EVOLUTION OF DEMAND FOR TOURISM SERVICES ON THE TERRITORY OF SUCEAVA COUNTY, ROMANIA, IN THE PERIOD 2010-2019

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Abstract

The analysis of arrivals, during the period 2010-2019, for Suceava County, indicates the fact that the number of tourists strongly increased by 139.7% in 2019, with respect to 2010. Overall, the average level of arrivals, registered 310 thousand persons, with an absolute average increase by 30.2 thousand persons and a relative increase by 10.2%. The study on the absolute and relative dynamics of overnight stays during the same period, in Suceava County, reveals that their number strongly increased by 120.2% in 2019, compared to 2010. In total, the average level of overnight stays registered 693.3 thousand persons, with an absolute average increase by 61.5 thousand persons and a relative increase by 9.1%. The medium level of the average length of stay (Romanians + foreigners) registered 2.27 days, with an absolute average decrease by 0.02 days and a relative decrease by 1%. The study on the absolute and relative tourist density during the period 2012-2019, in Suceava County, pointed out that this had almost doubled in 2019, compared to 2012 (increasing by 98.1%). Overall, the average level of the tourist density registered 53.22 tourists/100 inhabitants, with an average increase by 5.28 tourists/100 inhabitants and a relative increase by 24%.

Key words: overnight stays, arrivals, average length of stay, density of tourist movement

INTRODUCTION

Suceava County, known mostly under the name of Bukovina (and thus appears sometimes an unjustified separation of a subregion Bukovina in some programs that promote Suceava County, where Bukovina brand is associated with Moldovia brand according to [2]), illustrates one of the most complex tourism-oriented region in the country. The exceptional tourism capacity, with a great variety and diversity in objectives of national and international interest, landscape areas with an outstanding beauty, diverse therapeutic factors etc. displays the capacity to develop a high quality hospitality industry [16]. Due to the available favorable conditions, beautiful places, air and water cleanliness, mountainous zone, as well as the invaluable cultural and religious existing heritage, Suceava County has a high tourism potential. Beside the picturesque scenery of the region, well known hospitality, folk

traditions, customs, specific gastronomy, the holiday traditions and the folklore clothing give local color, to the delight of tourists [6]. Suceava County introduces itself as an important tourism zone of the country. Beside the great attractiveness of the mountainous landscape, the tourism potential of the county is defined also by the variety, density and value of the religious and architectural monuments, natural reserves and outstanding ethnographic zones - many of them unique in the world - where in particular the monasteries come into attention [11].

The most significant characteristic of relief in Suceava County is the diversity, as here can be found mountains, inter-mountains depressions, hills, plateaux, plains, valleys with terraces and river plains [3].

The dynamic development of tourism, under its two correlated aspects - production and consumption, asserts the receptiveness of this field to society dynamics [8] and, in the same time, the tourism - as a form of activity within the services sector - is characterized as being a necessary activity, meant to satisfy a certain social need [4, 15]. In Suceava County, the tourism potential and the material and technical facilities support the carrying out of different tourism forms: mountain-related tourism and hiking, equestrian tourism, spabased tourism, cultural tourism, religious tourism, eco-turism, rural tourism and agritourism, but also the business and congress related tourism [12].

MATERIALS AND METHODS

The number of tourists accommodated in tourist boarding units (arrivals) includes all the persons (Romanians and foreigners) who travel outside their own residence locality, for a period less than 12 months and who stay at least one night into a tourist boarding unit in areas visited by them within the country, the main reason of the journey being other than to carry on a paid activity in the visited destination [9].

The tourist overnight stay is a 24-hours period, starting with the hotel hour, for which a person is registered in the bookkeeping of tourism unit and is hosted for the paid price, even if the effective length of stay is shorter than the mentioned period. The overnight stays related to the supplementary installed beds (paid by customers) are also included

The average length of stay is determined by the ratio between the number of days/tourist (NTZ) and the number of tourists (T) and reflects the possibility of the tourism offer to retain a tourist into a certain area, region or country [4, 5, 10]:

$$D_s = \frac{\sum NZT}{\sum NT}$$

where:

D_s - average length of stay;

NZT - number of days/tourist;

T – number of tourists.

