

# TRENDS AND SEASONALITY OF OVERNIGHT STAYS IN THE TOURIST RECEPTION STRUCTURES WITH ACCOMMODATION FUNCTIONS IN ROMANIA'S CENTER REGION

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## **Abstract:**

*In tourism, and not only, the phenomenon of seasonality has negative influences both on the stability of the labor force and on the uniformity of the incomes of the local and regional communities. Starting from this consideration, the paper presents and analyzes the characteristics of the number of tourists' overnight stays in the reception structures with accommodation functions in the Center development area. After a regional analysis, the paper focuses on the evolution of the number of overnight stays of foreign tourists on types of reception structure with accommodation functions. The conclusions highlight, on the one hand, the increase in the phenomenon of seasonality and on the other hand the changes in the weights of the types of tourist accommodation structure in the total overnight stays of the foreign tourists during January 2010 - January 2018.*

**Key words:** foreign tourist flow, seasonality, overnight stays, tourist reception structure

**JEL classification:** C22, C52, L83

## **INTRODUCTION**

In Romania, tourism could be an important source of income for both local communities and development regions. Unfortunately, besides the relatively small number of arrivals and overnight stays in accommodation establishments, it is rather small compared to neighbouring countries as well as to the other European Union states. Moreover, the phenomenon of seasonality, with negative effects (Zaharia & Gogonea, 2017), has increasing amplitudes both at the level of Romania, regional level (Babucea & Bălăcescu, 2012) and local level, although Romania has a very varied touristic potential, which, under the conditions of a competitive management, could reduce this phenomenon by promoting and developing tourist offer in the months with reduced flow of tourists. An important role in this respect is the quality and efficiency of communication between the local, regional and central institutions of the tourism industry (Gogonea & Hapenciuc & Dragan, 2009), as well as in other areas with impact on tourism, and related infrastructure.

A particularly important in a competitive management of tourist destinations, is the intensity of the flow of foreign tourists (Panyik & Zaharia, 2014). They can contribute substantially to Romania's balance of payments by exporting services.

Taking into account the cultural and geographical particularities and not only (Scutariu, 2017), the intensities and characteristics of the tourist flows gain an aspect that differentiates them from one region to another. The Center development area, which is the subject of the analysis, is part of the Macroregion 1, alongside the North-West development region, and comprises the central area of Transylvania in which a number of types of tourist accommodation establishments are

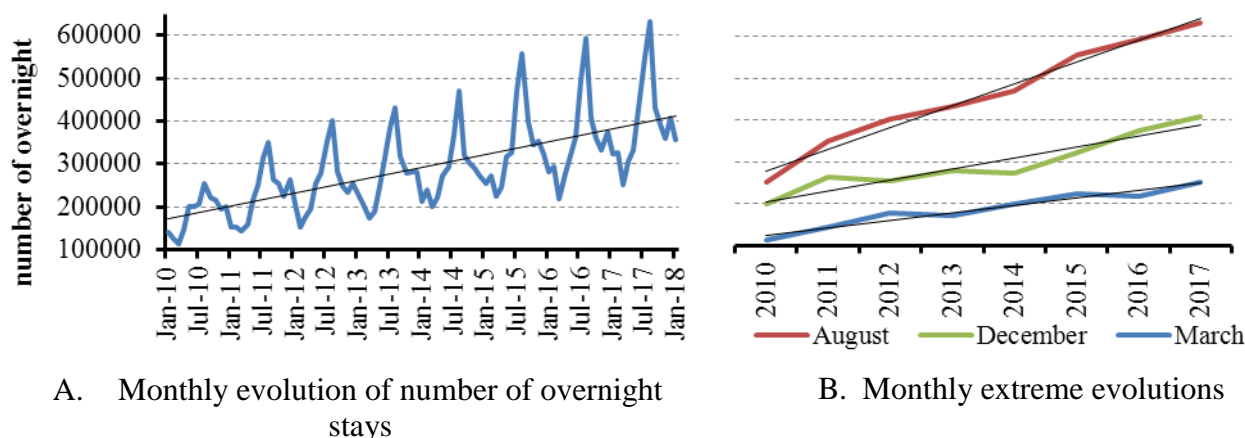
operating. Of these, hotels, hostels, motels, villas, chalets, guest houses and agrotouristic guest houses were included in the analysis.

