THE CITY OF CLUJ-NAPOCA AND THE CLUJ COUNTY, IMPORTANT TOURIST ATTRACTIONS IN ROMANIA

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Abstract

The paper aimed to analyze the main trends in tourism in Cluj-Napoca and the Cluj County in the period 2007-2016 based on the empirical data provided by the National Institute of Statistics and the Statistical Division of the Cluj County. Tourism offer was briefly presented in terms of natural, historical and cultural patrimony, and also in terms of accommodation capacity (number of units and places) in its dynamics and correlation with the tourism demand, in terms of number of tourists arrivals and overnight stays. The data have been processed using index method, statistical parameters, Pearson correlation coefficients, linear regression models and the Excel facilities. In 2016, in Cluj-Napoca there were by 81.9\% more units of tourist accommodation and by 74\% more places, while at the county level, there were by 35\% more units and by 20\% more places. More exactly, in 2016, the offer of places was 6,216 in Cluj-Napoca and 8,450 places in the county. In the same period, the tourist arrivals increased by 42\% in Cluj-Napoca and by 44\% in the county. The number of overnight stays also increased by 34\% and, respectively 33\%. In 2016, Cluj-Napoca was visited by 371,505 tourists meaning 1.15 tourists/inhabitant, while the county registered 498,500 visitors, meaning 0.69 tourists/capita. The number of overnight stays accounted for 704,921 in Cluj-Napoca and 952,900 in the county. The regression linear models proved that the variation of the number of places has a low effect on the number of arrivals and overnight stays both in the city of residence and in the county. But a strong relationship is between the number of arrivals and overnight stays, ($r = 0.990$). As a final conclusion, the higher and higher number of Romanian and foreign visitors in Cluj-Napoca and the county of Cluj is explained by the diversified offer in terms of natural, historical and cultural patrimony, accommodation units and places, hospitality, high quality services which reflect a good tourism management and marketing.

Key words: trends, tourism, attractions, offer, demand, Cluj-Napoca municipality, the Cluj County, Romania

INTRODUCTION

Romania's tourism has registered an important development during the last decade attracting more and more tourists, but there are still differences from a region to another regarding the demand/offer ratio. Despite of its growth in the recent years, the tourism contribution to GDP is still a low one. The tourism income comes mainly from mountain tourism, seashore tourism, agro-tourism, spa and medical tourism, special cultural, religious and sport events, despite that Romania has a diversified and high natural and cultural potential for the most different tourism activities.

From a region to another and from a city or village to another, there are strengths and weaknesses which could be improved in the field of tourism, mainly regarding its infrastructure and service quality [3]. Tourism infrastructure must be correlated quantitatively and qualitatively with the tourist demand and expectation regarding the price/quality ratio [2]. The access to the tourist destination, accommodation structure, its capacity and lodging quality, facilities for entertainment at the destination are still the main problems which must be solved in Romania's tourism. Investments have a low percentage in tourism sector compared to other branches of the
economy. In 2016, Romania invested RON 14.7 billion in Travel and Tourism, representing 8.1% of the total investment in the economy (USD 3,364.9 Million). [29]. The peculiarities of a tourist destination must be analyzed in the local context, by means of tourism offer and demand using appropriate methods to reach accurately results [13].

Transilvania is a special region of Romania as mentioned by Georg Reicherstorffer in his book "Choorographia Transylvaniae" published in 1532 in Vienna: „Transilvania is this too proud and rich region is too humble in all things which are in the benefit of men, in gold and silver and in salt mines, from which tear by year it is developed an immense treasure with hills covered by vineyards and everywhere a lot of cattle and sheep flocks ... Do not suspect someone else in Europe is another province equal by wealth and beauty". [15]

Cluj County is an area which offer a diversified supply of tourist attractions and allow a large variety of tourism forms to practice. The natural resources: the beautiful landscapes in the mountains, plains, hills, valleys, caves, rivers, forests, the sources of thermal and mineral waters are favorable for the development of leisure, recreation, spa tourism, climate tourism (high air ionization and aerosols in the salt mines), mountain tourism (walking, climbing, caving, hiking, hunting), sport tourism (skiing, and skating), extreme tourism (cycling, river rafting, paragliding) and rural tourism and agrotourism.

The cultural heritage is also diversified from the archeological sites, to museums, charming villages, folk traditions (costumes, music, dance, gastronomy), religious fests, etc. are of high attraction both for Romanian and foreign tourists [14].

In this context, the purpose of the paper was the analysis of the tourism offer in terms of the natural and cultural heritage, as well as accommodation capacity versus the demand of tourism in terms of number of tourist arrivals and overnight stays in the City of Cluj-Napoca and in the Cluj County.

These destinations were chosen because Cluj area is very dynamic from an economic point of view, and the richness of cultural objectives and events have attracted more and more tourists year by year. The paper combine in a harmonious manner both the cultural, ethnographic, and natural attractions with the concrete status of infrastructure, mainly regarding the number of units for tourist accommodation and their structure as well as the number of places (beds) available in the city and in the county. The correlation and regressions models between the number of places, the number of tourist arrivals and the number of overnight stays are especially used in order to characterize the relationship between tourism and demand.