The density of tourist movement is the indicator that directly interconnects the tourist movement with the resident population in the concerned zone or country. It is calculated as

the ratio between the number of tourists (T) and the number of inhabitants (P) [14, 17]:

$$D = \frac{\sum T}{P}$$

The absolute indicators represent a basic form of dynamic series, and they are used to obtain the general indicators [7, 14].

The level indicators are the terms of a series formed by absolute indicators (y₁....y_t....y_t-

The total level of term $\sum_{t=1}^{n} yt$, is calculated only for time interval series with absolute measures.

The absolute change is calculated:

-with fixed basis ($\Delta_{t/1}$)

where, t=2,n $\Delta_{t/1} = y_t - y_1$ -with in chain basis (mobile or variable basis) $(\Delta_{t/t/1}=y_{t}-y_{t-1})$

$$\Delta_{t/t/1} = y_t - y_{t-1}$$
 where, t=2,n

Relative indicators

They provide a presentation tool, mainly by percentage. In this situation is mandatory to mention, within the title or outside the table. the reference basis, so that the interpretation can be correctly done.

Index of dynamics is calculated:

-with fixed basis ($I_{t/1}$):

$$I_{t/1(\%)} = \frac{yt}{y_1} \times 100$$

-with in chain basis $(I_{t/t-1})$:

$$I_{t/t-1(\%)} = \frac{yt}{yt-1} \times 100$$

Rhythm [rate] of dynamics:

-with fixed basis $(R_{t/1})$:

$$R_{t/1} = I_{t/1(\%)} - 100 \%$$

with in chain basis $(R_{t/t-1})$:

$$\begin{array}{c} R_{t/t\text{--}1(\%)} = I_{t/t\text{--}1(\%)} \text{ --}100\%, \qquad t = \\ 2.n \end{array}$$

Average indicators:

 \bar{y} - the average level of the interval time series: $\bar{y} = \frac{\sum_{t=1}^{n} y_t}{y_t}$

 $\overline{\Delta}$ – the average level of the absolute change (increase or decrease): $\bar{\Delta} = \frac{yn - y1}{n - 1}$ \bar{I} - the average index of dynamics:

$$\bar{\Delta} = \frac{yn-y1}{n-1}$$

$$\bar{I} = \sqrt[n-1]{\frac{yn}{y1}}$$

R – the average growth rate:

$$\bar{R} = \bar{I} - 100$$

In order to adjust the number of tourists, it has been used the method of trends adjusted according to the linear trend for the time interval 2010-2019.

The linear model has the shape: y = a + bt.

R is the correlation between the values forecasted by the equation and the actual values. R^2 is used to indicate the change in values compared to the trend line [13].

RESULTS AND DISCUSSIONS

Analysis of the tourism demand.

Based on the statistical data provided by the National Institute of Statistics, with regard to the tourism demand, we could study the level and dynamics of the following indicators: level of total arrivals; level of total overnight stays; average length of total stays and by tourist type; tourist density. These indicators will be hereby characterised both in dynamics and as structure.

Level and dynamics of arrivals and overnight stays.

By studying the absolute and relative dynamics of entrances during the period 2010-2019, in Suceava County (Table 1), it could be noticed that their number increased significantly in the year 2019, compared to the reference year (2010), by 139.71%. With respect to the previous year, increases with variations between 1.26% (in 2013) and 19.12% (in 2015) were recorded. In total, the average level of entrances registered 310,033.6 tourists, with an absolute average increase by 30,172.88 tourists and a relative increase by 10.2%. This increase might have cause the zonal economic growth, determining implicitly a rather high interest of tourists for the concerned zone.

Table 1. Absolute and relative changes in arrivals, in Suceava County (2010-2019)

