTH												
Strata	Total	1	2	3	4	5	6	7	8	9	10	11	12
1	1,106	37	32	50	101	122	125	173	167	142	91	29	37
2	1,323	60	46	94	102	100	97	162	308	172	72	58	52
3	1,581	81	46	66	52	67	49	138	627	235	70	70	79
5	3,410	218	146	202	203	198	178	302	984	427	193	167	194
Total	7,420	396	269	411	459	487	449	776	2,087	976	425	324	362

#### 5.4.4 Railway

The sample size on the Railway, according to the information in section 5.2, is 8,621 *surveys in FR*, which with a subsample fraction of 14% represents 1,181 *surveys for EG*.

The sample distribution is as follows:

1. **Between borders:** the distribution is made according to the train passenger data provided by RENFE, assigning 30% uniformly and the rest proportionally.



2. **Between months:** the distribution is proportional to the number of passengers. However, taking into account the size of the sample, the sample is collected in the following months: February, April, June, August, October and December.
3. **Between stations of origin:** only Portugal takes into account a proportional distribution according to the station of origin.

According to the above, the number of FR and EG interviews to be carried out by months and borders is presented in the following tables:

Frontur	MONTHS						
	02	04	06	08	10	12	All
All	843	988	1,217	1,857	1,304	1,231	7,440
BORDER							
FRANCE	658	692	1,001	1,481	1,019	916	5,765
PORTUGAL	185	296	216	376	285	316	1,675

Egatur	MONTH						
	02	04	06	08	10	12	All
All	134	157	193	295	207	195	1,181
BORDER							
FRANCE	104	110	159	235	162	145	915
PORTUGAL	29	47	34	60	45	50	266

## 5.5 ESTIMATORS

Estimators to be used in both operations are expansion estimators of a stratified sample.

In FR, the general expression of the estimator of a characteristic X in a cell h is:

$$\hat{X}_h = \sum_i \frac{N_h}{n_h} x_{hi} = \sum_i f_h \cdot x_{hi}$$

where the numerator represents the total number of people, according to information provided by the administrative records of the operation involved in cell h, and the denominator is the number of respondents in the cell. The value  $x_{hi}$  is the value of the characteristic in respondent i belonging to cell h (it takes the value 1 or 0 according to whether or not the person possesses the characteristic being investigated).

In the particular case of the airports, information is provided by the Directorate General of Police (DGP) on percentage structures without detailing the nationalities of the people who come to Spain from non-Schengen countries. This information is used to correct the estimate obtained in FR. This correction affects the cells with the following nationalities of the flight destination countries: 7, 8, 11, 12 and 14.

The data on  $N_h$  is obtained from CONOPER and, using the previous estimator, the nationalities can be estimated,  $N_{h,1}, N_{h,2}, \dots, N_{h,d}$ . (For example, the nationalities of travellers entering the through Airport Group 2 from any airport in the UK).

Moreover, the police file provides the information:  $N_{h,1}^p, N_{h,2}^p \dots \dots N_{h,d}^p$

The aim is to adjust the FR estimates to the structure provided by the police, for which the following factor is applied to all registers  $i$  in cell  $h$  and which have nationality  $j$ :

$$f_{h,j} = f_h \cdot \frac{N_{h,j}^*}{N_{h,j}}$$

Where:  $N_{h,j}^* = \frac{N_{h,j}^p}{N_h^p} \cdot N_h$

Nationalities  $d$  are determined from the analysis of the DGP file and sample data.

EG factors are derived from the FR factors. In both cases, calibration techniques are applied in order to make the estimates consistent with other sources of information. The information sources used will be the Frontur results and some results of the Tourist Accommodation Occupancy surveys, compiled by the INE (see ANNEX 1).

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## 5.6 ELEVATION AND TREATMENT CELLS

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### 5.6.1 FRONTUR

In order to ensure a certain precision in the estimates, criteria were established for defining the cells used in the elevation of data, minimum monthly sample sizes were set, and a treatment was applied to the cells if they did not reach this size.

The FR elevation cells are defined as follows:

**Roads:** They are defined within each stratum as the cross of the Type of days (2 groups), Vehicle type (2 groups) and Nationality of license plate (2 groups).

Two kinds of types of days are taken into account, weekends (Saturday, Sunday and holidays in the neighbouring country) and other days (Mon to Fri), two kinds of types of vehicles, light and heavy, and two groups of nationalities, French and Other Countries and Portuguese and Other Countries, according to the border concerned.

At least 50 units per cell in each of the previously defined cells are considered necessary.

If this minimum is not achieved, cells are merged: first nationalities are merged within each type of vehicle, then, vehicle types are merged and, if necessary, the types of day.

**Airports:**

In this case, the cells are defined by the crossing of stratum (group of airports), type of day (2 groups) and flight destination country (13 groups).

The formation of the cells also takes into account the type of flight (regular or charter) but, since the latter is only significant in the Canary Islands, this variable is only taken into account in this stratum (Stratum 2).

As in the case of roads, the minimum number of surveys is 50 per cell.

If this minimum is not reached, the cell within each stratum and type of day will be merged with the “Other Countries” nationality within the same continent, and the remaining “Other Countries” will all be merged together, with the exception of the Canary Islands, where before nationalities, Types of Flight will be merged.

In the exceptional case of not reaching the minimum by merging the nationalities, types of days will be merged.

**Ports:**

In this case, the elevation cells are defined by the port group, separating the Regular and Cruise Line operations.

The minimum sample size must be 150 in each stratum (port group).

**Railway:**

In this case, elevation cells are defined in a very similar way to roads.

They are defined as crossing the borders (2 groups) x groups of provinces where passengers disembark (2 groups on the Portuguese border, one group in the case of France).

According to existing passenger flows, the borders taken into account are: France and Portugal and two groups of destination provinces:

France: only Cataluña.

Portugal: Madrid and all other provinces.

The minimum sample size must be 100 items in each cell.

Surveys are planned every other month except in the summer months. When data is not collected during a month M, the structure obtained in the previous month (M-1) is allocated to the total number of passengers in month M provided by RENFE.

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### 5.6.2 EGATUR

The EG elevation cells are obtained for each sub-operation by exploiting the FR data sample, and are formed for each access mode and the Strata Group crossing the Frontur Strata with Type of passenger and Nationality of country of residence.

Nationalities vary from one sub-operation to another depending on their behaviour and considering those that are most important at each border point.

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### 5.6.3 Allocation of EGATUR elevation cells

or the estimates to be reliable, a **minimum of 30 sample elements are considered necessary in FR and 15 in EG for road and rail. A minimum of 50 sample elements in FR and 25 in EG for airports and ports are considered necessary.**

If either of the above two conditions is not met, the following action shall be taken:

**If there is a sample shortfall in FR**, the cells will be merged according to the following criteria:

**On roads**, the stratum with a sample shortfall will be merged with the immediately preceding stratum, except for the first stratum, which will be merged with the next. However, if the minimum is not achieved despite merging strata, the nationality will be merged with Other Nationalities, keeping the division by types of travellers.

**In airports**, the strata in which the same nationalities are considered will be merged; that is, 1 and 4, 2 and 3. It is not expected that it will be necessary to merge strata for the remainder, except in Canada and Japan in which strata 5 + 6 will be merged with 7, if necessary.

**In ports (regular line)** merging is done within each stratum and the nationality with a shortfall will be merged with Other Countries. Then, if necessary, the stratum with a sample shortfall will be merged with the previous one and the first with the second.

**In railways**, within each passenger type, France will be merged with Other European Countries, and the Others merged together.

**For sample shortfalls in EG**, each cell (EG) will be completed by seeking donors of similar characteristics from previous periods.

The procedure, **within the calendar quarter is:**

If we are in month 3, the sample is searched for in the same cell, first in month t-1, t-2, t-12, t-13, t-14, t-24 and t-25

If we are in month 2 of the quarter, first t-1, t-12, t-11, t-13, t-24, t-23 and t-25.

If we are in month 1 of the quarter, first t-12, t-11, t-10, t-24, t-23. T-22 and t-25.

In any case, the full information is taken from the cell with the adjustments deemed necessary to update the amount of the expenditure.

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## 6 Basic concepts

The basics of the following statistical operations comply with the definitions in the *International Recommendations for Tourism Statistics* by the WTO and in the *Methodology Manual for Tourism Statistics* Eurostat.

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### 6.1 COUNTRY OF RESIDENCE

The country of residence is defined in exactly the same way as in the Balance of Payments and the System of National Accounts.

The **resident population** in a given geographic area is considered to be those persons who, at the time of the interview, have their regular residence there. Regular residence is defined as the place where a person normally stays during daily rest periods, considering the period of the last twelve months, without including travels for leisure, holidays, visits to relatives and friends, business, medical therapies and religious pilgrimages.

Therefore, regular resident will be defined as persons that at the time of the interview:

- Have lived regularly in it for a continuous period of at least twelve months.
- Those who, according to the above definition, have established their regular residence in it less than twelve months before but intend to stay in it for at least one year.

Furthermore, in the event that the respondent's place of regular residence cannot be specified in accordance with the above premises, they will be considered to reside in the country in which they live at the time of the interview.

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## 6.2 TRAVEL AND TOURISM

The term **travel** designates the activity by travellers. A **traveller** is anyone who moves between two different geographical locations for any purpose and for any length of time.

Travel within a country by its residents is called internal travel. Travel to a country by non-residents is known as **inbound travel**, while travel outside a country by residents is called **outbound travel**.

Those who take trips, whether internal, inbound or outbound are known as, **internal, inbound or outbound travellers**, respectively.

The term **travel** refers to any movement of a person outside their place of residence, from the time of their departure until their return. Therefore, it refers to a return journey. A journey consists of visits to different places.

An **inbound journey** corresponds to the journey made between the time of arrival in a country and the time of departure, whereas an **internal journey or an outbound journey** corresponds to the journey made between the time of departure from the place of regular residence and the time of return. An **internal trip** has a main destination in the traveller's country of residence, whereas an **outbound journey** has a main destination outside the country.

