

# **A comparative analysis of the structure of tourists' expenses from the member states of the European Union**

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**Abstract.** The tourism industry is progressively emerging as a catalyst for economic growth in numerous countries. Conversely, it has emerged as a prevailing inclination and leisure pursuit, increasingly adopted by European Union inhabitants, as well as by individuals beyond its borders. In such circumstances, expenditures related to tourism tend to comprise a significant portion of individuals' financial allocations. Starting from these considerations, the paper analyzes the similarities and disparities between average expenditures per tourist, within the European Union member states, encompassing both domestic and international destinations. Specifically, four categories of expenses are considered: transportation, accommodation, dining, and the acquisition of durable and valuable goods.

**Keywords:** *tourism, average expenses, transport, accomodation, durables and valuable goods*

## **1. Introduction**

During the second decade of the 21st century, there was a notable surge in the tourism sector, observed both in Romania [Druiu, 2021] and across the European Union [Badoi et al., 2020]. Despite the numerous adverse consequences brought about by the onset of the Covid 19 pandemic, resulting in a notable disruption [Marin & Condrea, 2021; Harchandani & Shone, 2023], the trajectory continues to exhibit a rise and shows indications of surpassing the levels observed in the preceding year of 2019. Therefore, when examining the data pertaining to the influx of visitors at tourist accommodation establishments at the EU27 level, as detailed in the arrivals at tourist accommodation establishments [ATAE, 2023] dataset, it can be deduced that prior to the onset of the pandemic, in 2019, the quantity of arrivals at tourist reception facilities providing accommodations was 1.42 times greater than the corresponding figure recorded in 2010. The results of the study indicate considerable advancements in Lithuania displaying increases of 2.97 times, Slovenia and Romania 2.18 times and Latvia and 2.17 times, while Finland 1.22 times, Italy and Cyprus demonstrated minimal growth of 1.33 times.

The escalation in the magnitude of sustainable tourist activity, within circumstances where the ramifications upon the environment and local culture are relatively limited [Hristova, 2018], represents a significant aspect of sustainable development [Sofronov, 2017]. This trend yields immediate beneficial outcomes in terms of employment opportunities and the enhancement of the quality of life for both local and regional communities. These effects exhibit a strong correlation with the level of satisfaction experienced by tourists with respect to their chosen tourist destinations.

The allure of a destination and the degree of tourist satisfaction are influential factors that not only shape the volume of tourist influx but also determine the level of expenditures, offering valuable insights into the tourist demand for a particular destination [Jaume & Jianan, 2020]. Simultaneously, the impact of tourists' satisfaction on their expenditures is contingent upon the characteristics of different tourist categories [Disegna & Osti, 2016], their country of origin (domestic or foreign), their expectations and individual peculiarities, as well as the presence of distinct determinants influencing daily expenditure levels [Smolčić & Soldić, 2016].

Considering these aspects, the primary aim of the study was to delineate a portrayal of the magnitude and composition of mean expenditures per visitor within the European Union countries, whilst emphasizing the resemblances and variances among them, in regard to this particular perspective. The study investigates the average expenditures per tourist within the domestic country as well as in foreign countries, with a focus on the three categories of expenses: transport, accommodation, and durables and valuable goods.

**2. Data series and methodology**

The current study utilizes primary data sourced from the EUROSTAT statistical database of the year 2021, specifically the data series on Expenditure by duration, purpose, main destination of the trip, and expenditure category [DETE, 2013]. This pertains to the entirety of tourism journeys taken by individuals aged 15 years or older, who are residents of the 27 member states of the European Union, and who embarked on such trips for personal purpose, with at least 1 overnight stay [TEUR, 2023].

This study undertook research and analysis pertaining to the mean expenditure per tourist, within the European Union at the national level, considering both expenditure per trip and expenditure per night. At the outset, the analysis comprised four distinct categories of expenses, namely transport, accommodation, restaurant/cafe and durables and valuable goods. However, it should be noted that data regarding expenses on restaurant/cafe is not available for six member states (Denmark, Germany, Italy, Luxembourg, Malta, and Austria) consequently, the comparative analysis at the EU level only incorporates the remaining three categories of expenses. Nevertheless, the category of restaurant/cafe expenditure was not disregarded; rather, it was incorporated into the delineations of the states for which the respective data is obtainable.

