

SUSTAINABLE TOURISM DEVELOPMENT - IMPORTANT COMPONENT OF SPATIAL TOURISTIC PLANNING

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Abstract

Through its specificity, the tourism industry is directly related to the environment, more than other industries. Running uncontrolled tourism activities, at random, without taking into account the development and exploitation standards can lead to the environmental degradation and tourism resources. To achieve the travel activities the best possible is required, besides the natural, human and material resources, to satisfy the tourists' needs. Material and technical endowment of tourism is represented by: accommodation and food services, transportation, treatment and leisure facilities and is primarily conditioned by developing and modernizing the existing endowment. Thus, a highly attractive tourist area could not be on offer before having the facilities for receiving and retaining potential tourists. In order to decide on the tourism development of an area, it is needed an analysis of the tourist traffic to the existing tourist settlements. This paper achieved a study case on the tourism demand and supply in Bucharest, the capital of Romania. For this purpose, a series of tourism indicators regarding the tourism demand and supply have been calculated, analyzed and interpreted.

Key words: average length of stay, spatial touristic planning, tourism supply and demand, tourist traffic density, occupancy of tourist accommodation establishments

INTRODUCTION

Tourism aims to promote particular destinations, exotic areas and different objectives. The tourism natural or anthropogenic resources are more varied and unspoiled, the greater their attractiveness. On the other hand, these areas are more fragile and require a special protection [6]. The high tourism demand required a specific infrastructure which sometimes affect the environment, increasing pollution, disrupting local life, and visibly degrading the natural heritage [3].

The sustainability of tourism supposes a proper management of resources, in order to cover the economic, social and aesthetic tourists needs, at the same time maintaining the biodiversity, ecological processes, and cultural integrity of all systems for the future generations of tourists [2].

To achieve sustainable development of tourism, three objectives are essential: the control of the tourist traffic; the layout of appropriate tourist settlements in various areas

which are tourist destinations; the diversification of tourism products by introducing new forms of tourism integrated in the environment.

Sustainable tourism should contribute to the preservation, protection and restoration of the the Earth 's ecosystems to support sustainable development, production and consumption.

It also should not be neglected the formative - educational side of the sustainable tourism, by which man should be aware about the role he plays in managing and maintaining the unaltered quality of nature.

In this context, this paper aimed to analyze the tourist traffic in Bucharest, the capital of Romania, and the degree of capitalization of village tourism.

MATERIALS AND METHODS

The objective of this study consists of analysis of tourist development plans and strategies made and put into practice in Bucharest, the capital of Romania, in close connection with the analysis of tourist traffic in the city of

Bucharest.

In order to achieve the objectives of this study, there were used the statistical data regarding the tourist traffic in Bucharest, tourist density in relationships with the number of inhabitants and in the area of the village.

Also, to manage this research, a series of documents were provided by the representatives of the City Hall, the Ministry of Regional Development. It is about documents on tourism marketing, plans for integrated tourism development of the municipality and urban development, also the empirical data on tourist traffic in the area provided by the National Institute of Statistics.

For tourist traffic analysis, there were calculated and interpreted certain indicators of tourism demand and supply, such as: changing tourism demand, demand variation index, tourist accommodation capacity, global tourism demand index distribution, customer development index, hostel overnights development index, the average accommodation rate in tourism facilities, monthly tourist concentration coefficient, tourist density indicator in relation to population density indicator, in relation to the surface, the "tourist office" [4, 5, 6].

The analysis and interpretation of these

indicators of tourist traffic helped to make an idea about the development of tourism in Romania and mainly about tourism planning strategies which can be taken in this area.

RESULTS AND DISCUSSIONS

The analysis of tourist traffic on tourism supply and demand in Bucharest, the capital of Romania

Bucharest has 228 km² surface and 1, 912,515 inhabitants in the year 2012 (Table 1).

A number of 22,552 accommodation in touristic units of accommodation were in Bucharest in the year 2012. The distribution of these accommodation places by tourism accommodation units was the following one: 18,531 beds in hotels (83,17%), 18 beds in villas (0.07 %) and 4,003 beds in tourist hostels (16.76 %) (Table 2).

A number of 1,238,881 foreign tourists were accommodated in Bucharest in the year 2012, by 7.72 % more than in the year 2008, reflecting that the capital of Romania has become an interesting touristic attraction for people from other countries.

