

## DYNAMICS OF TOURIST CIRCULATION IN ILFOV COUNTY FOR THE TOURIST AREA PLANNING

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### Abstract

This paper is based on the analysis of the evolution of the demand and the tourist offer from Ilfov county, at a type of accommodation unit, respectively tourist pensions. The statistical indicators considered were: tourist accommodation capacity (as number and places), number of tourists, number of tourists per month of 2017, number of overnight stays, resident population and area. The statistical data regarding the tourist circulation in Ilfov county were taken from the National Institute of Statistics. The accommodation unit, at which the study was carried out, was the tourist pensions, for a period of 5 years, 2013-2017. As a research method, we used the analysis of the dynamics of indices and indicators regarding the tourist circulation. The most representative tourist indicators, calculated and interpreted, were: the change of the global tourist demand, the evolution of the domestic and external tourist demand, the evolution of the overnight stays, the average tourist stay, the density of the tourist circulation in relation to the population of the county and with the surface and the evolution, the occupancy degree of the accommodation unit, the coefficient of the monthly tourist concentration in 2017. The objective of this study is to establish what is the tourist evolution in the tourist pensions of Ilfov county, so that we can propose and adopt strategies of tourist arrangement in the area. Harnessing and promoting tourism potential and existing tourist attractions, is another deciding factor in the tourism development of an area.

**Key words:** tourism, attractiveness, indicators, tourist traffic, tourist density, tourist traffic coefficient, average stay

## INTRODUCTION

Tourism traffic is one of the important components in establishing a strategy for tourism development in a country or region [3, 4, 5].

The promotion of natural tourist attractions, architectural, historical and cultural vestiges, as well as the facilities for organizing events, fairs or festivals, is another link in attracting more potential tourists, in the respective area. They spend their free time and spend money to benefit from these advantages, leading to the growth and economic development of the area, on the tourism segment [8, 9].

According to some opinions expressed by specialists, we can say that a satisfied tourist, of the stay spent in an area, transmits the information to other potential tourists, who will plan a vacation in that place, but a tourist dissatisfied with the services offered, by the behaviour of the staff employed in that location, negatively influences other potential tourists, interested in that area [6, 7].

Tourism is the most important activity for any country, which could have a major advantage, by exploiting the natural and anthropic potential of each area. [10].

The development and diversification of tourism activities created new jobs, increased family incomes, increased the standard of living of the local population, increased the turnover in the field of tourism, so much so that it stimulated the field of constructions, by modernizing the existing buildings and by building new tourist locations, as well as investments and tourism infrastructure have been developed [11].

The tourism potential of the county is related to its settlement on the site of the old Vlăsia district and the remaining forest areas, as well as the presence in the region of lakes and old Orthodox monasteries along with their museums. A special attraction is the possibility of fishing, water sports, hunting and access to cultural heritage values [15].

As main points of *attraction in this county*, I will list a few of these: Căldăruşani, Râioasa,

Cernica, Snagov, and Mogoșoaia, which represent complexes consisting of forests, lakes, and monasteries. The monasteries were built from the Middle Ages on the banks and islands of lakes. Most of them have museums in which old manuscripts, religious objects and sacred art are exhibited [12].

The natural area superimposed on the Natura 2000 site - *Grădiștea-Căldărușani-Dridu* represents a humid area (rivers, marshes, lake of water, peat bogs, forests and meadows with flora and wildlife) in the area in which several species of birds (migratory, were identified) of passage, sedentation) rare, some protected by law [15].

*The Snagov Lake Nature Reserve* is of particular archaeological, historical, cultural and natural importance, being located at a short distance from the capital of the country and preferred as an eco-leisure area for both Bucharest and Ploiești people. It is composed of terrestrial and aquatic habitats with a significant plant and animal biodiversity [15]. *Snagov Forest* is a protected area for the conservation of some trees, for scientific research, comprising natural elements of special value from a dendrological point of view, offering the possibility of research for scientific purposes and the visit for educational purposes [2]. It is possible that the existing tourist pressure will increase in the future, endangering the natural, wild aspect, unaltered by the human presence. The management plan was elaborated with a view to an integrated planning of the activities to be undertaken in order to achieve the major objective of the reservation, namely the conservation of biodiversity [1].