| Years | Arrivals (tourist | Absolute changes | | | dynamics %) | Rhythm of dy | Rhythm of dynamics (%) | |
|-------|----------------------|------------------|------------------|-----------------|----------------|--------------------|------------------------|--|
| | number) | $\Delta_{t/1}$ | $\Delta_{t/t-1}$ | $I_{t/1}$ | $I_{t/t-1}$ | $\mathbf{R}_{t/1}$ | $R_{t/t-1}$ | |
| 2010 | 194,365 | - | - | - | - | - | - | |
| 2011 | 229,519 | 35,154 | 35,154 | 118.08 | 118.08 | 18.08 | 18.08 | |
| 2012 | 238,611 | 44,246 | 9,092 | 122.76 | 103.96 | 22.76 | 3.96 | |
| 2013 | 241,629 | 47,264 | 3,018 | 124.31 | 101.26 | 24.31 | 1.26 | |
| 2014 | 260,684 | 66,319 | 19,055 | 134.12 | 107.88 | 34.12 | 7.88 | |
| 2015 | 310,548 | 116,183 | 49,864 | 159.77 | 119.12 | 59.77 | 19.12 | |
| 2016 | 342,710 | 148,345 | 32,162 | 176.32 | 110.35 | 76.32 | 10.35 | |
| 2017 | 385,676 | 191,311 | 42,966 | 198.42 | 112.53 | 98.42 | 12.53 | |
| 2018 | 430,673 | 236,308 | 44,997 | 221.57 | 111.66 | 121.57 | 11.66 | |
| 2019 | 465,921 | 271,556 | 35,248 | 239.71 | 108.18 | 139.71 | 8.18 | |
| | \overline{y} | Δ | | | \overline{I} | | \overline{R} | |
| | 310,033.6 | 30,17 | 72.9 | 1.102 (110.2 %) | | 10. | .2 | |

Source: Own calculation, on the basis of data from NIS.

The adjustment based on graphic representation represents an evaluation tool for the development trend, according to which the method (procedure) that has to be used to estimate the long and short term trend can be chosen [1].

In order to estimate the number of tourist entrances during the next five years (2020-2024), in Suceava County, we used the adjustment function y = 31,539x - 60,000,000 obtained through the graphic method according to the linear trend. \mathbf{R}^2 has been used to indicate the changes in value compared to the trend line ($\mathbf{R}^2 = 0.9845$) (Fig. 1).

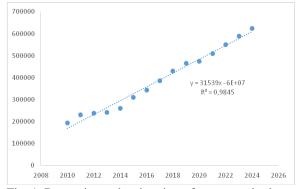


Fig. 1. Dynamics and estimation of entrances in the period 2010-2024, in Suceava County Source: Own calculation.

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By studying the absolute and relative dynamics of overnight stays during the period 2010-2019, in Suceava County (Table 2), it could be seen that their number has significantly increased in 2019, with respect to the reference year (2010), by 120.22%. Compared to the previous year, it could be noticed a low decrease during the year 2013

(by 1.54%), while over the remaining period, increases by up to 20.75% (in 2011) have been recorded. Overall, the average level of overnight stays registered 696,295.6 overnight stays, with an absolute average increase by 61,534.4 overnight stays and a relative increase by 9.1%.

Table 2. Absolute and relative changes in overnight stays, in Suceava County (2010-2019)

| Years | Overnight stays (number) | Absolute changes | | | dynamics 6 | Rhythm of dynamics % | |
|-------|-----------------------------|------------------|------------------|----------------|---------------|----------------------|----------------------|
| | (number) | | $\Delta_{t/t-1}$ | $I_{t/1}$ | $I_{t/t-1}$ | $R_{t/1}$ | $\mathbf{R}_{t/t-1}$ |
| 2010 | 460,637 | - | - | - | - | - | - |
| 2011 | 556,249 | 95,612 | 95,612 | 120.75 | 120.75 | 20.75 | 20.75 |
| 2012 | 586,237 | 125,600 | 29,988 | 127.26 | 105.39 | 27.26 | 5.39 |
| 2013 | 577,232 | 116,595 | -9,005 | 125.31 | 98.46 | 25.31 | -1.54 |
| 2014 | 583,642 | 123,005 | 6,410 | 126.70 | 101.11 | 26.70 | 1.11 |
| 2015 | 699,491 | 238,854 | 115,849 | 151.85 | 119.84 | 51.85 | 19.84 |
| 2016 | 759,754 | 299,117 | 60,263 | 164.93 | 108.61 | 64.93 | 8.61 |
| 2017 | 815,732 | 355,095 | 55,978 | 177.08 | 107.36 | 77.08 | 7.36 |
| 2018 | 909,535 | 448,898 | 93,803 | 197.45 | 111.49 | 97.45 | 11.49 |
| 2019 | 1,014,447 | 553,810 | 104,912 | 220.22 | 111.53 | 120.22 | 11.53 |
| | \overline{y} | $\bar{\Delta}$ | | Ī | | \overline{R} | |
| | 696,295.6 | 61,53 | 34.4 | 1.091 (109.1%) | | 9. | 1 |

Source: Own calculation, on the basis of data from NIS.