A visitor is someone who travels to a main destination outside their usual environment, lasting less than one year, for any main purpose (leisure, business or other personal reasons) other than to be employed by a company established in the country or place visited. These journeys taken by visitors are considered **tourist trips**. **Tourism** refers to the activity of visitors.

An internal, inbound or outbound traveller that makes a tourist trip is called an **internal, inbound or outbound visitor**, respectively.

Also, internal, inbound or outbound travel, by visitors is called **internal, inbound or outbound tourism**, respectively.

Therefore, **tourism** is a subset of travel types and **visitors** are a subset of travellers. These distinctions are critical for compiling data on movements of travellers and visitors.

A visitor (internal, inbound or outbound) is classified as a **tourist** (or overnight visitor) if their trip includes an overnight stay, or as a day visitor (or **day tripper**) if it does not.

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## 7 Main characteristics of the object of study

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### 7.1 JOURNEY

The term journey refers to any activity by travellers; that is, any journey by a person away from their place of residence, from the time of their departure until their return.

Tourist trips are considered to be all those trips to a main destination outside the person's regular place of residence, which involve at least one overnight stay outside the aforementioned environment and have a duration of less than one year, provided that the main reason for the same, including business, leisure or other personal reasons, is not a job in a company established in the place visited.

However, to make the measurement of tourist trips easier, a broader concept of travel will be used in the questionnaire. The characteristics of the trips considered (reason, frequency) will make it possible to identify those that can be considered tourism.

The regular environment is the geographic area, formed by non-necessarily adjacent areas, where a person regularly conducts their activities, that will be established on the basis of the following criteria: crossing of administrative borders or distance from the regular place of residence, duration of the visit, frequency and purpose of the visit (EU Regulation 692/2011).

In order to make this definition of usual environment operational within the context of these surveys, a person's usual environment will be considered to be their country of residence.

Therefore, the journeys under study are those with main destination outside the country of residence of the person that involve an overnight stay outside of it and in Spain, with a duration of less than one year.

It is important to note that the journeys that are the object of study are journeys for any reason, including visits to family and/or friends, trips to second homes, trips to the workplace or study centre, etc.

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### 7.2 TRIP

Day trips are visits that do not include overnight stays; that is, they begin and end on the same day (see definition of journey above). In other words, a day trip is considered to be any visit without an overnight stay made outside the regular environment of the person, and that has, as a starting point, the traveller's regular environment.

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### 7.3 TRAVELLING EXPENDITURE

The objective is to compile the individual travel expenditure, regardless of who paid it and where it was paid. To do so, the respondent is offered the possibility to report on the expenditure during their trip or the expenditure of the travelling group (if applicable), and its amount.

A question is asked about the expenditure on the following items and, by aggregation, the total cost of the travel is obtained.

- Expenditure on package holiday
- Expenditure on accommodation
- Expenditure on transport
- Other expenditure

For each item, the respondent will be asked where the payment was made (at origin or destination) and who made it.

The concept of *tourism expenditure* conforms to the international recommendations, according to which "tourism expenditure" refers to the amount paid for the purchase of consumer goods and services and valuable objects, for own use or for gifts, before and during tourist visits. It includes expenses incurred by visitors themselves, as well as expenses paid or reimbursed by others.

All individual goods and services considered consumer goods or services in the System of National Accounts (those meeting the needs and wishes of persons) can be part of tourism expenditure. These include the typical services acquired by the visitors, such as transport, accommodation, food and drinks, etc., but also goods such as valuables (paintings, pieces of art, jewellery, ...) regardless of their unit value and acquired during travels due to their role as stores of value over time; consumer durables (computers, cars, ..), regardless of their unit value and acquired during travels; any type of food, prepared or not; all goods manufactured, whether locally produced or imported, all personal services, ...

In addition to the monetary expenditure on consumer goods and services paid directly by the visitors, tourist expenditure includes in particular:

- Monetary expenditure on consumer goods and services paid directly by the employer to workers on business trips.
- Monetary expenditure paid by the visitor and reimbursed by third parties, either by the employer (companies, public administrations and non-profit institutions serving households), other households or the social security system.
- Monetary payments made by visitors for individual services and subsidies provided by government and private non-profit institutions serving households in the areas of education, health, museums, performing arts, ...
- Disbursements for services provided to workers and their relatives during tourist trips mainly funded by employers, such as transport, accommodation, stays in holiday residences of the employers or other subsidised services.
- Supplemental payments made by the visitors for attending sports or cultural events by invitation from producers (companies, public administrations and non-profit institutions serving households) and mainly paid by them.

The concept of tourist expenditure excludes the acquisition of some items, such as social transfers in kind that benefit visitors, allocation of accommodation services in holiday dwellings that belong to the visitors and financial intermediation services measured indirectly.

It excludes all types of payments that visitors might make. All payments that do not correspond to the purchase of consumer goods and services are excluded, in particular:

- The payment of fees and taxes that are not part of the purchasing price of products acquired by the visitor.
- The payment of all types of interest, including those on expenditure during travels and for them.
- The acquisition of financial and non-financial assets, including land and real estate, but excluding valuables.
- Acquisition of goods for resale purposes either in the name of third parties or on their own account.
- All cash transfers, such as donations to charitable organisations or to other persons (in particular to family and relatives), as they do not correspond to the acquisition of consumption goods or services.

The purchase of dwellings and real estate and all expenses related to significant repairs and improvements resulting from said purchase are considered to be capital expenditure, even if households buy them and, consequently, are also excluded.

The running costs related to holiday dwellings, as those usually incurred by an owner as producer of accommodation services, should be also excluded from tourist expenditure.

Furthermore, all services provided before the travel and clearly related to it (for instance, vaccines, passport services, medical check-ups, services of travelling agencies, etc.) are included in tourist expenditure. All consumer goods acquired before the journey for use during it (specific clothing, medicines, etc.) or taken as gifts, should be also included in this category.

Tourist expenditure must be evaluated at acquisition prices, that is, the price actually paid by the purchaser for the products at the time of the purchase.

With regard to the time of registration, the expenditure on a good must be registered when the change of ownership occurs and the expenditure on a service, in general, when the provision of the service is completed. That is to say, consumer expenditure on transport services takes place during the transport itself; consumer expenditure on accommodation services takes place during the stay in the accommodation location; consumer expenditure on travel agency services takes place at the time when information is provided and travel services are booked, etc.

Description of the categories:

**Transport expenditure:** expenditure on local transport, international transport, rented car, fuel, underground, bus, taxi, car parks, etc. Payments for luggage, seat reservations, priority boarding, travel agents' commissions, porters, tips and left luggage. Expenditure on food and drinks are excluded, unless they are included in the price of the ticket, as well as other products that are purchased on the plane (perfumes, make-up, clocks, sunglasses, jewels, etc.)

**Expenditure on accommodation:** expenditure on the accommodation services used during the journey. This includes tips to doormen, bellboys, etc. It excludes expenditure on phone calls, laundry, television, parking, beauty services, etc., provided they can be



broken down into the cost of accommodation. Expenditure on food and drinks not included in the price of accommodation (bed and breakfast, half board, full board) are also excluded.

**Expenditure on food and drinks in cafés or restaurants:** expenditure on food and drinks in cafés, restaurants, bars, pubs, discotheques, canteens, diners and the like, including those located in theatres, cinemas, sports stadiums, museums, etc. or in transport means, such as trains, ships, air planes, etc., provided they are not included in the ticket price; sale of food by caterers and catering services and products supplied by vending machines ready to be consumed or on food stalls.

**Expenditure on leisure, cultural and sports activities:** expenditure on sports stadiums, amusement parks, theme parks, cinemas, theatres, concerts, circus, shows, museums, national parks, zoos, ski, sailing, horse riding lessons, etc., rental of equipment and accessories for sports, mountaineers services, guides, etc.

**Expenditure on durable goods and valuables:** expenditure on durable goods (cars, computers, etc.) or valuables (pictures, jewels, pieces of art, etc.) acquired during the travel, as well as durable goods for use only (or almost only) on tourist journeys on light aircrafts, boats, caravans, recreational vehicles, camping equipment, luggage, sports equipment, etc.), that have been acquired for the trip (light aircrafts, boats, caravans, recreational vehicles, camping equipment, luggage, sports equipment, etc.). The unit value of these goods should be over 300 Euros.

Other costs: **travel expenses not included in the above categories, such as expenditure on food or drinks in supermarkets or retail shops, goods and services for personal use or for gifts, expenditure on health, education, communications, insurances, gambling, etc.**

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## 8 Classification characteristics

This section lists the characteristics to be investigated in these statistical operations.

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### 8.1 ACCESS MODE

Means of access refers to the way in which a person enters the country. In these operations the following are considered:

- Road: 23 road border crossings are taken into account.
- Airport: 23 airports with international flights.
- Ports: 7 sea-going ports.
- Railway: 6 international railway lines are studied.

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### 8.2 MAIN TRAVEL DESTINATION

The main destination of a journey is the destination where visiting it was an essential factor in organising of the trip.

If the main destination of the journey cannot easily be identified, it is considered to be where the greatest number of nights were spent. If the same number of nights was spent in several destinations, then the main destination is the one in which the greatest expenditure was made.

In the visits to Spain, the Autonomous Community of the main destination is noted.

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### 8.3 MAIN ACCOMMODATION

Main accommodation is defined as the type of accommodation where the most nights were spent during the travel. If the same number of nights was spent in two different types of accommodations, the main one is considered to be where the person was accommodated during their stay in the main destination. In this case, the main one is considered to be that which entailed the greatest expense.

If the respondent only answers the FRONTUR questions, the main accommodation of the trip must be determined. If the respondent also answers the EGATUR questions, this information is derived from the detailed description of the stages of the journey.

Two major groups of accommodation are distinguished, depending on whether there has been a monetary transaction or not: market (paid accommodation) or non-market (unpaid accommodation).