## MATERIALS AND METHODS

### Data collection

The data were taken from the statistical database, the Tourism section, from the INSSE website, from 2013-2017. These data are officially provided by the National Institute of Statistics for all regions / macroregions / counties of the country.

***The statistical data regarding the tourist movement indicators used in this study were the following:***

(a) Statistical indicators regarding the tourism offer for the accommodation capacity, in Ilfov county: the number of accommodation units by type, the number of accommodation places for each type of tourist accommodation unit;

(b) Statistical indicators regarding the tourist demand, from Ilfov county: tourist arrivals (for total tourists, Romanian and foreign tourists) for each type of accommodation unit, number of nights spent (for total tourists, Romanian and foreign tourists) for each type of accommodation unit, tourist arrivals (for total tourists, Romanian tourists and foreign tourists) in each month of 2017, for each type of accommodation unit;

(c) Statistical indicators reflecting the demography of Ilfov County: the resident population of Ilfov County, between 2013-2017 and the surface of the county.

### ***The used methodology***

Dynamic analysis of tourism indicators was run in the period 2013-2017.

The main indicators and indices calculated and interpreted were: Changing global tourism demand, Index of variation in tourist demand (domestic and foreign), Distribution index of global tourism demand, Night stay evolution index, Average tourist stay for Romanians and foreigners, Occupation rate of tourist pensions, the coefficient of the monthly tourist concentration at the level of 2017, the tourist density indicator in relation to the population, the tourist density indicator in relation to the surface [3, 4, 5].

## RESULTS AND DISCUSSIONS

The objective of this study is to analyze the evolution of the tourist circulation in the tourist pensions in Ilfov county, so that we can determine whether the promotion and the services offered to tourists can be improved.

The analysis of the dynamics of these indicators of the tourist circulation helps us to determine the level of tourism development in Ilfov county, what is the current degree of tourism valorization of this area and what strategies for tourism development and planning can be adopted.

**1). Index of global tourist demand change [3, 4, 5]:**

$\Delta CG = [\text{Total tourists (Romanians + foreigners) in current year} / \text{Total tourists (Romanians + foreigners) previous year}] * 100$  [3, 4, 5]

Table 1. Results regarding the change in the global tourism demand

Tourist pensions/ Indicators	2013	2014	2015	2016	2017
No. total tourists (Romanians + foreigners) at tourist pensions	3,589	5,007	5,777	6,062	15,101
No. Roman tourists	3,213	3,836	4,693	5,091	13,606
No. foreign tourists	376	1,171	1,084	971	1,495
$\Delta CG$ for total tourists (%)	-	139.50%	115.37%	104.93%	249.11 %
$\Delta CG$ for Romanian tourists (%)	-	119.39%	122.34%	108.48%	267.56 %
$\Delta CG$ for foreign tourists (%)	-	319.08%	92.57%	89.58%	153.96 %

Source: www.insse.ro data and own processing.

As a result of the calculations we observe that **the global tourist demand** has had an oscillating evolution, both for the total tourists, as well as for the internal and external demand.



Fig. 1. Evolution of the Index of the change of the global tourist demand for tourist pensions

Source: Own calculation.

The highest percentage was registered in the last period, 2016-2017, of 167%, for the Romanian tourists, and for the foreign tourists, the maximum percentage was registered in the period 2013-2014, of 219%. For both internal and external circulation, minimum values were registered for the period 2015-2016, with an increase of only

8% for Romanian tourists, and for foreign tourists, the decrease was 11%.

Evolution of the Index of the change of the global tourist demand for tourist pensions is also illustrated in Fig. 1.

