Romanian Tourism Market Ten Years after Joining the European Union

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Abstract: *The general purpose of this paper is to appraise the post-accession evolution of the Romanian tourism market by looking at a range of relevant indicators that measure the touristic demand and supply, over the 2006-2016 decade. The authors put forth an empirical analysis of the statistical data provided by the National Institute for Statistics and by the World Travel and Tourism Council, at both the national and regional levels, taking into account the eight development regions of the country. They devised a two-stage methodology, with a first stage dedicated to the empirical analysis of the indicators that measure tourism market from different angles and a second stage consisting in a cluster analysis meant to identify the potential narrowing or, on the contrary, deepening of the regional tourism market development gaps. They conclude that while the Romanian tourism industry underwent significant transformations after joining the EU, it did not manage to capitalize on the opportunity of the open access to the EU single market.*

Keywords: *Tourism, regional development, tourism market, cluster analysis, Romania.*

JEL Classification: *L83, Z32, C83*

1. Introduction

Romania's accession to the European Union should have been a great opportunity for the tourism industry in our country. Besides the benefit of an open common market that could help Romania reposition itself within the international touristic flows, the most important gain should have been, and it still is, the access to the EU financing, as a prerequisite for increasing Romanian tourism competitiveness. In 1998, eight development regions with a non-administrative statute have been created in Romania[1] with a view to improving the efficiency of EU fund absorption, firstly by enhancing the absorption of the pre-accession funds, and later on, after 2007, by better capitalizing on the financing programs devised for the member states.

As, until now, Romania has already had access to both pre-accession financing and to the funds allocated for the 2007-2013 financial exercise, we want to see if Romanian tourism has benefitted from the country's joining the EU. Therefore, the general purpose of this paper is to appraise the post-accession evolution of the Romanian tourism market, looking at the demand and the supply indicators in the eight development regions of the country. In the course of time, South-Eastern European (SEE) tourism and, in particular the Romanian tourism, has been looked at by numerous researchers. Starting from the relationship between tourism and sustainable development, Hall (1998), for instance, anatomized the tourism sector of the SEE countries laying stress on its potentially

[1] See map at http://www.mdrap.ro/dezvoltare-regionala/-2257/programul-operational-regional-2007-2013/-2975
The 8 development regions are: North-West (NW) – N-V , Centre – Centru , North-East (NE) - N-E, South-East (SE) – S-E, South-Muntenia (S-Muntenia) – Sud – Muntenia, Bucharest-Ilfov – Bucureşti- Ilfov, South-West Oltenia (SW Oltenia) – S-V Oltenia, West (W) - Vest.

significant role in the economic transition and restructuring of the countries in this part of the continent. On the other hand, analysing the Romanian rural tourism market before the EU accession, Naghiu et al. (2005) argued that such a market niche could be a pillar of the tourism sector development in our country. Mazilu (2007) suggested a tourism market analysis from the angle of the tourism flow formation mechanism and came to the conclusion that Romania had insufficient general and specific infrastructure and a still limited touristic supply. Rabontu & Vasilescu (2012) opted for a quantitative analysis of the Romanian tourism market, using indicators that measure the specific demand and supply, such as tourism-generated GDP, population involved in tourism activities, tourist accommodation capacity, number of accommodation units (by ownership type, destinations, classification by comfort categories), occupancy rate of the tourist accommodation capacity.

Other authors approached the regional development issue through indicators that feature the tourism sector. Ioannides & Petrakos (2000) demonstrated the inequity of the spatial distribution of the economic activities in Greece, a top EU tourism destination. Seckelmann (2002) argued that by the excessive concentration of the tourism flows in the southern and western parts of Turkey, mass tourism has contributed to the deepening of the regional development gaps, while, on the contrary, Spiriajevas (2008) focussed on attesting to the role played by tourism in the development of coastal areas, as illustrated by the case of the Baltic states.

2. Methodology

To reach our research goals, we have devised a two-stages methodology:

Stage I - consists in the empirical analysis of the indicators that measure the tourism market at both the national and the development regions level;

Stage II – is a cluster analysis that may highlight either the narrowing, or, on the contrary, the widening of the tourism market development gaps among regions.