Tabelul 1 The identifiers and meanings of the variables used in the analysis of average expenditures per tourist in domestic and foreign countries (euro/pers)

ADETRT	Transport per trip in domestic country
ADETRN	Transport per night in domestic country
ADEACT	Accommodation per trip in domestic country
ADEACN	Accommodation per night in domestic country
ADEDGT	Durables and valuable goods per trip in domestic country
ADEDGN	Durables and valuable goods per night in domestic country
AFETRT	Transport per trip in domestic country in foreign countries
AFETRN	Transport per night in domestic country in foreign countries
AFEACT	Accommodation per trip in foreign countries
AFEACN	Accommodation per night in foreign countries
AFEDGT	Durables and valuable goods per trip in foreign countries
AFEDGN	Durables and valuable goods per night in foreign countries

Given the unique characteristics of the two travel destinations, namely the domestic and foreign locations, a comprehensive assessment was undertaken. This involved conducting separate analyses to investigate the average expenditures per tourist in the domestic country, as well as in foreign countries. The identifiers and significance of the variables utilized in the analyses are provided in Table 1.

In alignment with the primary research objective, a comparative assessment was conducted to analyze the volume and composition of average expenditures per tourist for both domestic and

international destinations. To facilitate this examination, two distinct cluster analyses were performed, one for each destination category.

In order to accomplish this objective, two matrices were formed, each encompassing the observed values pertaining to the six variables associated with each of the twenty-seven member states within the European Union, according to [Zaharia et. al 2022] in the form of  $Y = \left\| y_{ij} \right\|_{i=1,27,j=1,6}$ . The methodology of hierarchical clusters was employed, utilizing squared Euclidean distance for the generation of the Proximity Matrix ( $W = \left\| w_{ij} \right\|_{i=1,n,j=1,n}$ ):

$$W = \left\| w_{ij} \right\|_{i=1,27,j=1,27}, \quad w_{ij} = \sum_{k=1}^{27} (z_{ik} - z_{jk})^2, \quad j = \overline{1,6}, k = \overline{1,6} \quad j \neq i, k \neq i, w_{ii} = 0 \quad (1)$$

Ward's method was used to generate the clusters. Let A and B be two clusters, with  $n_k$  elements and  $m_k$  centroids,  $x_i$  an item, the distance between the clusters is [Marinoiu, 2016]:

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

The testing of the statistical significance of the mean values of the variables at the cluster level was performed with the Welch test (Robust Tests of Equality of Means) with the following hypotheses:  $H_0$ : there is no significant difference between the means.

$$\exists m_i = m_j, \quad i = \overline{1,r}, j = \overline{1,r}, i \neq j \quad (3)$$

$H_1$ : there is a significant difference between the means.

$$m_i \neq m_j, \quad \forall i = \overline{1,r}, j = \overline{1,r}, i \neq j \quad (4)$$

The condition for accepting the null hypothesis ( $H_0$ ) is:  $\text{Sig.} > \alpha$ .

A confidence level of 95%, corresponding to a significance threshold of  $\alpha=0.05$ , was used to test the statistical hypotheses. Data processing was performed using SPSS.

### 3. Rezultate și discuții

In accordance with the research objective and considering the unique characteristics, two analyses were conducted. The initial focus pertained to mean tourism expenditures within national borders, while the subsequent focus was on mean tourism expenditures in international destinations.

#### 3.1. Average tourism expenditures in domestic country

After conducting analyses and statistical significance tests on the results concerning the similarities and disparities in average expenditures per tourist in their respective domestic countries (AETDC), a categorization into six clusters was chosen (refer to Table 2).

Table 2 Cluster structure regarding average expenditures per tourist in domestic country

Clusters	Structure of clusters
A	Belgium, Germany, Ireland, Luxembourg
B	Bulgaria, Estonia, Spain, Poland, Portugal, Romania, Slovakia, Finland, Sweden
C	Czechia, Cyprus, Latvia, Lithuania, Hungary
D	Denmark, Malta
E	Greece, France, Croatia, Netherlands, Slovenia
F	Italy, Austria

Source: elaborated by authors using SPSS

Cluster B is the most numerous, comprising Romania and a total of nine states. Conversely, clusters D and F are the least numerous, as they only encompass two states each. The other clusters, namely A, C and E, compose a grouping of five member states each. Figure 1. depicts the dendrogram generated for clustering based on the average expenditures per tourist within the domestic country using the six variables that serve as the classification criteria.

