# How Do Europeans Travel and Spend? A Pre-COVID Cluster Approach

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**Abstract**

The planning options for tourist activities take into account the potential tourists' behavior and travel preferences. In this context, the study presents a systematic framework on the travel preferences of European tourists. These are highlighted by the number and types of trips, in which priority is assigned to those oriented towards rural and mountain areas, as well as by trip expenditure related to basic services (accommodation and transport). The analysis involves a clustering of EU countries, taking into account the previously mentioned indicators, in order to identify tourism behavior patterns in European countries. The conclusions take into account the increase of global awareness regarding the tourists' preferences, especially that the orientation towards ecological, green tourist destinations tends to be perpetuated in the current European context, in which the COVID_19 pandemic deeply affects the tourist activity.

**Keywords**

Tourists' preferences, Average number of trips, Average expenditure per trip, Cluster analysis
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## Introduction

The issue of preferences underlying the choice of tourist destinations is increasingly debated in the literature. It takes into account the practical managerial perspectives that are needed for tourism to continue to be a significant tool in the process of national and global economic growth (Wight, 1996; Young, 1999; Kim and Lee, 2002).

Motivational preferences of tourists are characteristics that influence the choice of tourist destinations (Park and Yoon, 2009). An important role, at the level of each country, is played by the formation of preferences, which takes into account not only its potential, but also the competitiveness of the tourist destination. The attractiveness of a tourist area is a landmark in the development of tourism activities, the characteristics and ability to maintain a competitive advantage being a priority in future choices of potential tourists. Thus, it is possible to highlight a model for assessing the tourist preferences that it includes reception and sympathy of local residents, artistic and cultural cities, landscape/environment and nature, hotels and other accommodation, typical foods, cultural events, level of prices/living costs, quality and variety of products in the shops, information and tourist services as well as tourist safety (Chang and Lo, 2014). The travel behavior of the tourist also aims at the desire to experience new destinations and cultures with a sustainable character. Along with the degree of novelty and familiarity

that tourists take into account when traveling, there are also particular factors that take into account the type of accommodation, the type of travel companions, the language of the host community, but also the resources that are least polluting.

All these characteristics have as substrate the orientation towards the development of some tourist activities in the rural and mountainous space. These are the starting point in choosing tourist destinations if we take into account the need for people to escape to less polluted areas, given that daily activities are carried out in conditions of high stress and polluted environment. At the same time, the availability to travel also takes into account the financial possibilities, which influence the total level of trip expenses or the two basic trip services (accommodation and transport).

The article was structured in four parts. The introductory part is followed by a presentation of the main results from the specialized studies, and of the working data and processing methodology. The next chapter includes the presentation and analysis of the results obtained, following the application of the clustering method, in relation to the average values of the six variables. The conclusions' chapter summarizes the results, as well as their significance from the perspective of the future development of tourism in rural and mountain areas, in the context in which the COVID pandemic changes the orientation and preferences of tourists.

