

**STATISTICAL ANALYSIS OF THE TOURISTIC
ACCOMMODATION CAPACITY AND ACTIVITY IN ROMANIA
DURING 2000-2009**

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ABSTRACT: *Tourism is considered and pursued in its development through a system of specific indicators, based on a standardized methodology for computing worldwide. Tourism indicators provide the necessary information and quantify the tourism policy, allowing the effects of these actions and measurement. This paper is a study using statistical methods, such as indices for the characterization of the Romanian tourism during the period from 2000 to 2009, the statistical analysis of the capacity and activity of tourist accommodation.*

KEY WORDS: *touristic accommodation capacity; types of establishments of touristic reception*

JEL CLASSIFICATION: *L83*

**1. ESTABLISHMENTS OF TOURISTIC RECEPTION WITH FUNCTIONS OF
TOURISTIC ACCOMMODATION CAPACITY BY STRUCTURES**

To maximize tourism potential of natural and anthropogenic resources has created an infrastructure that is an adequate material base consisting primarily of accommodation spaces. Table 1 presents the tourist accommodation capacity and activity, by type of tourist reception, during 2000 - 2009 and reveals the dominance of hotels and villas. To illustrate the trend of tourist accommodation activity by type of tourist reception structures in the period 2000 - 2009 is calling on chronogram (figure 1). As can be seen from Figure 1, tourism development in our country generally has been a permanent upward trend, the size and structure was linked to the dynamics of consumer requirements. Absolute and relative indicators calculated with a fixed base or chains are presented in the table 2.

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Table 1. Establishments of touristic reception of functions of touristic accommodation capacity, regardless of ownership

Types of establishments of touristic reception	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009*
Total	3121	3266	3338	3569	3900	4226	4710	4694	4840	5079
Hotels	811	828	835	886	927	989	1059	1075	1104	1154
Hotels for youth	1	3	1	4	10	25	34	35	35	37
Hostels	2	7	11	15	21	33	41	44	46	60
Apartment Hotels	1	1	2	:	1	4	7	6	7	11
Motels	131	139	137	143	149	161	154	150	153	143
Inns	23	18	16	16	15	11	9	6	5	5
Touristic villas	801	746	669	676	691	716	742	708	718	744
Touristic chalets	161	158	140	138	132	113	111	104	110	117
Hunting chalets	:	:	:	:	:	:	4	4	6	6
Fishing chalets	:	:	:	:	:	:	1	:	:	:
Bungalows	265	270	259	265	279	305	298	266	264	265
Holiday villages	1	1	1	2	2	3	2	3	3	4
Campings	74	72	71	74	72	72	68	62	59	55
Touristic halting places	6	10	11	15	25	29	31	30	31	30
Touristic houselet units	66	60	58	60	53	52	53	49	50	46
School and pre-school camps	172	168	168	157	157	151	128	115	111	111
Urban touristic boarding houses	201	244	271	328	461	597	702	736	783	876
Rural touristic boarding houses	160	193	221	266	431	956	1259	1292	1348	1409
Agro-touristic boarding houses	240	343	461	515	461	:	:	:	:	:
Ships accommodation spaces	5	5	6	9	13	9	7	9	7	6
Other collective accommodation units	:	:	:	:	1	:	:	:	:	:

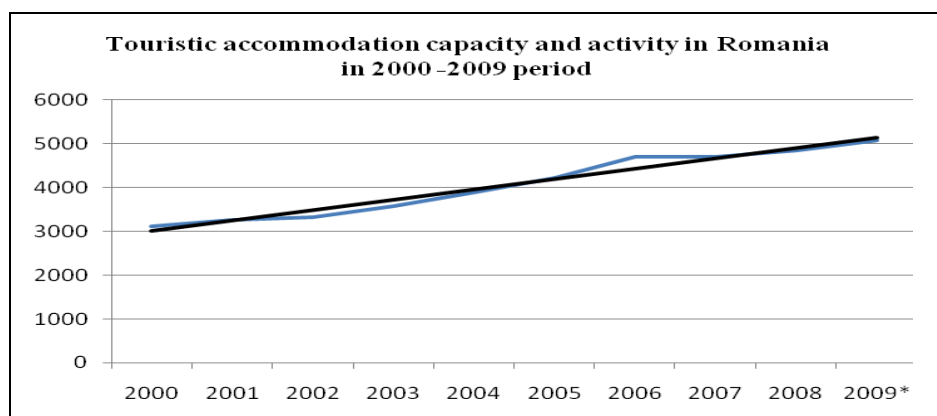
* *provisional data*Source: National Institute of Statistics – database Tempo online – www.insse.ro**Figure 1. Touristic accommodation capacity and activity in Romania in 2000-2009**