The adjustment according to the linear trend of the overnight stays for the following five years (2020-2024), in Suceava County, has been achieved with the adjustment function y = 590,39x-100,000,000. \mathbb{R}^2 has been used to indicate the changes in value compared to the trend line ($\mathbb{R}^2 = 0.9787$) (Fig. 2).

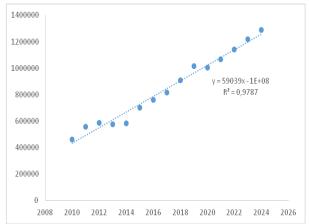


Fig.2. Dynamics and estimation of overnight stays in the period 2010-2024, in Suceava County Source: Own calculation.

Under the conditions when the factors with impact on tourism activity will keep the same rhythm also during the next five years of the analysed period (Table 3), in the year 2024 in Suceava County, the number of tourist entrances will be about 624 thousand, while the number of overnight stays will be about 1,288 thousand.

Table 3. Estimation of arrivals and overnight stays in the period 2020 – 2024, in Suceava County

| Years | t(x) | Arrivals y = 31,539x - 60,000,000 | Overnight stays y = 590,39x- 100,000,000 |
|-------|------|-----------------------------------------|---------------------------------------------------|
| 2020 | 11 | 474,717 | 1,005,235 |
| 2021 | 12 | 509,746 | 1,065,968 |
| 2022 | 13 | 549,470 | 1,140,185 |
| 2023 | 14 | 588,827 | 1,218,104 |
| 2024 | 15 | 624,007 | 1,287,860 |

Source: Own calculation.

Analysis of tourist movement

From the structure of tourist movement by tourist types, in Suceava County, during the period 2010-2019 (Table 4), it could be seen that the number of foreign tourists has a low share (14.28%) within the total entrances in county, and the number of overnight stays

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related to foreign tourists has also a low share (10.91%) within the total overnights in county.

The average length of stay - as an indicator that shows the average time (days) of staying in the accommodation units and thus reflects

the offer possibility to keep the tourists within a certain zone or region [17] - displayed fluctuations during the analysed period (2010-2019), both for Romanian and foreign tourists.

Table 4. Structure of tourist movement by tourist types, in Suceava County (2010-2019)

| Years | Arriva | ls (number of per | rsons) | Overnight s | stays (number of | persons) |
|-------|-----------|-------------------|----------|-------------|------------------|----------|
| | T | TR | TS | T | TR | TS |
| 2010 | 194,365 | 169,755 | 24,610 | 460,637 | 415,073 | 45,564 |
| 2011 | 229,519 | 196,896 | 32,623 | 556,249 | 493,933 | 62,316 |
| 2012 | 238,611 | 200,423 | 38,188 | 586,237 | 517,394 | 68,843 |
| 2013 | 241,629 | 200,233 | 41,396 | 577,232 | 501,180 | 76,052 |
| 2014 | 260,684 | 220,514 | 40,170 | 583,642 | 511,179 | 72,463 |
| 2015 | 310,548 | 264,553 | 45,995 | 699,491 | 620,170 | 79,321 |
| 2016 | 342,710 | 290,960 | 51,750 | 759,754 | 674,581 | 85,173 |
| 2017 | 385,676 | 332,352 | 53,324 | 815,732 | 729,758 | 85,974 |
| 2018 | 430,673 | 372,156 | 58,517 | 909,535 | 815,713 | 93,822 |
| 2019 | 465,921 | 409,793 | 56,128 | 1,014,447 | 924,586 | 89,861 |
| | | \overline{y} | | | \overline{y} | |
| | 310,033.6 | 265,763.5 | 44,270.1 | 696,295.6 | 620,356.7 | 75,938.9 |

Note: T - total; TR - Romanian tourists, TS - foreign tourists.

Source: Own calculation.

