

ANALYSIS IN DYNAMICS OF TOURISM OFFER IN SUCEAVA COUNTY DURING 2009-2018

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Abstract

Analysis of absolute and relative dynamics of touristy accommodation capacity which exist in Suceava County, during 2009-2018, shown the fact that number of accommodation places increased in 2018 face to 2009 with 60.87%, when was recorded the highest increase face to reference year; face to previous year were recorded increases up to 12.00% (in 2017). Per ensemble the mean level of existent accommodation capacity recorded 9789.2 places, with an absolute mean increase of 510.88 places, respectively a relative increase of 5.4%. Analysis of absolute and relative dynamics of functional accommodation capacity revealed the fact that these one increased in 2018 face to 2009 with 41.03%; when was recorded the highest increase face to reference year from analysed period; face to previous year was recorded a slightly decrease in 2016 (with 0.55%), in the rest of period were recorded increases up to 7.77% (in 2011). Generally speaking, mean level of functional accommodation capacity recorded 2638189.1 places-days/year, with an absolute mean increase of 99224.55 places-days/year, respectively with a relative increase of 3.9%. Net utilization index of functional touristy accommodation capacity, in Suceava County during 2009-2018 recorded fluctuating values, the highest value, 29.63% being recorded in 2018.

Key words: accommodation capacity; tourism; net utilization index of accommodation capacity

INTRODUCTION

Suceava County is situated in the North-East part of Romania, bordering at North with Ukraine, at East with Botoşani County, at South-East with Iaşi County, at South with Neamţ, Harghita and Mureş Counties and at West with Bistriţa-Năsăud and Maramureş Counties. Relief, which is diversified, is the most important characteristic of Suceava County, here being founded mountains, mountains depressions, hills, plateaus, plains, terraced valleys and meadows/floodplains. The main relief forms are placed in parallel stripes, with a North-South disposal. Mountain region includes massifs, groups of massifs and peak complexes separated by deep valleys or depression areas (*Bojoi I. et al., 1979*). The massifs from county area belong to Oriental Carpathians group. So, Călimani massif is individualized in relation with the other mountains, being the highest volcanic mountains on Romanian territory, the only ones which overcame an altitude of 2000 m in Pietrosul Călimani peak. On the left hand side of Bistriţa River, from North

to South there are Obcina Mestecănişului, Giumalău massif, Rarău massif, Stânişoarei peak. Suceava County is recommended as an important country touristy area. Besides the great attractiveness of mountain landscape, county's touristy potential is characterized by variety, density and value of religious and architectural monuments, by natural parks and remarkable ethnographical areas, many of them being unique in the world. Particularly noticeable Voroneţ, Suceviţa, Moldoviţa, Putna, Humor, Slatina and Dragomirna monasteries; Bogdana church from Rădăuţi, as well as the ones from localities Arbore, Pătrăuţi, Baia, Probota and Suceava, Seat Fortress from the county residence municipality, Salt Mine and Minor Basilica from Cacica (Neacşu N. et al., 2016). Spectacular evolution of tourism, under those two correlative sides of it, production and consumption, reveal the receptivity of this domain to society dynamics, (Minciu Rodica et al., 1991), and also tourism as activity belonging to services is defined as a useful activity, destined to satisfy a certain social need its evolution under the incidence of a complex factors system, differencing between them by nature, role and participation in different rates to determination of touristy phenomenon (Snak O. et al. 2001). Touristy potential and tourism technical-material base (which represents the ensemble of capital goods utilised in this domain, for obtain specific goods and services designed for touristy consumption) (Minciu Rodica, 2004; Brezuleanu S. et al. 2008) from Suceava County favours mountain tourism and trip makings, equestrian tourism, spa tourism, cultural tourism, religious tourism, eco-tourism, rural tourism and agro-tourism as well as business tourism and congresses.

MATERIAL AND METHOD

Touristy boarding structure with functions for touristy accommodation is represented by any building or construction, which provides permanently or seasonally an accommodation service or any other specific services for tourists. There aren't included in the statistical research, the touristy boarding structure with functions of touristy accommodation with an installed accommodation capacity less than 5 places (*insse.ro; Băltăreţu Andreea-Mihaela, 2016*).

The existent touristy accommodation capacity (installed) represent the number of accommodation places for touristy usage registered in the last document for reception, homologation and classification of the touristy accommodation unit, exclusively supplementary beds which could be installed in case of necessity. The places afferent to structures of touristy accommodation with function of complementary touristy boarding (small houses, camping, etc.) to a basic touristy boarding structure (hotel, motel,

camping, etc.) and utilisation of those places are included in the basic structure (*insse.ro; Neacșu N. et al., 2012*).

