

DYNAMIC ANALYSIS OF THE OFFER FOR SPA TOURISM IN BACĂU COUNTY IN THE PERIOD 2011-2020

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Abstract

Analysing the dynamics of the existing tourist accommodation capacity in Slănic Moldova resort, in the period 2011-2020, it was found that it increased in 2020 by 16.91%; overall, the average level of existing accommodation capacity in Slănic Moldova registered 1186.5 places, with an absolute average increase of 61.77 places and a relative increase of 5.4%. In Târgu Ocna resort, the same analysis shows that in this case to the existing accommodation capacity increased at the end of the analysed period by 156.91%. Overall, the average level of accommodation capacity existing in Târgu Ocna resort registered 483 places, with an absolute average increase of 42.88 places and a relative increase of 11%. The analysis of the dynamics of the accommodation capacity in operation in Slănic Moldova resort found that in 2020 it was 55.28% higher than in 2011; overall, the average level of accommodation capacity in operation in Slănic Moldova resort registered 321581 places-days/year, with an absolute average increase of 12499 places-days/year and a relative increase of 5%. In the resort of Târgu Ocna there was an increase in the accommodation capacity in operation during the analysed period by 76.12%. Overall, the average level of accommodation capacity in operation in Târgu Ocna resort registered 149,207 places-days/year, with an absolute average increase of 7681.55 places-days/year, respectively a relative increase of 6.4%.

Key words: absolute dynamics, relative dynamics, accommodation, tourism

INTRODUCTION

Bacău County is the possessor of a rich tourist potential, highlighted by the spa resorts Slănic Moldova and Târgu Ocna, by capitalizing on the natural healing factors and the favourable bio climate present. Slănic Moldova Resort is a permanent balneoclimateric resort located 84 km southwest of Bacău, in the valley of Slănic brook and is famous for its carbonated, sulphurous, chlorinated, sodium, hypertonic, hypotonic and oligo mineral springs, springs discovered since 1801. Over time, the qualities of the mineral waters discovered here have been confirmed by the medals obtained at international exhibitions in Paris, Vienna, Frankfurt/Main, etc. and specialists compared them with the mineral waters of Karlovy Vary, Vichy, Aix-les-Bains, etc. named "Pearl of Moldova", Slănic Moldova provides treatment

for digestive disorders, hepatobiliary diseases, metabolic and nutritional diseases, kidney and urinary diseases. External treatment with mineral waters from Slănic Moldova helps in the treatment of degenerative and diarrheal rheumatic diseases, cardiovascular and respiratory diseases, treatment of endocrine diseases, gynaecological diseases and other diseases [10].

Târgu Ocna is a spa resort located 60 km southwest of Bacău on the Trotuş Gorge [11]. The spa treatment tourism from Târgu Ocna is favoured by the existence of natural healing factors, the treatment base from the Măgura Spa Complex and the treatment arrangements made by the Salina Târgu Ocna company. Natural balneotherapeutic factors are represented by the sources of sulphurous mineral waters, chlorinated, sodium, weakly bicarbonate, hypotonic, recommended for the treatment of diseases of the digestive tract, hepatic-biliary, chronic gynaecological, rheumatic and respiratory tract and saline environment (Salina Târgu Ocna). The salt mine is located about 2 km from the city, in

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the Vâlcele-Slatinele salt massif, at a depth of 240 m and represents, through the salt microclimate, an important natural cure factor used in the therapy of respiratory diseases. The saline bioclimate has a sedative sparing character, with very low values of stress indices, slightly cool in temperature and balanced in terms of humidity [10].

The technical-material base of tourism (which represents the set of means of production used in this field, in order to obtain specific goods and services for tourism consumption) [4], [6], [2], in spas in Bacău County, favours in addition to the practice of spa tourism and mountain tourism and hiking, religious tourism, agrotourism but also business tourism and congresses.

The technical material base through the network of accommodation units (accommodation) of the spa resorts Slănic Moldova and Târgu Ocna, responds to one of the fundamental needs of the tourist - rest, overnight, knowing that without the existence of such equipment cannot achieve tourist consumption.

MATERIAL AND METHOD

The tourist reception structure with tourist accommodation functions represents any construction or arrangement, which permanently or seasonally provides the accommodation service and other specific services for tourists. The statistical research does not include tourist reception structures with tourist accommodation functions with an installed accommodation capacity of less than 5 places [12].

