

## Survey on the Distribution of the Number of Domestic Trips Taken in the EU countries in Terms of Length of Stay

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### Abstract

*Identifying the particularities of each country in terms of domestic trip structure and length of stay contributes to studying the domestic tourism market and understanding the behavior of resident tourists.*

*This study shows that although the CFA statistical method (correspondence factor analysis) entails quantitative results, their interpretation provides support for qualitative assessments represented (in the current situation) by the resident tourists' profile, shaped according to the length of stay during their domestic trips. At the same time, the processed data provide the basis for identifying, on the one hand, similarities and, on the other hand, differences between the tourism profiles of the 27 analyzed countries and implicitly related to the behavior of resident tourists.*

*In our perspective, this quantitative research could be continued with a qualitative one that would identify the reasons why the residents in each country prefer certain lengths of stay.*

**Key words:** length of stay, correspondence factor analysis (CFA), resident tourists

**J.E.L. classification:** C10, C38, L83, J63, Z33

### 1. Introduction

Recent European statistics show that in 2015, the residents (aged at least 15 years) in the EU-28 took about 1.2 billion tourist trips in 2015 for personal or business purposes. Furthermore, it is noted that 58.2% of the total number of trips were short trips of one to three nights and 74.8% of the total number of trips were taken to domestic destinations, the remainder being abroad. Moreover around 60% of the EU-28 population aged 15 or over participated in personal tourism activities or, in other words, they took at least one personal tourist trip in 2015. The number of overnight stays in tourist accommodation facilities in the EU-28 increased by 3.8% in 2015 compared to 2014.

([http://ec.europa.eu/eurostat/statistics-explained/index.php/Tourism\\_statistics/ro](http://ec.europa.eu/eurostat/statistics-explained/index.php/Tourism_statistics/ro) )

In this study, we analyzed the distribution of the number of resident tourists (from 27 EU countries, with data available for 2015), in terms of their length of stay (as presented by international statistics). This analysis enabled us to delineate the tourism profile of each country and to identify similarities and differences between them, for a better knowledge of the European tourist market.

### 2. Creating the appropriate research framework

In this study, we carried out a quantitative desk research, with a descriptive nature, based on the analysis of secondary cross-sectional data from international statistics, represented by the values of the indicator "length of stay". This is one of the three most important indicators for measuring tourism activity at international level. (Sank, Baron and Neacsu 2001; Minciu 2004)

For the purpose of our research, we used the statistical method known as *correspondence factor analysis (CFA)*. Data processing, indicator significance testing, and graphical representations were performed using *the SPSS statistical software*.( Field, A. ,2009)

It is noteworthy that in this study, we processed the data provided by Eurostat (Data Explorer) on the number of personal domestic trips taken by the residents of 27 European countries, with data available for 2015.

The concepts and definitions used in this study are in line with the specifications described in the Methodological Manual for Tourism Statistics. (International Recommendations for Tourism Statistics (New York / Madrid, 2008, Series M, No.83/Rev.1).

(<http://unstats.un.org/unsd/trade/IRTS/IRTS%202008%20unedited.pdf>).

### 3. Data, results and discussions

*The correspondence table* (which shows the distribution of statistical units according to the simultaneous variance of two categories of the same variable) is represented by the distribution of the "number of trips" according to the "country of residence" and "length of stay". Thus, the correspondence factor analysis makes a description of the data contained in a correspondence table, surprising the latent (hidden) structure of the data by reducing their dimensionality and by the geometric (visual) representation of the categories in a metric space. (Everitt, B., Dunn, G., 2001; Pintilescu, C. ,2007)

Following data processing, we obtained a series of statistical indicators calculated for the line-points.