Touristy accommodation capacity in function represent the number of boarding places available for tourists and provided by the touristy units, taking in account the number of days in which the unit is opened into a certain period of time. It is expressed in places/day. Are excluded places from rooms or units temporary closed due to the lack of tourists, for improvements or by any other reasons (*insse.ro*).

Utilisation index of functional touristy capacity is calculated by rate between numbers of realised overnights at functional touristy capacity from a certain period (*insse.ro; Bădiță Maria et al., 2005; Turcu Daniela and Weisz Janeta, 2008*).

$$I_n = (N/C_f) \times 100, \text{ where:}$$

I_n is the utilisation index of functional touristy capacity;

N is the number of overnights recorded into a certain period of time;

C_f is the functional touristy capacity.

Absolute indicators represent a basic form of dynamic series, based on which could be obtained general indicators (*Merce E. and Merce C.C., 2009; Petcu Nicoleta, 2005*).

Level indicators are the terms of a series formed by absolute indicators ($y_1 \dots y_t \dots y_{t-1}$).

Total level of terms $\sum_{t=1}^n y^t$, only for time interval series with absolute measures.

The absolute modifications:

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

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

Relative indicators:

It is a presentation way, mainly percentage.

Dynamic index:

- with fixed base ($I_{t/1}$): $I_{t/1}(\%) = \frac{y_t}{y_1} \times 100$
- with in chain base ($I_{t/t-1}$): $I_{t/t-1}(\%) = \frac{y_t}{y_{t-1}} \times 100$

Dynamic rhythm:

- with fixed base ($R_{t/1}$): $R_{t/1} = I_{t/1}(\%) - 100\%$
- with in chain base ($R_{t/t-1}$): $R_{t/t-1}(\%) = I_{t/t-1}(\%) - 100\%$, $t = 2, n$

Mean indicators:

- meanlevel of timeseries (\bar{y}): $\bar{y} = \frac{\sum_{t=1}^n y^t}{n}$
- meanlevel of absolute gain (decrease) ($\bar{\Delta}$): $\bar{\Delta} = \frac{y^n - y^1}{n-1}$
- mean index of dynamics (\bar{I}): $\bar{I} = \sqrt[n-1]{\frac{y^n}{y^1}}$

- meangrowth rate (\bar{R}): $\bar{R} = \bar{I} - 100$

Method of adjusted trends was utilised for adjusting the tourists' number in according with linear trend for period 2009-2018.

Linear model: $y = a + bt$.

R is the correlation between the predicted values by equation and the actual values. R square is utilised to indicate the variation of values face to trend lineR (Panțiru Mariana, 2006).

RESULTS AND DISCUSSION

Analysis of touristy offer

Number of touristy units with functions of touristy accommodation on types of structures (hotels, hostels, apartment hotels, motels, tourist villas, tourist chalets, bungalows, holiday villages, camping grounds/camp sites, tourist halts, tourist cottages, tourist boarding houses and agro-tourism boarding houses) from Suceava County in those 10 analysed years (2009-2018) (tab. 1), increased from 235 structures in 2009, to 460 accommodation units structures in 2018 (with 95.74%). The most numerous types of tourist accommodation units were agro-tourism boarding houses followed by tourist boarding houses and hotels.

Table 1

Touristy units with function of touristy accommodation on types of structures from Suceava County during 2009-2018

Types of touristy units	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	MU: Number									
Total	235	245	271	296	295	296	310	343	441	460
Hotels	29	30	34	36	42	45	46	46	48	48
Hostels	8	8	13	12	8	8	8	11	12	14
Apartment hotels	1	1	:	:	:	:	:	:	:	:
Motels	3	3	7	6	5	6	6	6	6	6
Tourist villas	18	19	18	16	14	14	15	16	17	18
Tourist chalets	4	7	14	13	12	13	14	13	13	14
Bungalows	2	2	2	2	2	2	3	3	3	3
Holiday villages	:	:	1	1	1	1	1	1	1	1
Camp sites	4	4	3	3	3	4	4	4	4	3
Tourist halts	2	2	2	2	2	2	3	3	3	3
Tourist cottages	:	:	1	1	1	1	1	1	2	3
Tourist boarding houses	54	62	67	74	73	73	80	88	107	115
Agro-tourism boarding houses	110	107	109	130	132	127	129	151	225	232