Table 2. Absolute and relative indicators

Year	The volum of establishments of touristic reception of functions of touristic accommodation capacity Y	Absolute changes		Index of dynamics		Rate of dynamics	
		with a chain base $\Delta_{t/t-1}$	with a fixed base $\Delta_{t/1}$	with a fixed base $I_{t/1}$	with a chain base $I_{t/t-1}$	with a chain base $R_{t/t-1}(\%)$	with a fixed base $R_{t/1}(\%)$
1	2	3	4	5	6	7	8
2000	3121	-	-	-	-	-	-
2001	3266	145	145	104.6	104.6	4.6	4.6
2002	3338	72	217	107	102.2	2.2	7
2003	3569	231	448	114.4	106.9	6.9	14.4
2004	3900	331	779	125	109.3	9.3	25
2005	4226	326	1105	135.4	108.4	8.4	35.4
2006	4710	484	1589	150.9	111.5	11.5	50.9
2007	4694	-16	1573	150.4	99.7	-0.3	50.4
2008	4840	146	1719	155.1	103.1	3.1	55.1
2009	5079	239	1958	162.7	104.9	4.9	62.7

Calculation of average indicators:

- *the average* of establishments of touristic reception with functions of touristic accommodation: $\bar{y} = \frac{\sum y_i}{n} = \frac{40743}{10} \approx 4074$

establishments of touristic reception with functions of touristic accommodation /year

- *average absolute change*: $\bar{\Delta} = \frac{\sum \Delta_{t/t-1}}{n-1} = \frac{1958}{9} \approx 218$

establishments of touristic reception with functions of touristic accommodation /year

- *average index dynamics*: $\bar{I} = n - \sqrt[n]{\prod I_{t/t-1}} = n - \sqrt[n]{I_{t/1}} = n - \sqrt[n]{\frac{y_n}{y_1}} \approx 1,02$

- *average rate dynamics*: $\bar{R} = \bar{I} - 1 = 1,02 - 1 = 0,02$ or 2%

Given these results, we can say that the touristic accommodation tourism had every year for the period 2000-2009 generally upward evolution, except for the year 2007, when there was a lower compared with the previous year with 16 units.

The establishments of touristic reception with functions of touristic accommodation had an average level of 3952 structures, from one year to the next level by increasing the average volume structures with 203 locations, which means a change in relative 1,02 times and an average annual growth rate of 2%. To see establishments of touristic reception with functions of touristic accommodation we used the structure diagram (Figure 2).

For the 2000-2009 period establishments of touristic reception were distributed on average, as follows: 967 hotels, followed by a total of 754 rural touristic boarding houses, 721 touristic villas, 520 urban touristic boarding houses, etc.