Table 1. Correspondence table for the number of domestic trips, by main length of stay intervals and the tourists' country of residence (2015)

Country of residence	length of stay				
	1-3 nights	4-7 nights	8-14 nights	15-28 nights	Active Margin
Belgium	2325916	701932	160954	49338	<b>3238140</b>
Bulgaria	1511811	820198	175338	28029	<b>2535376</b>
Czech Republic	16811281	5317824	1299740	420191	<b>23849036</b>
Denmark	20791374	670526	2655938	95342	<b>24213180</b>
Germany	111600930	37956895	11702057	2415668	<b>163675550</b>
Estonia	2426805	217137	44012	0	<b>2687954</b>
Ireland	5791333	886778	168820	64191	<b>6911122</b>
Greece	1655412	1725073	804847	537429	<b>4722761</b>
Spain	92513420	19472749	6967939	3394211	<b>122348319</b>
France	98677646	44488654	20794703	9130021	<b>173091024</b>
Croatia	2173789	1084921	476729	214801	<b>3950240</b>
Italy	23093606	9895533	4565622	2996713	<b>40551474</b>
Cyprus	1103141	163506	21276	11637	<b>1299560</b>
Latvia	2658581	223321	62944	0	<b>2944846</b>
Lithuania	2209438	305935	133989	12978	<b>2662340</b>
Luxembourg	14829	0	0	0	<b>14829</b>
Hungary	9485825	2705991	349980	73564	<b>12615360</b>
Malta	174135	24504	0	0	<b>198639</b>
Netherlands	17072203	4825231	1374354	592101	<b>23863889</b>
Austria	7913101	2625807	363351	153033	<b>11055292</b>
Poland	24237175	9921094	4150513	1164182	<b>39472964</b>
Portugal	10325848	2265010	1083733	371515	<b>14046106</b>
Romania	10181814	4471461	845886	207112	<b>15706273</b>
Slovenia	1195578	280526	52405	0	<b>1528509</b>
Slovakia	4103593	1146643	174551	149583	<b>5574370</b>
Finland	23641634	4602810	705514	166138	<b>29116096</b>
Sweden	24041680	5388313	1513293	418896	<b>31362182</b>
<b>Active Margin</b>	<b>517731898</b>	<b>162188372</b>	<b>60648488</b>	<b>22666673</b>	<b>763235431</b>

Source: Eurostat data processed by SPSS

Each row in Table 1 shows the number of trips taken by the resident tourists from the analyzed countries, based on the main length of stay intervals, in 2015.

It was noticed that:

- In 2015, 763,235,431 domestic trips were taken in the 27 countries surveyed.
- The countries with the highest trip rates were *France (173,091,024 trips –the 1<sup>st</sup> place)*, *Germany (163,675,550 trips – the 2<sup>nd</sup> place)* and *Spain (122,348,319 trips – the 3<sup>rd</sup> place)*.
- The lowest levels in terms of the number of trips were held by the following countries: *Luxembourg (14,829 trips)*, *Malta (198,639 trips)* and *Cyprus (1,299,560 trips)*.
- There were two groups of countries with high trip rates: the first group was represented by *Italy (40,551,474 trips - the 4<sup>th</sup> place)* *Poland (39,472,964 trips - the 5<sup>th</sup> place)*, *Sweden (31,362,182 trips- the 6<sup>th</sup> place)*, *Finland (29,116,096 trips - the 7<sup>th</sup> place)*, and *Denmark (24,213,808 trips - the 8<sup>th</sup> place)*. The second group included *the Netherlands (23,863,889 trips - the 9<sup>th</sup> place)* and *the Czech Republic (23,849,036 trips- the 10<sup>th</sup> place)*.

Applying the CFA method involves calculating the profiles of the categories of the first variable (i.e. the relative frequencies of the "country of residence" category), which shows the distribution of the categories of the other variable ("length of stay") among the categories of the first variable. Moreover, there are calculated the masses of the categories of the first variable and the marginal proportions of the categories, which show their share per total units observed. (Benzecri, J. P. (1992)

Table 2. Table of the row profiles for the distribution of the number of domestic trips taken by tourists, by country of residence and length of stay interval (2015) (Row Profiles output)