**Literature review**

Studying the preferences and behavior of tourists is very important in creating business opportunities both at the sectoral and national level. Thus, the expenses made by tourists with tourist trips, their distribution by categories of accommodation, transport, food and relaxation influence the economy of the tourist destination region. In identifying and characterizing the tourists' behavior and preferences, some studies have analyzed the level and structure of spending on tourist travel from a macroeconomic perspective (Wu, et al., 2013; Konstantakis, et al., 2017). This approach, in Laesser and Crouch's view, fails to capture some specific aspects of tourists' behavior patterns (Laesser and Crouch, 2006). Instead, an approach to these expenses based on microdata would allow a more detailed analysis of tourists' travel preferences (Lin et al., 2015). Park, Woo and Nicolau (2002) studied the determinants of tourism expenditure, focusing on the analysis of ways in which tourists seek information for travel planning. The study shows that the studied factor induces a decreasing effect on the distribution of travel expenses, with a higher impact at the bottom of the distribution and a weaker impact at the top of it. (Park et al., 2020). In the case of tourists traveling in urban areas, the daily expenses and the allocated budget are associated with the objectives, with the purposes of the trips (Loon and Rouwendal, 2017). At the same time, according to the same study, travel time length is positively correlated with the size of the allocated budget and inversely correlated with daily expenses (Loon and Rouwendal, 2017). Amir et al. analyzed the touristic expenditure patterns of domestic and international tourists in Malaysia, identifying some behavior similarities that consist in tourists' tendency to spend less on transportation and entertainment. Some behavioral differences were also identified, with international tourists preferring to spend more on accommodation and food than domestic tourists. (Amir, et al., 2015). However, tourism activity involves a complex of services engaged in a local economy, and their unsustainable development can put great pressure on the environment, which will eventually have a negative impact on the tourist destination area. The behavior and preferences of tourists in choosing the tourist destination will increasingly depend in the future on the sustainable, eco-friendly nature of the tourist services offered, on the degree of non-pollution of the environment in the area chosen as a tourist destination. An increasingly clear preference of tourists for green, ecological destinations is emerging (Hedlund, 2011; Adlwarth, 2010). Other studies suggest that the preference for a green, eco-friendly tourist destination and the way tourists value it is influenced by the knowledge and attitude of tourists for sustainability. Thus, tourists who place a higher price on a healthy, sustainable lifestyle are willing to pay more for the green tourist destination, but availability also depends on the price level of ecological, sustainable tourism products and services (Pulido-Fernández and López-Sánchez, 2016).

**Data and Methodology**

For the analysis of the number and type of trips by tourist destination, as well as the EU citizens' expenditure related to basic trip services (accommodation and transport), in the pre-Covid-19 crisis

period, the data series provided by EUROSTAT in tourism field were used. In the variables' selection, the tourists' preferences were taken into account, noticing lately an inclination towards sustainable tourist destinations, less polluted, such as mountain or rural areas. Considering that the number of trips made by the citizens of a state is directly influenced by the country's resident population, to ensure comparability, based on the variables *Number of trips* (both at total level and by types of tourist destinations), the average number of trips per 1000 inhabitants was determined for each state (Eurostat). The resulting variables as well as those concerning the average expenditure per trip are presented in Table no.1.

**Table no. 1. Identifiers of variables used and their measurement units**

| Variables | | Units |
|---|---|---|
| TANT | Total Average Number of trips, 1 night or over, all countries in the world | number per 1000 inhabitants |
| ANCT | Average Number of trips, 1 night or over, countryside, all countries in the world | number per 1000 inhabitants |
| ANMT | Average Number of trips, 1 night or over, mountain, all countries in the world | number per 1000 inhabitants |
| AET | Average expenditure per trip (1 night or over) | EUR |
| AETRS | Average expenditure per trip - on transport (1 night or over) | EUR |
| AEACC | Average expenditure per trip - on accommodation (1 night or over) | EUR |

*Source: author's selection, based on Eurostat data.*

The main descriptive statistical characteristics of the data series used are presented in Table no. 2. Given that the Skewness values fall in the range (-1.96, 1.96), it means that the series tend to be normal, with the observation that TANT and ANCT have a slight left skewness. Regarding the Kurtoisis values, they highlight a significant leptocurtic distribution for the TANT and ANCT data series.

**Table no. 2. Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|
| TANT | 28 | 502 | 7099 | 2442.61 | 1436.673 | 1.380 | 3.045 |
| ANCT | 28 | 20 | 2384 | 599.36 | 531.069 | 1.605 | 3.433 |
| ANMT | 28 | 7 | 540 | 218.82 | 160.478 | 0.515 | -0.899 |
| AET | 28 | 124 | 811 | 340.32 | 182.817 | 0.885 | .0141 |
| AETRS | 28 | 29 | 230 | 99.21 | 56.150 | 0.802 | -0.141 |
| AEACC | 28 | 28 | 263 | 109.96 | 68.528 | 0.780 | -0.375 |