The analysis is carried out in the period of the last decade, 2007-2016, based on the empirical data offered by the National Institute of Statistics and its branch at the level of the Statistical Division of the Cluj County.

MATERIALS AND METHODS

In order to characterize tourism and its trend in the Municipality of Cluj and the Cluj County, in the paper it was used a large range on indicators as follows: indicators regarding the geographical position, demographical and economic status, tourist attractions, tourism offer in terms of the number of units of accommodation with tourist function, the number of places exiting in these units, the number of tourist arrivals and the number of overnight stays.

The empirical data were provided by the National Institute of Statistics Tempo online data base and also by the Statistical Division of the Cluj County.

The period of reference was 2007-2016.

The methodology varied depending on the goals of the paper.

For analyzing the dynamics of the indicators mentioned above it was used the index method, in its variant of fixed basis Index, $I_{FB} = (X_n/X_0)100$, where $X_n$ is the variable $X$ in the years $n=1,2,...,i$, $X_0$ is the value of the variable $X$ in the year zero.

The structure of various indicators was...
established according to the formula: \( S_k = \left( \frac{X_i}{X_T} \right) 100 \), where \( X_i \) = the value of the variable \( i = 1, 2, ..., k \), and \( X_T \) = the sum of the values of all the variables \( k \).

In order to establish the relationship between tourism offer and demand, there were used linear regression models as well as the coefficient of determination and the Pearson coefficient of correlation for the following three pairs of indicators as follows:

(i) the number of places in the accommodation units with tourist function and the number of tourist arrivals;
(ii) the number of places in the accommodation units with tourist function and the number of overnight stays;
(iii) the number of tourist arrivals and the number of overnight stays.

The data processing was assured by the Excel facilities, for calculating the statistical main parameters of mean, standard deviation and coefficient of variation, the ANOVA, F test and Sign. F, and the values parameters "a" and "b", their interval of confidence, and the t test and p-value for 0.05 (95%).

The results were tabled, graphically illustrated and interpreted. Finally, the main ideas resulting from this research work were drawn.

RESULTS AND DISCUSSIONS

Brief presentation of the Cluj County and Cluj-Napoca Municipality

The Cluj County is situated in the North-Western part of Romania, between the paraleles 47°28'44" in North and 46°24'47" in South, respectively the meridians 23°39'22" in West and 24°13'46" in East. The county has a surface of 6,674 square kilometers including a part of the Apuseni Mountains, the Somes Highland and the Transilvanian Plain.

The archeological excavations proved that in this area existed an old civilisation well integrated in the Europe culture and life. It is about the neolitic settlements, as well as the old Geto-Dacian culture as mentioned by the Greek historian Herodot in the 2nd century A.D.

The county has a large variety of landscapes, relief forms and nature monuments. One third of its surface is covered by mountains, and the remaining is represented by hills and just a few by plains.

The climate is a moderate continental one with cold summers and hard winters, the average temperature in July varying between 12 and 23 degrees, and in winter, more exactly in January between -2 and -8 degrees.

The main hydrographic net is represented by the Rivers Somes Mic, Aries and Cris Repede and also by the lakes from the natural rezervations. The mountains are covered by virgin forests mainly of coniferous species, but also by pastures and meadows.

Across the time, the economy in this area has been quickly developed grace to the advantageous geographical position, rich resources of raw materials and labor, easy communication ways and facilities, and a huge capacity of adaptation to the new challeanges and opportunities imposed by the industry and trade development.

In 2015, the county had over 702,174 inhabitants, of which 460,189 (65.5 %) in the urban area. The active occupied population accounts for 352,600 persons, meaning 50.2 % of the total population. The active population has jobs in various field of activities such as: 22.1 % in industry, 15.7 % in trade, 14.5 % in agriculture, 6.6 % in transportation, 5.4 in education, 5.4 % in information and communications and 2.46 % in hotels and restaurants, tourism and travel industry.
The economy of the county and mainly of the municipality of Cluj-Napoca has exploded mainly after 1989, when the private sector has become the main supplier of jobs, production, and business. Many foreign investors came here to develop their business and found a favorable climate, so that the economy in the area has become one of the most dynamic and prosperous one in Romania.

In 2016, the county had 114,295 ha cultivated area, of which 63.6 % cereals, 6.1 % potatoes, 5.5 % oleaginous plants, 4.8 % vegetables. The agricultural production value totalized Lei 1,487,910 million, of which 55.47 % vegetal production, 43.70 % animal production, and 0.83 % services.

Investments made in the county reached Lei 4,836 million in the year 2015. Of the total investments, about Lei 145 million (3 %) were allotted for the development of travel and tourism in the county.

The GDP achieved by the Cluj County accounted for Lei 31,178.2 Million in the year 2015, being by 69.25 % higher than in 2007, when it accounted for Lei 18,420.6 Million. The GDP/inhabitant increased from Lei 26,055/capita in the year 2007 to Lei 43,257/capita in the year 2015 meaning an increase of 66.02 %. [25].

Tourist attractions in the Cluj County

There are many places in the Cluj County were tourists could enjoy the visit and find recreation.

Hoia - Baciu Woods are in the proximity of Cluj-Napoca at 5 miles West. It is about of a forest area suitable for relaxation and walks. 