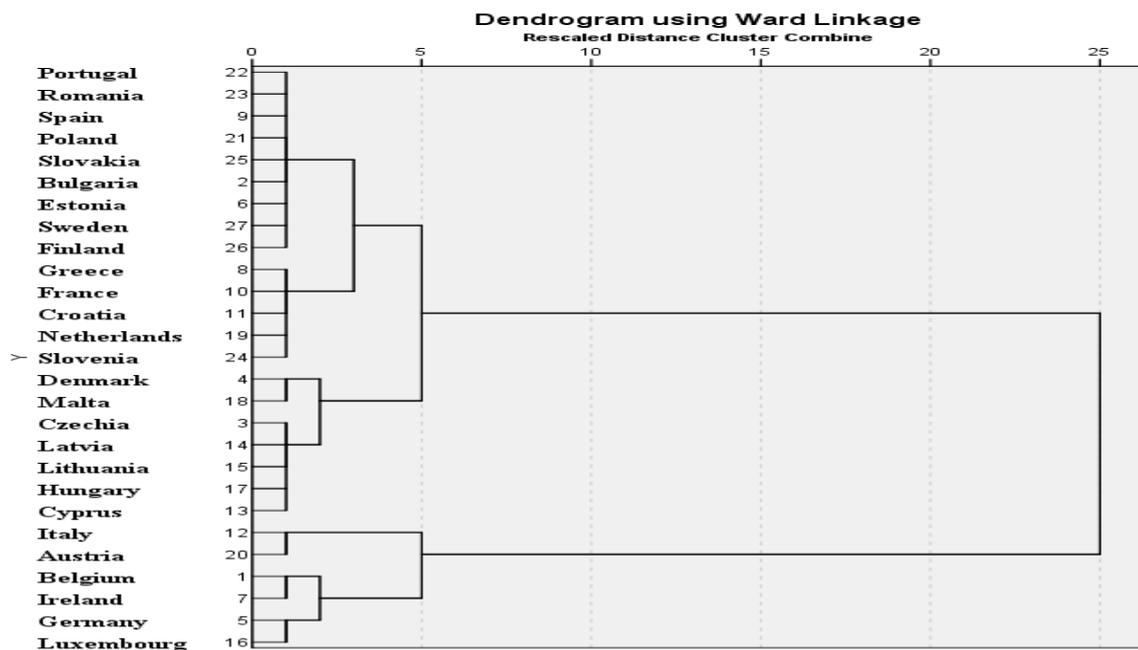


Figure 1. Cluster generation dendrogram regarding average expenditures per tourist in domestic country according to the specific classification criteria

Source: developed by the authors based on EUROSTAT statistical data

The statistical significance of the average values of the variables, recorded at the cluster level, was examined using the Robust Tests of Equality of Means. Based on the empirical findings presented in Table 3, it can be observed that all the reported statistical values exhibit a significance level of  $\text{Sig.} < \alpha = 0.05$ . Consequently, the null hypothesis  $H_0$  (3) is deemed invalid, thereby leading to the acceptance of the alternative hypothesis  $H_1$  (4). Consequently, all the average values of the variables used in the classification are statistically significant, therefore, they provide a good picture of the similarities and disparities between the groups of EU member states, from the point of view of average expenditures per tourist in domestic country.

Table 3 Results of Welch' Robust Tests of Equality of Means for the AETDC analysis

Variables	Statistic <sup>a</sup>	df1	df2	Sig.
ADETRT	21.430	5	4.880	.002
ADETRN	8.579	5	6.064	.010
ADEACT	241.934	5	5.473	.000
ADEACN	6.284	5	4.675	.037
ADEDGT	23.384	5	4.321	.003
ADEDGN	7.768	5	4.315	.029

a. Asymptotically F distributed.

Source: developed by the authors using SPSS

The characteristics of the clusters regarding average expenditures per tourist in domestic country according to the six classification criteria are presented in table 4.