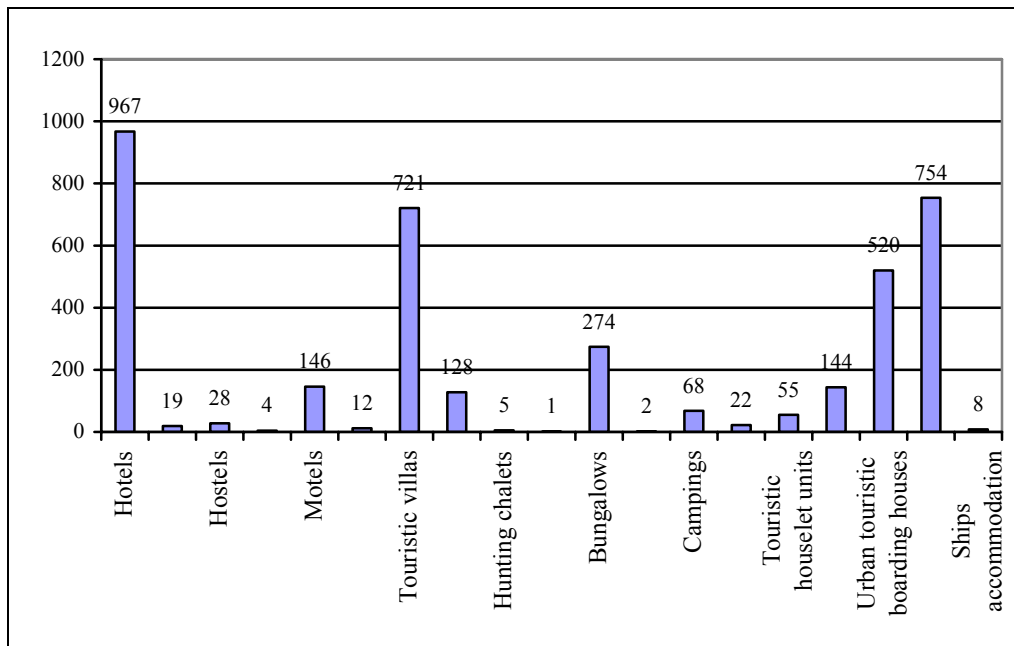


Figure 2. Average activity of tourist accommodation by type of reception

2. TOURISTIC ACCOMMODATION CAPACITY IN 2000 -2008

Existing places of establishments of touristic reception with functions of tourist accommodation on the types of structures are shown in Table 3.

Calculation of average indicators:

- average number of seats in establishments of touristic reception with functions of tourist accommodation: $\bar{y} = \frac{\sum y_i}{n} = \frac{2516485}{9} \cong 279609$.

existing places in establishments of touristic reception with functions of tourist accommodation/year

- average absolute change: $\bar{\Delta} = \frac{\sum \Delta_{t/t-1}}{n-1} = \frac{3757}{8} \cong 470$ places/year

- average index dynamics: $\bar{I} = n - 1 \sqrt[n]{\prod I_{t/t-1}} = n - 1 \sqrt[n]{I_{t/1}} = n - 1 \sqrt[n]{\frac{y_n}{y_1}} = \sqrt[8]{1,02} \cong 1,008$

- average rate dynamics: $\bar{R} = \bar{I} - 1 = 1,008 - 1 = 0,008$ or 0,8%

As regards the number of places in establishments of touristic reception with functions of tourist accommodation during 2000-2008 we can see in generally an upward trend in average during this period there were 279609 people. Level of places

in establishments of touristic reception with functions of tourist accommodation in the year 2000 (280005 places) was exceeded in 2005 (282661 places) with 2656 seats. On average the number of places in establishments of touristic reception with functions of tourist accommodation increased from one year with 470 places, which means a relative change of 1,008 times an average annual growth rate of 0.8%.

Table 3. Touristic accommodation capacity in 2000-2008 (number of seats)

Types of establishments of touristic reception	2000	2001	2002	2003	2004	2005	2006	2007	2008*
Total	280005	277047	272596	273614	275941	282661	287158	283701	283762
Hotels	157848	157703	157283	158776	160358	163451	167633	168736	168739
Hotels for youth	16	80	20	202	486	1487	2282	2059	2062
Hostels	91	285	305	424	694	987	1240	1463	1466
Apartment Hotels	:	:	:	:	12	118	138	121	127
Motels	6895	6602	6234	6173	:	:	:	:	:
Inns	6059	6076	5812	5795	5992	6186	5725	5614	5622
Touristic villas	836	526	422	378	385	292	278	186	188
Touristic chalets	19734	18585	16669	16464	16107	15157	16005	15333	15336
Hunting chalets	7972	7523	6176	6361	6215	5961	5803	5517	5520
Fishing chalets	:	:	:	:	:	:	57	57	60
Bungalows	:	:	:	:	:	:	15	:	:
Holiday villages	4617	4584	4584	4769	4854	4963	4698	4461	4464
Campings	36	36	36	56	56	266	110	160	163
Touristic halting places	28857	28029	29263	27598	26894	26568	26962	25006	25009
Touristic houselet units	263	729	785	877	1226	1485	1114	1152	1155
School and pre-school camps	6298	5501	5177	5354	4365	4227	4273	4120	4123
Urban touristic boarding houses	40149	38398	34964	32821	30198	28916	23227	20320	20323
Rural touristic boarding houses	3197	3758	4378	5670	8100	10910	12546	13429	13432
Agro-touristic boarding houses	1815	2188	2596	3272	5351	11151	14551	15448	15451
Ships accommodation spaces	1729	2560	3623	4238	4054	:	:	:	:
Other collective accommodation units	488	486	503	559	594	536	501	519	522