*Source: author's contribution*

The cluster methodology was used to generate the clusters, starting from the data series $Y = \|y_{ij}\|_{i=\overline{1,n},j=\overline{1,m}}$ corresponding to *m=6* studied indicators. For this the *z-score* method was applied. In order to generate the Proximity Matrix ($W = \|w_{ij}\|_{i=\overline{1,n},j=\overline{1,n}}$), the Euclidian distance was used (Zaharia, et al., 2017):

$$W = \|w_{ij}\|_{i=\overline{1,n},j=\overline{1,n}}, \quad w_{ij} = \sqrt{\sum_{i=1}^{n}\left(z_{ik} - z_{ij}\right)^2},\ j = \overline{1,m},\ k = \overline{1,m}\ \ j \neq i,\ k \neq i,\ w_{ii} = 0$$

$$z_{ij} = \frac{y_{ij} - \bar{y}_j}{\sigma_j}, \quad where \quad \bar{y}_j = \frac{\sum_{i=1}^{n} y_{ij}}{n}, \quad \sigma_j = \sqrt{\frac{\sum_{i=1}^{n}\left(y_{ij} - \bar{y}_j\right)^2}{n-1}} \tag{1}$$

Ward's method was used to determine the distance between clusters (Marinoiu, 2016):

$$\Delta(A,B) = \sum_{i\in A\cup B}\left\|x_i - m_{A\cup B}\right\|^2 - \sum_{i\in A}\left\|x_i - m_A\right\|^2 - \sum_{i\in B}\left\|x_i - m_{\mathbf{B}}\right\|^2 - \frac{n_{A\cap B}}{n_{A\cup B}}\left\|m_A - m_B\right\|^2 \tag{2}$$

In (3), A and B are two clusters, $m_i$ is the centroid, $n_i$ is the number of elements from cluster $i$. and $x_i$ an item. In order to test if the variances of the six data series significantly differ, (the homoscedasticity hypothesis) the Levene's Test was applied, its null hypothesis being:

$$H_{0\_1}: \sigma_1^2 = \sigma_2^2 = \ldots = \sigma_k^2 \quad (3)$$

The acceptance condition of the null hypothesis $H_{0\_1}$ is:

$$Sig.F > \alpha \quad or \quad F_{stat} < F_{\alpha,k-1,n-k} \quad (4)$$

Following the acceptance of the null hypothesis $H_{0\_1}$, for testing the significance of the variables belonging to clusters, the ANOVA method was used, whose null hypothesis is given by:

$$H_{0\_2}: \overline{x}_1 = \overline{x}_2 = \cdots = \overline{x}_k \quad (5)$$

The acceptance condition of the null hypothesis $H_{0\_2}$ is:

$$F_{stat} = \frac{\sum_{i=1}^{r}(\bar{y}_i - \bar{y}_0)^2 n_i \Big/ df_1}{\sum_{i=1}^{r}\sum_{j=1}^{ni}(y_{ij} - \bar{y}_i)^2 \Big/ df_2} < F_{\alpha,r-1,n-r} \quad equivalent \quad to \quad Sig.F > \alpha \quad (6)$$

The confidence level used in testing the statistical hypotheses was 95%, corresponding to a significance level α=0.05. Evidențierea caracteristicilor și a tendințelor de evoluție a indicatorilor incluși în cercetare s-a realizat prin aplicarea analizei cluster. Highlighting the characteristics and evolution trends of the indicators included in the research was achieved by applying cluster analysis. This analysis created an overview of the distribution of indicator averages both in clusters and at EU level, thus reflecting the distribution of tourists' preferences in terms of number and type of travel, as well as the amount of expenditure on basic services (accommodation) and transport).

**Results and discussions**

The cluster analysis applied to the six variables concerning on the one hand the number and type of trips, and on the other hand the amount of expenses related to basic services (accommodation and transport) made by EU citizens began with the construction of a dendrogram (Figure no. 1).