The distribution of foreign tourists by types of accommodation units was the following one: 98.39 % in hotels, 0.07 % in villas and 1.54 % in tourist hostels. (Table 3)

Table 1. Bucharest population, 2008-2012 (inhabitants)

	2008	2009	2010	2011	2012
Bucharest population	1,943,981	1,944,226	1,942,254	1,919,352	1,912,515

<http://www.insse.ro/>

Table 2. Total number of accommodation places in touristic accommodation units in Bucharest, 2008-2012 (No. of beds)

Types of tourist accommodation	2008	2009	2010	2011	2012
Hotels	16,469	17,520	20,187	18,632	18,531
Villas	18	18	:	18	18
Tourist Hostels	213	168	168	208	166

<http://www.insse.ro/>

Table 3. Total number of foreign tourists in Bucharest, Romania, by type of tourism accommodation unit

Types of tourist accommodation	2008	2009	2010	2011	2012
Hotels	938,182	899,824	1,024,893	1,180,760	1,218,955
Villas	184	110	:	589	923
Tourist Hostels	6,768	4,447	4,237	4,487	4,003

<http://www.insse.ro/>

A number of 553,912 residents visited Bucharest in the year 2012, of which 99.36 % were accommodated in hotels, 0.583 % in tourist hostels and 0.057 % in villas (Table 4).

The number of tourist arrivals totaled 669,969 in the year 2012, of which 99.78% were in hostels, 0.09 % in villas and 0.13 % in tourist hostels (Table 5).

Table 4. Total number of Romanian tourists arrivals in Bucharest, by type of tourism accommodation unit

Types of tourist accommodation	2008	2009	2010	2011	2012
Hotels	399,153	365,276	433,914	540,863	550,404
Villas	66	35	:	251	317
Tourist Hostels	3,468	2,928	3,525	3,668	3,191

<http://www.insse.ro/>

Table 5. Total foreign tourists arrivals by in tourist accommodation types of structures in Bucharest

Types of tourist accommodation	2008	2009	2010	2011	2012
Hotels	539,029	534,548	590,979	639,897	668,551
Villas	118	75	:	338	606
Tourist Hostels	3,300	1,519	712	819	812

<http://www.insse.ro/>

The visitors who visited Bucharest in the year 2012 recorded the highest number in the months of October, May, June, September and

November, reflecting the seasonality of tourism in Bucharest. They mainly applied to stay in hotels.(Table 6).

Table 6. Total number of visitors (Romanian +foreign) in Bucharest, by month in 2012

Types of tourist accommodation	Hotels	Villas	Boarding houses
January	77,288	64	306
February	77,288	74	324
March	103,001	57	344
April	93,600	64	343
May	119,582	90	380
June	113,643	83	412
July	101,614	84	284
August	95,741	48	287
September	112,419	84	409
October	126,516	107	386
November	115,154	79	333
December	81,367	89	195

<http://www.insse.ro/>

The number of overnight stays totaled 2,040,060 in the year 2012, of which 99.44% were in hotels and 0.44 % in tourist hostels. The data from the above tables, provided by

National Institute of Statistics were used to calculate, analyze and interpret the most important indicators of tourist traffic, as follows:

Table 7. Total number of overnight stays (Romanian +foreign) by accommodation unit types in Bucharest

Types of tourist accommodation	2008	2009	2010	2011	2012
Hotels	1,962,515	1,659,464	1,797,653	1,961,320	2,028,731
Villas	1,351	926	:	1164	2,306
Tourist Hostels	23,041	10,040	8,500	9,549	9,023

<http://www.insse.ro/>

Table 8. Total number of tourist overnight stays by accommodation unit type in Bucharest Romania

Types of tourist accommodation	2008	2009	2010	2011	2012
Hotels	874,044	734,530	794,525	870,534	884,551
Villas	475	307	:	355	566
Tourist Hostels	9,062	6,346	6,856	7,738	7,245

http://www.insse.ro/

Table 9. Total foreign overnight stays by accommodation unit type in Bucharest

Types of tourist accommodation	2008	2009	2010	2011	2012
Hotels	1,088,471	924,934	1,003,128	1,090,786	1,144,180
Villas	876	619	:	809	1,740
Tourist Hostels	13,979	3,694	1,644	1,811	1,778

http://www.insse.ro/

1. Index of global tourist demand change [3,4,5]:

$$\Delta CG_{0-i} = \frac{CG_i}{CG_0} \cdot 100$$

where: CG_i - global tourist demand in year „i”;

CG_0 - global tourist demand in year „0”

Years	Index of global tourist demand change (%)
2008-2009	104
2009-2010	113
2010-2011	115
2011-2012	94

The index of global tourist demand change registered the lowest value in 2011-2012, and the highest value in 2010-2011.