* *provisional data*

Source: National Institute of Statistics – database Tempo online – www.insse.ro

Number of tourists, the most representative indicator of quantitative, had a development in 2000-2008 period presented in table 5.

As can be seen in figure 3 number of tourists accommodated in establishments of touristic reception with functions of tourist accommodation has during 2000-2008 an upward trend. In the period 2000-2008 were accommodated on average 5493358 total visitors, of which distributed by type of receipt, so: in hotels: 4260803 tourists, in motels: 216 625 tourists, the inns: 4591 visitors, the villas: 207,167 tourists, tourist hostels urban: 215 771 tourists.

Table 4. Dynamics of existing places of establishments of touristic reception with functions of tourist accommodation on the types of structures in 2000-2008

Year	The volume of establishments of touristic reception of functions of touristic accommodation capacity Y	Absolute changes		Index of dynamics		Rate of dynamics	
		with a chain base $\Delta_{t/t-1}$	with a fixed base $\Delta_{t/1}$	with a fixed base $I_{t/1}$	with a chain base $I_{t/t-1}$	with a chain base $R_{t/t-1}$ (%)	with a fixed base $R_{t/1}$ (%)
1	2	3	4	5	6	7	8
2000	280005	-	-	-	-	-	-
2001	277047	-2958	-2958	98.9	98.9	-1.1	-1.1
2002	272596	-4451	-7409	97.4	98.4	-1.6	-2.6
2003	273614	1018	-6391	97.7	100.4	0.4	-2.3
2004	275941	2327	-4064	98.5	100.9	0.9	-1.5
2005	282661	6720	2656	100.9	102.4	2.4	0.9
2006	287158	4497	7153	102.6	101.6	1.6	2.6
2007	283701	-3457	3696	101.3	98.8	-1.2	1.3
2008	283762	61	3757	101.3	100.0	0.0	1.3

* provisional data

Source: National Institute of Statistics – database Tempo online – www.insse.ro

Table 5. Tourists stay in establishments of touristic reception with functions of tourist accommodation, by types of structures

Types of establishments of touristic reception	Property forms	Years								
		2000	2001	2002	2003	2004	2005	2006	2007	2008*
UM: Number of persons										
Total	Total	5109444	4920129	4874777	4847496	5056693	5638636	5805096	6216028	6971925
Hotels	Total	4073748	3881859	3823618	3830398	3982591	4339458	4477936	4725448	5212170
Hotels for youth	Total	:	660	2621	2496	5177	18620	33800	52547	61388
Hostels	Total	:	4669	14502	24845	28245	42344	35596	37519	50233
Motels	Total	154685	168674	191344	200783	200657	243682	238794	255370	295644
Inns	Total	6967	3527	3670	4049	3952	4113	4084	5502	5456
Touristic villas	Total	310981	217540	174956	142562	151739	182876	202483	231311	250059
Touristic chalets	Total	123774	116574	104049	84676	92972	76501	64480	70993	91945
Hunting chalets	Total	104689	93104	100641	94576	95243	107022	70155	85778	93852
Touristic halting places	Total	:	8176	6839	4080	5752	14785	17079	15388	14933
Urban touristic boarding houses	Total	95239	89328	106129	126109	163925	235877	310035	363664	451640
Rural touristic boarding houses	Total	:	15596	21244	32201	47444	96823	170164	217020	288508

* provisional data

Source: National Institute of Statistics – database Tempo online – www.insse.ro

Therefore, the largest proportion of the number of tourists stay on average for the period 2000-2008 had a hotels (84%), followed at a distance from hotels, villas and tourist travel urban hostels (4% each).