Description of the categories:

**1. Market (paid accommodation):** this type of accommodation involves a monetary transaction.

This category includes the following sub-categories:

1.1. Hotel or aparthotel (indicating the category based on the number of the stars): Establishments providing group accommodation services at a price, with or without other supplementary services, that are registered as such in the relevant register of the Tourist Board of each Autonomous Community.

1.2. Lodge, hostel, motel, inn, guest house: Establishments providing group accommodation services at a price, with or without other supplementary services, that are registered as such in the relevant register of the Tourist Board of each Autonomous Community.

1.3. Holiday apartments<sup>8</sup>: Establishments providing group accommodation services at a price, with or without other supplementary services, that are registered as such in the relevant register of the Tourist Board of each Autonomous Community.

1.4. Full dwelling rental: rented dwelling (apartment, villa, etc.) that may or may not include the provision of hotel-type services, such as cleaning, meals, etc. This type of accommodation can be rented directly from a private landlord or through an agency. The types of accommodation included in this category must be rented entirely, not by room.

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<sup>8</sup> Tourist dwellings advertised on online booking platforms are included in both sections. Those that are registered in the registry of the Tourism Councils are included in 'Tourist flats'. Those that do not comply with this will be included in 'Rental housing'.

1.5 Rented rooms in private homes: Rented rooms in a private house, whether or not rental includes cleaning services, food...

1.6. Rural tourism accommodation Rural tourism accommodation are considered to be those establishments or dwellings for paid tourist accommodation, with or without other supplementary services, and that are registered as such in the relevant register of the Tourist Boards of each Autonomous Community. These establishments usually have certain characteristics:

- a) they are situated in a rural environment,
- b) They are buildings in the characteristic architectural style of the area or are located on active agricultural properties.
- c) They offer a limited number of beds and bedrooms for guests, in addition to providing basic infrastructure and service requirements.

1.7. Hostel: accommodation in a tourist hostel is that offered, on a regular basis and at a price, in establishments providing to the public in general accommodation services in multiple capacity bedrooms, with or without other supplementary catering services, which can offer the practice of leisure, educational or nature contact activities.

1.8. Camp Site: A camp site is a duly enclosed, fitted and conditioned space, aimed at providing, on a regular basis and in exchange of a payment at a set price, a place for people to enjoy outdoors life for a limited time for holiday or tourist purposes and using as residence, mobile homes, caravans, tents or other similar easily transported elements; and that are registered as such in the corresponding register of the Tourist Boards of each Autonomous Community.

1.9. Cruise: Ship: A cruise is defined as a journey for holiday or tourism purposes made on board a passenger boat to any place in the world, with intermediate ports of call, and that provide passengers with all services of a hotel, such as accommodation, catering, medical services, leisure activities,..

1.10. Other collective accommodation: This category groups the rest of collective establishments. This would include, for example, health centres, spas, student residences, group transport, tourist complexes, etc.

**2. Non-Market (unpaid accommodation):** this is the type of accommodation where there is no monetary transaction.

The following sub-categories are distinguished:

2.1. Owned dwelling: This category includes second dwellings owned by the respondent. It also covers caravans permanently parked in a camp site.

2.2. Dwelling of family or friends (free): This category includes dwellings loaned by relatives or friends; and also those loaned free of charge by a company.

2.3. Shared-use dwelling (timeshare): The category of 'shared-use dwelling/timeshare' corresponds to the right of using by turn real estate properties for tourism use (for instance, an apartment on the coast purchased under a special regimen whereby the right to use it only six months a year is acquired, while the other owner will use it the other six months; this would be a timeshare dwelling).

2.4. House-exchange: this category includes dwellings exchanged free of charge between two private individuals.

2.5. Other non-market accommodations: This category groups the rest of non-market establishments (free), such as "outdoors", car, mountain huts, on the beach, caravan parked outside camp sites, and the like.

The list of categories of main accommodation in the FRONTUR module will not be so detailed, remaining as follows:

1. Market:
  - 1.1. Hotels and similar establishments
  - 1.2. Rented accommodation
  - 1.3. Camp sites
  - 1.4. Rural tourism accommodation
  - 1.5. Cruise Ship
  - 1.6. Another market accommodation
2. Non-market
  - 2.1. Own house
  - 2.2. Home of relatives or friends
  - 2.3. Other non-market accommodation

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#### 8.4 REASON FOR TRAVEL

The main reason for travelling is defined as the reason without which the journey would not have been made.

The main reason for a journey helps determine whether it can be considered a tourist trip and whether the traveller may be considered a visitor. For example, if the main purpose of the trip is to work in exchange for remuneration, then the trip cannot be considered tourism, and the traveller cannot be considered a visitor, but "other traveller".

In travel groups whose members may have different reasons for travelling, the reason why it was decided to travel should be taken as the main reason for travelling.

The classification of tourist trips by main reason is:

- A. Business
  - A.1 Cross-border worker
  - A.2 Seasonal worker (temporary)
  - A.3 Attendance at trade fairs, conferences and conventions
  - A.4 Other work and business reasons
- B. Personal reasons
  - B.1 Studies (education and training)

- B.2 Visit to relatives and/or friends
- B.3 Voluntary health treatments
- B.4 Religious reasons or pilgrimages
- B.5 Shopping, personal services
- B.6 Leisure, recreation, holidays
  - B.6.1 Gastronomic tourism
  - B.6.2 Cultural tourism
  - B.6.3 Sports activities
  - B.6.4 Sun and beach tourism
  - B.6.5 Nature tourism
  - B.6.6 Other leisure activities

#### C. Other reasons

The reasons will be classified into the following categories:

##### A. Business. Professional reasons.

Journeys made for professional reasons are those made to conduct work or business activities. This category includes for instance attending meetings, conferences, congresses, conventions or fairs; to give lectures, concerts, act in theatre plays or other shows; promotional, shopping or sales of goods or services on behalf of producers not resident in the place visited; the assignments by diplomatic, military staff or international organisation staff outside their station; journeys to take part in missions of non-government organisations; academic or scientific research stays; travels with guides or other professionals of the tourist sector to schedule and prepare travels or tourist activities, such as hiring accommodation or transport services at the place visited; professional participation in sports activities; attending professional training courses; journeys by professionals specialised in private transport (private yachts and aircraft, and the like).

Incentive trips organised and paid by a company to reward its employees, where these perform sports, leisure or recreational activities, that must be classified as leisure trips, are excluded.

We distinguish the following categories:

##### A.1 Cross-border worker (\*)

This is a traveller who crosses the border to work in Spain, but who returns to his country of residence every night to sleep. No overnight stay in Spain. Such a person is not considered a day tripper, but this category is included to identify this group and to tabulate them.

##### A.2 Seasonal worker (\*)

This is a traveller who comes to Spain to work for a season (less than one year) and who is employed by a resident business in our country. Stays in Spain overnight. Such a person is not considered a tourist, but this category is included to identify this group and to tabulate them.

A.3 Attendance at trade fairs, conferences and conventions.

A.4 Other work and business reasons.

B. Personal reasons

Travel for personal reasons are considered to be all those that cannot be classified as work trips. This group covers a wide range of reasons, that are classified in the following categories:

B.1 Studies (education and training)

This category includes, for example, short-term courses paid by employers, following up on particular study programmes (formal or informal) or acquiring specific skills through formal courses, including paid studies and language courses, professional or special courses; sabbatical holidays to attend university, etc.

B.2 Visit to relatives and/or friends

This category includes journeys made for the purpose of visiting relatives and friends, attending baptisms, communions, weddings, funerals or other family events; to visit friends or relatives in hospital, or to provide temporary care for children, old people or ill persons (without remuneration).

B.3 Voluntary health treatments

This category includes trips to spas, thalassotherapy centres or other specialised centres for voluntary medical or surgical treatment, including cosmetic surgery performed by medical professionals.

B.4 Religious reasons or pilgrimages

This category includes journeys made to participate in religious events, meetings or appointments (other than family or friend celebrations), pilgrimages (for instance, the Saint James' Way), and attendance to religious gatherings such as El Rocío, Holy Week processions, etc. when performed for religious reasons.

B.5 Shopping, personal services

This category includes journeys whose main goal is to purchase goods and/or services for personal use, gifts, and the like, that are not acquired for resale or as part of a production process; and trips made to process documents or make arrangements with government agencies, financial institutions or education centres.

B.6 Leisure, recreation, holidays

B.6.1 Gastronomic Tourism: this category includes journeys where the main motivation is gastronomic; such as experiencing the gastronomy of a particular region, visiting a certain restaurant, tastings, gastronomic routes, etc.

B.6.2 Cultural Tourism: this category includes journeys whose main purpose is to discover cultural assets (museums, historical or artistic heritage, etc.) present in a certain tourist destination, whether a village or a city.

B.6.3 Sports Activities: this category includes trips where the main purpose is to practice sports (skiing, sailing, golf, hunting, fishing, hiking, climbing, etc.) either on their own or to take part in an amateur competition (school, regional leagues, etc.).

B.6.4 Sun and beach tourism: this category includes trips to places on the coast for the purpose of enjoying the beaches and climate with the primary aim of resting and relaxing; as well as to enjoy the area's restaurants and ambience.

B.6.5 Nature tourism: this includes trips where the main motivation is to practise recreational, leisure, interpretation, knowledge or sports activities in natural environments.

B.6.6 Other type of leisure: this category includes leisure travel that cannot be classified in any of the above categories.

### C. Other reasons

This category covers the reasons that could not be classified in any of the previous categories.