The existing (installed) tourist accommodation capacity represents the number of tourist accommodation places registered in the last act of reception, homologation, classification of the tourist accommodation unit, excluding the extra beds that can be installed in case of need. The places related to the tourist reception structures with complementary tourist accommodation functions (cottages, campsites, etc.) to a basic tourist accommodation structure (hotel, motel, campsite, etc.) and the use of these places are included in the basic structure [12].

The tourist accommodation capacity in operation represents the number of accommodation places made available to tourists by the tourist accommodation units, taking into account the number of days the units are open during the considered period. It is expressed in places-days. Places in rooms or units temporarily closed due to lack of tourists, for repairs or for other reasons are excluded [12].

The index of utilization of the tourist accommodation capacity in operation is calculated by reporting the number of overnight stays made, to the tourist accommodation capacity in operation, from the respective period [12], [1], [9].

$$I_n = (N/C_f) \times 100$$

where: I_n – index of use of the tourist accommodation capacity in operation

N – number of overnight stays recorded in a certain period

C_f – tourist accommodation capacity in operation

Absolute indicators represent a basic form of dynamic series, based on which could be obtained general indicators [3], [8].

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

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

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

Relative indicators

It is a presentation way, mainly percentage. In this situation is mandatory that in title or outside the table to be mentioned the rating based so the data interpretation to be correctly done.

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

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

$$t = \overline{2, n}.$$

Average indicators: \bar{y} – the average level of the interval time series $\bar{y} = \frac{\sum_{t=1}^n y_t}{n}$, $\bar{\Delta}$ – the average level of the absolute change (increase or decrease) $\bar{\Delta} = \frac{y_n - y_1}{n-1}$, \bar{I} – the average index of dynamics $\bar{I} = n^{-1} \sqrt[n]{y_n}$, \bar{R} – the average growth rate $\bar{R} = \bar{I} - 100$.

To adjust the number of tourists, the method of trends adjusted according to the polinomial trend, for the time period 2011-2025 was used.

Linear model: $y = a + bt$.

R is the correlation between the values predicted by the equation and the current values. The square R is used to indicate the variation of the values from the trend line [7].

RESULTS AND DISCUSSIONS

For an objective study of the tourist offer of the spas in Bacău County, it is essential to analyse the existing tourist accommodation capacity and the operational tourist accommodation capacity of Slănic Moldova and Târgu Ocna resorts.

The number of tourist reception structures with tourist accommodation functions (hotels, motels, tourist villas, bungalows, tourist houses, tourist pensions and agritourism pensions) in the spa resort Slănic Moldova (Bacău County) varied between 9 and 36 structures in the 10 years analysed (2011-2020) (tab. 1), their number being 188% higher in 2020 compared to 2011, the most numerous types of tourist reception structures being hotels followed by tourist pensions and tourist villas. In the spa resort of Târgu Ocna (Bacău County), the number of tourist reception structures increased a lot, from 2 structures in 2011, to 17 structures in 2020 (tab. 1), the increase being 750% in 2020 compared to of reference, the most numerous structures of tourist reception being the tourist pensions.

Table 1 Tourist reception structures with tourist accommodation functions by types of structures from Slănic Moldova and Târgu Ocna localities (Bacău County) in the period 2011-2020

Types of tourist reception structures	Localities	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		MU: Number									
Total	Slănic Moldova	9	15	21	15	23	24	36	29	31	26
	Târgu Ocna	2	9	10	10	15	15	16	17	17	17
Hotels	Slănic Moldova	5	5	6	4	5	5	6	5	5	6
	Târgu Ocna	1	1	1	1	1	1	2	2	2	2
Motels	Slănic Moldova	:	:	:	:	:	:	1	1	1	:
	Târgu Ocna	:	:	1	1	1	1	1	1	1	:
Tourist villas	Slănic Moldova	2	4	4	2	5	6	14	8	8	5
Tourist houses	Târgu Ocna	:	1	1	1	1	1	:	:	:	1
Tourist pensions	Slănic Moldova	1	5	10	9	12	12	13	14	16	14
	Târgu Ocna	1	7	7	7	12	12	12	14	14	14
Agritourism pensions	Slănic Moldova	1	1	1	:	1	1	2	1	1	1
	Târgu Ocna	:	:	:	:	:	:	1	:	:	:

Legend: ':' –missing data

Source: insse.ro



The existing tourist accommodation capacity in the tourist reception structures in Slănic Moldova resort (*tab. 2*) varied in the 10 years analysed (2011-2020), between 639 and 1545 places being 61.91% higher in 2020 compared to of the reference year, most accommodation being found in hotels. In the resort of Târgu Ocna the existing tourist accommodation capacity also varied in the analysed period (2011-2020), between 246 and 666 places, being by 156.91% higher in 2020 compared to the reference year, most places accommodation is also found in hotels.

