

**ANALYSIS OF THE CORRELATION BETWEEN THE EXISTING
ACCOMMODATION CAPACITY AND THE NUMBER OF TOURISTS ARRIVED
IN SUCEAVA COUNTY STRUCTURES OF TOURISTIC RECEPTION**

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Abstract

In the international touristic practice, but also in the specialized literature, it is perceived the population's trend to spend the leisure time in an active way, by practicing tourism. It is also noted the fact that the forms of tourism organized in the big crowded centers, with fixed, rigid, monotonous programs, with journeys from a crowded environment to another, don't satisfy anymore the tourists' aspirations, motivations, options. They prefer the countryside zones that offer a non-polluted environment, with a natural and cultural potential very slightly altered.

Such an area, which is inscribed in the rich heritage of the Romanian tourism, is Suceava County, which, by its offer, may be envisaged as an exceptional touristic zone of Romania.

Suceava County, Bârsa Land's progress demands the inclusion of the principals of the lasting regional development in its development strategy.

Within this framework, the importance of studying and analyzing the touristic activity's evolution can be noted.

The need of acknowledging the fluctuations registered by the results of the touristic activity deployment allowed the approach of the issue related to the correlation stage between the existing accommodation capacity and the number of tourists arrived in the accommodation structures of Suceava County during the 2000-2006 period.

The mutual involvement relationship, the existence, the direction, the form and the intensity of the connection between the two indicators are analyzed in this paper.

The conclusions stated following the analysis of the obtained result, represent an upper step for filling in the image regarding the regional tourism activity in the conditions of the establishment and application of certain regional lasting development strategies.

Key words: accommodation capacity, correlation, Suceava County.

JEL classification: C10, Q01

**1. SUCEAVA COUNTY – EXQUISITE
ROMANIAN TOURISTIC REGION**

An area which is inscribed in the rich patrimony of the Romanian tourism is *Suceava County*, which, by its offer, can be considered one of Romania's exceptional touristic zones.

Suceava County lies in the north-eastern part of Romania, stretching over a 8553,5 km² area (representing 3,6 % from the country's total territory), being the second biggest in the country. By its big dimensions we can explain the great variety in terms of geology, landscape and also natural resources.

Suceava region means beautiful landscapes with a large and precious range of natural richness, with the synergetic diversity sheltered by the forestry patrimony covering 52% from this region, all of them with serious implications on the creative potential. Likewise, Suceava region is represented by a heroic history, tradition and customs of absolute originality, monuments, and craftsmanship of a rare ingenuity, Renaissance castles foundations certifying, for over five centuries, its European vocation.

The identification of the specificity of every urban or rural locality, with the purpose of contributing to a better launch of the intern and international tourism, has been made by using multiple criteria: the economic potential, the quantity and the quality of the natural and anthrop touristic resources, the transportation ways and means, the traditions and customs etc. Thus, the localities can be considered either climatic and landscape, either ethnographic-folklore, with archaeological, historical and culture monuments.

Outlined in historical time, the *Suceava County* (Bârsa Land's) touristic and anthrop potential extends its frame by the creative ascension of man in accordance with the demands of modern civilization.

The presentation of the touristic patrimony of this region, by pointing out the main components of the natural and anthrop potential, as well as of certain corresponding features, confirms that the area owns a rich and valuable touristic potential, with a huge possibility of turning into account.

Thus, the regional lasting development of tourism in *Suceava county* includes on one side the highlight of the possibilities of turning to account the components of the touristic fund existing in the area, and on the other side, the application of a management model which would interpenetrate all the component elements of a touristic market adapted to the international demands and standards.

The elaboration and the application of a management model cannot be achieved but in the conditions where there are pursued the results of a study concerning the touristic activity in *Suceava county*.

2. THE EVOLUTION OF THE EXISTING ACCOMMODATION CAPACITY AND OF THE NUMBER OF INCOMING TOURISTS IN THE TOURIST RECEPTION STRUCTURES IN SUCEAVA COUNTY, BETWEEN 2000-2006.