The Turda Salt mine is 23 miles South East of Cluj-Napoca. It is a real museum including salt deposits dated 13.6-13.4 million years ago. Its surface is 45 square kilometers and the salt layer has an average thickness of about 250 meters. The salt was exploited under the Roman occupation in Dacia and later on since 1690 under the Austrian Empire. The salt mine was closed in 1932 and since 1992 it was open to the public, getting the status of a genuine history museum. A part of the gallery is used for cheese storage. The salt mine is an important historical and tourist attraction being visited by more and more tourists every year. Inside the salt mine, there are Franz Jozef Gallery, the old extraction well, Rudolf Mine, Terezia Mine, Anton Mine, which could be admired using the modern elevator. The salt mine offers various entertainment facilities such: an amphitheater for concerts of 180 heated places, minigolf, bowling, sport terrains, tennis and billiard tables, a wheel with six gondolas and 48 places, games for children, a small lake with rowing boats, and also Ghizela Stationary destined for treatment (halotherapy) [19, 20, 31].

Turda Wine Cellars offer to tourists short visits including walks in the vineyard, visit of the wine cellars, wine tasting sessions and also the organization of private events. [32].

The Sic (Szek) Village, situated 25 miles in the North Eastern part of Cluj-Napoca, is a charming small locality lived by Hungarians and Saxons, where tourists may admire the old traditions well preserved such as: the beautiful traditional folk costumes, the folk dance and music, the Tuesday Market, the Bartholomew's Day on August 24, and also could have accommodation in a guest house of 34 seats capacity and meals in a restaurant with 60 places [34].

The Apuseni Nature Park is situated at 45 miles South West of Cluj-Napoca. The mountains are very charming and could be easily explored by tourists who are interested to discover the beauty of the forests and the peaks, or the underground world by caving. In this area, there are about 1,500 caves, about 80% of the total karstic rocks. The most known cave is Scarisoara Ice Cave, a national natural monument in the Apuseni Mountains, being the biggest underground glacier in Romania, and on the 2nd position in Europe. Scarisoara Cave has a glacier of 3,000 years old and 75,000 cubic meters, which belongs to the speleological reservation [26].

The Apuseni Motzi Villages are full of charm, showing their traditions to visitors. They are places where tourist could find tranquility and enjoy life in the country side, tasting traditional food and participating to the jobs in the field. [7].

It is about the villages situated in the Apuseni Mountains (Măguri-Mișel, Beliş, Băișoara,
Valea Drăganului, Râchițele, Ciucea, Poieni), in the Depresiunea Huedin (Sâncraiu, Izvoru Crișului, Călățele, Mărgău, Râșca), in the Podișul Someșan (Borșa, Vultureni, Panticeu, Bobâlna, Vad), and in the Transylvania Plane (Mociu, Frata, Taga, geaca, Năsal, Cătina) [17, 33].

The Cluj county has more than 20 protected natural areas and natural reservations such as: Cheile Turzii, Suatu, Lacul Stiucii, Valea Legii.

Also, other important tourist attractions are the balneo-resorts such as: Cojocna, Baita, Turda, Ocna Dej baths and the Vladeasa, Gilau, Tarnita and Trascau Mountains. The Cluj Faget Hill, the valleys of Visag, Draganului, Racatau and the Rachitele waterfall attract many tourists as well.

The rich and varied anthropic resources are represented by the cultural, historical and religious items and also by beautiful villages where traditions are well preserved and charming cities [24].

In the Cluj County are preserved many folk traditions and take place every year various cultural and artistic events, among which the most important ones are: the „Ion Cristoreanu” National Festival, The 'Serbarile Transilvane' Festival of culture and folk traditions, the "Golden Peacock" International Folk Festival for Children, the "Musical Autumn" with the support of the "Transilvania Philarmonique", the Men Folk Dance Festival of Transilvania, the Fair of folk handicrafts, and the Village Sons Folk Celebration. [9].

The City of Cluj-Napoca is one of the main and old cities situated in Transylvania region of Romania. Its origin goes back 200 years A.D in the settlement of Napoca in the old country Dacia.

From an etymological point of view, the name of the city could be translated "the city on the warm river" (Na = water, Po= source and Ca= warm water), justified by the fact that the city is really situated in an area full of thermal waters [12].

Its existence is attested by documents in the year 1173 AD. Cluj-Napoca was considered the unofficial capital of the Great Principality of Transilvania under the Austrian Empire between 1790-1867.

It is situated at about 458 km distance of Bucharest, the capital of the country, 460 km of Budapest, 464 km distance of Belgrad, and 651 km of Vienna.

It has 179.5 km² area and it is placed at an altitude of 410 m. It has a population over 330,000 inhabitants, being the 2nd city in Romania after Bucharest. Including the metropolitan area, it has over 420,000 inhabitants.

At present, the city is one of the most important industrial, academic, cultural and business cities of Romania.

The city of Cluj is an important economic center, coming on the 2nd position after the Capital of Romania [4].