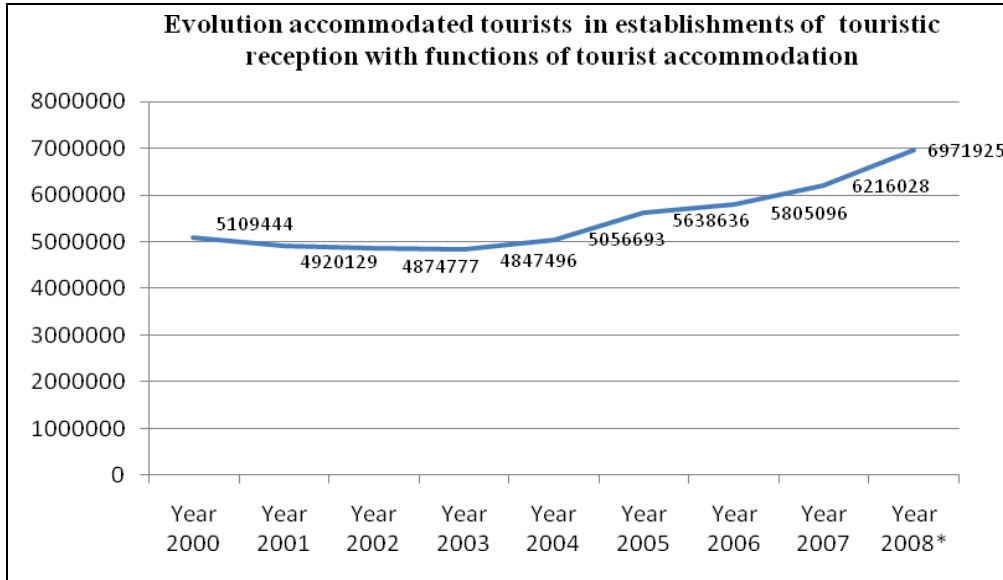


Figure 3. Evolution accommodated tourists in establishments of touristic reception with functions of tourist accommodation

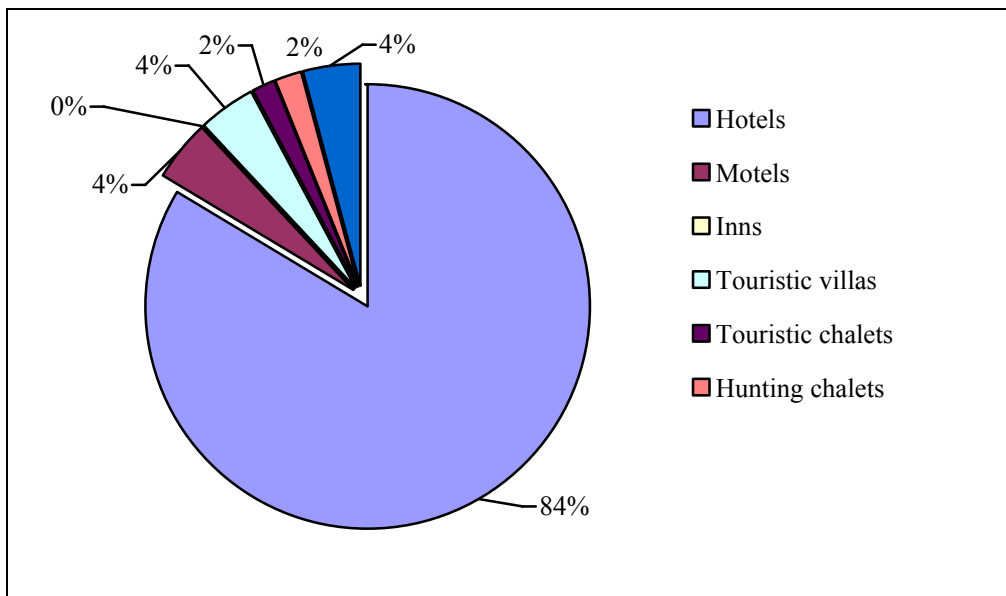


Figure 4. Distribution of tourists accommodated in establishments of touristic reception in 2000-2008

4. CONCLUSIONS

During 2000-2009 the evolution of tourism in our country in general has made a permanent upward trend. Establishments of touristic reception with functions of tourist accommodation had every year for the 2000-2009 periods generally an upward trend, except 2007.

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