The existing accommodation capacity, an important indicator of the touristic offer, having a direct connection with one of the number of touristic units, is expressed by *the number of the accommodation places* offered by the touristic units in *Suceava County* (table 1):

Table 1. – Number of places in the touristic accommodation structures of Suceava County

Years	2000	2001	2002	2003	2004	2005	2006
Number of places	5269	5034	5192	5577	5755	6526	7012

Source: *Romanian Statistical Yearbook, 2001-2007 editions, published by INS*

Figure 1 indicates the general trend of slight increase of the number of places in the structures of touristic reception of *Suceava county*. The annual recorded values experience a minimum at the level of the year 2001 of 5034 places, that is effectively with 1978 places less, compared to the maximum value of the year 2006, in the conditions where the average number of the accommodation places during the period 2000-2006 has been established as being of 5704 places yearly. The annual average increase recorded during the analyzed period as regards to the number of the places offered to the tourists by the structures of touristic reception in the region, is of 291 places annually and represents in fact a growth of 1,0488 times, namely a relative average modification with only 4,88%.

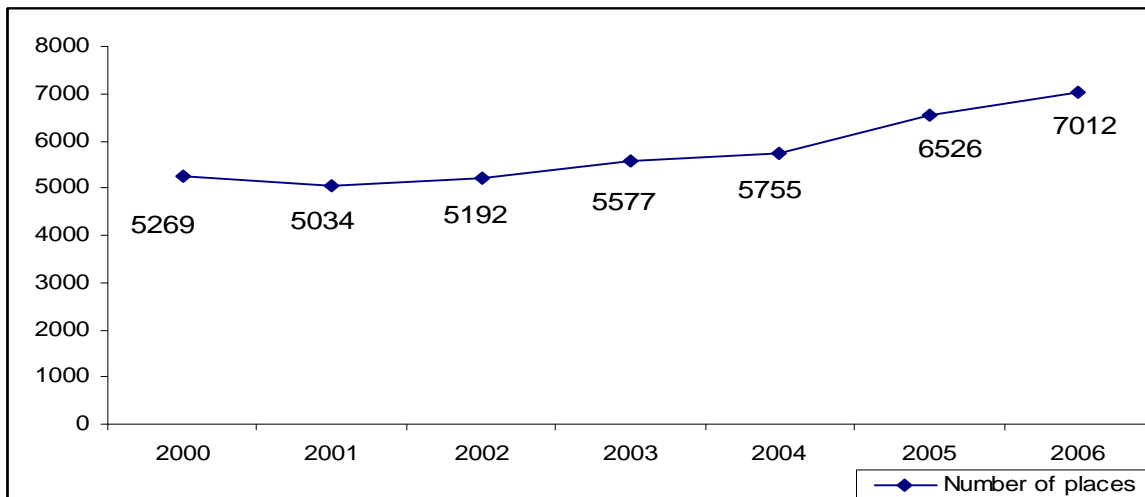


Figure 1 – The evolution of the existing tourist accommodation in Suceava County

In a tight accordance with the size, the functionality, the degree of updating and integration in the space of *Suceava county*, this technical-material base tends to comply at a high level with the touristic demand.

The fluctuations of the touristic activity in *Suceava County* can be emphasized by using the main indicators of quantifying the touristic circulation: number of accommodated tourists and number of recorded overnight stays in the structures of touristic reception.

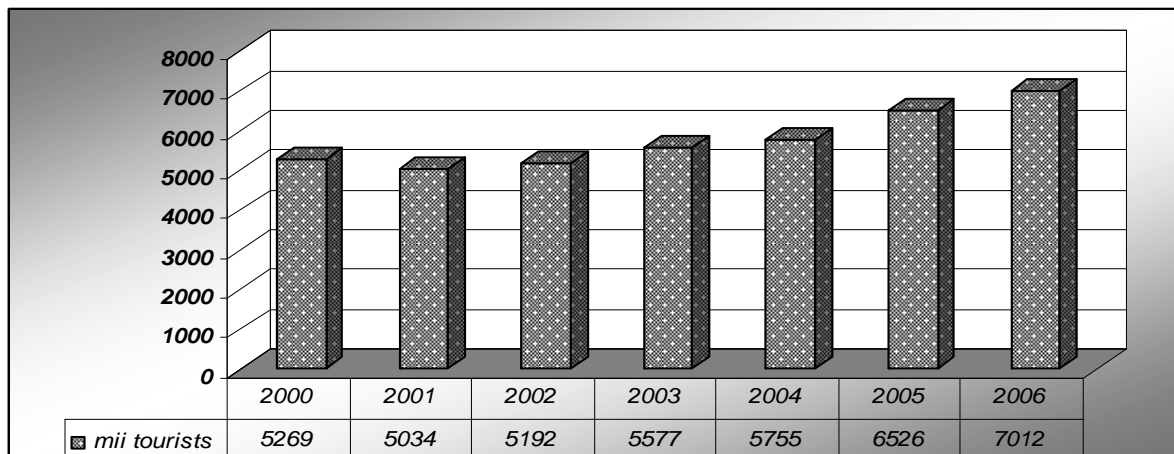
The evolution of *the number of tourists* arrived in *Suceava county*, during the period 2000-2006, is the result of the theoretical demand transformed into effective demand, on one part as a consequence of satisfying the motivations of practicing tourism, and on the other side as an answer to the quality of the touristic offer of this region.