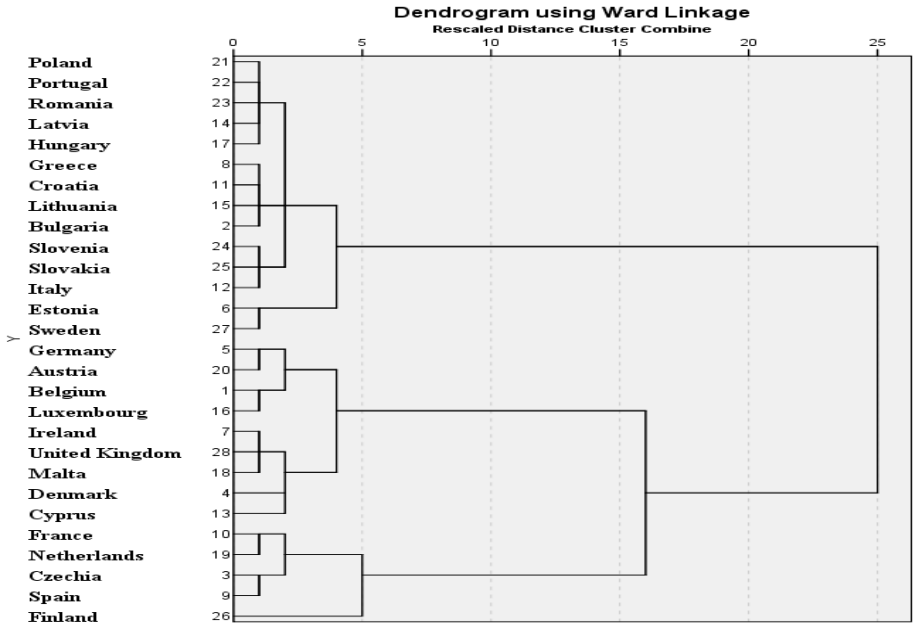


**Figure no. 1. Cluster-generation scheme.**
*Source: author's contribution*

The dendrogram in Figure no. 1 shows the grouping of the 28 EU states into six clusters, Finland being treated separately. In terms of the six indicators (TANT, ANTC, ANMT, AET, AETRS, AEACC) the clusters components shown in table no. 3 resulted.

**Table no. 3. Cluster components**

| Cluster | Countries |
|---|---|
| C_1 | Belgium, Germany, Luxembourg, Austria |
| C_2 | Bulgaria, Greece, Croatia, Latvia, Lithuania, Hungary, Poland, Portugal, Romania |
| C_3 | Czechia, Spain, France, Netherlands |
| C_4 | Denmark, Ireland, Cyprus, Malta, United Kingdom |
| C_5 | Estonia, Sweden |
| C_6 | Italy, Slovenia, Slovakia |
| - | Finland |

*Source: author's contribution*

Next, H0_1 hypothesis regarding the absence of significant differences between the variances of the data series, grouped in six clusters, was tested by applying the Levene's Test (Table no. 4).

Following the testing of condition (4) in Table no. 4, it is observed that all *Sig.F* values are higher than the significance level of 0.05, which determines the acceptance of H0_1hypothesis. In this context, the ANOVA methodology is further used to test the significance of the belonging of the analyzed variables to the clusters (H0_2 hypothesis).

**Table no. 4. Test of Homogeneity of Variances**

| | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| TANT | 1.012 | 5 | 21 | 0.435 |
| ANCT | 1.106 | 5 | 21 | 0.387 |
| ANMT | 1.214 | 5 | 21 | 0.337 |
| AET | 1.039 | 5 | 21 | 0.421 |
| AETRS | 1.531 | 5 | 21 | 0.223 |
| AEACC | 1.809 | 5 | 21 | 0.155 |

*Source: author's contribution*

The application of the ANOVA methodology led to the results presented in Table no. 5. Taking into account the results of the F test statistic, which are greater than the critical value F_crit = 2.66, respectively the values of Sig.F <α (0.05), it can be specified that, the null hypothesis H0_2 is rejected. Consequently, all six variables (TANT, ANTC, ANMT, AET, AETRS, AEACC) are significant in terms of cluster membership.