Table 4. Characteristics of the clusters regarding average expenditures per tourist in domestic country according to the classification criteria

Variables	Cluster A					Cluster B				
	Mean	Std. Dev.	Std. Err.	Min	Max	Mean	Std. Dev.	Std. Err.	Min	Max
ADETRT	46.26	18.52	9.26	29.41	67.55	38.08	10.03	3.34	22.51	55.18
ADETRN	12.42	3.99	1.99	8.05	17.12	10.92	4.71	1.57	5.74	19.93
ADEACT	111.66	2.77	1.38	108.70	114.65	50.79	7.77	2.59	32.67	59.29
ADEACN	30.84	4.37	2.18	27.65	37.27	14.24	4.20	1.40	9.29	23.44
ADEDGT	12.52	18.20	9.10	1.67	39.60	2.32	2.31	0.77	0.11	5.99
ADEDGN	3.28	4.52	2.26	0.42	9.95	0.64	0.66	0.22	0.03	1.72
Cluster C						Cluster D				
ADETRT	15.19	1.87	0.83	12.82	17.06	11.18	2.65	1.88	9.30	13.05
ADETRN	5.27	1.36	0.61	3.21	6.92	3.69	0.54	0.39	3.30	4.07
ADEACT	35.94	14.93	6.68	17.21	49.80	64.56	10.44	7.38	57.18	71.94
ADEACN	12.64	6.30	2.82	5.66	19.15	21.69	5.46	3.86	17.83	25.55
ADEDGT	0.19	0.17	0.08	0.00	0.45	27.08	2.87	2.03	25.05	29.11
ADEDGN	0.06	0.05	0.02	0.00	0.11	9.08	1.79	1.27	7.81	10.34
Cluster E						Cluster F				
ADETRT	51.13	18.83	8.42	25.42	72.91	72.52	8.51	6.02	66.50	78.53
ADETRN	9.64	2.84	1.27	6.21	13.62	15.94	5.32	3.76	12.18	19.70
ADEACT	75.42	6.84	3.06	69.86	85.69	166.98	2.55	1.81	165.17	168.78
ADEACN	16.34	7.67	3.43	6.02	24.81	37.56	16.07	11.37	26.19	48.92
ADEDGT	2.43	2.82	1.26	0.50	7.37	4.62	4.77	3.37	1.25	7.99
ADEDGN	0.71	1.08	0.48	0.07	2.62	1.28	1.54	1.09	0.19	2.37

Source: developed by the authors using SPSS results

The examination of the resemblances and variations among the groupings of European Union member states, with regards to average expenditures per tourist within their respective domestic countries, primarily relies on the assessment of clusters and then that of the countries in each cluster, in accordance with distinct classification criteria.

The countries belonging to Cluster F, namely Italy and Austria, exhibit the highest average expenses across both Transportation (ADETRT with 72.52 euro per person and ADETRN with 15.94 euro per person) and Accommodation (ADEACT with 166.98 euro per person and ADEACN with 37.56 euro per person), thus securing the top position in the cluster ranking. Cluster D, comprising exclusively of Denmark and Malta, occupies the top position in the ranking for average expenses/ per tourist associated with durables and valuable goods. The data reveals that the average expenditure for this cluster amounts to 27.08 euro/pers at ADEDGT and 9.08 euro/pers at ADEDGN.

The second place in the ranking of clusters belongs to cluster A for most of the variables with average values of average expenses/per tourist that oscillate between 111.66 euros/pers at ADEACT and 3.28 euros/pers at ADEDGN. The exception is the average expenses of ADETRT whose value of 46.26 euro/pers places this indicator in third place. Within this cluster, Germany stands out with the highest average expenses at ADETRT and ADETRN of 67.55 euros/pers and 17.12 euros/pers, then Ireland with 17.12 euros/pers and ADEACT and 114.65 euros/pers at ADEACN and Luxembourg with 39.60 euros/ per person at ADEDGT and with 9.95 euros/person at ADEDGN. The lowest average expenses are recorded within this cluster with Belgium 29.41 euro/person at ADETRT, 8.05 euro/person at ADETRN and 108.70 euro/person at ADEACT, followed by Luxembourg with 27.65

euro/person at ADEACN, as well as Germany at ADEDTG and ADEDTN by 1.67 euro/pers and 0.42 euro/pers.

Through the average values determined for the average expenses/ per tourist of the specified variables, we have a diversity in ranking. Thus, cluster B registers an average of 10.92 euro/person in average ADETRN expenses. The length of the variation interval is determined between 19.93 euro/person recorded in Estonia and 5.74 euro/person in Poland. The indicator that aims at the average expenditure per tourist ADEACT through 75.42 euro/pers through cluster E occupies the third position, with the Netherland dominating through 85.69 euro/pers and Greece in the last position with 6.21 euro/pers. Also, in third place with 21.69 euro/pers at ADEACN is cluster D through Denmark and Malta, which have average spending values of 17.83 euros/per tourist and 25.55 euro/pers.