The tourist accommodation capacity in operation in Slănic Moldova resort varied in the analysed period (2011-2020) (*tab. 3*) between 203.4 and 424.5 thousand places-days, with an increase of 55.28% at the end of the analysed period (year 2020) compared to the reference year, which indicates a good economic situation for tourism in Slănic Moldova resort in the ten years analysed,

most places-days being also found in hotels. At the end of the analysed period (2020), the tourist accommodation capacity in operation in Slănic Moldova resort registered 424.5 thousand places-days with a net utilization index of the accommodation capacity in operation of 28.34%. In Târgu Ocna resort, the tourist accommodation capacity in operation also varied in the analysed period (2011-2020) (*tab. 3*) between 90.8 and 184.3 thousand places-days with an increase of 76.12% at the end of the period analysed (year 2020) compared to the reference year, which also indicates a good economic situation for tourism in Târgu Ocna resort in the ten years analysed, most places-days are also found in hotels. At the end of the analysed period (2020), the tourist accommodation capacity in operation in Târgu Ocna resort registered 159.9 thousand places-days with a net utilization index of the accommodation capacity in operation of only 7.60%.

Table 2 Existing tourist accommodation capacity by types of tourist reception structures in the tourist resorts Slănic Moldova and Târgu Ocna (Bacău County), in the period 2011-2020

Types of tourist reception structures	Localities	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		MU: Places									
Total	Slănic Moldova	898	1084	1348	639	1301	1326	1545	1114	1156	1454
	Târgu Ocna	246	314	349	347	604	603	656	666	659	632
Hotels	Slănic Moldova	768	746	874	314	754	758	970	522	526	966
	Târgu Ocna	230	230	230	230	360	360	413	413	413	413
Motels	Slănic Moldova	:	:	:	:	:	:	45	45	45	:
	Târgu Ocna	:	:	38	38	38	38	38	38	38	:
Tourist villas	Slănic Moldova	94	182	182	72	195	218	234	222	222	167
Tourist houses	Târgu Ocna	:	12	10	8	20	20	:	:	:	12
Tourist pensions	Slănic Moldova	6	126	262	253	325	323	261	298	336	294
	Târgu Ocna	16	72	71	71	186	185	185	215	208	207
Agrotourism pensions	Slănic Moldova	30	30	30	:	27	27	35	27	27	27
	Târgu Ocna	:	:	:	:	:	:	20	:	:	:

Legend: ':' – missing data

Source: insse.ro

In Târgu Ocna resort, the tourist accommodation capacity in operation also varied in the analysed period (2011-2020)

(*tab. 3*) between 90.8 and 184.3 thousand places-days with an increase of 76.12% at the end of the period analysed (year 2020)



compared to the reference year, which also indicates a good economic situation for tourism in Târgu Ocna resort in the ten years analysed, most places-days are also found in hotels. At the end of the analysed period

(2020), the tourist accommodation capacity in operation in Târgu Ocna resort registered 159.9 thousand places-days with a net utilization index of the accommodation capacity in operation of only 7.60%.

Table 3 Tourist accommodation capacity in operation by types of tourist reception structures in Slănic Moldova and Târgu Ocna resorts (Bacău County), in the period 2011-2020

Types of tourist reception structures	Loc.	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		MU: Thousands places-days									
Total	Slănic Moldova	203.4	290.7	365.9	242	321.4	287.4	424.5	372.1	392.1	315.9
	Târgu Ocna	90.8	110	123.2	124.4	149.4	149.4	180.8	184.3	219.3	159.9
Hotels	Slănic Moldova	158.7	194	211.2	120.9	175.7	125.3	247.9	178.2	189	182.1
	Târgu Ocna	83.9	84.1	83.9	83.7	83.9	84.1	102.3	102.2	149.6	106.9
Motels	Slănic Moldova	:	:	:	:	:	:	15.8	15.1	15.4	2.7
	Târgu Ocna	:	:	11.4	13.8	13.8	13.8	13.8	13.4	:	:
Tourist villas	Slănic Moldova	28.3	54.0	64.6	36.3	67.4	68.1	67.5	67.0	67.8	51.3
Bungalows	Târgu Ocna	:	:	:	:	:	:	:	:	:	3.6
Tourist houses	Târgu Ocna	0.3	2.9	1.9	1.4	0.4	:	:	:	:	:
Tourist pensions	Slănic Moldova	5.4	31.7	80.5	84.7	78.1	94	88.1	105.9	109.8	72.7
	Târgu Ocna	6.4	22.9	25.9	25.4	51.1	51.3	64.7	68.7	69.7	49.3
Agrotourism pensions	Slănic Moldova	10.9	10.9	9.4	:	:	:	4.9	5.7	9.7	7.0