**Table no. 5. Results of testing the statistical significance of the average values of the analyzed variables, recorded at the level of each cluster**

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| TANT | Between Groups | 20126447 | 5 | 4025289 | 6.444 | 0.001 |
| | Within Groups | 13117297 | 21 | 624633 | | |
| | Total | 33243743 | 26 | | | |
| ANCT | Between Groups | 3193329 | 5 | 638666 | 11.989 | 0.000 |
| | Within Groups | 1118692 | 21 | 53271 | | |
| | Total | 4312021 | 26 | | | |
| ANMT | Between Groups | 472535 | 5 | 94507 | 11.996 | 0.000 |
| | Within Groups | 165446 | 21 | 7878 | | |
| | Total | 637981 | 26 | | | |
| AET | Between Groups | 709136 | 5 | 141827 | 15.413 | 0.000 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Within Groups | 193237 | 21 | 9202 | | |
| | Total | 902373 | 26 | | | |
| | Between Groups | 71557 | 5 | 14311 | 22.528 | 0.000 |
| AETRS | Within Groups | 13341 | 21 | 635 | | |
| | Total | 84898 | 26 | | | |
| | Between Groups | 107759 | 5 | 21552 | 24.613 | 0.000 |
| AEACC | Within Groups | 18388 | 21 | 876 | | |
| | Total | 126147 | 26 | | | |

*Source: author's contribution*

The clusters were ranked in relation to the average values of the three indicators targeting the average number of trips on the three categories (TANT, ANCT, ANMT), but also in relation to the values of the variables related to the three types of tourist travel expenses (AET, AETRS and AEACC) (Table no. 6). At the same time, the classification of the component countries by clusters in relation to the average values of the variables determined at the level of each cluster is present.

C_1 is the second largest cluster in terms of average number of trips to the mountains (ANMT). Germany and Austria are the component countries with more than 306 trips/1000 inhabitants, while Luxembourg and Belgium are below the cluster average value. Regarding the average number of trips to the countryside (ANCT), this cluster is ranked third, with an average of 738 trips /1000 inhabitants, the four countries having the same ranking. Only the *Total Average Number of Trips* indicator shows a slightly different internal distribution of countries than the other two indicators. Germany maintains its supremacy with 3111 trips/1000 inhabitants, followed by Luxembourg and Austria. The countries in cluster C_1 hold the supremacy, with the highest average expenses per trip for all 3 categories of expenses (total, accommodation, transport). At the top of the ranking of the component countries in this cluster there are Luxembourg, Belgium and Austria, while the last place is occupied by Germany.

**Table no. 6. The main cluster characteristics**

| Cluster | Variable | Mean | Std. Deviation | Std. Error | Variable | Mean | Std. Deviation | Std. Error |
|---|---|---|---|---|---|---|---|---|
| C_1 | TANT | 2506 | 746.735 | 373.367 | AET | 629 | 139.817 | 69.909 |
| | ANCT | 738 | 336.884 | 168.442 | AETRS | 199 | 29.462 | 14.731 |
| | ANMT | 306 | 88.127 | 44.063 | AEACC | 231 | 33.322 | 16.661 |
| C_2 | TANT | 1284 | 582.629 | 194.210 | AET | 193 | 69.646 | 23.215 |
| | ANCT | 245 | 174.650 | 58.217 | AETRS | 55 | 20.505 | 6.835 |
| | ANMT | 91 | 80.389 | 26.796 | AEACC | 50 | 18.967 | 6.322 |
| C_3 | TANT | 2930 | 292.607 | 146.304 | AET | 280 | 113.916 | 56.958 |
| | ANCT | 1146 | 307.752 | 153.876 | AETRS | 78 | 37.723 | 18.861 |
| | ANMT | 465 | 74.247 | 37.124 | AEACC | 87 | 47.843 | 23.921 |
| C_4 | TANT | 3045 | 1351.503 | 604.411 | AET | 501 | 108.541 | 48.541 |
| | ANCT | 358 | 202.468 | 90.546 | AETRS | 140 | 20.768 | 9.288 |
| | ANMT | 190 | 104.144 | 46.575 | AEACC | 161 | 28.413 | 12.707 |
| C_5 | TANT | 3896 | 574.171 | 406.000 | AET | 228 | 12.728 | 9.000 |
| | ANCT | 1004 | 106.773 | 75.500 | AETRS | 69 | 10.607 | 7.500 |
| | ANMT | 60 | 10.607 | 7.500 | AEACC | 77 | 23.335 | 16.500 |
| C_6 | TANT | 1658 | 646.542 | 373.281 | AET | 284 | 69.169 | 39.935 |
| | ANCT | 286 | 193.252 | 111.574 | AETRS | 75 | 25.166 | 14.530 |
| | ANMT | 234 | 123.314 | 71.195 | AEACC | 103 | 27.737 | 16.014 |