The lowest average values that place the clusters in the last place belong to cluster D (11.18 euros/pers at ADETRT and 3.69 euro/pers at ADETRN) and cluster C for the other variables, through 35.94 euro/pers at ADEACT, through 12.64 euro/pers at ADEACN, through 0.19 euro/person at ADEDTG and 0.06 euro/person at ADEDTN.

### 3.2. Average tourism expenditures in foreign countries

The present study examines and compares the average expenditures made by citizens across the 27 EU states, specifically focusing on their average expenditures per tourist while traveling abroad. This analysis brings to light several noteworthy distinctions when compared to the average expenditures per tourist within their home countries.

Initially, for reasons of comparability, for average expenditures per tourist in foreign countries (AETDF), a structure with six clusters was analyzed. The obtained results highlighted a first peculiarity. This consists in the fact that of the six clusters, only five contain two or more states, the sixth including a single state.

On the other hand, the tests performed to verify the statistical significance of the average values recorded at the cluster level reflected a second particularity: the average values corresponding to the AFEDGT and AFEDGN variables (Table 5) lead to the acceptance of the null hypothesis  $H_0$  (3). Since  $\text{Sig}_{\text{AFEDGT}}=0.298 > \alpha=0.05$  si  $\text{Sig}_{\text{AFEDGN}}=0.332 > \alpha=0.05$ , the average values of AFEDGT and AFEDGN are not statistically significant. Consequently, the expenditures for Durables and valuable goods per trip and per night in foreign countries, in the case of average expenditures per tourist in foreign countries, no longer constitute a classification factor for the EU member states included in the analysis.

Table 5. Welch's Robust Tests of Equality of Means for the AETDF analysis with six variables

	Statistic <sup>a</sup>	df <sub>1</sub>	df <sub>2</sub>	Sig.
AFETRT	13.346	4	9.235	0.001
AFETRN	10.005	4	7.824	0.004
AFEACT	83.817	4	8.574	0.000
AFEACN	16.682	4	7.708	0.001
AFEDGT	1.475	4	7.847	0.298
AFEDGN	1.350	4	7.943	0.332

a. Asymptotically F distributed.

Source: developed by the authors using SPSS results

The analysis of average expenditures per tourist in foreign countries resulted in the generation of a structure comprising four clusters after the exclusion of the AFEDGT and AFEDGN variables (Table 6). Romania is included within the C cluster, which comprises a total of nine states and holds the

distinction of being the most expansive in size. Cluster D, in stark contrast, consists solely of a mere four states. The remaining clusters consist of a grouping of seven states per cluster.

Table 6 Cluster structure regarding average expenditures per tourist in foreign countries

Clusters	Structure of clusters
A	Belgium, Denmark Estonia, Ireland, France, Malta, Netherlands,
B	Bulgaria, Czechia, Greece, Croatia, Hungary, Slovenia, Slovakia
C	Spain, Italy, Cyprus, Latvia, Lithuania, Poland, Portugal, Romania, Finland
D	Germany, Luxembourg, Austria, Sweden

Source: elaborated by authors using SPSS

The cluster generation dendrogram is illustrated in figure 2.