Legend: ':' – missing data

Source: *insse.ro*

From the comparative analysis between 2011 and 2020 of the number of accommodation units and the number of places in the tourist reception structures with tourist accommodation functions (*tab. 4*), it was found that in Slănic Moldova in 2020 the number of accommodation units increased significantly, by 188% compared to 2011 and the number of accommodation places increased in 2020 by 61.46% compared to 2011. In Târgu Ocna resort the number of accommodation units increased very much, by 750% in 2020 compared to since 2011 and the number of accommodation places increased by 156.91% in 2020 compared to 2011.

The qualitative analysis of the structure of the accommodation units by types of structures, for the 2 years analysed, 2011 and 2020, from Slănic Moldova resort, shows that

only the share of tourist pensions in the total number of units increased from 11.11% in 2011 to 53.84% in 2020, otherwise the share of other types of tourist reception structures with tourist accommodation functions decreased, so the share of hotels in the total number of tourist units in Slănic Moldova resort decreased from 55.55% in 2011 to 23.07% in 2020. In Târgu Ocna resort it was also found that only the share of tourist pensions in the total number of units increased from 50% in 2011 to 82.35% in 2020, otherwise the share of other types of tourist reception structures with tourist accommodation functions decreased, so the share held by hotels in the total number of tourist units in Târgu Ocna resort was reduced from 50% in 2011 to 11.76% in 2020.

The most significant increase in the number of accommodation places in the tourist reception structures with tourist accommodation functions in Slănic Moldova resort, was registered in the case of tourist pensions where the share of accommodation places in their total increased from 0.66% in 2011 to 20.20% in 2020. In Târgu Ocna

resort, the most significant increase in the number of accommodation places in the tourist reception structures with tourist accommodation functions, was also registered in the case of tourist pensions where the share of accommodation places in their total increased by to 6.5% in 2011 to 32.75% in 2020.

Table 4 Comparative analysis between 2011 and 2020 of the number of accommodation units and the number of places in the tourist reception structures with tourist accommodation functions in the spa resorts Slănic Moldova and Târgu Ocna (Bacău County)

Unit type	Localities	2011				2020			
		No. units	%	No. of places	%	No. units	%	No. of places	%
Hotels	Slănic Moldova	5	55.55	768	85.52	6	23.07	966	66.43
	Târgu Ocna	1	50	230	93.5	2	11.76	413	65.34
Tourist villas	Slănic Moldova	2	22.22	94	10.46	5	19.23	167	11.48
Tourist houses	Târgu Ocna	:			-	1	5.88	12	1.89
Tourist pensions	Slănic Moldova	1	11.11	6	0.66	14	53.84	294	20.20
	Târgu Ocna	1	50	16	6.5	14	82.35	207	32.75
Agrotourism pensions	Slănic Moldova	1	11.11	30	3.34	1	3.84	27	1.85
Total	Slănic Moldova	9	100	898	100	26	100	1454	100
	Târgu Ocna	2	100	246	100	17	100	632	100

Legend: ':' - missing data

Note: calculus in according with insse.ro

For an objective presentation of the tourist offer of the spa resorts Slănic Moldova and Târgu Ocna from Bacău County, in the period 2011-2020, we analysed the existing tourist accommodation capacity and the tourist accommodation capacity in operation. Their level and dynamics are considered as the actual supply of accommodation available to tourist accommodation structures. For a dynamic analysis of this indicator, we used the time series indicators.

Analysing the absolute and relative dynamics of the existing accommodation capacity in Slănic Moldova and Târgu Ocna resorts, in the period 2011-2020 (tab. 5), we can observe that in Slănic Moldova resort it varied a lot in the analysed period and increased at the end of it (in 2020), by only 16.91%. The highest increase compared to the base year was recorded in 2017 and had values of over 70% (72.04%). Compared to the previous year, there were also fluctuations, the most important increase was

registered in 2015, with values of over 100% (103.59%) Overall, the average level of accommodation capacity in Slănic Moldova registered 1186.5 places, with an absolute average increase of 61.77 places and a relative increase of 5.4%.