The analysis was carried out starting from the monthly data series from January 2010 to January 2018 (NIS, 2018) and aims at identifying the characteristics of trend and seasonality components of tourists' overnight stays with a focus on the foreign tourists' flow, as well as on determining changes in the share of accommodation structures in total overnight stays of foreign tourists.

The SPSS was used to process data series and test statistical assumptions on statistical significance of models and their parameters. The significance threshold used was  $\alpha = 0.05$  (Confidence level 95%).

### CHARACTERISTICS OF THE EVOLUTION OF THE TOTAL NUMBER OF OVERNIGHT STAYS

At the level of Center development region, the evolution of the total number of overnight stays in accommodation establishments in January 2010 is characterized by a large seasonal oscillation superimposed on an upward trend (Figure no.1.A) with an annual increase an average of 2248 tourists, which corresponds to an average annual rate of 0.98%. It should be noted that both the average annual growth rates and the annual average rate correspond to a levelled series, in which the minima and maxima tend to compensate each other.



**Figure no. 1. Evolution of the total number of overnight stays in the tourist accommodation establishments in the Center region (A) and the evolution of the total number of overnight stays in the significant months (B)**

Of the 12 months of the year, the months with significantly different evolutions from each other were March, August and December (Figure no. 1.B). Note that evolutions of overnight stays in each of the three months are linear (Table 1). Both Sig.F (Significance F) and P-value values are much lower than the significance threshold chosen ( $\alpha = 0.05$ ), which means that both the three models and their parameters are statistically significant. The models approximate very well the evolutions of the number of overnight stays in the establishments of tourists' accommodation functions in the three months analyzed, fact evidenced by the values of R.Square. Under these circumstances, for the 95% Confidence level, it can be estimated that during the analyzed period, the number of overnight stays increased, in average, from 1394.1 to 21908.9 overnights for March, between 45022.6 and 59227.6 overnights for August, respectively, between 17906.8 and 35001.7 overnights for December.

**Table no. 1. Characteristics of developments in the total number of overnight stays in accommodation establishments in the Center region in March, August and December**

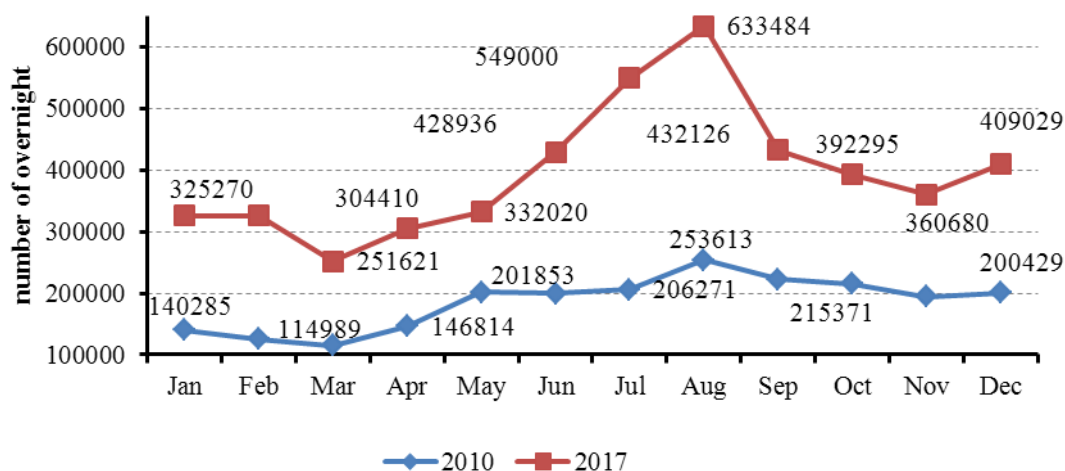
Null hypothesis (H <sub>0</sub> ): the model or its parameters are not statistically significant								
Month	R. Square	Sig.F	Coeff	t Stat	P-value	Confidence level 95%		Hp
						Lower	Upper	
March	0.9529	3.3E-05	125133.2	18.3907	1.6E-06	108484.1	141782.3	H <sub>1</sub>
			17928.9	11.0231	3.3E-05	13949.1	21908.9	H <sub>1</sub>
August	0.9817	1.9E-06	279161.8	22.9901	4.4E-07	249449.8	308873.8	H <sub>1</sub>
			52125.6	17.9577	1.9E-06	45022.6	59227.6	H <sub>1</sub>
December	0.9052	2.7E-04	204834.6	14.0174	8.2E-06	169078.1	240591.1	H <sub>1</sub>
			26454.3	7.573192	2.7E-04	17906.8	35001.7	H <sub>1</sub>