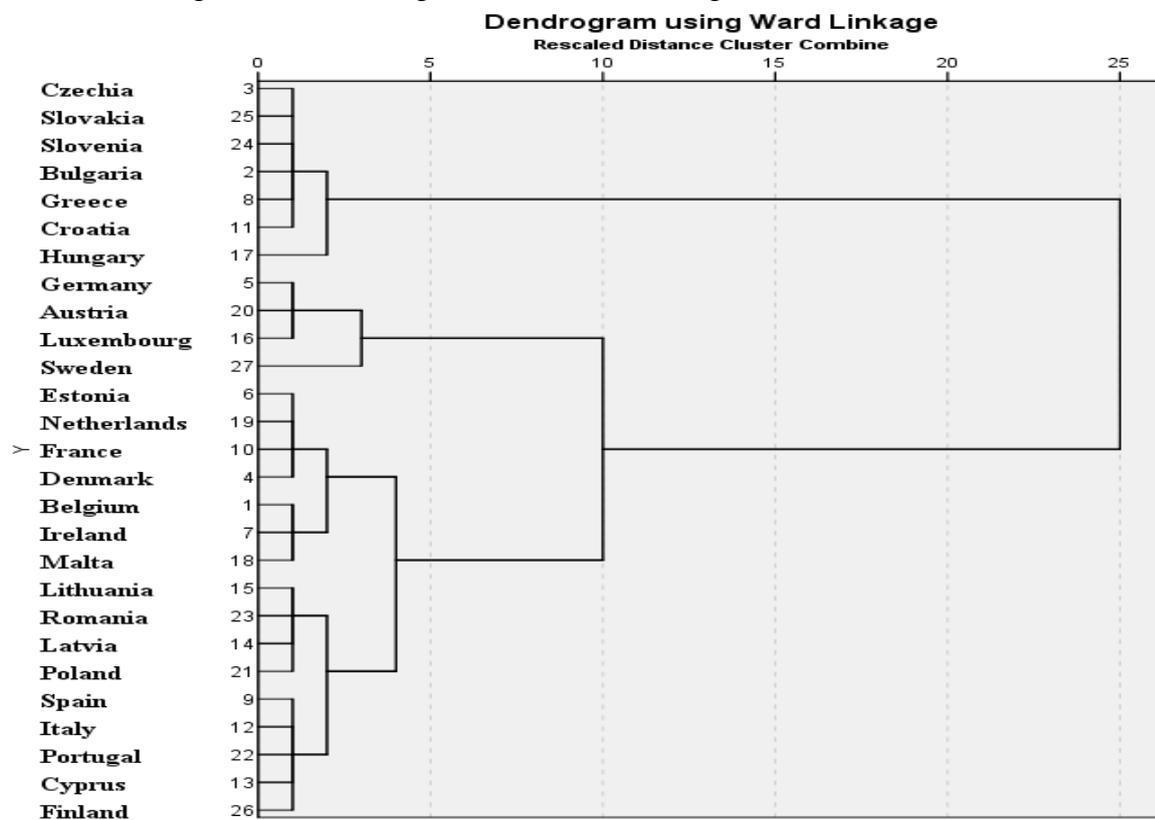


Figure 2. Cluster generation dendrogram regarding average expenditures per tourist in foreign countries according to the specific classification criteria

Source: developed by the authors based on EUROSTAT statistical data

According to the results of Welch's Robust Tests of Equality of Means for the four classification criteria (AFETRT, AFETR, AFEACT and AFWACN) and presented in table 7, all values Sig.<  $\alpha=0.05$ , which leads to the rejection of the null hypothesis  $H_0$  (3) and accepting the alternative hypothesis, accepting the null hypothesis  $H_1$  (4): the average values of the four variables, recorded at the cluster level, are significant.

Table 7 Welch's Robust Tests of Equality of Means for the AETDF analysis with four variables

	Statistic <sup>a</sup>	df1	df2	Sig.
AFETRT	21.834	3	9.077	.000

AFETRTR	15.004	3	7.643	.001
AFEACT	70.555	3	11.325	.000
AFEACN	10.492	3	8.059	.004

a. Asymptotically F distributed.

Source: elaborated by authors using SPSS

The characteristics of the clusters regarding average expenditures per tourist in foreign countries according to the four classification criteria are presented in table 8.

Table 8. The characteristics of the clusters regarding average expenditures per tourist in foreign countries according to the classification criteria

Cluster A						Cluster B				
Variables	Mean	St.Dv.	St.Err.	Min	Max	Mean	St.Dv.	St.Err	Min	Max
AFETRTR	233.66	46.48	17.57	153.45	276.09	112.73	44.23	16.72	34.64	181.48
AFETRTRN	28.66	6.74	2.55	19.29	36.67	14.86	3.98	1.50	6.60	18.52
AFEACT	262.34	17.15	6.48	244.41	291.07	113.46	39.56	14.95	51.79	155.77
AFEACN	32.16	4.17	1.58	25.65	36.29	16.10	6.94	2.62	7.88	24.99
Cluster C						Cluster D				
AFETRTR	222.74	45.64	15.12	163.42	296.39	299.78	67.13	33.56	249.47	396.51
AFETRTRN	23.84	2.60	0.86	17.77	26.47	35.87	6.26	3.12	27.19	41.86
AFEACT	182.79	21.60	7.19	150.87	212.19	340.57	45.97	22.90	274.48	375.66
AFEACN	19.95	3.37	1.12	14.19	24.88	41.64	10.33	5.16	28.98	54.23