In Târgu Ocna resort, in the analysed period (2011-2020), the analysis of the absolute and relative dynamics of the existing accommodation capacity shows us that in this case as well, it varied, but not much, but increased a lot at the end of the analysed period (in 2020) compared to 2011 by over 150% (156.91%). The highest increase compared to the base year (2011) was recorded in 2018 when it recorded values of over 170% (170.73%). Compared to the previous year, there were also fluctuations, the most important increase was registered in 2015, with values of over 70% (74.06%) Overall, the average level of accommodation capacity in Târgu Ocna resort registered 483 places, with an absolute average increase of 42.88 places and a relative increase of 11.0%.

Table 5 Absolute and relative changes of the existing accommodation capacity, from the spa resorts Slănic Moldova and Târgu Ocna (Bacău County), during 2011-2020

Years	Localities	Existing accommodation capacity (places)	Absolute changes		Dynamics index %		Dynamics rhythm %	
			$\Delta_{t/t}$	$\Delta_{t/t-1}$	$I_{t/t}$	$I_{t/t-1}$	$R_{t/t}$	$R_{t/t-1}$
2011	Slănic Moldova	898	-	-	-	-	-	-
	Târgu Ocna	246	-	-	-	-	-	-
2012	Slănic Moldova	1084	186	186	120.71	120.71	20.71	20.71
	Târgu Ocna	314	68	68	127.64	127.64	27.64	27.64
2013	Slănic Moldova	1348	450	264	150.11	124.35	50.11	24.35
	Târgu Ocna	349	103	35	141.86	79.29	41.86	-20.71
2014	Slănic Moldova	639	-259	-709	71.15	47.40	-28.85	-52.6
	Târgu Ocna	347	101	-2	141.05	99.42	41.05	-14.05
2015	Slănic Moldova	1301	403	662	144.87	203.59	44.87	103.59
	Târgu Ocna	604	358	257	245.52	174.06	145.52	74.06
2016	Slănic Moldova	1326	428	25	147.66	101.92	47.66	1.92
	Târgu Ocna	603	357	-1	245.12	99.83	145.12	-0.17
2017	Slănic Moldova	1545	647	219	172.04	116.51	72.04	16.51
	Târgu Ocna	656	410	53	266.66	108.78	166.66	8.78
2018	Slănic Moldova	1114	216	-431	124.05	72.10	24.05	-27.9
	Târgu Ocna	666	420	10	270.73	101.52	170.73	1.52
2019	Slănic Moldova	1156	258	42	128.73	103.77	28.73	3.77
	Târgu Ocna	659	413	-7	267.88	98.94	167.88	-1.06
2020	Slănic Moldova	1454	556	298	116.91	125.77	16.91	25.77
	Târgu Ocna	632	632	-27	256.91	95.90	156.91	-4.1
		\bar{y}	$\bar{\Delta}$		\bar{I}		\bar{R}	
	Slănic Moldova	1186.5	61.77		1.054 (105.4%)		5.4	
	Târgu Ocna	483	42.88		1.110 (111.0%)		11.0	

Source: calculus in according with insse.ro

To estimate the existing accommodation capacity in the next five years (2021-2025) (fig. 1) for Slănic Moldova resort we used the adjustment function $y = 40.919x - 81287$ obtained by the graphical method according to the linear trend and the square R was used to indicate the variation of values from the trend line ($R^2 = 0.478$); for Târgu Ocna resort we used the adjustment function $y = 47.734 - 95702$ also obtained by the graphical method according to the linear trend and the square R was used to indicate the variation of the values compared to the trend line ($R^2 = 0.9266$). The value of the coefficient $R^2 = 0.478$ for Slănic Moldova resort, suggests a less accurate approximation compared to the value of the coefficient obtained for Târgu Ocna resort, where its value equal to 0.9266, indicates a very good approximation of the trend.

Analysing the absolute and relative dynamics of the accommodation capacity in operation in Slănic Moldova and Târgu Ocna resorts, in the period 2011-2020 (tab. 6), we can observe that in Slănic Moldova resort the accommodation capacity in operation showed

fluctuations in the analysed period, in the year 2020 being 55.28% higher than the base year (2011). The highest increase compared to the base year was recorded in 2017, being over 100% (108.64%). Compared to the previous year, the tourist accommodation capacity in operation also showed fluctuations, the most important increase was registered in 2017 being over 40% (47.68%).