If the respondent only has to answer the FRONTUR module, the list of travel reasons is not as detailed, being as follows:

1. Leisure/holidays
2. Turnover
3. Studying
4. Personal (health, family, etc.)
5. Other reasons

(\*) Note: It must be noted that the descriptions of 'cross-border worker' and that of 'seasonal worker' do not classify them as day trippers or tourists; however, they are included for identification purposes. There are more categories of travellers, who are not visitors (that is, who are neither tourists nor day trippers). These groups are a minority, and are not identified in the questionnaire. These categories are:

- Other short-term workers
- Long-term workers
- Nomads and refugees
- Passengers in transit who do not enter the economic and legal territory
- Public transport crew
- People who enter the country to make it their country of residence.
- Students and long-term patients and family members accompanying them
- Other passengers considered as not entering the economic territory:
  - Diplomats, consular staff and their dependants
  - Military personnel on manoeuvres

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## 8.5 PACKAGE HOLIDAYS

A package holiday is a previously booked trip, including at least accommodation and transport, though either of these two items can be replaced by any other service involving a significant amount of the total price of the trip (organised visits, car rental,

etc.), and that has been sold for an overall single price through the travel agency or tour operator.

If the trip has been booked as a package holiday, the traveller is asked which services are included in the package:

- Transport
- Accommodation
- Food and drinks not included in the accommodation system (bed and breakfast, half board, full board)
- Leisure, culture and sports activities
- Other services

When more than one package holiday has been booked for or during the travel, this question is asked considering all packages as one. Therefore, if a package contains the transport and leisure activities and another the transport and accommodation, then it must be specified that the package includes the transport, accommodation and leisure activities.

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## 8.6 DURATION OF THE JOURNEY

The journey duration is measured in the number of nights a person spends while travelling in Spain; that is, the number of overnight stays.

The date of entry into Spain is not asked, but as the survey is done when the trip ends, with this data and the number of overnight stays, it can be calculated.

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## 8.7 STAGES OF THE JOURNEY

So far we have defined the main travel destination, but a journey may have several destinations in addition to the main one. Each of the destinations where there is at least one overnight stay will be considered a stage of the journey.

That is, a stage is each of the stops with an overnight stay during the journey. A trip may have as many stopovers as intermediate destinations where the traveller has stayed at least one night.

In addition to the destination, at each stage the traveller is asked about type of accommodation used, the number of people who stayed in it (provided that it is not a private home), the type of stay (accommodation, B&B, half-board, full-board) in group accommodation, the number of overnight stays and the mode of transport used to travel to the next stage, if any.

This information will improve the consistency with Tourist Accommodation Occupancy Surveys (EOAT), so the date of the overnight stays is required. So as not to overload the questionnaire with questions, the respondent is asked to describe them chronologically and by knowing the date trip ended (the date on which the interview takes place), the dates of each stage of the journey can be deduced.



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## 8.8 TOURIST GROUP

The tourist group consists of people travelling with the respondent. The respondent should indicate their relationship with the group:

- a. Single
- b. With partner
- c. With family, including children
- d. With family , excluding children
- e. With family and friends
- f. With friends
- g. With work or study colleagues

The gender and age of the group members is asked (by ranges: 0-5, 6-14, 15-24, 25-44, 45-64, 65 or over).

A distinction should be made between the number of people referred to in the travel expense questions. Expenditure may refer only to the respondent, or to the respondent and a number of people, which must be indicated, the latter being less than or equal to the number of members of the group.

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## 8.9 ACTIVITIES CONDUCTED DURING TRIP

The questionnaire contains a question where the respondent selects the activities undertaken while travelling in Spain and also indicates whether or not they were included in the package (if one was booked). The list of activities includes:

- A. Sports activities:
  - a. Golf.
  - b. Winter Sports.
  - c. Yachting
  - d. Water sports.
  - e. Hunting.
  - f. Hiking, mountain climbing.
  - g. Adventure sports.
  - h. Horse-riding routes.
  - i. Other sports.
- B. Enjoying and using the beach.
- C. Visiting cities.
- D. Visiting rural destinations, camping.
- E. Visits to natural areas (natural parks, forests, mountains, etc.).
- F. Visits to theme parks.

- G. Services such as spas, thalassotherapy
- H. Cultural visits (museums, churches, libraries).
- I. Attending cultural events (music festivals, opera, bullfighting, ...).
- J. Other cultural activities.
- K. Attending sporting events
- L. Gastronomic activities: (haute cuisine, visiting wineries, vineyards, tasting).
- M. Fun activities (discos, clubs).
- N. Visit to casinos, gaming rooms.
- O. Religious events.
- P. Visits to congresses and trade fairs.
- Q. Visits to relatives and friends?
- R. Shopping (clothes, jewellery, handicrafts, typical products).

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#### 8.10 EXPENDITURE CHARACTERISTICS

One of the objectives of this survey is to compile individual travel expenditure, regardless of who has paid it.

To compile this variable more accurately, the respondent is asked whether the expense being reported corresponds to the respondent alone or to several persons and the number of people who make up this expenditure group should be indicated. If the respondent replies that it belongs to a group, the expenditure will be separated to calculate the average expenditure per person.

To help answer this variable, questions will be asked on the spending on various items and the total cost of the trip will be obtained by aggregation. The respondent will be asked if expenditure was involved in each item (in some this can be seen by the response to previous questions), and if so, the amount.

Moreover, the respondent must indicate whether each item of expenditure was paid in origin or destination (for some items, such as accommodation, multiple choice is allowed, and some items included in the 'other expenses' section are not queried, assuming spending is always at the destination).

On the other hand, the person making the payment should be identified, using the following options:

- a. The respondent, or someone in the group
- b. Relatives or friends who are not travelling
- c. Company or organisation
- d. Free of charge (points, prizes, etc.).
- e. Others.

In addition, to facilitate the answer, the respondent may answer questions on expenditure using the currency in which payment was made, and must report on the items for which the expenditure was made, as follows:

1. Spending on package holidays: as already mentioned in paragraph 8.6 on package holidays, the cost of the package will be asked, including a single figure for the total cost of all packages booked for this trip, besides indicating the types of service they contain.
2. Travel expenses: Included in this item are:
  - a. Group round trip
  - b. Outbound transport (only if a round trip was not bought)
  - c. Return transport (only if a round trip was not bought)
  - d. Public transport on arrival: includes buses, taxi, train on national routes
  - e. Car hire: in this case also the number of days this service was booked must be indicated
  - f. Fuel consumption and tolls
3. Accommodation expenditure: depending on the answers given in the type of accommodation used in the stages of the journey, the items corresponding to the accommodation expenditure will be enabled, distinguishing the following:
  - a. Group accommodation
  - b. Rented dwelling
  - c. Owned or borrowed housing. In the latter case, the respondent will be asked about payments for using the dwelling, repairs, equipment and consumption.
4. Other costs: in the 'Other Expenses' section the following must be identified:
  - a. Sports and cultural activities.
  - b. Purchase of clothes, jewels, handicrafts, typical products souvenirs...
  - c. Buying groceries, beverages and other (cleaning, pharmacy, ...)
  - d. Meals or drinks in restaurants
  - e. Extraordinary expenses: in this case, the following are identified: Acquisition of real estate, purchase of land and marine vehicles, other unusual purchases of value, vehicle repairs, expenses due to illness or accident, other expenses. The value of the last four concepts only are requested (the first two are asked only if expenditure has been made, but not the amount).

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#### 8.11 SOCIODEMOGRAPHIC CHARACTERISTICS

In order to characterise overseas residents visiting Spain socio-demographically, respondents are asked about the following characteristics:

- Age and gender of the respondent: gender (male or female) and age (measured in years by ranges: 0-5, 6-14, 15-24, 25-44, 45-64, 65 or over).

- Highest level of education attained: in this case, the International Standard Classification of Education (CINE 2011) is used, at stratum level, except for informal education, which is not included:
  - a. Primary or intermediate.
  - b. Secondary
  - c. Higher education.
- Situation in relation to activity: in this case the respondent's situation at the time of the interview is asked (if the respondent is in various situations, the main one is taken). The following categories are identified:
  - A. Employed, working: Persons conducting paid activity at the time of the interview, either for a salary or other form of payment, or in exchange for a benefit or a family gain in cash or in kind, will be considered as work. The following are also considered to be working: people on family benefits, paid apprentices and workers under a public programme of paid employment.
 

Similarly, this category also includes persons in employment from which they are absent and to which they expect to return. Persons who work regularly but are not working at the time of the survey due to illness or accident, labour dispute, disciplinary suspension from work and salary, vacations, holidays, study, maternity or other types of leave, voluntary absence, temporal work disruption for reasons such as bad weather, mechanical breakdowns or other similar reasons will be considered to be in this situation, provided they are formally linked to the job.
  - B. Pensioners, retired: Pensioners or retired persons are those not working or who receive an old-age or retirement pension, obtained for their previous economic activity on stopping working due to their age.
  - C. Unemployed (seeking employment) <sup>9</sup> People aged between 15 and 74 who meet the following conditions:
    - Without a job at the time of the interview, that is to say, they are neither self-employed nor employed.
    - They are currently available for employment, i.e. they are available for employment or self-employment before the end of the two weeks following the interview.
    - They are actively seeking employment or self-employment.
  - D. Student: Students are considered to be persons receiving an instruction in any level of education.
  - E. Homemakers: Persons that do not fulfil any economic activity but take care of their households with no economic remuneration.
  - F. Others: this category includes all persons not included in any of the above categories, in particular the following: incapacitated for work (persons who are permanently incapacitated, whether or not they have previously worked and regardless of whether they receive disability benefits), landlords (persons who without any wage-earning or self-employed activity receive income from property

<sup>9</sup> Definition of the Active Population Survey

and/or other investments), persons temporarily deprived of liberty, and those who, without exercising economic activity, receive public or private aid.

- Current professional situation: the respondent is asked to state to which of four categories they belong, if they have declared they are employed:
  - A. Self-employed
  - B. Employee, senior management position
  - C. Employee, mid-level management
  - D. Unqualified employee
- Level of income: regarding income level, and taking into account the common feature of all respondents of being resident outside Spain, many with non-euro currencies, the question will not address monetary ranges:
  - A. High
  - B. Medium-high
  - C. Medium
  - D. Medium-low
  - E. Low

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#### 8.12 USE OF THE INTERNET FOR PLANNING THE JOURNEY ACCOMMODATION

The respondent is asked if they used the Internet in organising the trip to Spain. If so, they are asked to detail whether it was to find information, make a reservation or pay for a service, specifying if it was in the field of transport, accommodation or the activities undertaken during the trip.