A comparison between the two cities in the year 2015 pointed out that the population living in Cluj-Napoca and in the adjacent localities represented 17.7 % of the population of the capital. In Cluj-Napoca there were employed 220 thousand people, representing 24.3 % of the number of employees in the capital. The average net salary in Cluj-Napoca was Lei 2,060, meaning 80.5 % of the one earned in Bucharest. The GDP/capita in Cluj-Napoca was Euro 20,900/inhabitant accounting for 48.3 % of the one achieved in Bucharest. Cluj-Napoca export value per inhabitant was Euro 1,136, representing 34.1
% of the one carried out in the capital. The number of tourists visiting Cluj-Napoca was over 360,000, representing 24.8 % of the number of Bucharest visitors [1]. (Table 1).

The turnover achieved in Cluj-Napoca in 2016 accounted for Lei 53,366 Million, being by 75.92 % higher than in 2007. The contribution to various sectors of activity to the total turnover of the city was the following one: trade 38.62 %, industry 22.43 %, buildings 9.38 %, transportation 8.38 %, hotels and restaurants 1.86 %.

All the sectors of activity followed a general increasing trend, except the years 2008 and 2010 when the economy was affected by the economic crisis, but starting from the year 2011, the economy has recovered registering a higher and higher growth rate from a year to another. Comparing the absolute figures of turnover achieved in the year 2016 with the turnover level in 2007, one may easily notice that the highest increase was achieved by Hotels and restaurants, (+142.29 %), followed by transportation (+100.67 %), industry (+64.26%), trade (+48.97 %) and buildings (+20.97). (Table 2).

Table 1. Cluj-Napoca versus Bucharest in terms of the key economic indicators in 2015

<table>
<thead>
<tr>
<th></th>
<th>Population (Thousand)</th>
<th>Population including the adjacent localities (Thousand)</th>
<th>Employees (Thousand)</th>
<th>Average net salary Lei/employee/ Month</th>
<th>GDP/capita (Thousand Euro/capita)</th>
<th>Export Value/capita (Euro/capita)</th>
<th>Number of Tourists (Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucharest</td>
<td>1,883</td>
<td>2,121</td>
<td>904</td>
<td>2,556</td>
<td>20.9</td>
<td>3,333</td>
<td>1.45</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>325</td>
<td>377</td>
<td>220</td>
<td>2,060</td>
<td>10.1</td>
<td>1,136</td>
<td>0.36</td>
</tr>
<tr>
<td>Share of Cluj-Napoca (%)</td>
<td>17.2</td>
<td>17.7</td>
<td>24.3</td>
<td>80.5</td>
<td>48.3</td>
<td>34.1</td>
<td>24.8</td>
</tr>
</tbody>
</table>

Source: [1].

Table 2. The dynamics of turnover in the city of Cluj-Napoca by main sectors of activity, 2007-2016 (Lei Million)

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover, Total</td>
<td>30,335</td>
<td>37,934</td>
<td>35,356</td>
<td>36,604</td>
<td>38,370</td>
<td>37,704</td>
<td>39,967</td>
<td>42,442</td>
<td>47,905</td>
<td>53,366</td>
</tr>
<tr>
<td>Trade</td>
<td>13,838</td>
<td>16,041</td>
<td>12,790</td>
<td>12,607</td>
<td>14,097</td>
<td>14,960</td>
<td>15,592</td>
<td>16,336</td>
<td>17,326</td>
<td>20,615</td>
</tr>
<tr>
<td>Industry</td>
<td>7,289</td>
<td>9,269</td>
<td>10,615</td>
<td>13,136</td>
<td>11,471</td>
<td>8,122</td>
<td>8,257</td>
<td>9,149</td>
<td>10,639</td>
<td>11,973</td>
</tr>
<tr>
<td>Buildings</td>
<td>4,162</td>
<td>5,414</td>
<td>4,889</td>
<td>3,639</td>
<td>3,925</td>
<td>4,481</td>
<td>5,113</td>
<td>4,481</td>
<td>5,840</td>
<td>5,010</td>
</tr>
<tr>
<td>Transport</td>
<td>2,230</td>
<td>1,660</td>
<td>1,515</td>
<td>1,639</td>
<td>2,182</td>
<td>2,324</td>
<td>2,829</td>
<td>3,438</td>
<td>4,110</td>
<td>4,475</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>409</td>
<td>487</td>
<td>454</td>
<td>467</td>
<td>516</td>
<td>572</td>
<td>618</td>
<td>673</td>
<td>975</td>
<td>991</td>
</tr>
<tr>
<td>Share of Hotels and restaurants (%)</td>
<td>1.34</td>
<td>1.28</td>
<td>1.28</td>
<td>1.28</td>
<td>1.34</td>
<td>1.52</td>
<td>1.55</td>
<td>1.59</td>
<td>1.83</td>
<td>1.86</td>
</tr>
</tbody>
</table>

Source: Own calculations based on the data provided by the Statistical Division of the Cluj County, 2018 [28].

Cluj-Napoca is well known for its higher education institutions, which account about 55,000 students of which over 30,000 attend the courses of the Babeș-Bolyai University, the largest in the country. About 13,000 students are enrolled at the Technical University, 6,000 at the University of Medicine and Pharmacy and 5,000 at the University of Agricultural Sciences and Veterinary Medicine, also the University of Art and Design [10].