Hp – Accepted hypothesis

Source: own elaboration using SPSS

The month with the highest number of overnight stays was August. Developments in the number of nights spent this month increased 2.5 times (from 253613 overnight stays in August 2010, to 633484 overnight stays in August 2017). This corresponds to an average annual increase of 54267 overnight stays and an average annual rate of 13.97%.

On this other hand, the month with the lowest number of overnight stays throughout the analyzed period was March. In March the number of overnight stays increased from 114989 in 2010, to 251621 overnight stays in 2017 (an increase of 2.19 times). This corresponds to an annual average increase of 19519 overnights, and an average annual rate of 11.84%. Although the increase can be considered significant, the gap to August increased from 138624 overnight stays in 2010, to 381836 overnight stays in 2017 (an increase of 2.75 times).

**Figure no. 2 Evolution of the total number of overnight stays in the Center region in the years 2010 and 2017**

A month that also has peculiarities is December. This month there have been relative maximum values during the period from October to May. This is, of course, the result of the tourist interest in the winter holidays. Compared to December 2010, which registered 200429 overnight stays, in 2017 their number reaches 409029 overnight stays (an increase of 2.04 times). This growth corresponds to an average annual increase of 29,800 overnight stays and an average annual rate of 10.73%. Compared to the May and August evolutions, it is noteworthy that the gaps between this and the other two have increased, the evolution of overnight stays in December surpasses the number of overnight stays in March (increasing 1.84 times), but on the other hand, continues to remain significant behind the number of overnight stays in August.

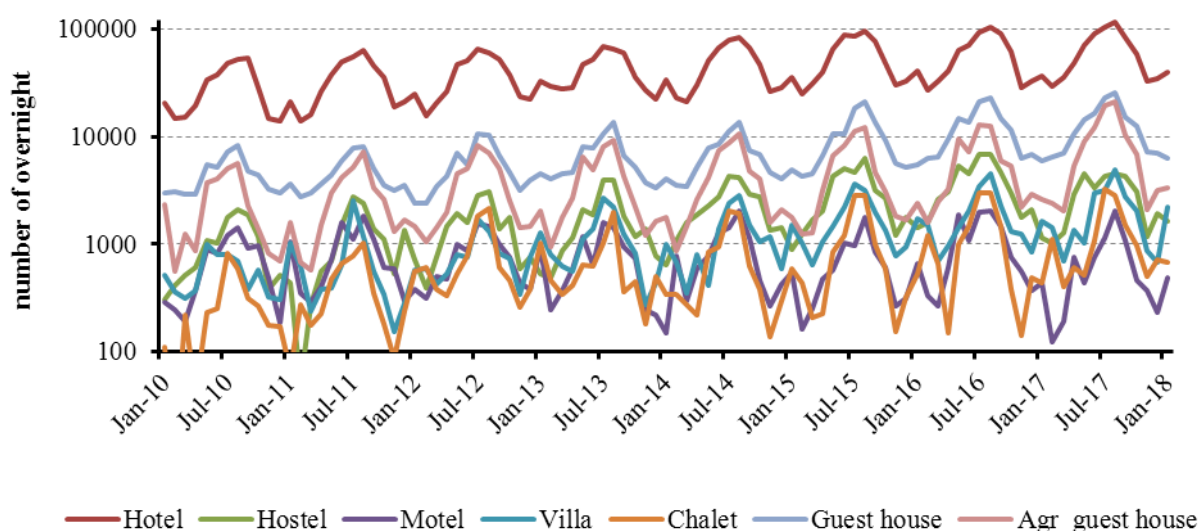
The relevant aspects of the evolution of the total number of overnight stays recorded in the

accommodation establishments in the Center region are highlighted from the comparative presentation of these in the beginning and the end years of the analyzed period (Figure 2). Although the number of overnight stays increased in all months of the year in 2017, compared to 2010, the seasonality phenomenon has increased also. This highlights a weak concern of central competent institutions as well as local authorities in diminishing the phenomenon.