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#### 8.13 EVALUATION OF THE TRIP

The respondent is requested to give an overall evaluation of the trip, from 0 to 10, with 0 being the lowest score and 10 the highest.

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### 9 Data collection

One of the main new features is the integration of FRONTUR and EGATUR in the collection and design phases, considering the EGATUR sample as a sub-sample of FRONTUR.

The unit that will be part of the EGATUR sample is selected from the sample selected for FRONTUR. An algorithm included in the portable device used by the survey team makes the selection, taking into account that the minimum sample sizes determined by groups of countries of residence must be obtained. In this way, all interviewers will carry out the EGATUR and FRONTUR surveys.

These operations use a mixed system for obtaining results, based on three types of information:

- Administrative information, provided by different bodies and public companies responsible for the different access routes into Spain
- Volumes. Physical counting of vehicles and persons at road border crossings.
- Survey of the four access modes to the country.

In the first case, the information is sent directly by the bodies managing the source.

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## 9.1 ROAD

At all road border points the following will be done:

- Sample volume of all types of vehicles, by distinguishing.
  - Heavy goods vehicles count.
  - Volume of other vehicles, capturing the type of vehicle, the registration plate nationality and the number of occupants.
- Survey of travellers leaving Spain:
  - By bus.
  - The remaining vehicles except heavy goods vehicles.

The work being carried out at border crossing points consists of:

- Volumes in monthly samples at border points and time slots
- Sample survey of departures from Spain targeting residents and non-residents (FRONTUR) and Tourism Expenditure Survey (EGATUR) aimed at a subsample of non-residents of the FRONTUR sample.

### **VOLUMES**

The job of the volume counter is to count all vehicles crossing the border point, entering information on the nationality of their registration plate, the number of occupants and type of vehicle. This information serves to represent the vehicles counted by the existing counting equipment that uses road loops located at every border point, which are managed by the DGT.

Depending on the border post, the flow of vehicles can travel in one or more lanes or roads.

At points with a single lane, or if there are more than one lane at a point close enough to allow perfect visual monitoring of all lanes, a single agent counts the volumes. Where there are several lanes, when the forecast traffic density justifies it, there will be an agent for each one.

In any case, the volume counter is in a place that allows the most favourable visibility conditions for estimating the volume (always perpendicular to the direction of the road) which obviously includes the speed at which the vehicles travel.

## **FRONTUR/EGATUR ROAD**

The survey is conducted on light vehicles and buses leaving Spain, in accordance with the sample sizes provided by the design of the operation for each border point, day, and time slot, whether the occupants be tourists, through-travellers, or day trippers, following the CAPI questionnaire flow in each case, and only restricted to non-residents in the EGATUR module.

For tourist groups, the general methodology contains rules for their detection and distinguishing them from short-distance buses; only one person from the vehicles is interviewed.

The interview is conducted using computer translation in the language in which the respondent best communicates. Rejections and refusals to carry out the surveys shall be entered in the computer.

Vehicles are approached, and stopped by the agent when they are departing.

The drivers are invited to stop as they arrive, without the agent selecting the vehicle at any time, and regardless of its type (except heavy vehicles: trucks, vans and tractor cabs, which are not surveyed). That is, the first vehicle to reach the survey point is stopped. To ensure the agent's safety, and of traffic in general, the agents will be careful when stopping vehicles.

For this task the agents must always wear a reflective vest to ensure their presence on the road is clearly visible. They must also wear their identification tag in a visible place.

If the vehicle approached does not stop or does not want to answer, the type of vehicle, the nationality of the registration plate, number of occupants and the cause is recorded. Only one traveller per vehicle is surveyed.

There are special treatment standards for buses, and for recording non-response or other incidents.

After interviewing or attempting to interview a vehicle, the agent helps it rejoin the traffic and tries to interview the next vehicle passing through the survey point. This ensures that the selection is random and is in proportion to the flow of traffic that travels through that point during the day.

In any case, the interviews will be spread throughout the day, ensuring a random sample.

At road border points where information collection (both volumes and surveys) is particularly complex, the best spots for data collection must be selected. Criteria such as proximity to the border point, passenger flow, previous junctions, security and other typical and well-known characteristics of the area (service stations with low fuel prices) are taken into account when choosing these points.

In addition to these points, a methodological procedure has been defined for when survey points are located after junctions on the roads, if points before them could not be found.

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## 9.2 AIRPORTS

The interviewers know the schedules of the flights that they have to meet to carry out both operations, as well as the FRONTUR sample and EGATUR sub-sample sizes. Similarly, they are provided with the route method to follow around the boarding lounge to minimise FRONTUR (and therefore EGATUR) selection bias. They also have substitution rules for non-response incidents and the credentials and authorisation to carry out their work.

Having examined the list of flights to be covered during the day, the agent will be ready to take position in the departure lounge well in advance (at least one hour before the scheduled boarding time).

Once the interviewers arrive (usually two people) at the flight departure lounge, they interview the passengers on the flight indicated, following the pre-planned route, whether the passengers are sitting or standing in the boarding line. FRONTUR questionnaire flows are different for residents (fewer items) and non-residents.

However, the EGATUR sub-sample module, which is self-selected in the FRONTUR CAPI flow, is only for non-residents.

After completing the work in the departure lounge, both interviewers will close the flight.

The compiled data is sent at the end of the day.

As for the road survey, for tourist groups, the general methodology contains rules for their detection; and only one person from the group is interviewed.

The interview is conducted using computer translation in the language in which the respondent best communicates. Rejections and refusals to carry out the surveys shall be entered in the computer.

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## 9.3 RAILWAY

The rail survey is conducted in a similar way to airports. The interviewers are positioned on the platform and survey passengers boarding the train. A question is introduced in the CAPI regarding border crossing, in order to properly select the group making an international journey.

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## 9.4 PORTS

Surveying in the ports is very similar to the airport, there are collaboration agreements with the port authorities and the agents have credentials and access authorisations.

### **Control procedures**

Given the magnitude and complexity of the operation, controls to ensure the compilation, accuracy and transmission of information are necessary.



## Work inspection

In addition to monitoring the sample information compiled, the fieldwork will be continuously inspected, using both the information on the devices and on-the-spot activities. All teams will follow continuous training programmes.

Circulars, containing general instructions or specific cases emphasising aspects to improve the work of the teams and correct any identified incidents are regularly distributed.

## Validation Rules

The sample information collected is monitored through validation rules. Monitoring is performed on the final sample files, before the start of the estimation stage.

This process ensures that the sample information is correct and suitable for use in the next computation phase.

The process consists of numerous rules that the sample files must comply with each month. Both the file structure and their contents are checked and any inconsistency or anomaly is detected immediately.

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## 10 Data processing

The information collected will be processed in three main stages:

### 1. Construction of the FRONTUR elevation framework.

Based on the AENA, Renfe<sup>10</sup> and Puertos del Estado passenger entry registers, and the vehicle entry register (DGT loops and cameras) and sample volumes, the FRONTUR elevation framework is compiled, formed by the set of passengers entering Spain in the reference month.

### 2. Microdata filtering

The application used to perform the surveys includes a number of validation controls which enable errors and inconsistencies to be detected at the time of collection. Additionally, quality standards are set to judge whether a questionnaire is valid or not.

The questionnaires must be filtered upon collection, as there is no possibility of contacting the respondent again.

### 3. Statistical processing of the information

The microdata files are transformed into operating files for working out the estimates. These processes are:

- Validation of the information contained in the files in order to verify that the collected data is consistent.
- Processing of non-response in FRONTUR total: a model of donation within the cell is used according to donation criteria as provided for in the sample design.

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<sup>10</sup> Currently, at the French border, due to the end of the RENFE and SCNF agreement, an estimate of the universe is made.

- Detection and treatment of outliers in overnight stays in EGATUR and FRONTUR.
- Calculation of FRONTUR elevation factors: expansion estimators are used in each elevation cell (see section 5.5 of this document).
- Construction of the elevation framework of the EGATUR variables.
- Allocation of partial non-response: for cases where the information in the questionnaire is not complete, the missing values are allocated using information from the reference month, as well as information from past periods.
- Processing of non-response EGATUR total: a model of donation within the cell is used according to donation criteria as provided for in the sample design.
- Calculation and calibration of FRONTUR elevation factors: expansion estimators are used in each elevation cell, see section 5.5 of this document). For details on the calibration process, see ANNEX 01.
- Estimation of expenditure levels in EGATUR by model-assisted estimation procedures. For details on the expenditure model, see ANNEX 02.

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## 11 Dissemination

The INE website contains the operation publication calendar.

The publication plan includes:

- Detailed results tables, summarised in the section below
- Microdata files duly managed to prevent identification of the respondents.

In addition, the customised operation requests from users are managed.

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### 11.1 TABULATION PLAN

In the INE website provides the following information.

#### A CIRCUMSTANTIAL INFORMATION: MONTHLY ESTIMATES

Number of visitors by type: tourists and day trippers

- Number of tourists according to access mode: airport, road, port and railway.
- Number of tourists by type of accommodation: market and non-market accommodation.
- Number of tourists by country of residence (the most important ones).
- Number of tourists by main Autonomous Community destination: Andalucía, Illes Balears, Canarias, Cataluña, Comunitat Valenciana, Comunidad de Madrid, other Autonomous Communities.
- Number of tourists by purpose of travel.
- Number of tourists by travel organisation type: with and without package deal.
- Average duration of the trip (nights) and tourist spending (total spending (million), average expenditure per person (euros) and average daily expenditure (euros).

- Tourist spending according to entry mode: total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros).
- Tourist spending according to accommodation type: total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros).
- Tourist spending according to country of residence: total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros).
- Tourist spending according to main destination Autonomous community: total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros).
- Tourist spending according to reason for trip: total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros).
- Tourist spending according to type of organisation: total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros).