2.a) Index of global tourist demand distribution, between domestic and foreign demand [3,4,5] (domestic tourist demand):

$$\Delta CI_{0-i} = \frac{CI}{CG} \cdot 100 ; \Delta CE_{0-i} = \frac{CE}{CG} \cdot 100$$

where: CI - domestic tourist demand;

CE - foreign tourist demand.

CG – global tourist demand

Years	CI-Domestic tourist demand (%)
2008	42
2009	40
2010	42
2011	45
2012	49

The index distribution of global tourism demand for domestic demand had the lowest value in 2009, and the highest value in 2012.

2.b) Index of global tourist demand distribution, between domestic and foreign

demand [3,4,5] (foreign tourist demand)

$$\Delta CI_{0-i} = \frac{CI}{CG} \cdot 100 ; \Delta CE_{0-i} = \frac{CE}{CG} \cdot 100$$

where: CI - domestic tourist demand;

CE - foreign tourist demand.

CG – global tourist demand

Years	CE-Foreign tourist demand (%)
2008	57
2009	59
2010	57
2011	54
2012	59

The index distribution of global tourism demand for foreign tourism demand recorded the lowest value in 2011, and the highest value in 2009-2010.

3.a) Index of domestic demand variation in time [3,4,5]

$$ICI_{0-i} = \frac{CI_i}{CI_0} \cdot 100$$

unde: CI_0 – domestic tourism demand in the previous year;

CI_i – domestic tourism demand this year.

Years	Index variation in demand for domestic tourism (%)
2008-2009	91
2009-2010	118
2010-2011	124
2011-2012	101

The index of variation in domestic tourism demand recorded the lowest value in the years 2008-2009, and the highest value in the years 2010-2011

3.b) Index of foreign demand variation in

time [3,4,5]

$$ICE_{0-i} = \frac{CE_i}{CE_0} \cdot 100$$

where: CE_0 – foreign tourism demand in the previous year;

CE_i – foreign tourism demand this year.

Years	Index variation in the demand for foreign tourism (%)
2008-2009	43
2009-2010	110
2010-2011	108
2011-2012	104

The index of variation in the demand for foreign tourism recorded lowest value in the years 2008-2009, and the highest value was recorded in the years 2009-2010.

4. Index of demand variation in time for each accommodation facility [3,4,5]

$$\Delta CH_{0-i} = \frac{CH_i}{CH_0} \cdot 100 ;$$

Years	Hotels (%)	Tourist Villas (%)	Hostels Tourist(%)
2008-2009	160	100	78
2009-2010	115	100	100
2010-2011	92	100	123
2011-2012	99	100	79

Hotel: index of variation in time of tourism demand for hotels recorded with lowest value in the years 2010-2011, and the highest value was recorded in the years 2008-2009.

Tourist Villas: index of variation in time of tourist demand for villas had fluctuations in the period.

Hostels Tourist: index variation in time of tourism demand for tourist hostels recorded with lowest value in the years 2008-2009, and the highest value in the years 2010-2011.

5.a)The average length of stay globally [3,4,5]

$$S = \frac{ZT}{T} \text{ (days)}$$

where: ZT = travel days (365 days)

T = No. total tourists

Years	Calculating the average length of stay globally (days)
2008	3.86
2009	4.03
2010	3.54
2011	3.07
2012	3.24

The average length of stay, based on the total number of tourists in 2008 was about 4 days, and in 2012 about 3 days, which shows a decrease.

5.b)The average length of stay for each accommodation facility [3,4,5]

If we want to calculate the average stay per accommodation units, this means to use number of overnight stays recorded in the accommodation establishments instead of the number of days of travel, as follows:

$$S_H = \frac{NH}{T} \text{ (tourist days)}$$

where: NH - number of recorded overnight stay;

T - number of tourists arriving;

S_H - average stay in the hotel.