**2. Index of (Romanian and foreign) tourist demand variation in time [3, 4, 5]**

$\Delta CI = [\text{No. Romanian tourists per current year} / (\text{No. Romanian tourists} + \text{No. Foreign tourists}) \text{ current year}] * 100$  [3, 4, 5]

$\Delta CE = [\text{No. Foreign tourists per current year} / (\text{No. Romanian tourists} + \text{No. Foreign tourists}) \text{ current year}] * 100$  [3, 4, 5]

Table 2. Results regarding the distribution of global tourism demand

Tourist pensions/ Indicators	2013	2014	2015	2016	2017
No. total tourists (Romanians + foreigners) at tourist pensions	3,589	5,007	5,777	6,062	15,101
No. Roman tourists	3,213	3,836	4,693	5,091	13,606
No. foreign tourists	376	1,171	1,084	971	1,495
$\Delta CI$ (%)	89.52%	76.61%	81.23%	83.98%	90.10%
$\Delta CE$ (%)	10.47%	23.38%	18.76%	16.01%	9.90%

Source: www.insse.ro data and own processing.

The dynamics of the **index of (Romanian and foreign) tourist demand variation**, both for the internal demand and for the external demand, at the tourist pensions, was oscillating, during the analyzed period. For the Romanian tourists, the maximum value was registered in the last calculation year, of 90%, and the minimum value in 2014, of 76%. For the external demand, the maximum percentage was registered in 2014, and the minimum value of 10%, in the last year, 2017.

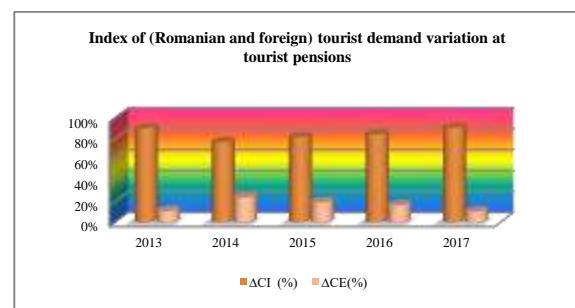


Fig. 2. The evolution of the Index of (Romanian and foreign) tourist demand variation to tourist pensions

Source: Own calculation.

### 3. The average length of stay [3, 4, 5]

**Total average stay** = No. Total overnight stays (foreign + Romanian)/No. Total Tourists (Romanian + foreign) [3, 4, 5]

$$S_H = \frac{NH}{T} \text{ (days)} [3, 4, 5]$$

where: NH - number of recorded overnight stay;

T - number of tourists arriving;

$S_H$  - average stay in the tourist pension.

Table 3. Results regarding the average stay

Tourist pensions/ Indicators	2013	2014	2015	2016	2017
No. overnight Total tourists	6,590	9,021	10,398	10,355	24,875
No. total tourists arriving	3,589	5,007	5,777	6,062	15,101
Total average stay (days)	1.83	2.51	1.79	1.70	1.64
Average stay for Romanian tourists (days)	1.51	1.72	1.73	1.74	1.64
Average stay for foreign tourists (days)	4.54	2.05	2.06	1.52	1.70

Source: www.insse.ro data and own processing.

**The total average stay** at the tourist pensions registered, during the analyzed period, an oscillating evolution. The total average stay was 2 days, representing the average number of days the tourists stay. The maximum value of the total average stay was recorded in 2013 for 5 days, for foreign tourists, and the minimum value was 1.51 days, respectively in 2013, for Romanian tourists.



Fig. 3. Evolution of the average stay at tourist pensions  
 Source: Own calculation.

### 4. The monthly concentration coefficient [3, 4, 5]

$Cc$  = [No. Tourists per each month / (No. Romanian tourists + No. Foreign tourists) per year of calculation] \* 100

$C_c = \frac{LM}{A_t}$ , will be calculated for each month of 2017 [3, 4, 5].