Source: elaborated by authors using SPSS

The subsequent analysis sought to elucidate the similarities and discrepancies among the various groups of European Union member states with regards to the mean expenditures per traveler in international destinations. This analysis emphasizes the hierarchical positioning of the clusters and subsequently the ordering of nations within each cluster, while considering all classification criteria. The uniqueness of the findings arising from this analysis lies in the consistent placement of each cluster within the hierarchy of clusters for every variable and implicit classification criterion.

Compared to the other clusters, regardless of the analysis criterion (transport, accommodation), cluster D (Germany, Luxembourg, Austria, Sweden) dominates the ranking, through the highest average values of the average expenditures per tourist in foreign countries. In the case of the transport characteristic, for both variables (AFETRTR, AFETRTRN), there are two countries of cluster D that occupy the extreme places in the ranking of the component countries. Thus, Sweden ranks first for both transport variables with an average expenditure/tourist of 96.73 euros/pers above the average of 299.78 euros/pers at AFETRTR and one with 5.99 euros/pers higher than the average of 35.87 euros/pers at AFETRTRN. The last place in cluster D is occupied by Germany with 249.47 euros/pers at AFETRTR and with 27.19 euros/pers at AFETRTRN.

For the first variable regarding accommodation (AFEACT), the places of the two countries change in the sense that Germany occupies the first place in average expenditures per tourist in foreign countries with 375.66 euros/person, i.e., 35.09 euros/person above the average, and Sweden the last with 274.48 euro/pers. Also, on the last position we find Sweden in the case of the AFEACN variable with average expenditures per tourist in foreign countries of 28.98 euro/pers, 12.66 euro/pers less than the average of 340.57 euro/pers. The first place in this variable is occupied by Austria with 54.23 euro/pers.

A similar situation is also in the case of cluster A (Belgium, Denmark, Estonia, Ireland, France, Malta, Netherlands), occupying the second place in the cluster hierarchy, for each of the four analyzed variables. Compared to the average values of average expenditures per tourist in foreign countries (233.66 euro/pers AFETRT, 28.66 euro/pers AFETR, 262.34 euro/pers AFEACT and 32.16 euros/pers AFEACN) the average expenses in Denmark (276.09 euro/pers AFETRT and 36.67 euro/pers AFETR) and those from France (291.07 euro/pers AFEACT and 36.29 euro/pers) place them first in the internal ranking of cluster A countries.

The third place is occupied by cluster C with the most countries (Spain, Italy, Cyprus, Latvia, Lithuania, Poland, Portugal, Romania, Finland) for each transport and accommodation indicator. The averages calculated for average expenditures per tourist in foreign countries are: 222.74 euro/pers AFETRT, 23.84 euro/pers AFETR, 182.79 euro/pers AFEACT and 19.95 euros/pers AFEACN. Average expenditures per tourist in foreign countries of 296.39 euro/person at AFETRT, 26.47 euro/person at AFETR, 212.19 euro/person at AFEACT and 24.88 euro/person at AFEACN place Cyprus, Spain, Italy and Romania in first place in the internal ranking of cluster C countries. Lithuania with 163.42 euro/person at AFETRT and Poland with 17.77 euro/person at AFETR, 150.87 euro/person at AFEACT and 14.19 euro/person at AFEACN represent the countries of cluster C with the lowest average values expenditures per tourist in foreign countries for all three variables analyzed within the third place.

Comparing the averages of the clusters, the last place (fourth) is occupied by cluster B (Bulgaria, Czechia, Greece, Croatia, Hungary, Slovenia, Slovakia) regardless of the analyzed variable between those of transport and accommodation. This statement is justified by the average values determined for average expenditures per tourist in foreign countries of 112.73 euro/person at AFETRT, 14.86 euro/person at AFETR, 113.46 euro/person at AFEACT and 16.10 euro/person at AFEACN. Greece with 181.48 euro/person (AFETRT), Bulgaria with 18.52 euro/person (AFETR), Czechia with 155.77 euro/person (AFEACT) and Slovakia with 24.99 euro/person (AFEACN) are the dominant average expenditures per tourist in foreign countries among the countries cluster B. Hungary has the lowest average expenditures per tourist in foreign countries for AFETRT (34.64 euro/pers), AFETR (6.60 euro/pers) and AFEACT (51.79 euro/pers), while for AFEACN Greece holds the last place with 9.69 euros/person.