For the foreign tourists, the average length of stay increased only in the year 2011 (by 3.24%) compared to the reference year, while

the remaining period registered decreases with respect to the reference year, by up to 13.52% (in 2018 and 2019) (Table 5).

Table 5. Absolute and relative changes in average length of stay by domestic tourist, in Suceava County (2010-2019)

| Vacus | Ds | Absolute of | changes | Index of dy | namics (%) | Rhythm of dy | namics (%) |
|-------|---------------------|----------------|------------------|-------------|-------------|--------------------|----------------------|
| Years | (Romanian tourists) | $\Delta_{t/1}$ | $\Delta_{t/t-1}$ | $I_{t/1}$ | $I_{t/t-1}$ | $\mathbf{R}_{t/1}$ | $\mathbf{R}_{t/t-1}$ |
| 2010 | 2.44 | - | - | - | - | - | - |
| 2011 | 2.50 | 0.06 | 0.06 | 102.45 | 102.45 | 2.45 | 2.45 |
| 2012 | 2.58 | 0.14 | 0.08 | 105.73 | 103.2 | 5.73 | 3.2 |
| 2013 | 2.50 | 0.06 | -0.08 | 102.45 | 96.89 | 2.45 | -3.11 |
| 2014 | 2.31 | -0.13 | -0.19 | 94.67 | 92.4 | -5.33 | -7.6 |
| 2015 | 2.34 | -0.10 | 0.03 | 95.90 | 101.29 | -4.1 | 1.29 |
| 2016 | 2.31 | -0.13 | -0.03 | 94.67 | 98.71 | -5.33 | -1.29 |
| 2017 | 2.19 | -0.25 | -0.12 | 89.75 | 94.80 | -10.25 | -5.2 |
| 2018 | 2.19 | -0.25 | 0 | 89.75 | 100 | -10.25 | 0 |
| 2019 | 2.25 | -0.19 | 0.06 | 92.21 | 102.73 | -7.79 | 2.73 |
| | \overline{y} | Ā | | ī | Ī | \overline{R} | |
| | 2.36 | -0.0 | 2 | 0.99 (99%) | | -1 | |

Source: Own calculation.

In the case of Romanian tourists, it has been noticed an increase in the average length of stay compared to the reference year, only in the years 2011, 2012 and 2013, the increase in the year 2012 reaching 5.73%. The remaining period registered decreases by up to 10.25% (in the years 2017 and 2018) (Table 6).

In total, the medium level of the average length of stay (Romanian tourists +foreign tourists) recorded, in the analysed period (2010-2019), 2.27 days, with an absolute average decrease by 0.02 days, respectively a relative decrease by 1% (Table 7).

| Toble 6 Absolute a | and malatirea aha | | a lamath of ata | r. hr. famaiam | tormist in | Cuanaria | Country (2010, 2010) |
|---------------------|-------------------|-----------------|-----------------|----------------|-------------|-----------|----------------------|
| Table o. Absolute a | na refative cha | nges in average | e tengui of sta | iv by ioreign | tourist, ii | i Suceava | County (2010-2019) |

| Years | De (femaign tourists) | Absolute | changes | Index of dy | namics (%) | Rate of dynamics (%) | |
|-------|-----------------------|-------------------------|------------------|-------------|-------------|----------------------|----------------------|
| rears | Ds (foreign tourists) | $\Delta_{\mathrm{t/1}}$ | $\Delta_{t/t-1}$ | $I_{t/1}$ | $I_{t/t-1}$ | $R_{t/1}$ | $\mathbf{R}_{t/t-1}$ |
| 2010 | 1.85 | - | - | - | - | - | - |
| 2011 | 1.91 | 0.06 | 0.06 | 103.24 | 103.24 | 3.24 | 3.24 |
| 2012 | 1.80 | -0.05 | -0.11 | 97.29 | 94.24 | -2.71 | -5.76 |
| 2013 | 1.83 | -0.02 | 0.03 | 98.91 | 101.66 | -1.09 | 1.66 |
| 2014 | 1.80 | -0.05 | -0.03 | 97.29 | 98.36 | -2.71 | -1.64 |
| 2015 | 1.72 | -0.13 | -0.08 | 92.97 | 95.55 | -7.03 | -4.45 |
| 2016 | 1.64 | -0.21 | -0.08 | 88.64 | 95.34 | -11.36 | -4,66 |
| 2017 | 1.61 | -0.24 | -0.03 | 87.02 | 98.17 | -12.98 | -1.83 |
| 2018 | 1.60 | -0.25 | -0.01 | 86.48 | 99.37 | -13.52 | -0.63 |
| 2019 | 1.60 | -0.25 | 0 | 86.48 | 100 | -13.52 | 0 |
| | \overline{y} | Ā | | Ī | Ī | \overline{R} | |
| | 1.73 | -0.0 | 2 | 0.98 | (98%) | -2 | 2 |

Source: Own calculation.