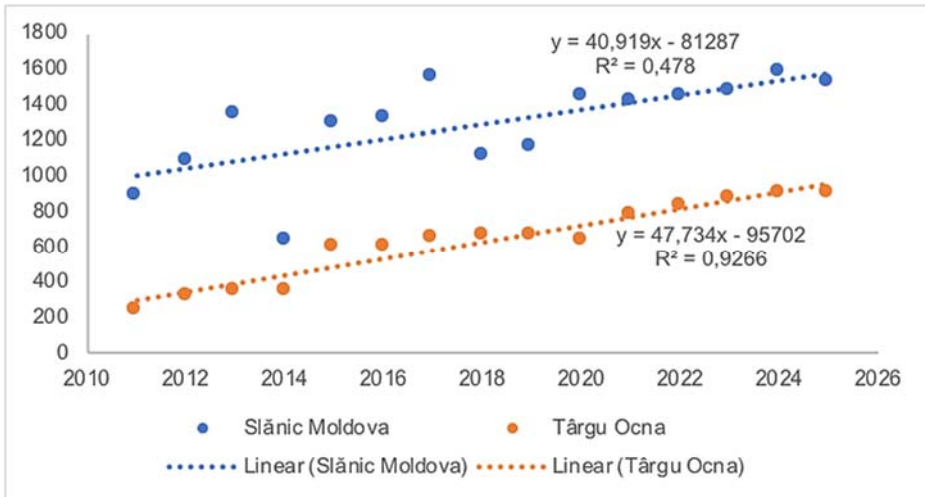


Fig. 1 Dynamics and estimation of existing accommodation capacity in the resorts of Slănic Moldova and Târgu Ocna, in the period 2021-2025

Table 6 Absolute and relative changes of the accommodation capacity in operation, from the spa resorts Slănic Moldova and Târgu Ocna (Bacău County), during 2011-2020

Years	Localities	Existing accommodation capacity in operation (places-days)	Absolute changes		Dynamics index %		Dynamics rhythm %	
			$\Delta_{t/1}$	$\Delta_{t/t-1}$	$I_{t/1}$	$I_{t/t-1}$	$R_{t/1}$	$R_{t/t-1}$
2011	Slănic Moldova	203468	-	-	-	-	-	-
	Târgu Ocna	90819	-	-	-	-	-	-
2012	Slănic Moldova	290748	87280	87280	142.89	142.89	42.89	42.89
	Târgu Ocna	110073	19254	19254	121.20	121.20	21.20	21.20
2013	Slănic Moldova	365907	162439	75159	179.83	125.85	79.83	25.85
	Târgu Ocna	123250	32431	13177	135.70	111.97	35.70	11.97
2014	Slănic Moldova	242027	38559	-123880	118.95	66.14	18.95	-33.86
	Târgu Ocna	124481	33662	1231	137.06	100.99	37.06	0.99
2015	Slănic Moldova	321439	117971	79412	157.98	132.81	57.98	32.81
	Târgu Ocna	149464	58645	24983	164.57	120.06	64.57	20.06
2016	Slănic Moldova	287465	83997	-33974	141.28	89.43	41.28	10.57
	Târgu Ocna	149411	58592	-53	164.51	99.96	64.51	-0.04
2017	Slănic Moldova	424534	221066	137069	208.64	147.68	108.64	47.68
	Târgu Ocna	180865	90046	31454	199.14	121.05	99.14	21.05
2018	Slănic Moldova	372150	168682	-52384	182.90	87.66	82.90	-12.34
	Târgu Ocna	184369	93550	3504	203.00	101.93	103.00	1.93
2019	Slănic Moldova	392113	188645	19963	192.71	105.36	92.71	5.36
	Târgu Ocna	219385	128566	35016	241.56	118.99	141.56	18.99
2020	Slănic Moldova	315959	112491	-76154	155.28	80.57	55.28	-19.43
	Târgu Ocna	159953	69134	-59432	176.12	72.90	76.12	-27.10
		\bar{y}	$\bar{\Delta}$	\bar{I}	\bar{R}			
	Slănic Moldova	321581	12499.00	1.050 (105.0%)	5.0			
	Târgu Ocna	149207	7681.55	1.064 (106.4%)	6.4			

Source: calculus in according with insse.ro

The adjustment according to the linear trend of the accommodation capacity in operation for the next five years (2021-2025) (fig. 2) in Slănic Moldova resort was made with the adjustment function $y = 12395x -$

$2E+07$ and the square R was used to indicate variation of values from the trend line ($R^2 = 0.611$). The adjustment for Târgu Ocna resort was made with the adjustment function $y = 10905x - 2E+07$ and the square R used to



indicate the variation of the values compared to the trend line was ($R^2 = 0.9165$). The value of the coefficient $R^2 = 0.611$ for Slănic Moldova resort, suggests a less accurate approximation compared to the value of the coefficient obtained for Târgu Ocna resort, where its value equal to 0.9165, indicates a very good approximation of the trend.