Tourist attractions in the City of Cluj-Napoca

Cluj-Napoca is a cultural city grace to its historical and cultural places including: vestiges of the past in the old Dacia and the medieval era, monuments, museums, palaces, libraries, theaters, exhibitions, cultural events organized by its specialized institutions and local authorities.

Among the most important cultural institutions there are: the Romanian Opera House which was founded in 1919, and since that time, here there were played more than 200 titles of operas, operettas and ballets performed by high value artists well know in
Europe and other continents.
Also, the National Theater "Lucian Blaga", the State Hungarian Opera House, the State Hungarian Theater, the Academy of Music "Gh. Dima", and the "Philharmonica Transilvania" are other important institutions in the cultural life of the city [27].
The National Art Museum founded in 1951, hosted by the marvelous Banffy Palace, a jewel of baroque architecture, exhibits a rich collection of art masterpieces belonging to the great Romanian artists such as Ștefan Luchian, Theodor Aman, Nicolae Grigorescu, Nicolae Tonitza, Dimitrie Pachiurea, Theodor Pallady, but also of foreign artists such as Constantin David Rosenthal and Karl Storck [21].
In the city there are other important museums such as: The National Museum of Transilvania, the Museum of Pharmacy, The Village Museum, The Etnographic Museum of Transilvania, Emil Racovita Speleology Institute & Museum, The Museum of Mineralogy, and the Zoological Museum.
In the Union Square, in the middle of the city, it is the Saint Michael Church, built in the middle of the 14th century and the monument of the King Matei Corvin, which have become symbols of the city.
Also, in the Union Square, there are ruins of the buildings belonging to the Roman City of Napoca in the 2nd and 3rd centuries A.C. On the occasion of the archeological excavations made in the year 1822, 1994 and 2008, there were discovered Roman and medieval ruins and also neolitical vestiges [18].
The Tailor's Tower and Wall of defend are among the least fortification towers belonging to the old medieval fortress of Cluj [8].
The city has many churches among which the most important are: the Calvinist Reformed Church, dated since the year 1416 and built in a late gothic architectural style, St. Peter and Paul Cathedral, another gothic church dated since 1848, the Franciscan Monastery and Church, and the New Synagogue.
The city has an well known "Alexandru Borza" Botanical Garden which was founded in 1920 and has 14 ha surface where over 10,000 plant species from all over the world are grown and exhibited. Here, the Japanese garden and the Roman Garden, the Ceres statue and the plants cultivated in the Romanian agriculture at present are among the most important tourist attractions [23].
In 2015, Cluj-Napoca was the "European capital of Youth", organizing over 1,100 events and 3,500 activities which have attracted a by 21 % more tourists [5].
In Cluj-Napoca there are annually organized a series of important festivals such as: ClujShorts-International Short Film Festival, Music-Jazz in the Central Park, Music-Electric Castle Festival (Banffy Castle), Music-Untold Festival, Musci-Delahoya (Valea Garbaului, Hoia), Music=Mioritmic, Art- Transilvania International Music and Art Festival (TIMAF), and Film -Comedy Cluj-International Film Festival [22].
Due to its valuable and unique traditions, customs, institutions and events, the city of Cluj-Napoca candidates as the European capital of culture in the year 2021 [6].
Regarding other cities of high attraction in the Cluj County, we can mention:
- In Dej City: the Samum Roman Castrum, the Dej Municipal Museum, the Protestant Church, The Franciscan Monastery and Church St. Anton de Padova, the "Lupa capitolina" statue, the Palace of Justice, the Greek-Catholic Church, the Heroes Obelisque, the ruins of the Cornis Castle [16].
- In Turda City: the Protestant Church with Tower ( the 15th century), the Roman-Catholic Church ( the 16th century), the Fortified Church Turda Noua, the Franciscan Monastery ( the 18th century).

**Trends in tourism in Cluj-Napoca Municipality**

The tourism offer in terms of accommodation capacity.
The number of tourist units with accommodation function in the Municipality of Cluj-Napoca increased year by year in the analyzed period. In the year 2017, the city had 111 units for tourists accommodation, by 81.96 % more than in the year 2007. In the year 2007, in the structure of the accommodation units, the main positions were occupied by: hotels (11 units, 40.9 %), tourist villas (11 units, 18 %), tourist guesthouses (10 units, 16.36 %) and agro-tourist guesthouses

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In the year 2017, the hotels remained on the top position with 72.15 % market share, the tourist guesthouses had 18.67 % market share, the tourist villas 4.29 % and hostels 2.94 %. The number of places-days also increased by 34.40 % from 1,304,780 places-days in the year 2007 to 1,779,734 places-days in the year 2016 (Fig.2.).

The tourism demand.

The number of tourist arrivals followed an ascending trend from 261,343 arrivals in the year 2007 to 371,505 arrivals in the year 2016. This means by 42.15 % more tourist arrivals than in 2007. (Fig.3.)

In 2016, the number of tourists was by 16.37 % higher than in 2015, reflecting that Cluj-Napoca is a city of high attraction for visitors, both from Romania but also from various countries.

Of the total number of tourists in 2016, a number of 99,131 were foreigners, representing 26.68 %. The foreign tourists came from Hungary (14,903 tourists, 15 %), Germany (11,717 tourists, 11.81 %), Italy (9,766 tourists, 9.85 %), France (7,293 tourists, 7.35 %) and Poland (6,270 tourists, 6.32 %).