<b>Row Profiles</b>					
Country of residence	Length of stay				Active Margin
	1-3 nights	4-7 nights	8-14 nights	15-28 nights	
Belgium	.718	.217	.050	.015	1.000
Bulgaria	.596	.324	.069	.011	1.000
Czech Republic	.705	.223	.054	.018	1.000
Denmark	.859	.028	.110	.004	1.000
Germany	.682	.232	.071	.015	1.000
Estonia	.903	.081	.016	.000	1.000
Ireland	.838	.128	.024	.009	1.000
Greece	.351	.365	.170	.114	1.000
Spain	.756	.159	.057	.028	1.000
France	.570	.257	.120	.053	1.000
Croatia	.550	.275	.121	.054	1.000
Italy	.569	.244	.113	.074	1.000
Cyprus	.849	.126	.016	.009	1.000
Latvia	.903	.076	.021	.000	1.000
Lithuania	.830	.115	.050	.005	1.000
<u>Luxembourg</u>	<u>1.000</u>	.000	.000	.000	1.000
Hungary	.752	.214	.028	.006	1.000
Malta	.877	.123	.000	.000	1.000
Netherlands	.715	.202	.058	.025	1.000
Austria	.716	.238	.033	.014	1.000
Poland	.614	.251	.105	.029	1.000
Portugal	.735	.161	.077	.026	1.000
Romania	.648	.285	.054	.013	1.000
Slovenia	.782	.184	.034	.000	1.000
Slovakia	.736	.206	.031	.027	1.000
Finland	.812	.158	.024	.006	1.000
Sweden	.767	.172	.048	.013	1.000
<b>Mass</b>	<b>.678</b>	<b>.213</b>	<b>.079</b>	<b>.030</b>	

Source: Eurostat data processed by SPSS

The values in Table 2 represent the weights of the domestic trips taken by resident tourists in the 27 countries (row profile), per each analyzed length of stay interval. The data in this table allows us to shape the profile/ structure of each country according to the weight of the domestic trips from each length of stay interval, per total number of trips, from each country. (Baltagi, B. H. ,2008),

The tourism profile of the countries ranking on the first three places in terms of the number of trips (see Table 1) is as follows:

- In *France*, 57% of the trips taken by domestic/ resident tourists had *between 1 and 3 overnight stays*; 25.7% had *between 4 and 7 overnight stays*; 12% had *between 8 and 14 overnight stays*; 5.3% had *between 15 and 28 overnight stays*.

- In *Germany*: 68.2% of the trips taken by resident tourists had *1-3 overnight stays*; *the interval 4-7 overnight stays* accounted for 23.2%; *the interval 8-14 overnight stays* held 7.1%, while *the interval 15-28 overnight stays* held 1.5%.

- In *Spain*: *the interval 1-3 overnight stays* accounted for 75.6% of the trips taken by resident tourists; *the interval 4-7 overnight stays* held 15.9%; *the interval 8-14 overnight stays* held 5.7%, and *the interval 15-28 overnight stays* accounted for 2.8%.

If we analyze the value of the shares held by each length of stay category in the 27 countries, we can make the following assessments:

- There are many countries where *the interval 1-3 overnight stays* held very high shares: Luxembourg (100%), Estonia and Latvia (90.3%), Malta (87.7%), Denmark (85.9%), Cyprus (84.9%), Ireland (83.8%), Lithuania (83%) and Finland (81.2%). Based on these values, it could be said that the obvious feature of the tourism profile of these countries is represented by the very short duration of the holidays made by domestic tourists in their own country. In other words, tourists (overwhelmingly) chose the shortest length of stay when spending their holiday in their country of residence.

The lowest shares in terms of *the interval 1-3 overnight stays* were held by Croatia (55%), Italy (56.9%) and Bulgaria (59.6%). The tourists (from these three countries) were more interested (than those in the other 24 countries) in intervals longer than *1-3 overnight stays*.

- *The interval 4-7 overnight stays* had the highest shares in the following countries: Greece (36.5%), Bulgaria (32.4%), Romania (28.5%), Croatia (27.5%), France 25.7%). The lowest shares held by *the interval 4-7 overnight stays* were found in Denmark (2.8%), Latvia (7.6%) and Estonia (8.1%). In this situation, the quantitative research did not allow us to identify the forms of tourism practiced for this length of stay. In Luxembourg, there were no trips with this length of stay.