Table 2. – Number of arrivals of tourists in the touristic reception structures of Suceava County

Years	2000	2001	2002	2003	2004	2005	2006
Number arrivals tourists	5269	5034	5192	5577	5755	6526	7012

Source: *Romanian Statistical Yearbook, 2001-2007 editions, published by INS*

The evolution of the number of tourists follows, in a certain measure, the one of the touristic offer's indicators, in the direction of registering an overall increase. This general increase is rather reduced, with just 60 thousands tourists, during the period of the 7 years or in average of 174 thousand tourists yearly, this being the result of the attempt of adaptation of the demand and consumption to the touristic offer of the area *Suceava county* (table 2).



Graphic 2 – The evolution of the number of incoming tourists in the touristic reception structures in Suceava County

The decrease of the number of places offered to the tourists recorded at the level of the year 2001 also reflects upon their arrival in the touristic reception structures, thus being explained the minimum value recorded in this year, of 151 thousand tourists.

At the same time, it is noticed that the increase trend of the number of tourists follows the one of the number of places offered by the touristic reception structures in the area, in this way being also reasoned the average relative recorded growth (5,50%), close as percentage value to the one of the indicator with which it has been compared, in the conditions of the establishment of an average absolute increase with 10 thousand tourists per year.

The trends in the evolution of the tourism activity in the *Suceava county* are completed by an analysis of the connection and of the inter-dependency

between the existing accommodation capacity and the number of incoming tourists in the touristic reception structures in *Suceava county* during the period 2000-2006.

3. THE CORRELATION ANALYSIS BETWEEN THE EXISTING ACCOMMODATION AND THE NUMBER OF INCOMING TOURISTS IN THE TOURISTIC RECEPTION STRUCTURES IN SUCEAVA COUNTY.

Generally, the connections between the phenomena are grounded on the fact that each phenomenon manifests under the influence of a complex of factors, some of them essentials, others with a more reduced and less significant influence. The research of these connections is based upon the use of, either simple methods and procedures of the connections' interpretation, either of certain analytical applicable methods by using mathematical functions and procedures.

The existence and the intensity of the connection between the existing accommodation capacity and the number of tourists have been analyzed by the application of the method of correlation and regression.

Table 3 – Algorithm of calculation of the correlation coefficient

Years	Existing accommodation capacity (th.)	Number of tourists (th.)	$x_i y_i$	x_i^2	y_i^2
	x_i	y_i			
2000	5,27	153	806,31	27,77	23409
2001	5,03	151	759,53	25,30	22801
2002	5,19	162	840,78	26,94	26244
2003	5,58	162	903,96	31,14	26244
2004	5,76	187	1077,12	33,18	34969
2005	6,53	192	1253,76	42,64	36864
2006	7,01	211	1479,11	49,14	44521
Total	40,37	1218	7120,57	236,11	215252

Source: *Romanian Statistical Yearbook, editions 2001-2007, published by INS*

$$r = \frac{n \sum_{i=1}^7 x_i y_i - \sum_{i=1}^7 x_i \cdot \sum_{i=1}^7 y_i}{\sqrt{n \sum_{i=1}^7 x_i^2 - \left(\sum_{i=1}^7 x_i\right)^2} \cdot \sqrt{n \sum_{i=1}^7 y_i^2 - \left(\sum_{i=1}^7 y_i\right)^2}} =$$

$$= \frac{7 \cdot 7120,57 - 40,37 \cdot 1218}{\sqrt{7 \cdot 236,11 - 40,37^2} \cdot \sqrt{7 \cdot 215252 - 1218^2}}$$

$$r = 0,92$$

The application of the correlation method has assumed the determination of the correlation coefficient which value of 0,92 indicates us the existence of a direct connection of average intensity between the existing accommodation capacity and the number of tourists arrivals in the structures of touristic reception from Suceava county, during the period 2000-2006.