Legend: ':' – missing data

Source: insse.ro

Tourist accommodation capacity existent on types of tourist receiving units from Suceava County during 2009-2018 (*tab. 2*) constantly increase in those 10 analyzed years from 7554 places in 2009 to 12152 places in 2018 (with 60.87%), the most significant accommodation capacity being founded in hotels followed by agro-tourism boarding houses and tourist boarding houses. Functional tourist accommodation capacity existent in Suceava County in the same period of time (2009-2018) (*tab. 3*) recorded increases with 41.03% in 2018 face to 2008 which indicates a good economical situation for tourism in Suceava County during analyzed period, the most significant existent tourist accommodation capacity being also founded in hotels followed by agro-tourism boarding houses and tourist boarding houses.

Table 2

Existent tourist accommodation capacity on types of touristy receiving units from Suceava County during 2009-2018

Types of touristy units	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	MU: Places									
Total	7554	8033	8835	9447	9585	9650	10143	10610	11883	12152
Hotels	3144	3322	3510	3610	3926	4065	4193	4152	4298	4276
Hostels	292	266	417	437	239	237	237	340	350	381
Apartment hotels	32	32	:	:	:	:	:	:	:	:
Motels	111	111	263	262	214	292	292	280	257	269
Tourist villas	530	572	379	357	283	291	290	297	314	341
Tourist chalets	259	246	332	304	308	258	284	243	224	245
Bungalows	40	40	40	40	50	50	104	104	104	104
Holiday villages	:	:	82	82	82	82	86	86	86	86
Camp sites	230	230	224	220	220	246	246	244	244	216
Tourist halts	76	76	76	76	76	76	124	120	108	108
Tourist cottages	:	:	10	10	10	10	10	10	16	30
Tourist boarding houses	1102	1383	1534	1665	1715	1592	1725	1964	2171	2308
Agro-tourism boarding houses	1738	1755	1968	2384	2462	2451	2552	2770	3711	3788

Legend: ':' – missing data
Source: *insse.ro*

In 2018, functional existent tourist accommodation capacity (total) from Suceava County was of 3069443 places – days with a net utilization index for functional accommodation capacity of 29.63%.

From a comparative analysis of the accommodation units number and places number from touristy units with function of touristy accommodation between years 2009 and 2018 from Suceava County (*tab. 4*), result that in 2018 number of accommodation units increase significantly, with 95.74% face to 2012 and number of accommodation places increases in 2018 with 60.87% face to 2009.

Qualitative analysis of receiving units' structure on structural types, for those two analysed years, 2009 and 2018, show the fact the rate of agro-tourism boarding houses from the total of units increased, from 46.80% to 50.43% and the rate of tourist boarding houses from the total of tourist units also increased from 22.97% to 25%. The rate of hotels from the total of touristy units from Suceava County reduced from 12.34% in 2009 to 10.43% in 2018.

Table 3

Existent functional tourist accommodation capacity on types of tourist receiving structures from Suceava County during 2009-2018

Types of touristy units	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	MU: Places-days									
Total	2176422	2263630	2439609	2594059	2642601	2686399	2780181	2764901	2964646	3069443
Hotels	1096689	1141347	1199286	1234081	1329994	1398169	1330435	1251026	1301704	1304429
Hostels	88791	89177	105945	107203	97838	54874	48371	58260	66594	69736
Apartment hotels	8736	:	:	:	:	:	:	:	:	:
Motels	23844	30387	73628	73055	80773	103176	105857	104593	98118	93288
Tourist villas	164625	145579	101860	87689	77010	81643	79128	70612	68397	77875
Tourist chalets	74498	75846	60502	67734	74130	73956	67102	69847	65650	56403
Bungalows	7340	6740	6120	6740	8580	10210	17172	17098	17234	19670
Holiday villages	:	:	:	:	:	:	4816	:	:	:
Camp sites	34756	29398	31692	22712	29088	18352	21432	17952	15688	18128
Tourist halts	9386	8046	8252	6992	5732	4918	23492	24192	23890	20436
Tourist cottages	:	:	920	1840	1220	:	:	366	12	2514
Tourist boarding houses	300606	370943	419498	441444	417341	407494	474472	527300	560909	588039
Agro-tourism boarding houses	367151	366167	431906	544569	520895	533607	607904	623655	746450	818925

Legend: ':' – missing data

Source: insse.ro

The most significant increases of accommodation places were recorded in the case of agro-tourism boarding houses where the rate of accommodation places increased from 23.00% in 2009 to 31.17% in 2018 and in the case of tourist boarding houses from 14.59% in 2009 to 18.99% in 2018. The share held by number of places from hotels in Suceava County decreased from 41.62% in 2009 to 35.18% in 2018.