## B STRUCTURAL INFORMATION: ANNUAL ESTIMATES

In addition to aggregating the monthly information, annual estimations aimed at providing information on the variables studied with a higher disaggregation level will be published.

- Entry of tourists by country of residence for a broader list of countries than the monthly sample.
- Entry of tourists by main Autonomous Community and Autonomous City destination for all Autonomous Communities (See ANNEX 3)
- Tourist spending according to accommodation type: total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros) average length of journey (nights).
- Tourist spending according to country of residence: total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros) average length of journey (nights).
- International tourist spending, resident in long-haul countries: average expenditure per person (euros), average daily expenditure (euros), average trip duration (nights).
- Tourist spending according to main destination Autonomous Community (All Autonomous Communities and the two Autonomous Cities): total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros) average length of journey (nights).
- Tourist spending according to reason for trip: total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros) average length of journey (nights).
- Tourist spending according to spending location (at origin or destination): Total expenditure (million euros).
- Tourist spending according to age and gender (table with twin entries for gender and age by ranges (<15, 15-24, 25-44, 45-64, >64): total spending (million euros), average expenditure per person (euros) and average daily expenditure (euros) average length of journey (nights).

- Day tripper spending according to entry mode: total spending (million euros), average expenditure per person (euros).
- Day tripper spending according to country of residence: total spending (million euros), average expenditure per person (euros).
- Day tripper spending according Autonomous Community of destination: total spending (million euros), average expenditure per person (euros).

The disaggregations specified are conditioned by the efficiency of the sample sizes implicit in them, determined by the design, so they may be subject to restriction in their diffusion, of which the users will be informed in each case.

### C COMMENTS

- Custom requests: the INE policy for custom requests from users will be followed. The restrictions of sample insufficiency in the requested disaggregations, determined by the design of the operations, will be taken into account, if applicable, and the receiver will be duly notified.
- In all diffusion products obtained by third parties, from microdata or other statistical products supplied by the INE, explicit reference will be made to "INE source", as the operation owner, as well as "own operation", assuming that it is performed under the responsibility of the agency or institution diffusing them.

### Note on the country of residence

To ensure the quality of the estimates, the list of countries of residence on which data will be published shall be subject to the minimum sample sizes specified in the sample design.

In the variables relating to entry of travellers, the list of countries will be:

- |   |                     |
|---|---------------------|
| – The United Kingdom                                  | – Switzerland       |
| – France  | – The United States |
| – Germany   | – Ireland           |
| – Nordic countries (Denmark, Finland, Norway, Sweden) | – Russia            |
| – Italy   | – Rest of Europe    |
| – Portugal  | – Rest of America   |
| – Netherlands   | – Rest of the world |
| – Belgium   |                     |

In the annual data, this list is extended by the following countries:

- |          |                        |
|----------|------------------------|
| – Japan  | – Saudi Arabia         |
| – China  | – Philippines          |
| – Korea  | – United Arab Emirates |
| – Turkey | – Argentina            |
| – Israel | – Brazil               |
| – India  | – Chile                |

- Mexico
- Venezuela
- Canadá

This list will be smaller in the variables relating to expenditure, since the sample is smaller, and the following countries will be fixed:

- The United Kingdom
- Germany
- France
- Nordic countries (Denmark, Finland, Norway, Sweden)
- Italy
- Rest of the world

This list is extended in the annual data by the following countries:

- Belgium
- Ireland
- The Netherlands
- Portugal
- Russia
- Switzerland
- Rest of Europe
- United States of America
- Rest of America

In the tabulation of long-range countries, average expenditure data is provided for the following countries:

- Japan
- China
- Japan
- Korea
- Israel
- Saudi Arabia
- United Arab Emirates
- Chile
- Venezuela
- Canada
- Mexico
- Argentina
- Brazil
- Turkey
- India
- Philippines

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## 11.2 MICRODATA FILES

The INE, on its web page, provides users with anonymous microdata files so the user can carry out studies on travellers who are not resident in Spain, in which they may be interested. Together with the files, a short guide on their treatment is provided.

The files contain, together with the variables collected directly in the questionnaires, derived variables built from the former that will contribute to enhancing the use of the files. In addition, each register includes the elevation factors necessary for calculating the estimates such as those shown in the tabulation plan.

## Annex 1: Calibration of overnight stays of EGATUR and FRONTUR travellers

The objective of calibrating the EGATUR overnight stays made in collective accommodation to the overnight stays provided by the Tourist Accommodation Occupancy Surveys (Hotels, Tourist Apartments, Campsites and Rural Tourism Accommodation, hereinafter referred to as EOHyAT) is to make the estimates more efficient by integrating an exogenous information of recognised quality, wide coverage and high accuracy into the estimators; moreover, in the context of an integrated tourism statistics system, the aim is to present consistent results from different sources relating to the same target variables.

The procedure uses the CALMAR software developed by Claude Deville for the INSEE in France.

The monthly marginals of this calibration process are the overnight stays of the Tourist Accommodation Occupancy Surveys (EOHyAT) broken down by twice crossing destination Autonomous Communities (Andalucía, Baleares, Canarias, Cataluña, Comunitat Valenciana, Comunidad de Madrid, Rest of the Autonomous Communities) with country of residence (UK, Germany, France, Rest of World). Overnight stays at national level of the following countries of residence are also included: Belgium, Ireland, Italy, Netherlands, Portugal, Switzerland, Russia, the Nordic countries, Rest of Europe, USA, Rest of America.

The calibration marginals of overnight stays from the external source (EOAT) cannot be used directly due to two main types of effects that must be adjusted beforehand: firstly, those due to systematic differences in coverage (for example, permanent residents in hotels); and secondly, the effect due to the presence of overnight stays compiled in surveys corresponding to entries during the month prior to the reference month, and those not compiled due to departures taking place in the month after the reference month. However, since the FRONTUR-EGATUR weightings refer to visitor entries, whereas the sampling data for overnight stays is visitor departures, it is assumed to be largely corrected and therefore, hereinafter, only the former is taken into account.

After adjusting the marginals, they will be used as a calibration base for the base year (month), obtaining for subsequent years the estimation achieved by updating them with the annual exchange in the direct data provided by the external source (EOHyAT).

The calibrations will always take into account the overnight stays by stage. In what follows, the indicator sub-index of the cell or sub-population referred to by estimators (country of residence, Autonomous Communities, type of accommodation where overnight stays occur) is omitted. The formulae for the estimators are given, specifying for the base year T<sub>B</sub>, which is from October 2014 to September 2015. If a major structural change in the distribution of entries by countries is seen in the future, all references to the year of the formulae below will be construed by transferring T to T+n.

Below, all formulae are calculated in the cell or sub-population determined by the dimensions: country of residence, group by type of accommodation, group by Autonomous Community of destination.

$$\hat{P}_M^{T_{B+i}} = \hat{P}_M^{T_{B+i-1}} \frac{H_M^{T_{B+i}}}{H_M^{T_{B+i-1}}}$$

$$\hat{P}_M^{T,B} = H_M^{T,B} * C_A^{T,B}; \quad T\_B : \text{base year}$$

Where:

$$C_A^{T,B} = \frac{(P^{T,B} + P^{T,B-1})}{(H^{T,B} + H^{T,B-1})};$$

This coefficient is bounded at the interval (0.95; 1.05).

With:

$\hat{P}_M^T$  = target variable, marginal for calibration of overnight stays of the reference subpopulation in month M of year T of the EGATUR.

$H_M^T; H^T$  = overnight stays of the surveys of tourist establishments of the INE (EOHyAT) of month M or of year T, respectively.

$P_M^T$  = Estimated EGATUR overnight stays for journeys ending in month M of year T. Monthly overnight stays are truncated to the maximum number of days in the month (28, 29, 30 or 31). Truncation is carried out over the total trip, which has an impact on overnight stays by stages, inversely.

NOTE: To calculate the estimations of EGATUR overnight stays using the methodology used by Turespaña, in a sub-population or group cell of types of accommodation, group of Autonomous Community of destination, the microdata for each stage of the trip will be taken into account to establish both dimensions of the cells in which the estimator is calculated.

With all this, the marginal vectors to which EGATUR is calibrated are:

- N\_R\_AJ\_k\_p: overnight stays of the EOHyAT adjusted and truncated with travellers, with k = 1, 2, ..., 7 (Andalucía, Illes Balears, Canarias, Cataluña, Comunitat Valenciana, Comunidad de Madrid and other Autonomous Communities) and p = 1, 2, 3, 4 (UK, Germany, France and Rest of World).
- N\_R\_AJ\_p: total overnight stays of the EOHyAT of travellers, with p = 1, 2, ..., 11 (Belgium, Ireland, Italy, Netherlands, Portugal, Switzerland, Russia, Nordic countries, Rest of Europe, Rest of America).
- V\_i: Total FRONTUR non-resident tourists by access mode into Spain, i = 1, 2, 3, 4 (road, airport, port and railway).
- V\_k: Total FRONTUR non-resident tourists by main destination Autonomous Community, k = 1, 2, ..., 6 (Andalucía, Illes Balears, Canarias, Cataluña, Comunitat Valenciana, Comunidad de Madrid).
- V\_p: Total FRONTUR non-resident tourists by country of residence, p = 1, 2, ..., 14 (United Kingdom, Germany, France, Belgium, Ireland, Italy, Netherlands, Portugal, Russia, Scandinavia, Rest Europe, USA, Rest of America).

The last three vectors are included to maintain the EGATUR elevation frame.

## Calibration of FRONTUR travellers

With the same objectives as those listed for EGATUR, an adjustment using the same FRONTUR weights technique is performed prior to calibrating EGATUR.

The external marginals in this case are the journeys estimated from overnight stay variables provided by the EGATUR calibration marginals, firstly, divided by the average monthly stays provided by EOHyAT within the cells that define the marginal that are related separately.