The utilization of the multiple regression method (table 4) assumes an estimation of the parameters of the regression function, achieved by applying the method of the smallest squares:

Table 4 – Correlation between the functional accommodation capacity and the number of incoming tourists in the touristic reception structures in Suceava county

SUMMARY OUTPUT						
<i>Regression Statistics</i>						
Multiple R	0,950085					
R Square	0,902661					
Adjusted R Square	0,883193					
Standard Error	7,793568					
Observations	7					
<i>ANOVA</i>						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	2816,301525	2816,301525	46,36673808	0,001040704	
Residual	5	303,6984746	60,73969492			
Total	6	3120				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	5,146551	24,97177618	0,206094725	0,844845926	-59,04544288	69,33855
C.C.existing	29,27853	4,299777211	6,8093126	0,001040704	18,22559795	40,33146

The value of the correlation report $R = 0,95$ confirms us the existence of the direct strong connection between the two analyzed indicators.

The equation of the linear theoretical adjustment $\hat{y} = \hat{a} + \hat{b}x_i$, by its use in the study of the connection between the two indicators, becomes:

$$\hat{y}_i = 5,15 + 29,28x_i$$

The regression coefficient $\hat{b} = 29,28$ shows us that, at an increase of the existing accommodation capacity with one thousand places, there is recorded an average raise with approximately 29 thousand tourists arrived in the structures of touristic accommodation.

The value of the determination coefficient $R^2=0,9027$ shows us that 90,27% represent the influence of the existing accommodation capacity on the number of the tourists' arrivals, the rest of 9,73% being due to other random, aleatory, not essential factors.

The result of using the Fisher test: $F=46,36673808$ (Significance $F = 0,001040704 < 0,05$), indicates us the fact that the used model expresses quite well the correlation established between the existing accommodation capacity and the number of the tourists' arrivals in the structures of touristic reception from Suceava county, during the period 2000-2006.

The value resulted by the application of the "t" student test: $t_{\text{calculated}} = 6,8093126$ ($P\text{-value} = 0,001040704 < 0,05$) shows us that there is no

significant difference between the two indicators which connection has been analyzed.

To accept the model as valid it is considered a stage that creates the possibility of predicting the existing accommodation capacity and the number of the tourists' arrivals in the structures of touristic reception in Suceava county for the following years.

Irrespective of the method used, it has been established and emphasized that, on the whole, during the period 2000-2006 the two indicators, the existing accommodation capacity and the number of the tourists' arrivals in the structures of touristic reception in Suceava county, have evolved in a close correlation, what outlines the favourable trend of the area's activity of tourism towards its lasting development.

The application of the various statistical-mathematical methods has allowed obtaining results that made easier the elaboration of a study related to the outlining of an image of the touristic activity carried on in Suceava county during the period 2000-2006.

Against the background of the transactions and of the political-social-economic changes, the measurement of the touristic activity in the mentioned area has led to the elaboration of conclusions that highlight the redressing efforts in this field of activity. These efforts have led to the appearance of new structures of touristic reception, that try to present themselves at high quality standards, in order to satisfy ever more the tourists' demands. Until 2001, the tourists weren't too motivated to cover this area, as we are shown from the study's results, whilst, starting

with 2002, the management structures involved in this activity of tourism are mobilizing and are modelling their offer by using under other coordinates the promotion activities, so that, in 2006 it is reached the point of recording positive results compared to the previous years, thus being noted the trend of redressing of the touristic sector of Suceava county.

The general infrastructure represents a priority element in the base's development, updating and adaptation to the touristic market's demands, polarizing the movement of the touristic flows, modifying favourably the deployment of the touristic activities.

The achieved study may be considered as a foundation that created in this way the adequate framework for the accomplishment of a model of regional lasting development of Suceava county,

which can raise this Romanian touristic zone at international standards.

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