Table 7. Absolute and relative changes in the average length of stay, in Suceava County (2010-2019)

| Years | Total | Absolute changes | | | ex of ics (%) | Rhythm of dynamics (%) | |
|-------|-----------|------------------|------------------|-----------|------------------|------------------------|-------------|
| | Ds | $\Delta_{t/1}$ | $\Delta_{t/t-1}$ | $I_{t/1}$ | $I_{t/t-1}$ | $R_{t/1}$ | $R_{t/t-1}$ |
| 2010 | 2.36 | - | - | - | - | 1 | 1 |
| 2011 | 2.42 | 0.06 | 0.06 | 102.54 | 102.54 | 2.54 | 2.54 |
| 2012 | 2.45 | 0.09 | 0.03 | 103.81 | 101.23 | 3.81 | 1.23 |
| 2013 | 2.38 | 0.02 | -0.07 | 100.84 | 97.14 | 0.84 | -2.86 |
| 2014 | 2.23 | 0.13 | -0.15 | 94.49 | 93.69 | -5.51 | -6.31 |
| 2015 | 2.25 | 0.11 | 0.02 | 95.33 | 100.89 | -4.67 | 0.89 |
| 2016 | 2.21 | 0.15 | -0.04 | 93.64 | 98.22 | -6.36 | -1.78 |
| 2017 | 2.11 | 0.25 | -0.10 | 89.40 | 95.47 | -10.6 | -4.53 |
| 2018 | 2.11 | 0.25 | 0 | 89.40 | 100 | -10.6 | 0 |
| 2019 | 2.17 | 0.19 | 0.06 | 91.94 | 102.84 | -8.06 | 2.84 |
| | \bar{y} | Ā | | Ī | | \overline{R} | |
| | 2.27 | -0 | .02 | 0.99 | (99%) | - | 1 |

Source: Own calculation.

The variation in value for the average length of stay in Suceava County, during the analysed period (2010-2019), points out a decrease of the purchasing power of clients for the provided tourism services, under the conditions when the share of Romanian tourists in the total entrances is over 85% (85.72%) and also the probable use of some too high tariffs, that are not appropriate for the provided services.

In order to estimate the average length of stay (Romanian tourists + foreign tourists) in the next five years (2020-2024), in Suceava County, it was used the adjustment function y = -0.0379x + 78,708 obtained by the graphic method according to the linear trend. The indicator $R^2 = 0.9287$ points out a good trend approximation by the linear function (Fig. 3).

The estimation of the average length of stay in the case of Romanian tourists was carried out also with the adjustment function obtained by the graphic method, according to the linear trend: y = -0.0406x + 84,156.

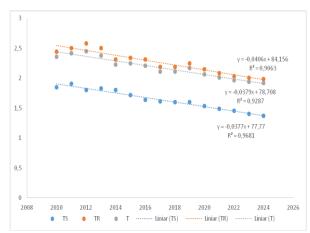


Fig. 3. Dynamics and estimation of average length of stay in the period 2010-2024, in Suceava County Note *T* - total; *TR* – Romanian tourist; *TS* – foreign tourists.

Source: Own calculation.

The value of the coefficient R^2 =0.9063 indicates also a good trend approximation by the linear function. In order to estimate the average length of stay in the case of foreign students, the adjustment function obtained by the graphic method according to the linear trend was: y = -0.0377x+77,770. The value of the coefficient $R^2 = 0.9681$ indicates a very trend good approximation by the linear function (Fig. 3).

Under the conditions when the factors with impact on tourism activity will keep the same rhythm also during the next five years (Table 8), in the year 2024, in Suceava County, the

average length of stay (Romanian tourists + foreign tourists) will be about 1.9 days.