Table 4. Results for the monthly concentration coefficient for 2017

Mounths/ Indicators	No. total tourists / month	No. of total tourists (Romanians + foreigners) 2017	Cc
January	830	15,101	0.05
February	997	15,101	0.07
March	1,107	15,101	0.07
April	1,135	15,101	0.08
May	1,413	15,101	0.09
June	1,400	15,101	0.09
July	1,578	15,101	0.10
August	1,542	15,101	0.10
September	1,220	15,101	0.08
October	1,201	15,101	0.08
November	1,535	15,101	0.10
December	1,143	15,101	0.08

Source: www.insse.ro data and own processing.

**The coefficient of the monthly concentration** for the tourist pensions, during the analyzed period, had an oscillating evolution.

The coefficient of the monthly tourist concentration had the maximum tourist traffic in the July-August monthly range of 0.10, and the minimum tourist traffic was registered in January of 0.05.

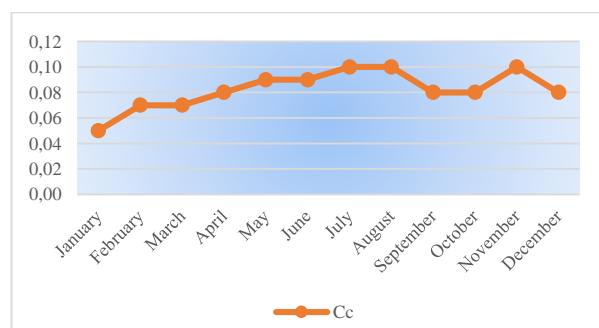


Fig. 4. Evolution of the coefficient of the monthly concentration in tourist pensions  
 Source: Own calculation.

### 5. Index of overnight stay evolution [3, 4, 5]

$\Delta N = (\text{No. overnight stay per current year} / \text{No. overnight stay per previous year}) * 100$  [3, 4, 5]

Table 5. Results regarding the index of overnight stays

Tourist pensions/ Indicators	2013	2014	2015	2016	2017
No. total tourist overnights (Romanians + foreigners)	6,590	9,021	10,398	10,355	24,875
No. overnight Romanian tourists	4,882	6,615	8,161	8,875	22,331
No. overnight foreign tourists	1,708	2,406	2,237	1,480	2,544
ΔN for total tourists (Romanians + foreigners) (%)	-	136.88%	115.26 %	99.58%	240.22 %
ΔN for Romanian tourists (%)	-	135.49%	123.37 %	108.74 %	251.62 %
ΔN for foreign tourists (%)	-	140.86%	92.97%	66.16%	171.89 %

Source: www.insse.ro data and own processing.

The evolution of the overnight stays index was an oscillating one, during the analyzed period.

Thus, between 2015-2016, the trend decreased, by 34%, for foreign tourists and with a maximum increase of 72% in the last period.

For the domestic demand, the maximum growth was reached in the period 2016-2017, of 151%, and in the period 2015-2016, registering an increase of only 9%.

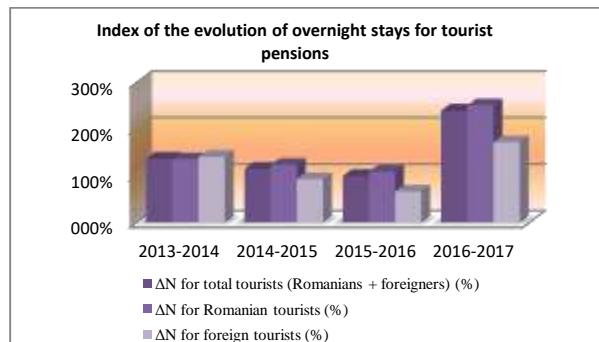


Fig. 5. Evolution of the Index of the evolution of overnight stays for tourist pensions  
 Source: Own calculation.