This was due to the increasing importance of the City of Cluj-Napoca as a business center and also as host and organizer of various events such as the Untold Music Festival, which attracted about 30,000 foreign tourists, representing 30.26 of the total number of foreign visitors. Also, another important event of high interest for tourists is Transylvania
International Film Festival TIFF [34]. In 2017, the city of Cluj-Napoca carried out a record of tourist arrivals, that is over 542,000 visitors, of which 22 % foreigners. Most of them were from Hungary (18,189 tourists, 15.28 %), Germany (14,722 tourists, 12.36 %), Italy (10,832 tourists, 9.09 %), United Kingdom (8,095 tourists, 6.80 %), France (7,794 tourists, 6.54 %), and Poland (6,313 tourists, 5.3 %) [11].

In general, there are three reasons why the Romanian tourists are attracted to come to Cluj-Napoca are the following ones: to visit friends and relatives and shopping (33.5 %), to attend various events, mainly concerts and festivals (17.1 %) and for recreation (16%). The foreign visitors are mainly interested of recreation (35.7 %), of cultural events (15.8 %), medical treatments, visits to friends and relatives and shopping (16.4 %). These aspects were found by an important field survey achieved on a sample of tourists in June 2015-June 2016 [28].

Tourism density, as a ratio between the number of tourists and the resident population, followed a continuous growth rate. In the year 2011, the tourism density in Cluj-Napoca was 0.71 tourists per inhabitant, in the year 2016, the city recorded 1.15 tourists/inhabitant, meaning by 61.97 % more. And this happens under the condition that the population of Cluj-Napoca is increasing, the city, being the only county residence, besides Timisoara, where the population have a positive growth rate [1].

The number of overnight stays registered also an ascending trend. In 2016, the number of overnight stays in the city of Cluj-Napoca accounted for 704,921, being by 44.08 % higher than in the year 2007. (Fig.4.)

<table>
<thead>
<tr>
<th>Statistical parameter</th>
<th>Number of places</th>
<th>Number of places-days</th>
<th>Tourist arrivals</th>
<th>Overnight stays</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>49,738</td>
<td>1,559.66</td>
<td>256,379.90</td>
<td>464,069.60</td>
</tr>
<tr>
<td>St.Deviation</td>
<td>876.37</td>
<td>268.37</td>
<td>57,084.13</td>
<td>121,874.29</td>
</tr>
<tr>
<td>Coeff. of variation (%)</td>
<td>1.76</td>
<td>17.20</td>
<td>22.26</td>
<td>26.26</td>
</tr>
</tbody>
</table>

Source: Own calculation based on the data provided by The Statistical Division of Cluj County, 2018 [28].

The statistical parameters in terms of mean, standard deviation and coefficient of variation for the analyzed indicators: number of places, number of places-days, tourist arrivals and overnight stays are presented in Table 3.

Relationship between tourism offer and demand.

Regression of tourist arrivals depending on the number of places in accommodation units for tourist reception is presented in Fig. 5. The linear regression model, $y = 40.554x + 79882$, where $Y= \text{the number of tourist arrivals}$, the dependent variable, and $X = \text{the number of places}$, the independent variable, reflects that for an increase of one place in the accommodation units for tourist reception will determine an increase by 40.554 of the number of tourist arrivals. However, the determination coefficient, $R^2 = 0.2536$, reflects that only 25.36 % of the variation of the number of tourist arrivals is due to the variation of the number of places. Therefore, there are other factors which influence the number of arrivals such as the reason why the tourist would like to visit the
city of Cluj-Napoca, their motivation for doing this, the cost of their travel, accommodation, board, entertainment etc.

The coefficient of correlation \( r = 0.503 \) reflects that between the number of tourist arrivals and the number of places in accommodation units for tourist reception is a positive and enough strong relationship. The regression model is available as \( F = 2.718 \) much higher than its table value, and Sign. \( F = 0.1378 \).

The value of "a" parameter is situated in the interval - \( 166,915.5632 < 79,882.24 < 329,680.054 \) for \( P=0.05 \) (95%), and the value of " Intercept X1" is situated in the interval - \( 16.16895 < 40.5536 < 97.2762 \) for \( P= 0.05 \) (95%).

Regression of overnight stays depending on the number of tourist arrivals is confirmed by the linear econometric model: \( Y = 2.1231x - 80245 \), where \( Y = \) number of overnight stays and \( X = \) tourist arrivals. For an increase of one arrival, the number of overnight stays will grow by 2.1231. The strong relationship between this two indicators is also attested by the value of R square, \( R^2 = 0.9889 \), which reflects that 98.89 % of the variation of the overnight stays is caused by the variation of the number of tourist arrivals (Fig.7).

The correlation coefficient is very high, \( r = 0.994 \) confirming the strong and positive relationship between the two analyzed indicators. Also, \( F = 710.7584 \) is higher than the tabled value and Sign. \( F = 4.2153 \). Also, the parameters "a" and "b" are situated within the interval of confidence.
Trends in tourism of the Cluj County.

The tourism offer in terms of accommodation capacity.