Given that the influencing factors in tourism will maintain the same pace in the

next five years (*tab. 7*), in 2025, in Slănic Moldova resort the existing tourist accommodation capacity can be about 1500 places and in Târgu Ocna resort 900 seats, and the tourist accommodation capacity in operation in Slănic Moldova resort can be of approximately 429 thousand places-days and in Târgu Ocna resort 248 thousand places-days.

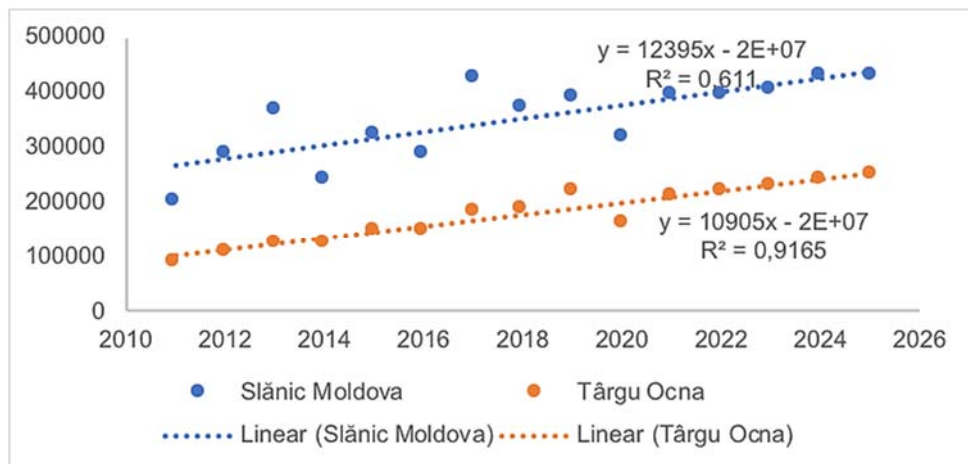


Fig. 2. Dynamics and estimation of accommodation capacity in operation in the period 2011-2025, from Slănic Moldova and Târgu Ocna resorts (Bacău County)

Table 7 Estimation of accommodation capacity in the period 2021-2025, in Slănic Moldova and Târgu Ocna resorts (Bacău County)

Years	t(x)	Existing accommodation capacity (places)	Accommodation capacity in operation (places-days)
Slănic Moldova			
		$y = 40.919x - 81287$	$y = 12395x - 2E+07$
2021	11	1422.53	397138.9
2022	12	1140.01	395865.2
2023	13	1479.11	404445.4
2024	14	1580.52	429492.2
2025	15	1524.69	428953.8
Târgu Ocna			
		$y = 47.734x - 95702$	$y = 10905x - 2E+07$
2021	11	787.60	211276.5
2022	12	829.84	220534.1
2023	13	871.00	230598.7
2024	14	903.57	240839.0
2025	15	913.84	248347.0

The index of net use of the tourist accommodation capacity in operation that expresses the relationship between the accommodation capacity in operation and its effective use by tourists (overnight stays), in the spa resorts Slănic Moldova and Târgu

Ocna from Bacău County, during 2011-2020 (*tab. 8*), presented values that varied between 22.03 and 39.94% in Slănic Moldova resort (in the 10 years analysed), in 2011 registering the highest value (of 39.94%), and in the resort of Târgu Ocna, the index of net use of

the tourist accommodation capacity in operation presented values (in the ten years analysed), which varied quite a lot, between 7.60 and 70.88%, in 2011 registering it is also its highest value (70.88%).