The concepts of 'main destination' and 'main accommodation' of the journey, used in the FRONTUR questionnaire, are not directly comparable with the EOHyAT traveller concept; however, they correspond to the concept of 'stage of the journey' used in EGATUR. Therefore, a coefficient that estimates the stages/journey ratio within FRONTUR marginal calculation cell is applied to the travel marginal calculated from EOHyAT overnight stays and average stays. This estimate is obtained from EGATUR, whose questionnaire does include both concepts (travel by destination or main accommodation and by destination and accommodation during the stage).

Marginal vectors used in this calibration process are:

- $T_i$ : total number of travellers (resident and non-resident) by access mode into Spain,  $i=1, 2, 3, 4$  (road, airport, port and railway).
- $V$ : total number of tourists (non-resident).
- $E$ : total number of day trippers (non-resident).
- $V_{R_k}$ , the EOHyAT tourists corrected by Autonomous Community ( $k = 1, 2, \dots, 7$  - Andalucía, Illes Balears, Canarias, Cataluña, Comunitat Valenciana, Comunidad de Madrid, Rest of the Autonomous Communities)
- $V_{R_p}$ , the EOHyAT tourists corrected by country of residence,  $p = 1, 2, \dots, 15$  (United Kingdom, Germany, France, Belgium, Ireland, Italy, Netherlands, Portugal, Russia, Scandinavia, Rest Europe, USA, Rest of America).



## Annex 2: Estimates of the expense variables

### Introduction

01. To exploit results on the monthly spending variables in EGATUR, model-based assisted estimation procedures were used based on the 48 mobile survey months ending in the reference month. The aim is to increase the efficiency of monthly estimates by accumulating observations from various survey periods, given the great variability and the presence of observation errors of the target variables. Previously, the original monthly expenditure variables were updated with the variation of the Spanish harmonised CPI A for expenditure at origin and with the Spanish CPI under the heading "Tourism and hospitality" for expenditure at destination.

02. As input, the model uses the original observed and validated data (not estimated-allocated in previous periods) with value > 0, and it was applied to the following study variables:

- Total expenditure without extra costs
- Spending on package with international transport
- Spending on package without international transport
- Spending on public transport at destination
- Spending on car rental
- Spending on fuel and tolls
- Spending on international transport in travel without a package with international transport
- Spending on accommodation in stages without a package with accommodation
- Spending in bars, restaurants, food, drink...
- Spending on cultural activities, sporting, shopping
- Extraordinary expenses (excluding purchase of real estate or vehicles).

03. Furthermore, in addition to the above items, the following auxiliary variables are generated:

- Gtotal\_extra: total expenditure minus extraordinary expenses (gextra)
- Gsum: total spending as the sum of all individual items of expenditure
- Gsum\_extra: gsum minus extraordinary expenses item (gextra)
- Gpaq\_aj: adjustment of the spending on packages by the number of nights spent in Spain
- Gvivienda: payments related to owned or leased property
- Gextra: Expenses related to extraordinary expenditures excluding property and vehicles

The subcomponents of these key variables, such as expenditure at origin, destination and other expenditure specified in a later section are also subject to the same estimation derived from the same model.

04. The model is developed from monthly microdata files at different stages of the overall chain of operation of the survey; its results will be disseminated according to the general plan referred to in the EGATUR methodology.

In Stage 0, a study of theoretical validity of the response observed in the original questionnaire data is carried out, for the main variables as well as for its sub-components, adequately coding the same as auxiliary information to be used in the rest of the phases. In stages 1 and 2, cells are defined to calculate the averages used in the model, as well as the detection and marking of influential observations, for the different expenditure items.

05. Once the influential observations on the various items of expenditure have been detected, estimated and allocated in stages 3 and 4, up to a month  $t$  and the various components of expenditure for one month  $t + n$ , the 48 previous months will be used to build the model. However, outliers will only be detected and estimation/allocation conducted for the month  $t + n$ , respecting the results of the model for the previous months. The estimation/allocation is carried out for all trips (including non-responses) while the model only uses as input the original journeys of each month, excluding non-responses.

06. For developing stages 1, 2 and 3 no records marked as overnight stay outliers will be considered; these are detected at an earlier stage of operation of the survey. Later, in stage IV (estimation and allocation) the corrected overnight stay value is used; therefore, the previously modelled spending is also corrected for the outlier effect of overnight stays.

Moreover, in the case of expenditure variables related to international transport (expenditure on international transport and spending on packages that include international transport), in stage 1, 2, 3 only those records in which the average input equals the average output are used.

Tourists and day trippers are treated separately.

## **TOURISTS**

### **STAGE 0: Monitoring of expenditure items validity**

07. An item of expenditure is valid when all its subheadings are valid, and, when this is the case, it is obtained as their sum, creating ad hoc derived variables.

These derived variables (main expenditure items) are:

- Expenditure on accommodation
- Expenditure on international transport
- Spending on public transport at destination
- Spending on car rental
- Spending in bars, restaurants, food, drink
- Spending on cultural activities, sporting, shopping
- Gtotal\_sum

The remaining spending items are generated from a single sub-item or variable expense that will determine their validity.

- Spending on fuel and tolls
- Expenditure on package holiday
- Total expenditure

As a general rule, a sub-item (cost variable) is valid if it takes a value greater than 0 or a value of 0 but indicates that there is no expenditure. Similarly, a sub-item is invalid if its value is 0 but it should have value.

08. The analysis of spending on accommodation will take place in stages, considering each stage as a journey. Therefore, there is no need to model the expense variable on accommodation in package holidays including accommodation (because in the stage it will appear as = 0 valid).

Moreover, to analyse spending on car rental and spending on fuel/tolls, distinction will be made between rented or private cars (respectively) for international transport. For rental cars, it is sufficient that the rental vehicle was used on entry or on departure, while spending on petrol/tolls will be analysed when a private vehicle was used on both the outward and return journeys.

09.- The Stage 0 study results in the allocation of the data validity key > 0, zero valid or invalid, to be used as auxiliary information in later stages. For the validity study, the filter variable of each expense (has/has not) will be taken into account; this will later determine the criteria to allocate, or not, the values = 0 and outliers.

### **STAGE 1. Definition of analysis cells of influential observations on the expenditure variables**

10. Basic cells have been previously defined based on categorical dimensions taken from characteristics of the travel microdata. These were obtained through expert analysis after exploitation testing conducted against simulations of the historical series.

Although the partition can be adjusted according to the evolution of the model's performance, the initial model uses 72 cells resulting bounded by the following categorical dimensions:

Accommodation \* Means of transport \* Country of Origin \* Destination Autonomous Community \* Age Breakdown of Travel Group \* Season of the Year \* Use of Package Tour \* Duration

Travel frequencies will be obtained for each variable expenditure component within the basic cell and from the cells resulting from upward cascading aggregates. The aggregation level corresponding to a frequency of journeys with data > 0 in the variable under study greater than 150 shall be marked. This level (cell-Mark) will be physically associated with the basic cell.

### **STAGE 2. Detection and marking of influential observations.**

11. Influential observations/outliers are detected within each basic cell for each component of expenditure. To do so, the impact of spending per person-night (or person-km for transport, or day of rental, for rented vehicles) is taken into account for each expenditure component of each journey contained in the cell. This is a percentage

of the sample average within the cell-Mark containing the basic cell, calculated as average expenditure per person-night (or KM of transport or number of vehicle rental days) among all trips with data > 0 in that item within the cell-Mark. The difference is calculated as a percentage of the average within the Mark of that particular trip, with the average of all trips of the Mark containing the basic cell.

### **STAGE 3.1- Estimation and allocation. Expense regression model within cells**

12. This is a regression model estimated by Ordinary Least Squares in the sample cells, defined for each target expenditure item to be estimated, and which are listed in the Annex.

Only the following expenses are estimated using regression models:

- Spending on accommodation in stages without a package with accommodation
- Total expenditure without extra costs;
- Spending on package with international transport
- Spending on food (bars, restaurants, food, drink...)

Elevation factors are not taken into account when estimating the model.

The general model, which can be customised by type of expenditure, has the following form for each elementary unit  $i$  (the subscript is omitted).

$$\text{LogG} = B_0 + B_1 \cdot \log N + B_2 \cdot \log D + B_{3.1} \cdot A_1 + B_{3.2} \cdot A_2 + B_{3.3} \cdot A_3 + B_4 \cdot E_1 + B_{5.1} \cdot F_1 + B_{5.2} \cdot F_2 + B_6 \cdot T_1 + B_{7.1} \cdot PC_1 + B_{7.2} \cdot PC_2 + B_{7.3} \cdot PC_3 + B_{8.1} \cdot PA_1 + B_{8.2} \cdot PA_2 + B_{8.3} \cdot PA_3 + B_{8.4} \cdot PA_4 + B_{8.5} \cdot PA_5 + B_9 \cdot M + B_{10} \cdot Q + r$$

G: spending per traveller in the type of expenditure of the target variable in each case, with value > 0 and that has not been classified as an outlier at an earlier stage of monitoring of influential observations, or estimated or allocated in months before the reference month, or that does not correspond to a donor with total non-response.

N: overnight stays on the journey;

D: Km from origin to final destination;

E1 = 1 if a summer season (july and august); 0 otherwise;

A1 = 1 The Hotel market; 0 otherwise

A2 = 1 Rental; 0 otherwise

A3 = 1 Non-market; 0 otherwise

F1 = 1 if all group travellers > 64 years; 0 otherwise;

F2 = 1 if group includes < 14 years; 0 otherwise;

PC1 = 1 if COUNTRY = France; 0 otherwise

PC2 = 1 if COUNTRY = Netherlands + Belgium + Luxembourg + Switzerland; 0 otherwise

PC3 = 1 if COUNTRY = Italy; 0 otherwise

PA1 = 1 if COUNTRY = Scandinavia (Norway, Sweden, Denmark, Finland)

PA2 = 1 if COUNTRY = Russia; 0 otherwise

PA3 = 1 if Europe - (Scandinavia, Russia, France, UK, Germany, Italy); 0 otherwise

PA4 = 1 if country = USA, Canada, Mexico; 0 otherwise

PA5 = 1 if country = Rest of America (excluding Canada, Mexico); 0 otherwise

M = 1 if Reason for trip, personal; 0 otherwise;

Q = 1 if uses package with spending > 0; 0 otherwise;

T=1 if length ≤ 5; 0 otherwise;

–  $r$  is the random error.