### CHARACTERISTICS OF THE EVOLUTION IN THE NUMBER OF OVERNIGHT STAYS OF FOREIGN TOURISTS BY TYPES OF TOURIST ACCOMMODATION ESTABLISHMENTS

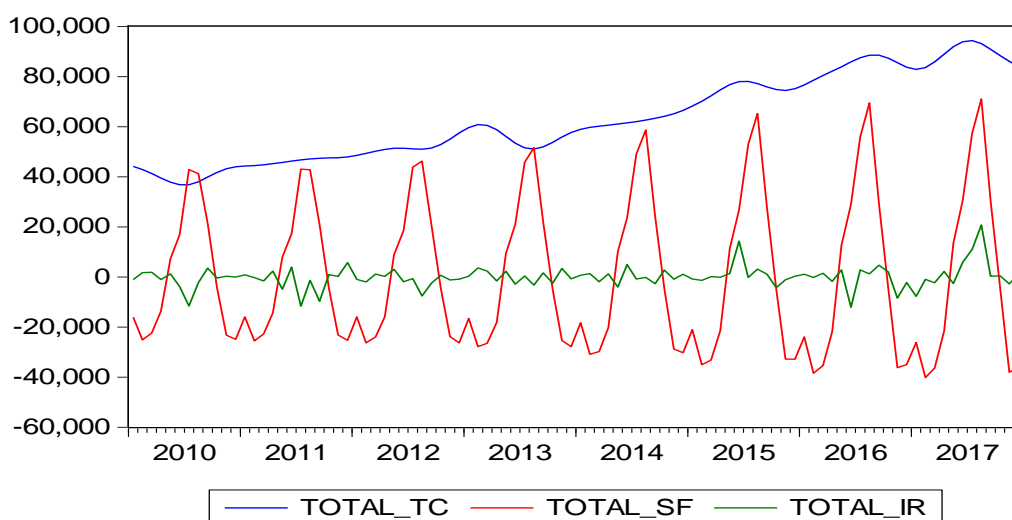
The flows of foreign tourists, both in terms of intensity and stability, are particularly important sources of income growth for local communities as well as national economy. In the eight years included in the analysis, the share of foreign tourists in total overnight stays ranged between 8.67% in December 2010 and a peak of 26.7% in June 2015.

In absolute terms, the number of overnight stays of foreign tourists in the tourist accommodation establishments in the Center region increased (figure 3) for hotels ranging from 13912 overnight stays in February 2011 to 117477 overnight stays in August 2017. Compared to hotels, the other tourist accommodation facilities included in the analysis (hostel, motel, villa, chalet, guest house and agrotouristic guesthouse) totals much lower values between 4506 overnight stays in March 2011 and 67553 overnight stays in August 2017.



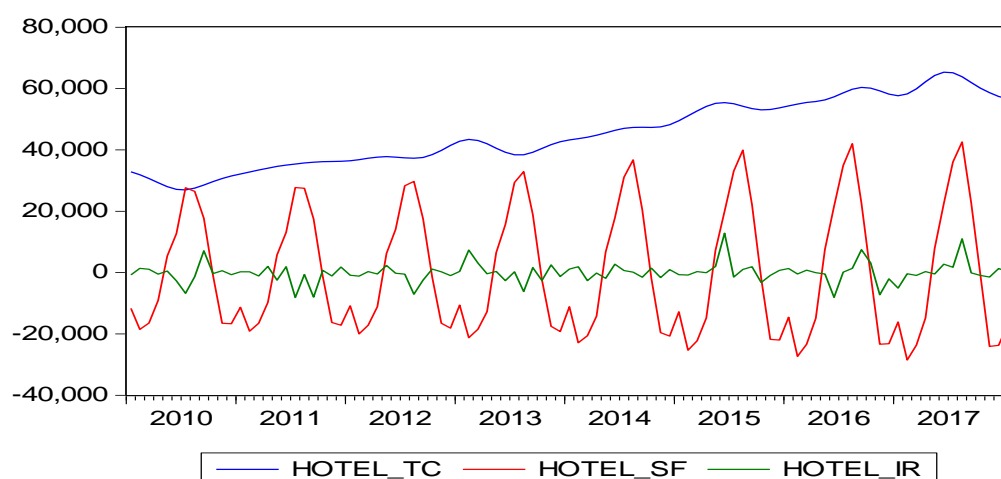
**Figure no. 3 Evolution of the number of overnight stays of foreign tourists in the tourist accommodation establishments in the Center region**