Table 8. Estimation of average length of stay, by tourist types, in the period 2020 – 2024, in Suceava County

| | | Av | erage length of | stay |
|-------|------------|------------------|-------------------|-------------------|
| Years | Years t(x) | T $y = -0.0379x$ | TR $y = -0.0406x$ | TS $y = -0.0377x$ |
| | | + 78,708 | + 84,156 | +77,770 |
| 2020 | 11 | 2.07 | 2.15 | 1.54 |
| 2021 | 12 | 2.01 | 2.08 | 1.49 |
| 2022 | 13 | 1.97 | 2.03 | 1.45 |
| 2023 | 14 | 1.94 | 2.00 | 1.41 |
| 2024 | 15 | 1.92 | 1.98 | 1.37 |

Note: T - total; TR - Romanian tourist; TS - foreign tourists.

Source: Own calculation.

The average length of stay in the case of Romanian tourists will be about 2 days, while the average length of stay, in the case of foreign tourists, will be about 1.4 days.

The density of tourist movement (Dtpop.) is the indicator that directly interconnects the

tourist circulation with the resident population of a certain zone or country. The density of tourist movement (Dtpop.) in Suceava County, in the period 2012 - 2019, is given in Table 9. As a rule, this indicator has a below 1 value in the zones with medium and low tourist movement [17], as it is also the case of Suceava County, where in the year 2019 was recorded the highest value of 0.74 tourists/inhabitants. If the dynamics of the average length of stay registered fluctuations during the analysed period, the density recorded significant increases as follows: if in 2012, by each 100 inhabitants were 38 tourists, in 2019 the ratio was about 75:100. This fact derived from the growth in tourist number, as well as from the numerical decrease of population in Suceava County, in the analysed period.

Table 9. Tourist density, in the period 2010-2019, in Suceava County

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Resident population* | 632,985 | 632,041 | 631,587 | 630,621 | 629,115 | 627,975 | 625,778 | 623,896 |
| Arrivals | 238,611 | 241,629 | 260,684 | 310,548 | 342,710 | 385,676 | 430,673 | 465,921 |
| Dtpop (tourists/inhab., | 0.37 | 0.38 | 0.41 | 0.49 | 0.54 | 0.61 | 0.68 | 0.74 |
| tourists/100 inhab.) | 37.69 | 38.23 | 41.27 | 49.24 | 54.47 | 61.41 | 68.82 | 74.68 |

Note: *resident population on 1st July

Source: Own calculation, on the basis of data from NIS.

Studying the absolute and relative dynamics of tourist density during the period 2012-2019, in Suceava County (Table 10), it could be noticed that this had almost doubled in 2019, compared to 2012 (increasing by 98.14%).

Table 10. Absolute and relative changes in tourist density, in the period 2012-2019, in Suceava County

| Years | Dt _{pop} Tourists /100 | Absolute changes | | dyna | ex of imics 6 | Rhythm of dynamics % | |
|-------|---------------------------------------|------------------|------------------|-------------|---------------------|----------------------------|----------------------|
| | inhab. | $\Delta_{t/1}$ | $\Delta_{t/t-1}$ | $I_{t/1}$ | $I_{t/t-1}$ | $R_{t/1}$ | $\mathbf{R}_{t/t-1}$ |
| 2012 | 37.69 | - | - | - | - | - | - |
| 2013 | 38.23 | 0.54 | 0.54 | 101.43 | 101.43 | 1.43 | 1.43 |
| 2014 | 41.27 | 3.58 | 3.04 | 109.49 | 107.95 | 9.49 | 7.95 |
| 2015 | 49.24 | 11.55 | 7.97 | 130.64 | 119.31 | 30.64 | 2.78 |
| 2016 | 54.47 | 16.78 | 5.23 | 144.52 | 110.62 | 44.52 | 10.62 |
| 2017 | 61.41 | 23.72 | 6.94 | 162.93 | 112.74 | 62.93 | 12.74 |
| 2018 | 68.82 | 31.13 | 7.41 | 182.59 | 112.06 | 82.59 | 12.06 |
| 2019 | 74.68 | 39.99 | 5.86 | 198.14 | 108.51 | 98.14 | 8.51 |
| | \bar{y} | Ā | | Ī | Ī | Ī | <u>-</u> |
| | 53.22 | 5.2 | 28 | 1.24 (124%) | | 2 | 4 |

Source: Own calculation.