For an accurate presentation of touristy offer of Suceava County, during 2009-2018, we analysed the existent touristy accommodation capacity and functional touristy accommodation capacity. Their level and dynamics are considered to be the effective offer for accommodation places which exist into touristy accommodation units. To analyse this indicator in dynamics we use the indicators of chronological series.

Analyzing the absolute and relative dynamics for existent accommodation capacity from Suceava County, during 2009-2018 (tab. 5), we could observe that number of places considerably increase in 2018 face to 2009 with 60.87%, when was recorded also the highest increase face to reference year. Face to previous year was recorded increases up to 12.00%

(in 2017). Per ensemble the mean level of existent accommodation capacity recorded 9789.2 places, with an absolute mean increase of 510.88 places, respectively a relative increase of 5.4%.

Table 4

Comparative analysis of accommodation units number and places number from touristy receiving structures with function of touristy accommodation between 2009 and 2018 from Suceava County

Unit type	2009				2018			
	Nr. units	%	Nr. places	%	Nr. units	%	Nr. places	%
Hotels	29	12.34	3144	41.62	48	10.43	4276	35.18
Hostels	8	3.4	292	3.86	14	3.04	381	3.13
Apartment hotels	1	0.42	32	0.42	:	-	:	-
Motels	3	1.27	111	1.47	6	1.30	269	2.21
Tourist villas	18	7.66	530	7.01	18	3.91	341	2.80
Tourist chalets	4	1.70	259	3.42	14	3.04	245	2.09
Bungalows	2	0.85	40	0.53	3	0.65	104	0.85
Holiday villages	:	-	:	-	1	0.22	86	0.70
Camp sites	4	1.70	230	3.04	3	0.65	216	1.77
Tourist halts	2	0.85	76	1.00	3	0.65	108	0.88
Tourist cottages	:	-	:	-	3	0.65	30	0.24
Tourist boarding houses	54	22.97	1102	14.58	115	25.00	2308	18.99
Agro-tourism boarding houses	110	46.80	1738	23.00	232	50.43	3788	31.17
Total	235	100	7554	100	460	100	12152	100

Legend: ':' – missing data

Note: calculus in according with insse.ro

Table 5

Absolute and relative modifications of the existent accommodation capacity, in period 2009-2018, in Suceava County

Years	Existent accommodation capacity (places)	Absolute modifications		Dynamics index (%)		Dynamics rhythm (%)	
		$\Delta_{t/1}$	$\Delta_{t/t-1}$	$I_{t/1}$	$I_{t/t-1}$	$R_{t/1}$	$R_{t/t-1}$
2009	7554	-	-	-	-	-	-
2010	8033	479	479	106.34	106.34	6.34	6.34
2011	8835	1281	802	116.96	109.98	16.96	9.98
2012	9447	1893	612	125.06	106.92	25.06	6.92
2013	9585	2031	138	126.88	101.46	26.88	1.46
2014	9650	2096	65	127.74	100.68	27.74	0.68
2015	10143	2589	493	134.27	105.11	34.27	5.11
2016	10610	3056	467	140.45	104.60	40.45	4.60
2017	11883	4329	1273	157.31	112.00	57.31	12.00
2018	12152	4598	269	160.87	102.26	60.87	2.26
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	9789.2	510.88		1.054 (105.4%)		5.4	

Source: calculus in according with insse.ro

To estimate the existent accommodation capacity for the next five years (2019-2023) we used the adjustment function $y = 481.88x - 960478$ obtained through graphical method in according with the linear trend. R

square was used to indicate the variations of values face to trend line ($R^2 = 0.9869$)(fig. 1).