The phenomenon that characterizes the evolution of the number of overnight stays of foreign tourists in accommodation establishments during the analyzed period at the level of the Center region is the seasonality, the amplitude of which increased from 68111 overnight stays in 2010 to 111297 overnight stays in 2017 (an increase of 1.64 times). The seasonal component is superimposed on an ascendant trend (Figure no. 4), plus an irregular component with significant positive values in June 2015 and August 2017, respectively with significant negative values in July 2010, July 2011 and June 2016.



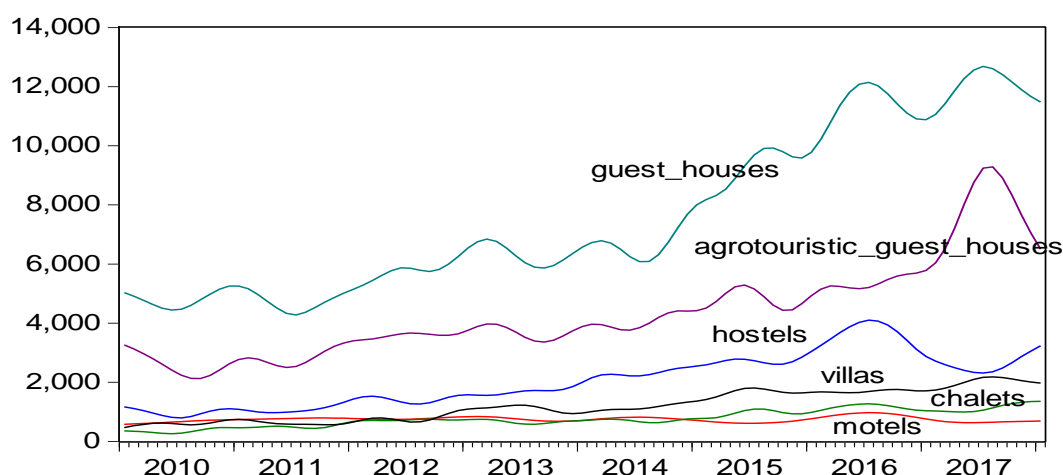
**Figure no. 4. Evolution by component of the number of overnight stays of foreign tourists in the tourist accommodation establishments in the Center region**

Among of the types the tourist accommodation establishments the largest number of foreign tourists was recorded in hotels. Their evolution (Figure no. 5) is similar to the evolution of the total number of overnight stays at the level of the region (Figure no. 4), due to the significant hotel weight in the accommodation preferences of foreign tourists compared to other types of accommodation establishments. However, it should be stressed that although the seasonal hotel component amplitude increased from 28,493 overnight stays in 2010 to 42,600 overnight stays in 2017 (a 1.49-fold increase), in relative terms, the increase by 49% is inferior to the increase in the amplitude of seasonal component of all accommodation establishments, 64%, which shows a more pronounced increase of the seasonal components corresponding to the other accommodation establishments.



**Figure no. 5. Evolution by component of the number of overnight stays of foreign tourists in hotels in the Center region**

The trend components of the overnight stays of foreign tourists in non-hotel accommodation establishments (Figure 6) between January 2010 and January 2018 are generally upward. Exceptions are made for motels for which the number of foreign citizens' overnight stays fluctuates around an average of 745 overnight stays. This evolution of the number of overnight stays in motels, different from the developments of overnight stays of foreign tourists in the other types of accommodation establishments, is also evidenced by the results presented in Table no.2.



**Figure no. 6. The trend components of the number of overnight stays of foreign tourists in the tourist accommodation establishments in the Center region on the main types of accommodation establishments, other than hotels.**

Another aspect of the evolution of the number of overnight stays of foreign tourists by types of accommodation establishments is the significant increase in their number in the guest house and agrotouristic guest houses compared to other types of accommodation establishments except hotels.