## 6. The occupancy indicator [3, 4, 5]

$$G_0 = [\text{No. overnight stays (no. tourist days)} / (\text{No. beds} * \text{no. days running})] * 100$$

$$G_0 = \frac{NH \cdot 100}{LH \cdot Z} = \frac{NT \cdot S}{LH \cdot Z} \cdot 100 \quad [3, 4, 5]$$

where:

$G_0$  - occupancy, percentage;

$NH$  - number of overnight stays;

$LH$  - number of beds in hotels;

$Z$  - number of supply days = 365 days;

$NT$  - number of tourists;

$S$  - average length of stay [3, 4, 5].

Table 6. Results regarding the degree of occupancy in tourist pensions

Tourist pensions/ Indicators	2013	2014	2015	2016	2017
No. overnight stays (NH) total tourists (Romanians + foreign) at tourist pensions	6,590	9,021	10,398	10,355	24,875
No. accommodation units (LH) at tourist pensions	132	145	161	157	228
$G_0$ (%)	13.67 %	17.04%	17.69%	18.06 %	29.89%

Source: www.insse.ro data and own processing.

**The occupancy rate** for tourist pensions during the period analyzed has increased, from about 14% in 2013 to about 30% in 2017.

In the analyzed period, the occupancy rate of the tourist guesthouses varied between 14 % in the year 2013 to 30 % in the year 2017, as illustrated in Fig. 6.

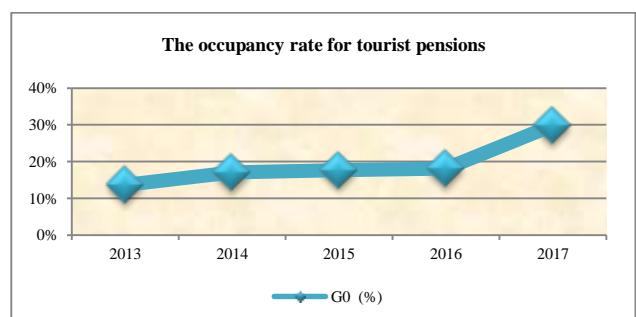


Fig. 6. Evolution of the occupancy rate in tourist pensions

Source: Own calculation.

## 7. Tourist density indicator in relation to population [3, 4, 5]

$$D_{t_{i-0}} = \frac{T_{t_{i-0}}}{\text{Population}} \quad (\text{tourists/ no. inhabitants})$$

[3, 4, 5]

where:

$T_{t-0}$  – no. total Romanian + foreign tourists;

*Pop – the population of Ilfov county [3, 4, 5].*

Table 7. Results regarding the tourist density in relation to the population

Tourist pensions/ Indicators	2013	2014	2015	2016	2017
No. total tourists (Romanians + foreigners)	3,589	5,007	5,777	6,062	15,101
Population of Ilfov county	352,466	364,954	376,607	390,919	407,505
Dt (tourists/no. inhabitants)	0.010	0.013	0.015	0.015	0.037

Source: www.insse.ro data and own processing.

**The indicator of the tourist density in relation to the population** at tourist pensions, during the analyzed period had an increasing evolution, from 0.010 tourists/no. Residents in 2013 reached 0.037 tourists/no. Residents in 2017. The evolution of the indicator of tourist density in relation to the population at tourist pensions is illustrated in Fig. 7.

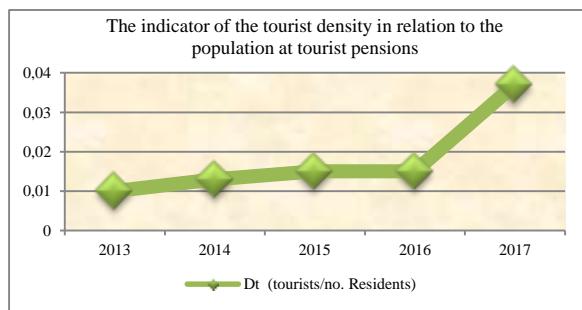


Fig. 7. Evolution of the indicator of tourist density in relation to the population at tourist pensions  
 Source: Own calculation.