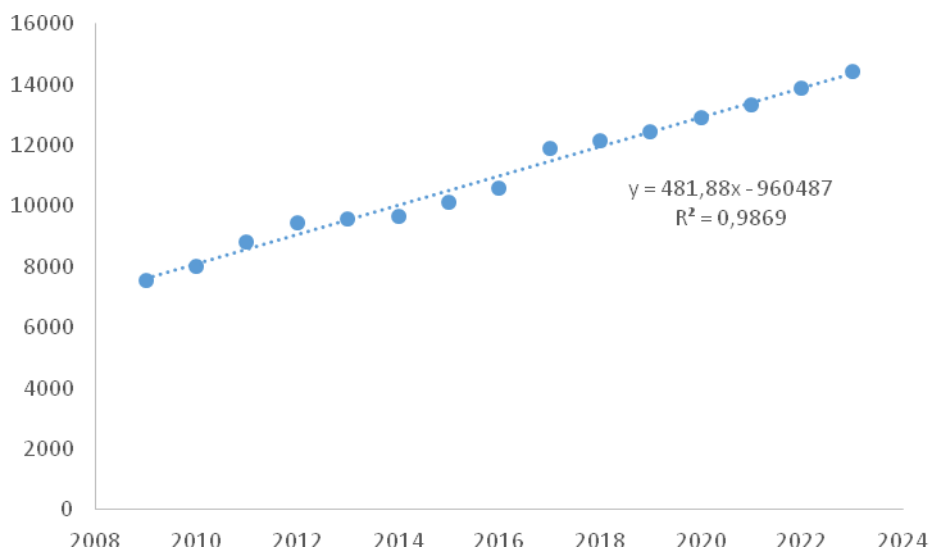


Fig. 1 - Dynamics and estimation of existent accommodation capacity in period 2009-2023, Suceava County

Analysing the absolute and relative dynamics of functional accommodation capacity, from Suceava County, during 2009-2018 (tab. 6), we could observe that the number of places increased quite high in 2018 face to 2009 with 41.03%, when was recorded also the highest increase face to reference year.

Table 6
Absolute and relative modifications of the functional accommodation capacity, in period 2009-2018, in Suceava County

Years	Functional accommodation capacity (places-days)	Absolute modifications		Dynamics index (%)		Dynamics rhythm (%)	
		$\Delta_{t/t}$	$\Delta_{t/t-1}$	$I_{t/t}$	$I_{t/t-1}$	$R_{t/t}$	$R_{t/t-1}$
2009	2176422	-	-	-	-	-	-
2010	2263630	87208	87208	104.00	104.00	4.00	4.00
2011	2439609	263187	175979	112.09	107.77	12.09	7.77
2012	2594059	417637	154450	119.19	106.33	19.19	6.33
2013	2642601	466179	48542	121.42	101.87	21.42	1.87
2014	2686399	509977	43798	123.43	101.66	23.43	1.66
2015	2780181	603759	93782	127.74	103.49	27.74	3.49
2016	2764901	588479	-15280	127.03	99.45	27.03	-0.55
2017	2964646	788224	199745	136.21	107.22	36.21	7.22
2018	3069443	893021	104797	141.03	103.53	41.03	3.53
	\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	2638189.1	99224.55		1.039 (103.9%)		3.9	

Sursa: calcul după insse.ro

Face to previous year were recorded slightly decreases in 2016 (with 0.55%), in the rest of period being recorded increases up to 7.77% (in 2011). Per ensemble mean level of functional accommodation capacity recorded 2638189.1 places-days/year, with an absolute mean increase of 99224.55 places-days/year, respectively with a relative increase of 3.9%. If we compare mean dynamics of functional accommodation capacity (103.9%) with the existent one (105.4%), we could observe that the first one didn't overcome the second one, which means the fact that didn't increased the efficiency of tourist offer by renovation process or by increasing of tourist demand in Suceava County during analysed period (2009-2018).

Adjustment after linear trend of functional accommodation capacity for the next five years (2019-2023) was realised with adjustment function $y = 89099x - 2E+08$. R square was utilised to indicate the values' variations face to trend line ($R^2 = 0.9866$) (fig. 2).