**Table no. 2. Characteristics of the trend component of the number of overnight stays of foreign citizens in the accommodation establishments in the Center region by types of structures**

Month	R.Square	Sig.F	Coeff	t Stat	P-value	Confidence level 95%		Hp
						Lower	Lower	
Hotel	0.95598	3.1E-66	27248.1	59.2045	8.6E-77	26334.3	28161.7	H <sub>1</sub>
			376.2	45.4233	3.1E-66	359.8	392.6	H <sub>1</sub>
Hostel	0.78954	6.5E-34	710.7	8.6179	1.5E-13	546.9	874.4	H <sub>1</sub>
			28.1	18.8783	6.5E-34	25.1	30.9	H <sub>1</sub>
Motel	0.00979	0.33496	729.8	41.1175	2.5E-62	694.6	765.1	H <sub>1</sub>
			0.3	0.9690	0.33496	-0.3	0.9	H <sub>0</sub>
Chalet	0.86342	7.5E-43	324.9	15.2556	2.7E-27	282.6	367.2	H <sub>1</sub>
			9.4	24.5062	7.5E-43	8.6	10.2	H <sub>1</sub>
Villa	0.92507	2.9E-55	363.3	12.8025	2.E-22	306.9	419.7	H <sub>1</sub>
			17.5	34.2479	2.9E-55	16.5	18.5	H <sub>1</sub>
Guest house	0.88381	2.1E-46	3210.7	17.0276	1.3E-30	2836.4	3585.1	H <sub>1</sub>
			91.8	27.0416	2.1E-46	85.1	98.5	H <sub>1</sub>
Agr.guest house	0.78773	9.8E-34	1858.7	12.1622	4.4E-21	1555.3	2162.1	H <sub>1</sub>
			51.6	18.7762	9.8E-34	46.2	57.1	H <sub>1</sub>

On the other hand there have been changes in the hierarchy of the last three places. In August 2010, the last places in terms of the number of overnight stays for foreign tourists were Motels with 691 overnight stays, followed by Villas with 560 overnight stays and Chalets with 328 overnights. In August 2017, the hierarchy of the last three places was: Villas with 2164 overnight stays, Chalets, 1138 overnight stays, and Motels with 668 overnight stays.

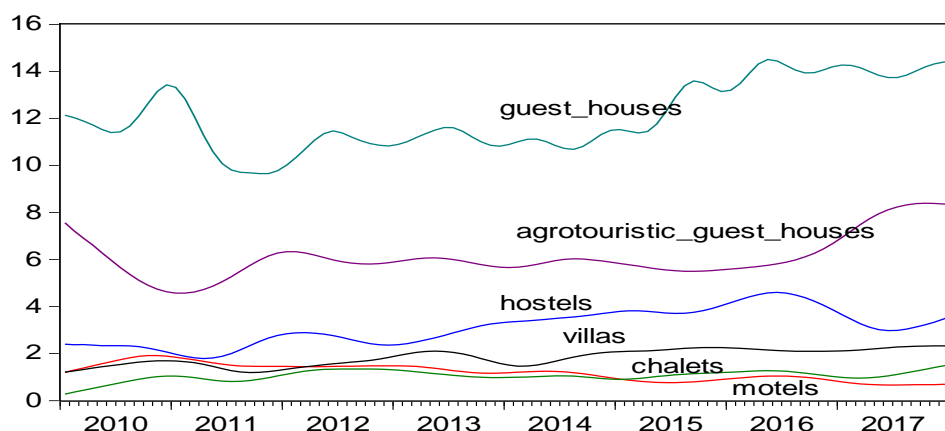
#### **CHARACTERISTICS OF THE CHANGES IN SHARE OF OVERNIGHT STAYS BY TYPES OF TOURIST ACCOMMODATION ESTABLISHMENTS**

Between January 2010 and January 2017 there were changes not only in the number of overnight stays of foreign tourists in accommodation establishments in the Center region but also in the share of accommodation types in total overnight stays (Figure 7).

Thus, if in January 2010, the percentage of the overnight stays in tourist accommodation



establishments were Hotels 75.65%, Guest houses 10.90%, Agrotouristic guest houses 8.73%, Villas 1.90%, Hostels 1.12%, Motels 1.07% and Chalets 0.41%, in January 2018 the hierarchy was Hotels 72.85%, Guest houses 11.48%, Agrotouristic guest houses 7.39%, Villas 4.03%, Hostels 2.94%, Chalets 1.24% and Motels 0.88%.