*Source: author's contribution*

Cluster 2 (C_2) with the most component countries (9 countries) records the lowest average number of trips for each of the three types: 1284 trips/1000 inhabitants (TANT), 245 trips/1000 inhabitants (ANCT) and 91 trips/1000 inhabitants (ANMT). Hungary, Portugal and Poland have higher than average values for all three indicators, while Croatia, Greece and Bulgaria have lower than average values for all three variables. Latvia has above average values for the TANT and ANTC variables. Lithuania and Romania have the values of TANT and ANTMT indicators above the registered averages, respectively. The rest of the component countries of the C_2 cluster show the average number of trips lower than the average values. At the same time, the countries of the second C_2 cluster are characterized by the lowest average expenditures on tourist travel, placing the cluster in last place in the rankings. The first three places are occupied by Greece, Croatia and Lithuania, and the last three places are occupied by Portugal, Romania and Latvia, with average spending values far below the average.

The countries with the highest average number of trips to countryside and mountain are Czechia, Spain, France, Netherlands. The average values of the two indicators for cluster C_3 are 1146 and 465 trips/1000 inhabitants, placing it on the first place, compared to the other clusters. The average of the TANT variable (2930 trips/1000 inhabitants) places this cluster on the third place. The Czech Republic is the country with the highest average number of trips, followed by Spain for TANT and ANCT, respectively by France for TANT and ANMT. Netherland is the component of the third cluster that records the lowest values of the three variables analyzed. At the same time, cluster C_3 ranks third among clusters referring to AETRS and fourth referring to AET and AEACC. Netherland and France dominate the ranking, while the other two countries, Spain and the Czech Republic, are the worst ranked, with the lowest average spending for each of the three variables.

From the point of view of the total average number of trips, the C_4 cluster occupies the second place, with an average of 3045 trips/1000 inhabitants. Denmark and Cyprus are at the top of the list of component countries, above the cluster average. Ireland, United Kingdom and Malta show lower indicator values than the cluster average. Denmark and Cyprus are also in the first place in terms of ANMT. Only regarding the ANCT indicator, the hierarchy is inverse to that of the TANT variable. The two countries analyzed are at the end of the ranking, while Ireland, United Kingdom and Malta are at the top with values higher than the cluster average. Compared to the other clusters, C_4 ranks second for the variables AET, AETRS and AEACC. If for AET and AETRS the first three places are contested by Malta, Cyprus and Ireland, and the last by Denmark and United Kingdom, in terms of AEACC, the situation is different: United Kingdom, Malta and Ireland are dominant in the ranking, and Denmark and Cyprus are below the average level of expenditure.

Sweden and Estonia, the component countries of the C_5 cluster, present the highest values of the TANT variable within the EU. Compared to the other clusters, cluster C_4 occupies the 2nd place in terms of ANCT indicator values, and the 4th place in terms of ANMT indicator values. From the point of view of the expenses with the tourist trips on the 3 categories, the cluster C_5 occupies the fifth place. In terms of AET and AEACC, Sweden has the highest average trip expenditure, with values above 228 EUR/trip for the first variable and over 77 EUR/trip for the second. Estonia has the highest expenditure on the AETRS indicator.