In total, the average level of tourist density registered 53.22 tourists/100 inhabitants, with an absolute average increase by 5.28 tourists/100 inhabitants and a relative increase by 24%.

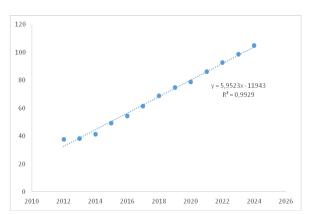


Fig. 4. Dynamics and estimation of tourist density in the period 2012-2024, in Suceava County

Source: Own calculation.

In order to evaluate the tourist density in the next five years (2020-2024), in Suceava County, the adjustment function y=5.9523x-11,943 obtained by the graphic method, according to the linear trend, was used. \mathbf{R}^2 has been used to indicate the changes in value compared to the trend line ($\mathbf{R}^2=0.9929$) (Fig. 4).

Under the conditions when the factors with impact on tourism activity will keep the same rhythm also during the next five years (Table 11), in the year 2024, in Suceava County, the tourist density will be about 105 tourists to 100 inhabitants.

Table 11. Estimation of tourist density in the period

2020 – 2024, in Suceava County

| Years | t(x) | Tourist density $y = 5.9523x - 11,943$ |
|-------|------|-----------------------------------------------|
| 2020 | 9 | 78.81 |
| 2021 | 10 | 86.05 |
| 2022 | 11 | 92.70 |
| 2023 | 12 | 98.64 |
| 2024 | 13 | 104.88 |

Source: Own calculation.

CONCLUSIONS

During the period 2010-2019, the average level of entrances in Suceava County recorded 310 thousand persons, with an absolute average increase by 30.2 thousand persons and a relative increase by 10.2%. The average level of overnight stays, during the same period (2010-2019), in Suceava County, registered 696.3 thousand, with an absolute average increase by 61.5 thousand and a relative increase by 9.1%. These increases could be caused by the zonal economic growth, determining implicitly also a higher interest of tourists for the concerned zone.

The structure of tourist movement by tourist types during the period 2010-2019 indicates the fact that the number of foreign tourists has a small share (14.3%) within the total entrances in Suceava county, while the number of overnight stays related to foreign tourists has also a small share (10.9%) within the total overnights in county.

Under the conditions when the factors with impact on tourism activity will keep the same rhythm also during the next five years, in the year 2024, in Suceava County, the number of tourist entrances will be about 624 thousand, while the number of overnight stays will be about 1,288 thousand.

The average length of stay in Suceava County presented fluctuations during the analysed period (2010-2019), both for the Romanian and foreign tourists. For the foreign students, it has increased by only 3.24% in the year 2014, compared to the reference year. In the case of Romanian tourists, the most important increase of the average length of stay, with respect to the reference year, was about 12.44% in the year 2012. Overall, the medium level of the average duration of (total) stays recorded 2.27 days, with an absolute average decrease by 0.02 days and a relative decrease by 1%. The decrease of the average length of stay in Suceava County, during the analysed period (2010-2019), indicates a reduction in the purchasing power of clients for the provided tourism services and also the probable use of some too high tariffs, that are not appropriate for the provided services. If the factors with impact on tourism activity will keep the same rhythm also during the next five years, in the year 2024, in Suceava County, the average length of (total) stays will be about 1.9 days; the average length of stay in the case of Romanian tourists will be about 2 days, while the average length of stay for foreign tourists will be about 1.4 days.

The average level of tourist density, in Suceava County, during the period 2012-2019, registered 53.22 tourists/100 inhabitants, with an absolute average increase by 5.28 tourists/100 inhabitants and a relative increase by 24%. Under the conditions when the factors with impact on tourism activity will keep the same rhythm also during the next five years, in the year 2024, in Suceava County, the tourist density will be about 105 tourists /100 inhabitants.

If the dynamics of the average length of stay recorded fluctuations during the analysed period, the tourist density registered significant increases, this fact deriving from the growth in tourist number, but also from the numerical decrease of population in Suceava County, in the analysed period.

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