#### **4. Conclusions**

In consideration of the primary aim of the study, an analysis was conducted to examine the portrayal of the volume and arrangement of the mean expenditures per traveler originating from European Union nations. This endeavor sought to underscore resemblances and discrepancies observed among them. The study encompassed an examination of three distinct expenditure categories, namely transportation, accommodation, and durable goods, with regards to the average expenditures incurred by tourists within their domestic country as well as in foreign countries. This investigation utilized the Hierarchical cluster methodology, incorporating the Welch test (Robust Tests of Equality of Means), along with its associated dendrogram.

A first conclusion concerns the similarities and disparities between countries in relation to the structure of the five clusters regarding average expenditures per tourist in domestic country. Italy and Austria (cluster F) are the countries with the highest average expenses per tourist in the domestic country for each variable in the categories of expenses addressed. In this context, the average average expenditures per tourist in domestic country on cluster F, which represents the two countries, is above the EU27 average on each variable as follows: for transport with 21.05 euro/person ADETRT, with 3.95 euro/person ADETRN, for accommodation with 90.15 euro/pers ADEACT, with 19.65 euro/pers ADEACN and for goods with 1.75 euro/pers at ADEDTG and with 0.61 euro/pers at ADEDTGN. Denmark and Malta (cluster D) have the lowest average expenditures per tourist in domestic country for transport, on average by 40.29 euro/pers at ADETRT and by 8.30 euro/pers at ADETRN lower than the EU27 averages. Cluster C (Czechia, Cyprus, Latvia, Lithuania, Hungary) records the lowest average expenditure/tourist on accommodation and durables and valuable goods. Compared to EU27

averages, average expenditures per tourist in domestic country are lower on accommodation by 40.89 euro/person on average at ADEACT and by 5.27 euro/person at ADEACN, and on goods by 2.68 euro/person on average at ADEDGT and by 0.61 euro/person at ADEDGN.

The second conclusion highlights the similarities and disparities between the countries in relation to the structure of the four clusters obtained by applying the average expenditures per tourist in foreign countries method. Thus, Germany, Luxembourg, Austria, Sweden, which form cluster D, represent the countries with the highest average spending per tourist in foreign countries. The average expenses per tourist in foreign countries representing cluster D of each variable are above the EU27 averages as follows: for transport with 62.34 euro/pers at AFETRTR and with 9.19 euro/pers at AFETRNR, for accommodation with 50.43 euro/pers at AFEACT and with 9.04 euro/person at AFEACN. At the same time, cluster C (Spain, Italy, Cyprus, Latvia, Lithuania, Poland, Portugal, Romania, Finland) has the lowest average expenses per tourist in foreign countries. The average on cluster C for each variable is below that of the EU27 for transport by 124.71 euro/pers at AFETRTR, respectively by 11.82 euro/pers AFETRNR, and for accommodation by 176.68 euro/pers AFEACT and 16.50 euro/pers at AFEACN.

Based on the summarized results, it can be deduced that the clustering process serves to emphasize the similarities among the states. Consequently, each cluster is comprised of countries that share common characteristics across all the indicators examined. Regarding the disparities, they manifest themselves among nations and are brought to the forefront through the comparative methodology employed within each grouping. The study revealed prominent indicators pertaining to the average expenditures per tourist in both domestic and foreign contexts, thereby elucidating the hierarchical positioning of each cluster at the EU27 level, as well as the placement of individual countries within their corresponding clusters. In the present context, prioritizing an augmentation in the average expenditure per tourist is regarded as a fundamental objective in the realm of tourism across all nations, as it signifies a crucial step toward achieving sustainability within the industry. Simultaneously, the progressive augmentation of average expenditure per tourist assumes an essential role in fostering economic growth within individual nations.

The design of future research endeavors to address the limitations surrounding the utilization of alternative indicators that offer more precise insights into the phenomenon of tourist circulation. Additionally, it seeks to explore the interdependent sustainable factors associated with this process, while also expanding the scope of studies to encompass multiple countries worldwide.

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