**8.Tourist density indicator in relation to area** [3, 4, 5]

$$D_{t_{i-0}} = \frac{T_{t_{i-0}}}{\text{Surface}} \quad (\text{tourists}/\text{km}^2) [3, 4, 5]$$

where:

$T_{t_{i-0}}$  – no. total Romanian + foreign tourists; [3, 4, 5]

$S$  – Ilfov county area. [3, 4, 5]

Table 8. Results regarding the tourist density in relation to the area

Tourist pensions/ Indicators	2013	2014	2015	2016	2017
No. total tourists (Romanians + foreigners)	3,589	5,007	5,777	6,062	15,101
Ilfov County area ( $\text{km}^2$ )	1.583	1.583	1.583	1.583	1.583
Dt ( $\text{tourists}/\text{km}^2$ )	2.26	3.16	3.64	3.82	9.54

Source: www.insse.ro data and own processing.

**The indicator of tourist density in relation to the area** for tourist pensions, during the analyzed period, had an increasing evolution, from 2.26 tourists/ $\text{Km}^2$  in 2013 reached 9.54 tourists/ $\text{Km}^2$  in 2017 (Fig.8).

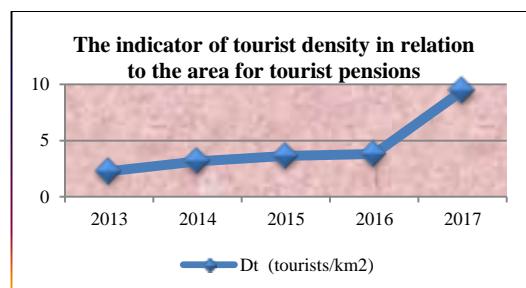


Fig. 8. Evolution The indicator of tourist density in relation to the area for tourist pensions  
 Source: Own calculation.

## CONCLUSIONS

The analysis of the existing situation regarding the dynamics of the tourist circulation in Ilfov county, highlighted the fact that in this area, it had an upward trend, regarding the total number of tourists, for the period 2013-2017.

Following the analysis, we observe that **the global tourist demand** has had an oscillating evolution, both for the total tourists, as well as for the internal and external demand. The highest percentage was registered in the last period, 2016-2017 for Romanian tourists, and for foreign tourists, the maximum percentage was registered in 2013-2014.

The dynamics of **the index of the distribution of the global tourist demand**, both for the internal demand and for the external demand, at the tourist pensions, was oscillating, during the analyzed period. For the Romanian tourists, the maximum value was registered in the last year of calculation, and for the external demand, the maximum percentage was registered in 2014.

**The total average stay** at the tourist pensions registered, during the analyzed period, an oscillating evolution. The total average stay was 2 days, representing the average number of days the tourists stayed, and the maximum value of the total average stay was recorded in 2013 for 5 days, for foreign tourists.

**The coefficient of the monthly tourist concentration** for the tourist pensions, had a

maximum tourist traffic in July-August of 0.10, and the minimum tourist traffic was registered in January of 0.05.

**The evolution of the overnight stays index** was an oscillating one, during the analyzed period. Thus, between 2015 and 2016, the trend decreased, by 34%, for foreign tourists, and for domestic demand, the maximum increase was reached in 2016- 2017, by 151%.

**The occupancy rate** at the tourist pensions during the analyzed period has increased, from about 14% in 2013 to a percentage of about 30% in 2017.

The dynamics of **the indicator of the tourist density in relation to the population and the area**, in tourist pensions, during the analyzed period had an increasing evolution.

Therefore, through a sustained promotion at tourism fairs, at national and international level, through the media and promotional materials, Ilfov County can benefit from an increase in tourist circulation year by year.

Tourism can be an important source of income for a potential area, but it requires investment.

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