The number of tourist units with accommodation function in the tourists increased by 34.12 % from 211 units in the year 2007 to 283 units in the year 2016. The share of the main types of accommodation units was the following one:

- in the year 2007: hotels 45 (21.32 %), tourist villas 33 (15.63 %), tourist guesthouses 16 (7.58 %) and agro-tourist guesthouses 94 (44.54 %);
- in the year 2017: hotels 64 (22.61 %), tourist guesthouses 64 (22.61%), agro-tourist guesthouses 121 (42.75 %) and tourist villas 12 (4.24 %).

The number of places (beds) in accommodation units for tourists increased by 19.51 % from 7,070 places in 2007 to 8,450 places in 2017 (Fig.8).

The number of places-days increased by 19.63 % from 2,330 thousand places-days in 2007 to 2,787.5 thousand places-days in 2016. (Fig.9.)

The tourism demand.

The number of tourist arrivals has also increased from 372,000 visitors in 2007 to 498,500 visitors in 2016, meaning by 34 % more than in the previous year of the analysis (Fig.10).

Tourism density in the County of Cluj increased by 32.69 % from 0.52 tourists/inhabitant in 2007 to 0.69 tourists per inhabitant in 2016. And this has happened under the condition that the population of the Cluj Country has had an ascending trend from 706,855 inhabitants in 2007 to 722,438 inhabitants in 2016 (+2.20 %).
Fig. 11. The dynamics of the number of overnight stays in the accommodation units with tourism function in the Cluj County, 2007-2016
Source: Own design based on the data provided by the National Institute of Statistics Tempo-online data base, 2018 [25].

Table 4. The statistical parameters for number of places, number of places-days, tourist arrivals and overnight stays in the Cluj County in the period 2007-2016

<table>
<thead>
<tr>
<th>Statistical parameter</th>
<th>Number of places (Thousand)</th>
<th>Number of places-days (Thousand)</th>
<th>Tourist arrivals (Thousand)</th>
<th>Overnight stays (Thousand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7,737</td>
<td>2,007</td>
<td>346,710</td>
<td>643,350</td>
</tr>
<tr>
<td>St. Deviation</td>
<td>756.25</td>
<td>317.65</td>
<td>80,462.40</td>
<td>173,910.73</td>
</tr>
<tr>
<td>Coeff. of variation (%)</td>
<td>9.77</td>
<td>1.58</td>
<td>23.20</td>
<td>27.03</td>
</tr>
</tbody>
</table>

Source: Own calculation based on the data provided by the National Institute of Statistics Tempo-online data base, 2018 [25].

**Relationship between tourism offer and demand.**

Regression of tourist arrivals depending on the number of places in accommodation units for tourist reception was reflected by the linear econometric model: \( Y = 28.84x + 123558 \), where \( Y \) = the number of tourist arrivals and \( X \) = the number of places. It shows that an increase of one place in the tourism accommodation units will determine an increase by 26.84 of the number of tourist arrivals. The determination coefficient, \( R^2 = 0.0735 \), reflects that only 7.35 % of the variation of the tourist arrivals is caused by the number of places (Fig. 12).

Therefore, the remaining of 92.65 % is determined by other factors. Also, the coefficient of correlation, \( r = 0.271 \) has a low value, reflecting that between the number of tourist arrivals and the number of places is a weak relationship (Fig. 12).

The regression model is available as \( F = 0.6344 \) much higher than its table value, and \( \text{Sign. } F = 0.44873 \).

The number of overnight stays increased by 33.3 % from 722,300 in the year 2007 to 952,900 in the year 2016. However, in the years 2009, 2010 and 2011, the number of overnight stays registered a decline due to the economic crisis which limited the tourist flow and the duration of stay (Fig. 11).

The statistical parameters in terms of mean, standard deviation and coefficient of variation for the number of places, the number of places-days, tourist arrivals and overnight stays in the Cluj County are shown in Table 4.

Fig. 12. The regression of the number of tourist arrivals depending on the number of places in the accommodation units with tourism function in the Cluj County, 2007-2016
Source: Own design based on the data provided by the National Institute of Statistics Tempo-online data base, 2018 [25].

The value of "a" parameter is situated in the interval - 525,280.1911 < 123,558 < 772,396.85 for \( P=0.05 \) (95%), and the value of "Intercept X1" is situated in the interval - 54.65649 < 28.8395 < 112.33556 for \( P= 0.05 \) (95%).

Regression of overnight stays depending on the number of places in tourist
accommodation units is shown by the linear model: \( Y = 50.229x + 254,692 \), where \( Y \) = the number of overnight stays and \( X \) = the number of places. It proves that a change of one place in the tourism accommodation units will determine an increase by 50.22 of the number of overnight stays. The value of \( R^2 = 0.0477 \) shows that 4.77 % of the variation of the number of overnight stays is caused by the variation of the number of places. This means that there are other factors which influence the variation of the number of overnight stays. The coefficient of correlation, \( r = 0.218 \) also reflects a weak relationship between the number of overnight stays and the number of places (Fig.13).