**Figure no. 7. Evolution of the share of overnight stays of foreign tourists in the tourist accommodation establishments in the Center region on the main types of accommodation establishments, other than hotels**

A significant aspect is given by the modifications of the overnight stays of foreign tourists over a year. Thus, the number of overnight stays in Hotels registers lower percentage in July or August, with the lowest in July 2017 (63.24%), the higher values being recorded in the other months of the year, the highest being registered in October 2011 (81.06 %).

A totally different situation is recorded for Agrotouristic guest houses, where the maximum percentages are recorded in July and August (12.02% in July 2017) and the minimum in January and February (2.56% in February 2015).

In the case of the other accommodation establishments, the maximum overnight stays percentage were recorded in January for Villas (4.04% in 2018) and Motel (3.61% in 2011), February for Chalets (3.03% in 2016), March for Hostels (5.63% in 2014) and April for Guest Houses (16.02% in 2016).

## CONCLUSIONS

Among the tourist accommodation establishments with accommodation functions included in the analysis, hotels have the highest share in tourists' overnight stays. For foreign tourists, during the analyzed period it oscillated between 63% and 81%. Although these weights tend to decrease by changing the tourists' accommodation preferences, seasonality has increasing amplitudes. We consider that in the months of October, November and from February to May tourist flows in hotels could increase as a result of the motivation of the tourists (Nedelea, 2017), by developing the spa tourism, the resources of Romania being very large, but not very exploited, by organizing cultural events, sports, conferences, symposiums, training (Cosma, et.al., 2017), as well as organizing circuits to highlight the particularities of natural tourism potential in the autumn and spring months.

Although in last period, the places of Guest house and Agrotouristic guest houses have become increasingly popular in foreign tourists' accommodation preferences; we consider it necessary to facilitate the decision makers to continue this trend through measures to support local authorities, especially in the international promotion of offers them. Regarding Agrotouristic guest houses, actions are needed to attract foreign tourists in the autumn and spring months by promoting farm activities and the beauty of the rural environment in the two seasons.

A levelling of the seasonality by increasing the intensity of the tourist traffic and implicitly the number of overnight stays of foreign tourists could be achieved by supporting the development

and promotion of the tourist accommodation establishments with poorly represented today such as Chalets, Villas and Hostels and offering attractive services on throughout the year.

## BIBLIOGRAPHY

1. Babucea, A.G., Balacescu, A. (2012), *Social and economic aspects of tourism in the region South-West Oltenia în the period 1990-2010*. Annals of the "Constantin Brancusi" University of Targu Jiu, 2, pp. 34-43
2. Cosma, S.A., Bota, M., Fleşeriu, C., Gică, O.A., *Participants' motivation and Perception on Events*, The USV Annals of Economics and Public Administration. Vol.17, No 2(26), Suceava, pp.44-54
3. Gogonea R.M., Hapenciu C.V, Drăgan I-M (2009), *The link between of local and global management in the rural tourism*, The Annals of the Stefan cel Mare University Suceava. Fascicle of The Faculty of Economics and Public Administration, vol.9, nr. 1, pp. 31-35
4. Nedelea, A. (2017), Romanian Tourism Promotion, Events. *The USV Annals of Economics and Public Administration*. Vol.17, No 2(26), Suceava, pp.69-75
5. NIS (2018) *Staying overnight in the establishments of touristic reception by type of tourists, macroregions, development regions and counties, monthly*, National Institute of Statistics, Bucureşti, Romania, <http://statistici.INSSE.ro/shop/index.jsp?page=tempo3&lang=en&ind=TUR105G>, [accessed on 12 January 2018]
6. Panyik E., Zaharia M. (2014,) *A Comparative Analysis of Foreign Tourist Arrivals in Portugal and Romania 2004-2014*, Journal of tourism – studies and research in tourism, Issue 17, pp.63-68
7. Scutariu A.L. (2017), *The Evolution of Economic Territorial Disparities in Romania*, The USV Annals of Economics and Public Administration. Vol.17, No 2(26), Suceava, pp.21-27
8. Zaharia R.S., Gogonea R.M. (2017), *The Impact of Seasonality on the Using of Accommodation Capacity in Operation in Romanian*, International Journal of Sustainable Economies Management (IJSEM), Volume 6, Issue 4, pp.44-52.