The total average length of stay = $Nr.$ Total overnight stays (Romanian +foreign) / No. Total foreign +tourists Romanian

The average length of stay of foreign tourists = no. overnight stays Foreign tourists / No foreign tourists

The average length of stay of Romanian = no. overnight stays Romanian tourists / No Romanian tourists

The total average length of stay (Romanian + foreign) = tourist days

Years	Hotels	Tourist Villas	Hostels Tourist
2008	2.09	7.34	3.40
2009	1.84	8.41	2.25
2010	1.75	-----	2.00
2011	1.66	1.97	2.12
2012	1.66	2.49	2.25

The average length of stay (Romanian) = tourist days

Years	Hotels	Tourist Villas	Hostels Tourist
2008	2.01	7.42	4.23
2009	1.73	8.25	2.43
2010	1.69	-----	2.30
2011	1.70	2.39	2.21
2012	1.71	2.87	2.18

The total average length of stay (foreign) = tourist days

Years	Hotels	Tourist Villas	Hostels Tourist
2008	2.18	7.19	2.61
2009	2.01	8.77	2.34
2010	1.83	-----	1.94
2011	1.60	1.41	2.10
2012	1.60	1.78	2.27

a).The average stay in hotel recorded the lowest value in 2011 and 2012, and the highest value in 2008.

The average stay in villas had lowest value in 2010 and the highest value in 2009.

The average stay in guesthouses recorded the lowest value in 2010 and the highest value in 2008.

b)The average stay of the Romanian tourists in hotels registered the lowest value in 2011 and 2012, and the highest value in 2008.

The average stay of the Romanian tourists in villas had the lowest value in 2010 and the highest value in 2009.

The average stay of the Romanian tourists in boarding houses recorded the lowest value in 2010 and the highest value in 2008.

c.)The average stay of foreign tourists in hotels registered the lowest value in 2011 and 2012, and the highest value in 2008.

The average stay of foreign tourists in villas had the lowest value in 2010 and the highest value in 2009.

The average stay of foreign tourists in boarding houses had the lowest value in 2010 and the highest value in 2008.

6. The monthly traffic coefficient [3,4,5]

The monthly traffic coefficient is calculated as a ratio between the number of tourists during the highest-traffic month (*LM*) and the number of tourists during the lowest-traffic month (*lm*)

$$C_{monthly} = \frac{LM}{lm}, \text{ where } C_{monthly} \geq 1$$

$$127009 \text{ (October)} / 77658 \text{ (January)} = 1.63$$

7. The monthly concentration coefficient [3,4,5] (year of study 2012)

was calculated by dividing the number of tourists recorded in each month by the total number of tourists during a year *A_t*. Value *C_c* ranges between 0.083 and 1.

$$C_c = \frac{LM}{A_t}$$

$$\text{January} = 77658 / 1223881 = 0.006$$

$$\text{February} = 77686 / 1223881 = 0.006$$

$$\text{March} = 103402 / 1223881 = 0.08$$

$$\text{April} = 94007 / 1223881 = 0.07$$

$$\text{May} = 120052 / 1223881 = 0.09$$

$$\text{June} = 114138 / 1223881 = 0.09$$

$$\text{July} = 101982 / 1223881 = 0.08$$

$$\text{August} = 96076 / 1223881 = 0.07$$

$$\text{September} = 112912 / 1223881 = 0.09$$

$$\text{October} = 127009 / 1223881 = 0.10$$

$$\text{November} = 115566 / 1223881 = 0.09$$

$$\text{December} = 81651 / 1223881 = 0.06$$

The tourist maximum concentration was recorded in October and the lowest monthly tourist concentration was recorded in January and February.

8. Share of accommodation capacity [3,4,5] (per each accommodation type) of the total accommodation capacity of Bucharest

$$I_{cc} = \frac{LC}{LH} \cdot 100$$

where: *LH* - total number of beds in hotels (pensions, ... etc.) per town or county;

LC - accommodation capacity in each type of accommodation unit (hotel, motel, guest house, inn, ..., etc.);

Years	Hotels (%)	Tourist Villas (%)	Hostels Tourist(%)
2008	98	0.1	1.27
2009	98	0.1	0.94
2010	99	-----	0.82
2011	99	0.09	1.10
2012	99	0.09	0.88

The share of accommodation capacity (for each type of accommodation unit) of the total accommodation capacity of Bucharest, recorded the highest percentage of about 99% in hotels. For villas and guesthouses percentages were very small compared to hotels.