The value of "a" parameter is situated in the interval \(-1,167,067.128 < 254,692 < 1,676,450.859\) for \( P = 0.05 \) (95%), and the value of "Intercept X1" is situated in the interval \(-132.73044 < 50.229 < 233.18875\) for \( P = 0.05 \) (95%).

The regression model is available as \( F = 0.4007 \) higher than its table value, and Sign. \( F = 0.5443 \).

Regression of overnight stays depending on the number of places in the accommodation units with tourism function in the Cluj County. Between these two indicators is a strong and positive relationship, as confirmed by \( R^2 = 0.972 \), attesting that 97.20 % of the variation on the number of tourist arrivals will have a deep impact on the variation of the number of overnight stays.

The value of "a" parameter is situated in the interval \(-95,464.95086 < 9,193.7909\) for \( P = 0.05 \) (95%), and the value of "Intercept X1" is situated in the interval \( 1.83612 < 2.13093 < 2.42573\) for \( P = 0.05 \) (95%).

The coefficient of correlation, \( r = 0.985 \) also reflects a positive a very high link these two indicators (Fig.14).

The regression model is available as \( F = 277.8417 \) higher than its table value, and Sign. \( F = 1.69682 \).

Regression of overnight stays depending on the number of tourist arrivals is synthesized by the econometric liner model \( Y = 2.1309x - 95,465 \), where \( Y \) = the number of overnight stays and \( X \) = the number of tourist arrivals. It shows that an increase by one of the number of tourist arrivals will determine an increase by 2.1309 of the number of overnight stays in the Cluj County.

Between these two indicators is a strong and positive relationship, as confirmed by \( R^2 = 0.972 \), attesting that 97.20 % of the variation on the number of tourist arrivals will have a deep impact on the variation of the number of overnight stays.

The value of "a" parameter is situated in the interval \(-200,123.693 < -95,464.95086 < 9,193.7909\) for \( P = 0.05 \) (95%), and the value of "Intercept X1" is situated in the interval \( 1.83612 < 2.13093 < 2.42573\) for \( P = 0.05 \) (95%).

The coefficient of correlation, \( r = 0.985 \) also reflects a positive a very high link these two indicators (Fig.14).

The regression model is available as \( F = 277.8417 \) higher than its table value, and Sign. \( F = 1.69682 \).

CONCLUSIONS

The paper analyzed the main trends of tourism in one of the most important cities of Transylvania, Cluj-Napoca and the Cluj County. The research revealed the richness and variety of natural, historical and cultural tourist attractions, the development of the accommodation capacity in terms of the number of units for tourism reception and the number of places (beds), all these reflecting the offer at the local level. Also, the study pointed out the tourism demand in terms of the number of tourist arrivals and overnight stays.
The results reflected the dynamism of tourism infrastructure in terms of accommodation units and number of places. The growth rate in the analyzed period 2007-2016, being higher in the municipality of Cluj-Napoca compared to the Cluj County.

In Cluj-Napoca, the increase was 81.9% for the number of units with tourist accommodation function increased and 74% for the number of places, while at the county level, the growth rates were 35% for the number of units and 20% for the number of places. In 2016, in Cluj-Napoca there were 6,216 places while in the county there were 8,450 places.

The number of tourist arrivals and overnight stays increased year by year, except the years 2009 and 2010 when the economic crisis affected tourism not only in Romania but also in Europe and at the world level. But, since 2011, the trend was continuously an ascending one. In the period 2007-2016, the increase of the number of tourist arrivals and overnight stays in Cluj-Napoca accounted for 42% and respectively 44%, while at the county level, the growth rates were 34% and respectively 33%.

In 2016, Cluj-Napoca received 371,505 tourists, much more than its population, reflecting a tourism density of 1.15, meaning 1.15 tourists/inhabitant. While at the county level, there were recorded 498,500 tourists arrivals, meaning a tourism density of 0.69.

In 2016, the number of overnight stays in Cluj-Napoca reached the record of 704,921 while at the county level it was 952,900.

The analysis of the relationship between the number of places and the number of tourist arrivals and the number of overnight stays, proved a high relationship both at the municipality level and at the county level between the number of tourist arrivals and the number of overnight stays (r=0.994 and respectively r=0.985).

The linear regression models proved that the variation of the number of places in Cluj-Napoca is responsible just for 25% of the variation of tourist arrivals and 22% of the number of overnight stays.

At the county level, it was found a similar situation, more exactly, the variation of the number of places determines just 7.35% of the variation of the tourist arrivals and 4.77% of the variation of the number of overnight stays.

Therefore, there are other reasons why the number of tourist arrivals increased, and we must think of the high attraction of the visitors to discover and learn more about the natural, historical and cultural patrimony of Cluj-Napoca and the Cluj County.

The interest for this part of Transilvania region of Romania has continuously increased both from the side of Romanian visitors, but also from the side of foreign tourists. In 2016, the foreign tourists accounted for 25% of the total number of arrivals. They are represented mainly by Hungarians, Germans, Italian, French, British and Italians.

As a final conclusion, the tourism development in Cluj-Napoca and the Cluj County is an example of tourism management and marketing, the promotion of the local values, the diversification of the tourism offer and the high quality of tourist services have had a deep impact of the increased number of visitors.

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REFERENCES


[25] The National Institute of Statistics Tempo-online data base, 2018