No interactions are included.

13. Excluding variables or blocks of variables from the model depends on the regression estimation cell and the type of spending. Estimation cells that constitute a partition obtained as grouping of those used in stage 1.

As the model is expressed in terms of logarithms  $g = \log G$  the prediction from the model is the normal average log of the model:  $G_i = \exp\left\{\hat{g}_i + \frac{1}{2}\hat{\sigma}_r^2\right\}$ , Where  $\hat{g}$  is the prediction of the model in logarithms and  $\hat{\sigma}_r^2$  is the residual variance.

The following data was also obtained for each journey.

$G'_i = G_i * \text{numero de viajeros del viaje}$  (+ spending on extraordinary expenses in the case of GT\_EXT component in record i) which will be the estimated data for the journey.

### **STAGE 3.2 - Estimation and allocation. Model of averages within travel cells**

14. All other expenses (spending on packages without international transport, spending on public transport at the destination, car rental expense, spending on petrol and tolls, spending on activities) are not estimated with the regression model. In these cases, the model used is the average sample of person-hours, person-km (international transport and petrol/toll if the international transport is by private car), or daily rental (vehicles) within the same cell-Mark as used for detecting outliers in Stage 2.

The expenses that are not estimated using the regression model, but with average model in the mark, will be elevated to a total, multiplied by person-trip person-KM or (in the case of international transport in journeys without a package and with international transport), or by day of car rental).

### **STAGE 4.1- Estimation. Estimation of the expense variables**

15. As of October 2015 (starting month of the new methodology for estimating expenditure) and the months of the previous annual period (October-September 2014), the original records of EGATUR survey months are used to estimate the link effect, when valid > 0. That is, when there is a cost and its subcomponents (for example, spending at origin, spending at destination) are valid, directly receive the allocation of the estimated travel data, model output, calculated as expenditure per person.

In the case of variables for which the regression model is used, the data estimated by the model is allocated to all travel records with valid > 0 data, not marked as influential in Stage 2, in each type of expenditure.

In other variables, the mean value within cell-mark calculated by the above procedure in Stage 3 is allocated.

16. In the case of invalid values, these receive the average mark or allocation with the regression model, using, in the latter case, the model parameters that apply to its calculation cell.

#### **STAGE 4.2- Estimates. Processing of subcomponents of the main spending variables**

17. The subcomponents of the main expenditure variables are estimated/allocated in the last stage of the EGATUR spending model, from the internal percentage structures valid for the primary variable observed in the original data, obtained using the microdata, or calculated as an average within the cell-Mark.

18. The EGATUR questionnaire expenditure module includes the following breakdown into subcomponents of spending variables:

– ***Spending on accommodation at each stage:***

- If the accommodation is collective or rented: spending at ORIGIN and DESTINATION.
- If the accommodation is owned or borrowed: it is not broken down as it only exists at DESTINATION.

– ***Expenditure on international transport:***

The questionnaire flow must be checked beforehand to see whether the record enters the transport matrix through the joint payment of return transport, or through separate payments for the outbound and return transport.

- If both journeys are paid jointly, it is allocated to origin or destination as appropriate (they are mutually exclusive variables).
- If there is no separate payment, transport is broken down into outbound and return transport, allocating it to origin or destination as appropriate (source and destination are exclusive variables in this case).

Note: It must be taken into account that if either of the (entry or departure) access routes are in private vehicles (owned or rented), the corresponding spending in the transport matrix is = 0, valid..

– ***Spending on public transport at destination***

Spending is broken down into ORIGIN and DESTINATION accordingly

– ***Spending on car rental***

Spending is broken down into ORIGIN and DESTINATION accordingly.

– ***Spending in bars, restaurants, food, drink***

Spending is broken down into into FOOD/ OTHER and BARS / RESTAURANTS (both are recorded only in destination) accordingly.

– ***Spending on cultural activities, sporting, shopping***

Spending is broken down into ORIGIN and DESTINATION accordingly.

The remaining spending items

- Spending on fuel and tolls
- Expenditure on package holiday
- Total expenditure
- Extraordinary expenses

these are generated from a single sub-item or expense variable and therefore do not need to be broken down.

#### **STAGE 4.3- Estimation. Estimation assisted by expenditure sub-component structure model**

19. In stage 0, these expenditure subcomponents are analysed and filtered, identifying those with valid data (whether or not greater than 0) and those with invalid data. This data is missing even though the methodology should have provided it and/or because the respondent answered yes to the filter question, but which fails to show the data or it is null.

20. In addition, in Stage 1, by reading within the cell-Mark the valid records on each item of expenditure, the cumulative value of the percentage structure of the 2 valid subcomponents of the primary variable (as an expense at ORIGIN and DESTINATION) will be calculated, but only if both are > 0. This structure is to be used to disaggregate the allocated expenditure on the two subcomponents for invalid records in an item of expenditure that have a declared cost > 0 in the two subcomponents under the main component. If there is only data > 0 in one of them, the value of the main variable is allocated to it. If it is not known whether it is attributable to origin or destination, preference will be given to destination, except in international transport, where it will be allocated to origin.

21. In those travel records in which the data of the subcomponents of a main component are all valid in the above sense, the internal structure of the microdata is allocated by applying it to the main component containing them and which has been estimated or allocated with the model.

Therefore, regarding valid data or influential records, the original structure of each level of spending subcomponents internal to the microdata is respected.

22. For the rest of the travel records in which not all subcomponents of a spending component are valid, the travel records are used in its Stage 1 cell-Mark in which the data of the subcomponents of a main component are all valid in the sense expressed above and their structure is allocated to the main component containing them that has been estimated or allocated using the model for that particular journey.

23. Once the expenditure components have been allocated or estimated or the original data retained according to rules of the previous stages, the variable is created

$GastoSUM\_GEXT = GastoORIG\ SUM + GastoDESTSUM\_GEXT,$

as the sum of all items at origin and destination respectively that have already been estimated and allocated using the model, except the GEXT item (extraordinary expenses excluding vehicles and property).



## **DAY TRIPPERS**

### **STAGE 0: Monitoring of expenditure items validity**

To exploit results on the monthly spending variables for day trippers in EGATUR, estimation procedures are used based on the 48 mobile survey months ending in the reference month.

The original monthly expenditure variables were updated with the variation of the Spanish harmonised CPI A for expenditure at origin and with the Spanish CPI under the heading "Tourism and hospitality" for expenditure at destination.

The expenditure variables are identified and a theoretically valid study is carried out on the response observed in the original data of the questionnaire.

### **STAGE 1. Definition of analysis cells of influential observations on the expenditure variables**

Basic cells are defined from categorical dimensions, the starting model uses resulting cells bounded by the following categorical dimensions:

Transit \* Transport \* Border \* reason for reduced trip \* reason for trip \* season

Travel frequencies will be obtained for each variable expenditure component within the basic cell and from the cells resulting from upward cascading aggregates. The aggregation level corresponding to a frequency of journeys with data > 0 in the variable under study greater than 150 shall be marked. This level (cell-Mark) will be physically associated with the basic cell.

### **STAGE 2. Detection and marking of influential observations**

Influential observations/outliers are detected within each basic cell for each component of expenditure. To do so, the impact of spending per person is taken into account for each expenditure component of each day trip contained in the cell. This is a percentage of the sample average within the cell-Mark containing the basic cell, calculated as average expenditure per person among all day trips with data > 0 in that item within the cell-Mark. The difference is calculated as a percentage of the average within the Mark of that particular trip, with the average of all trips of the Mark containing the basic cell.

### **STAGE .3.- Estimation. Estimation of the expense variables**

The subcomponents of the main expenditure variables are estimated/allocated in the last stage of the EGATUR spending model, from the internal percentage structures valid for the primary variable observed in the original data, obtained using the microdata, or calculated as an average within the cell-Mark.

The EGATUR questionnaire expenditure module, for day trips, includes the following breakdown into subcomponents of spending variables:

- Package holidays
- Payments made in Spain
  - Public transport
  - Fuel, tolls
  - Food



- Purchases
- Others
- Payments made in the country of residence
  - Round trip transport
  - Others

Once the expenditure components have been estimated or the original data has been retained according to rules of previous stages, the total expenditure variable is generated as the sum of its components.

### Annex 3: Adjustment Ceuta and Melilla

In order to obtain data for the Autonomous Cities of Ceuta and Melilla, an adjustment has been made to the final annual data from FRONTUR and EGATUR.

For this purpose, the information provided by the occupancy surveys on the total number of tourists using market accommodation in each of the Autonomous Cities is used.

The procedure for calculating the adjustment coefficients is described below.

From the information provided by FRONTUR in the two cities, we extract the percentage of tourists using market and non-market accommodation as an average for the last two years.

The total number of tourists using market accommodation in each city is given by the data from the occupancy surveys. From this data, and the FRONTUR percentages, we extract the total number of tourists in non-market accommodation. This is now:

$$Total = Total\ market\ occupancy + Total\ non - market\ calculated$$

The adjustment coefficients will be calculated as the total number of tourists, in each type of accommodation, over the total that we initially had from FRONTUR. This gives two adjustment coefficients for each city, according to the following formulae:

$$market_{coefficient} = \frac{Total\ market\ occupancy}{Total\ FRONTUR\ market}$$

$$non\ market_{coefficient} = \frac{Total\ non\ market\ calculated}{Total\ non\ market\ FRONTUR}$$

These adjustment coefficients are applied to the FRONTUR uplift factor.

Finally, EGATUR is calibrated to these new FRONTUR data.

This adjustment affects only the two Autonomous Cities and consequently the national totals.