9. Indicator of total accommodation capacity evolution [3,4,5]

$$I_{LC} = (\text{No. beds per current year} / \text{No beds per previous year}) * 100$$

$$\Delta LC_{0-i} = \frac{LC_i}{LC_0} \cdot 100$$

Years	ΔLC (%)
2008-2009	106
2009-2010	114
2010-2011	92
2011-2012	99

The accommodation capacity registered the highest increase of 14% in 2009-2010 and in 2010-2011 it declined by 8%.

10. Index of overnight stay evolution [3,4,5]

$I_N = (No. \text{ overnight stay per current year} / No. \text{ overnight stay per previous year}) \cdot 100$

$$\Delta N = \frac{NH_i}{NH_0} \cdot 100$$

where: $N = \text{overnight stay}$.

Years	Index of overnight stay evolution(%)
2008-2009	84
2009-2010	108
2010-2011	109
2011-2012	103

The evolution of overnight stays recorded the highest growth in 2001, increasing by 9% and in 2008-2009 it decreased by 16%.

11. Occupancy indicator of existing accommodation units in Bucharest [3,4,5]

$Guc = [number \text{ of overnights (No tourist days)} / (no. \text{ beds} \cdot no. \text{ working days})] \cdot 100$

$$G_o = \frac{NH \cdot 100}{LH \cdot Z} = \frac{NT \cdot S}{LH \cdot Z} \cdot 100$$

where:

G_o - occupancy, percentage;

NH - number of overnight stays;

LH - number of beds in hotels;

Z - number of supply days = 365 days;

NT - number of tourists;

S - average length of stay.

Years	Occupancy indicator of existing accommodation units in Bucharest (%)
2008	32
2009	25
2010	24
2011	28
2012	29

Since 2008, the occupancy indicator of existing accommodation units in Bucharest fell every year.

12. Tourist density indicator in relation to population density in Bucharest [3,4,5]

$$D_{t_{i-0}} = \frac{T_{t_{i-0}}}{Population} \text{ (tourists/ no. inhabitants)}$$

where:

T_{i-0} - total Romanian + foreign tourists;

Pop - local population.

Years	Tourist density indicator in relation to population density
2008	0.48
2009	2.14
2010	1.88
2011	1.61
2012	1.56

In the period under review, tourist traffic density in relation to population Bucharest had a decrease of 0.58% of tourists / No. inhabitants in 2012 compared to 2008.

13. Tourist density indicator in relation to Bucharest area [3,4,5]

$$D_{t_{i-0}} = \frac{T_{t_{i-0}}}{Surface} \text{ (tourists/km}^2\text{)}$$

where:

T_{i-0} - total Romanian + foreign tourists;

S - town/village (county) area,

Years	Tourist density indicator in relation to Bucharest area
2008	4.1453
2009	8.5287
2010	8.5186
2011	8.4182
2012	8.3882

Tourist traffic density in relation to surface of Bucharest had the lowest value of 4,145 tourists/km² in 2012 and the highest value 8,528 tourists /km² was recorded in 2009.

CONCLUSIONS

By the pressure of tourists and the specific infrastructure, tourism can be a direct cause of constraints on the environment.

The destructive actions on natural resources have a large variety and intensity increasing from year to year.

The tourism concentration in time and space during the recent years had a negative impact on ecosystems.

The arrangements made for tourism have also a significant negative impact on the environment.

More attention should be paid to the accommodation capacities, which need to cover the tourists demand, but also to be integrated in the environment, without affecting the natural environment, the original topography and the beauty of landscape.

Tourism should not generate pollution and disrupt the existence of flora and fauna.

Also, tourism has to compile both tourists needs and also not to disturb the local population, and affect the traditions, moral values, customs, etc.

Bucharest, the capital of Romania is an example of how tourism should be integrated in the urban environment becoming a factor of economic development and promotion of Romanian values.

The number of tourists increased year by year, and the duration of stay as well, and more and more foreign visitors are interested to enjoy visiting the beautiful, cultural and historical places of the Romania's capital.

The accommodation units have increased their number and quality of their facilities year by year, hotels being the most preferred type for accommodation in Bucharest and Romania general.

The development strategy of tourism in Bucharest should be continuously improved in order to exploit the whole touristic potential of this old and modern metropolis of Europe.

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