



## **Tourism Survey for Spanish Residents (ETR/FAMILITUR)**

**Link between FAMILITUR and ETR**

July 2015

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## Introduction

The new Tourism Survey for Spanish Residents performed by the INE starts to diffuse data related to February 2015. The data for January 2015 were published by TURESPAÑA according to the methods of the previous survey, FAMILITUR<sup>1</sup>. The methodological changes made, that are related to the ETR methods, do not allow for comparison or direct aggregation of the results of both surveys.

Consequently, the measurement of the annual variation of the months for which double methodology is not available must be performed through a statistical link. The INE has designed a procedure linking the monthly data which allows to obtain annual variation rates of the main aggregates that were object of monthly diffusion of the previous survey, Familitur. From these 2015/2014 link rates estimated with the ETR, the series can be extended backwards with the annual rates of months 2014/2013, 2013/2012 and subsequent available in Familitur diffusion products.

The link has been performed designing a procedure for re-preparing microdata of Familitur, for adaptation to the methodology and treatment changes implemented in the new ETR. This procedure allows to obtain a simulation of sample data and population weights, available for estimation of the annual ETR rates of months from February to December, 2015, from the homonymous months of 2014.

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## Simulation of ETR microdata

The simulation of ETR microdata for statistical link of series of monthly results Familitur has been performed in the following stages:

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### 1. SELECTION OF PERSON

Randomised selection of a person aged 15 years or older (hereinafter called the adult) in each household of the Familitur sample.

The algorithm of selection considers the distribution of the Familitur sample in the subsamples for each rotation turn to respect the panel effect of the old survey. Subsequently the weights of design are adjusted to the resulting subsample of adults

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### 2. OVERNIGHT OUTLIERS

Treatment of outliers of overnight stays, by the same procedure applied in the ETR.

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<sup>1</sup> <http://www.iet.tourspain.es/en-EN/estadisticas/familitur/paginas/default.aspx>

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### 3. CORRECTOR FOR MINORS

Introduction of a corrector, obtained with model assisted estimation of travels of persons under 15 years of age, with the same method used in the ETR. Using this model, that uses design weights, the information of travels of the group aged under 15 years travelling alone is estimated from the travels of minors accompanied by a sample adult. This corrector affects the microdata of travels of adults where persons under 15 years participate.

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### 4. CONSTRUCTION OF MARGINAL SOCIODEMOGRAPHIC VARIABLES

Construction of the vector of marginals of sociodemographic variables referred to the month corresponding to 2014, with the same methods as that used in the ETR.

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### 5. CONSTRUCTION OF MARGINAL VARIABLES OF TRAVELS

Construction of the vector of marginals of travels for calibration: to take into account the impact of the methodological changes of the ETR from Familitur, in particular that due to the complete renewal of the panel sample and the selection conditioned by the propensity to travel estimated exogenously, a vector of marginals of travels linked from the homonymous month of 2015 is built, distributed according to accommodation and main destination. A marginal by reason is also used. These marginals are built also with the following steps:

- i) **Obtaining marginals of monthly overnight stays of residents estimated according to the Hotel and Tourist Accommodation Occupation Survey (EOHyAT) of the INE.** For this, the same methods as that used for calibration of monthly ETR samples of 2015 are used, that is, correcting the data of the monthly INE survey, for the effect of overnight stays attributable to permanent or almost-permanent residents in this type of group establishments, not attributable to travels of the month. Despite its minor impact, the effect is also corrected because the overnight stays of the survey are not exactly centred in the month, as well as the effect of the small difference of the estimations of overnight seen in the historic series of Familitur, considering the destination and main accommodation of the travel or alternatively of its stages. The latter correctors are obtained from the ratio of estimations cumulated in the years 2013-14 of Familitur and the EOHyAT.
- ii) **Estimation of marginals for calibration of resident travels, of one month of 2014, with main accommodation in hotel establishments** (disaggregated in the main autonomous communities of destination) and of campings and rural tourism accommodations (national level). For this, the data of estimated overnight stays in i) and an estimation of average stay of each type of travel is used. The latter is estimated backwards applying the variation rate of the same that

is provided by the EOHyAT to the average stay of travels of residents estimated by the ETR in the homonymous month of 2015, with the same destination and accommodation.

- iii) **Estimation of marginals for calibration of travels of residents with accommodation different from that of travellers estimated in ii), domestic destination.** For this, the ratio of travels with no hotel, camping or rural main destination to hotel destination (scope of marginal EOH calculated in the previous step) is calculated in the calibration cell, in final month M\_2015 and this same ratio in Familiaritur M\_2014, obtaining a combined mean weighting both structures with 2/3-1/3, respectively.
- iv) **Destination abroad:** In this case, for the calculation of marginals of travels the ratios of travels abroad to domestic travels is obtained with the same sources and are applied to the estimations obtained in the previous steps related to domestic travels.
- v) **Personal/professional reasons:** Keeping the total linked of travels obtained in steps ii) and iii), the percentage distribution of travels between personal and professional reason is obtained on a national basis, with the same sources and combined in the same way to obtain a new marginal of travels for professional reasons.
- vi) Correction of conceptual differences. Once the weights of the simulated sample have been obtained for a month of 2014, calibrated to the vectors described above, a correction is entered for the effect of conceptual differences. These coefficients adjust, keeping the level, to the distribution observed in the ETR 2015 of travels by reason.

As a full year of ETR survey becomes available, these adjustments necessary for the statistical link may only undergo slight changes, also affected by the seasonality of the phenomenon, so during the first year of life of the ETR this link should be considered provisional.

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### **Particular case of the month of January**

Given the interest of having the cumulative data of the first months of the year with homogeneous methods for obtaining data related to the first quarter 2015 the INE has used the estimations of travels completed in January 2015 obtained with the methodology of the new survey from the sample collected in February and March, 2015. These estimations will be also used to measure the linked annual variation 2016/2015 once the month of January 2016 of the Tourism Survey for Spanish Residents becomes available. The rates of the months of January 2015/2014 and next backwards will be those corresponding to the historic series of Familiaritur.