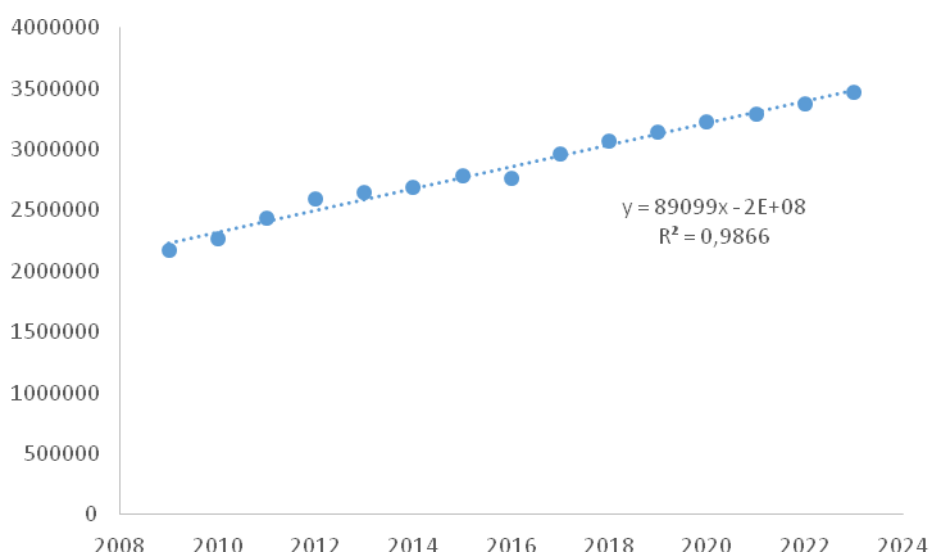


Fig. 2 - Dynamics and estimation of functional accommodation capacity in period 2009-2023, Suceava County

In conditions in which influence factors in touristy activity will have the same rhythm in the next five years (tab. 7), in 2023, in Suceava County existent touristy accommodation capacity will be of around 14500 places, and functional accommodation capacity will be of around 3.5 mil. places-days.

Net utilisation index for functional touristy accommodation capacity which express the relation between functional accommodation capacity and effective utilization of it by tourists (overnights), (into a certain period),

in Suceava County, during 2009-2018 (tab. 8), recorded fluctuant values in those 10 analysed years (2009-2018), in 2018 being recorded the highest value of 29.63%.

Table 7

Estimation of accommodation capacity during 2019 – 2023, in Suceava County

Years	t(x)	Existent accommodation capacity (places) $y = 481.88x - 960478$	Functional accommodation capacity (thousands places-days) $y = 89099x - 2E+08$
2019	11	12434.53	3143953
2020	12	12896.61	3223121
2021	13	13345.89	3292709
2022	14	13864.5	3373095
2023	15	14453.03	3469947

Table 8

Capacity and touristy accommodation activity in Suceava County

Years	Accommodation capacity		Arrivals	Overnights	In (%)
	Existent (places)	Functional (places-days)			
2009	7554	2176422	209725	479402	22,02
2010	8033	2263630	194365	460637	20,35
2011	8835	2439609	229519	556249	22,80
2012	9447	2594059	238611	586237	22,60
2013	9585	2642601	241629	577232	21,84
2014	9650	2686399	260684	583642	2172
2015	10143	2780181	310548	699491	25,16
2016	10610	2764901	342710	759754	27,48
2017	11883	2964646	385676	815732	27,51
2018	12152	3069443	430673	909535	29,63

Legend: In – utilization index for functional accommodation capacity

Source: calculus in according with insse.ro

CONCLUSIONS

Analyzing the absolute and relative dynamics for existent accommodation capacity from Suceava County, during 2009-2018 we could observe that number of places considerably increase in 2018 face to 2009 with 60.87%, when was recorded also the highest increase face to reference year.

Face to previous year was recorded increases up to 12.00% (in 2017). Per ensemble the mean level of existent accommodation capacity recorded 9789.2 places, with an absolute mean increase of 510.88 places, respectively a relative increase of 5.4%.

Analysing the absolute and relative dynamics of functional accommodation capacity, from Suceava County, during 2009-2018, we could observe that the number of places increased quite high in 2018 face to

2009 with 41.03%, when was recorded also the highest increase face to reference year.

Face to previous year were recorded slightly decreases in 2016 (with 0.55%), in the rest of period being recorded increases up to 7.77% (in 2011).

Per ensemble mean level of functional accommodation capacity recorded 2638189.1 places-days/year, with an absolute mean increase of 99224.55 places-days/year, respectively with a relative increase of 3.9%.

If we compare mean dynamics of functional accommodation capacity (103.9%) with the existent one (105.4%), we could observe that the first one didn't overcome the second one, which means the fact that didn't increased the efficiency of tourist offer by renovation process or by increasing of tourist demand in Suceava County during analysed period (2009-2018).

In conditions in which influence factors in touristy activity will have the same rhythm in the next five years, in 2023, in Suceava County existent touristy accommodation capacity will be of around 15000 places, and functional accommodation capacity will be of around 3.5 mil. places-days.

Net utilisation index for functional touristy accommodation capacity in Suceava County, during 2009-2018, recorded fluctuant values in those 10 analysed years (2009-2018), in 2018 being recorded the highest value of 29.63%.

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