Table 8 The index of net use of the tourist accommodation capacity in operation in the spa resorts Slănic Moldova and Târgu Ocna (Bacău County), in the period 2011-2020

Years	Localities	Accommodation capacity in operation (places-days)	Overnights (number)	In (%)
2011	Slănic Moldova	203468	81267	39.94
	Târgu Ocna	90819	64379	70.88
2012	Slănic Moldova	290748	76609	26.34
	Târgu Ocna	110073	59220	53.80
2013	Slănic Moldova	365907	89490	24.45
	Târgu Ocna	123250	55023	44.64
2014	Slănic Moldova	242027	56520	23.35
	Târgu Ocna	124481	66047	53.05
2015	Slănic Moldova	321439	101544	31.59
	Târgu Ocna	149464	68298	45.69
2016	Slănic Moldova	287465	77270	26.87
	Târgu Ocna	149411	67783	45.36
2017	Slănic Moldova	424534	142416	33.54
	Târgu Ocna	180865	55124	30.47
2018	Slănic Moldova	372150	82018	22.03
	Târgu Ocna	184369	57288	31.07
2019	Slănic Moldova	392113	106478	27.15
	Târgu Ocna	219385	53798	24.52
2020	Slănic Moldova	315959	89573	28.34
	Târgu Ocna	159953	12170	7.60

Legend: In – utilization index for accommodation capacity in function

Source: calculus in according with insse.ro

CONCLUSIONS

Analysing the absolute and relative dynamics of the existing accommodation capacity in the period 2011-2020, from Slănic Moldova resort, we can say that it varied a lot in the analysed period and increased at its end (in 2020) by only 16.91%. The highest increase compared to the base year was recorded in 2017 and had values of over 70%. Overall, the average level of existing accommodation capacity in Slănic Moldova registered 1186.5 places, with an absolute average increase of 61.77 places and a relative increase of 5.4%.

In the resort of Târgu Ocna, in the analysed period (2011-2020), the analysis of the absolute and relative dynamics of the existing accommodation capacity showed that even in this case, it varied, but not much and increased a lot at the end of the analysed period. 2020) with over 150% (156.91%). The highest increase compared to the base year (2011) was recorded in 2018 when it

recorded values of over 170% (170.73%). Overall, the average level of accommodation capacity existing in Târgu Ocna resort registered 483 places, with an absolute average increase of 42.88 places and a relative increase of 11.0%.

Analysing the absolute and relative dynamics of the accommodation capacity in operation in Slănic Moldova resort, it could be observed that it showed fluctuations in the analysed period, in 2020 being 55.28% higher than the base year (2011). The highest however, the increase compared to the base year was registered in 2017 being over 100% (108.64%). Overall, the average level of accommodation capacity in operation in Slănic Moldova resort registered 321581 places-days/year, with an absolute average increase of 12499.00 places-days/year, respectively a relative increase of 5.0%. Comparing the average dynamics of accommodation capacity in operation (5.0%) with the existing one (5.4%), we noticed that

the first does not overtake the second, it has not increased almost not at all the efficiency of the accommodation offer through the process of renovation or increase of the tourist demand in Slănic Moldova resort, in the analysed period (2011-2020).

In Târgu Ocna resort, the analysis of the absolute and relative dynamics of the accommodation capacity in operation from the analysed period (2011-2020), indicated that it increased more or less compared to the base year (2011), in 2020 being 76.12% higher. However, the highest increase compared to the base year was registered in 2018, being over 140% (141.56%). Overall, the average level of accommodation capacity in operation in Târgu Ocna resort registered 149,207 places-days/year, with an absolute average increase of 7681.55 places-days/year, respectively a relative increase of 6.4%. If we compare the average dynamics of the accommodation capacity in operation (6.4%) with the existing one (11.0%), it can also be observed that in Târgu Ocna resort the first does not overtake the second one, which again means the fact that it did not increase the efficiency of the accommodation offer through the process of renovation or increase of the tourist demand in this resort, in the analysed period (2011-2020).

Given that the factors influencing the tourist activity will maintain the same rhythm in the next five years, in 2025, in Slănic Moldova resort the existing tourist accommodation capacity can be about 1500 places and in Târgu Ocna resort 900 places, and the tourist accommodation capacity in operation in Slănic Moldova resort can be of approximately 429 thousand places-days and in Târgu Ocna resort 248 thousand places-days.

The index of net use of the tourist accommodation capacity in operation, in Slănic Moldova resort in the period 2011-2020 presented values that varied between 22.03 and 39.94%, in 2011 registering the highest value (of 39.94%), and in the resort of Târgu Ocna it presented values (in the ten years analysed), which varied quite a lot, between 7.60 and 70.88%, in 2011 also registering the highest its value (70.88%).

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