Cluster C_6 ranks fifth in the cluster hierarchy in terms of TANT and ANCT indicators, Slovenia and Slovakia having their values above the cluster average. At the same time, the cluster ranked 3rd in terms of the ANMT variable, with Slovakia dominant in the ranking. Italy occupies the last place in the cluster with the lowest TANT, ANCT and ANMT values. Cluster C_6 ranks third in the cluster ranking in terms of the variables AET and AEACC, and 4th in terms of the AETRS indicator. For all 3 variables, Italy registers values above average, being at the top of the ranking of the component countries. The other two countries (Slovenia and Slovakia) record expenditures below the average values of the cluster for the three variables.

The conclusion is that, following the cluster ranking of EU countries through the average values of the six indicators, but also of the countries within the clusters, Sweden and Estonia (C_5) have the highest average total number of trips/1000 inhabitants, and Czechia, Spain, France and the Netherlands (C_3) are dominant countries with respect to the average number of trips/1000 inhabitants, oriented towards rural and mountainous areas. In terms of average travel expenditure, both in total and for the two

categories (accommodation and transport), Luxembourg, Belgium, Austria and Germany (C_1) are the countries with the highest amounts.

## Conclusions

Following the clustering applied on the 28 EU member states, using as classification criteria indicators that characterize the tourist behavior with respect to the number of trips and trip expenditure, six patterns of tourist behavior were identified.

Thus, tourists from the countries in **C_1 cluster** prefer to spend the most important amounts for travel planning, including accommodation and transportation. At the same time, the preference for tourist destinations in mountainous areas, more isolated and far from the hustle and bustle of cities is also well defined, as the average number of trips in these areas is high. In fact, these countries have a great economic power, but also a strongly developed tourism sector. Tourists from the countries of **cluster C_2** have a lower tourist activity, described by the lowest average number of tourist trips, both in total and in rural or mountain destinations. At the same time, they are willing to spend the least on planning travel trips, accommodation or transportation. In this cluster we meet on the one hand, less economically developed countries (former socialist countries), and on the other hand countries with developed tourist activity (like Greece, Croatia or Portugal). Tourists from the countries of the **C_3 cluster** register the highest average number of trips in green, eco-friendly, mountain or rural areas, valuing the relaxation that this type of destination gives. The expenses occasioned by these trips are average, both in total and accommodation or transport. They are not too willing to spend too much on such trips. For tourists from the **C_4 cluster** countries, there is a strong preference for travel, but not necessarily in environmentally friendly tourist destinations, being willing to spend quite a lot on this occasion, both for the entire trip and on accommodation and transport services. The countries in this cluster are more polarized, some located in northern Europe, with greater economic power, while others in southern Europe have a slightly lower development degree. This also explains the higher variation in the values of the indicators in this cluster. The appetite for tourist trips is the highest among tourists from the countries included in the **C_5 cluster**, outlining a fairly strong inclination for rural destinations, full of traditions and far from busy and polluted urban areas. But the expenses with tourist trips as a whole are modest, the tourists from these countries not being willing to spend too much on accommodation or transport. Tourist activity is quite limited for tourists from the countries of the **C_6 cluster**, reflected by a rather small number of trips, and rural areas are not among their favorite destinations, as the average number of trips in these areas is among the lowest. The tourists do not excel in terms of tourist expenses, being rather willing to pay moderate amounts for tourist trips. However, in this cluster Italy stands out, with a more favorable situation of the tourist activity compared to the other countries.

As a tool of economic growth in rural areas, tourism adapts to the tourists' preferences through a variety of development policies and plan strategies, in order to increase eco-efficiency. Thus, there are options related to the management of leisure, the protection of green space, renewable energy. An implementation of eco-efficiency strategies is also envisaged to meet the tastes and interests of tourists, satisfying the needs of community stakeholders. Simultaneously with the orientation of tourists' preferences, their risk-taking behaviors are also taken into account. It may be influenced by their experience, participation frequency and commitment, perception of risky environmental conditions and individual risk compromise (information, experience, other time management constraints or weather conditions) (Steiger et al., 2016). With regard to options for transport services, it is highly recommended to encourage the reduction of energy consumption and pollutant emissions as well.

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