- *The interval 8-14 overnight stays* had the highest shares in the following countries: Greece (17%), Croatia (12.1%), France (12%), Italy (11.3%), Denmark (11%), Poland (10.5%). The lowest shares of *the interval 8-14 overnight stays* were in Latvia (2.1%), Finland (2.4%) and Hungary (2.8%). In Luxemburg and Malta, there were no trips with this length of stay.

- *The interval 15-28 overnight stays* had the highest shares in the following countries: Greece (11.4%) and Italy (7.4%). The lowest shares held by *the interval 15-28 overnight stays* are found in Denmark (0.4%), Lithuania (0.5%), Finland and Hungary (0.6%). In several countries, such as Luxembourg, Malta, Latvia, Estonia and Slovenia, there were no trips with this length of stay.

A particular situation was represented by Greece, as it was the country with the most balanced distribution of the shares held by each length of stay interval. Thus, the trips with *1-3 overnight stays* held 35.1%; *the interval 4-7 overnight stays* accounted for 36.5%; *the interval 8-14 overnight stays* held 17%, and *the interval 15 -28 overnight stays* held 11.4%.

Romania had the following profile: *the interval 1-3 overnight stays* held 64.8% of the total number of trips taken by resident tourists; *the interval 4-7 overnight stays* had 28.5%; *the interval 8-14 overnight stays* accounted for 5.4%, and *the interval 15-28 overnight stays* accounted for 1.3%.

It is interesting to note that Romania's profile (for 2015) was close to that of Germany.

A statistical association between the two countries (two row profiles) shows a similar distribution (a similar structure) of the share of trips taken by resident tourists, depending on their length of stay. (Spircu, L. ,2005; Spircu, L., Calciu, M., Spircu, T., 1994)

The analysis of the data presented in Table 2 revealed similar distributions (regarding the shares of trips per length of stay interval) in the following countries: Estonia and Latvia, on the one hand, and France, Croatia and Italy, on the other hand.

By grouping the countries according to the similar distribution (similar structure) of the shares of domestic trips taken by tourists, per each analyzed length of stay interval, a segmentation of the European tourist market was actually achieved. This allowed us to identify the main segments (groups) of countries with similar structures in terms of the choices made or the decisions taken by tourists regarding the length of their trips, taken in their countries of residence.

#### 4. Conclusions

The quantitative information obtained by processing the initial data with the CFA method can assist us in formulating qualitative interpretations regarding the resident tourists' behavior (interpreted as the average of the trends in the 27 countries), when analyzing their preferences for certain length of stay intervals, when they travel in their country of residence.

The high share (of 67.8%) of the trips taken for 1-3 overnight stays shows that, on average, resident tourists (at the level of the 27 countries surveyed) tend to spend their free time, from weekends or on the occasion of legal holidays, traveling in their own country.

Less than a quarter (i.e. 21.3%) of the trips was taken for the interval 4-7 overnight stays. Therefore, for their holiday leave, 21.3% of the resident tourists opted for a domestic destination. The same aspects regarding the trips with 1-3 days overnight stays, related to destinations and forms of tourism, were also valid for the interval 4-7 overnight stays.

The share of 7.9% held by the interval 8-14 overnight stays (in terms of domestic trips) brings to our attention the following issues: there are very few resident tourists who travel in their own country over this longer period of time; it is very likely that these trips are preferred by older tourists, who are more concerned with improving/ maintaining their health. The domestic trips with 8-14 overnight stays are mostly taken in spa resorts.

The domestic trips with 15-28 overnight stays held only 3%. This shows that a very small number of resident tourists choose to travel for a very long period, for various reasons, such as: the amount of free time and the choices made in order to spend it; the income they have and the share allocated to travel; the destinations and forms of tourism that harmonize/ best correlate with the tourists' needs and wishes (mostly represented by older people).

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