We have collected and interpreted the general statistical data at national and regional level, as provided by the World Travel and Tourism Council (WTTC) and the National Institute for Statistics (NIS): (I) Indicators of tourism demand – tourist arrivals; overnight stays; (II) Indicators of tourism supply – number of accommodation units; number of accommodation beds; tourist accommodation capacity in operation.

The following indicators were calculated using the collected statistical data: (1) the weight of Romanian and foreign tourists in the total number of arrivals and in the total number of overnight stays; (2) the ratio of Romanian and foreign tourists' arrivals; the ratio of Romanian and foreign tourists' overnight stays; (3) the occupancy rate; (4) the average stay; (5) the degree of accommodation capacity usage.

The cluster analysis included the grouping of the development regions in two different moments - 2006 (the last year before the EU accession) and 2016 (the most recent available data) - and was performed on the basis of two sets of components:

- Cluster analysis 1 – the main indicators of the tourism market: tourist arrivals, tourist overnight stays, number of accommodation units, number of accommodation beds, tourist accommodation capacity in operation.

- Cluster analysis 2 – aggregate indicators - average stay, occupancy rate, degree of accommodation capacity usage, average number of beds per unit, ratios of Romanian and foreign tourists' arrivals, ratios of Romanian and foreign tourists' overnight stays.

The cluster analysis pursued the following steps: data uploading into the STATISTICA 7 software, data standardization, the selection of the Ward method and City block distance (also referred to as Manhattan distance), dendogram interpretation.

3. Results and discussion

3.1 The Romanian tourism market analysis

According to the statistical data provided by WTTC, the *direct contribution of tourism to Romania's 2016 GDP* amounted to USD 2.5 billion, accounting for 1.3% of the national gross product. WTTC also forecasted a record growth of 6.7% for 2017 and a 2.9% average yearly growth rate for the whole of the 2017-2027 time frame.

In 2016, the *total contribution of tourism to the Romanian GDP* amounted to USD 9.7 billion, the equivalent of 5.2% of the total gross domestic product. Its growth is estimated at 4.6% in 2017 and the average annual rate for the next decade is forecasted to reach 2.7%. Nearly 200 000 people, accounting for 2.4% of the

overall labour market were directly involved in Romanian tourism in 2016, but the total *number of employees*, including the multiplying effect, might be extended beyond 500 000 people.

In recent years, the balance between the *receipts from the international tourism* (the foreigners' spending in Romania) and the *expenditure by the Romanian residents travelling overseas* kept scoring in the negative range. Although the proceeds from the international tourism have taken an upward trend after 2010, the total expenditure of the Romanian tourists abroad has been invariably higher, year by year, starting with 2009.

Fig. no. 1. The balance of the Romanian international tourism (USD, billion)

Source: The authors, using World Travel & Tourism Council [WTTC] data (WTTC, 2018)

According to the NIS data, during 2006-2016, the main tourism demand and supply indicators had the following evolution (Table 1):

- *The number of accommodation units* rose by almost 50%, recording only two years of decline, in 2007 and 2011, throughout the entire time span;
- *The number of beds* increased at a much lower rate, of only 15% in ten years, with the same two years of decline all along the interval (2007 and 2011);
- *The accommodation capacity in operation* has also increased by almost 50%, but the growth was, this time, continuous, even in the years when the *number of accommodation units*, or the *number of beds* declined;
- *The number of tourist arrivals* has grown by almost 80% - obviously at a higher rate than that of the supply indicators mentioned above - and it has picked up speed after 2010. Throughout the time frame we looked at, the number of tourists declined only during the 2008 - 2010 interval, at the peak of the global economic crisis. The decline was more pronounced in 2008 and it subdued by 2010;
- *The number of overnight stays* increased by only 34%, at a much slower pace than that of the *tourist arrivals*, or of the *accommodation capacity in operation*, a fact that had a significant impact on the *average stay level* and on the *occupancy rate*.

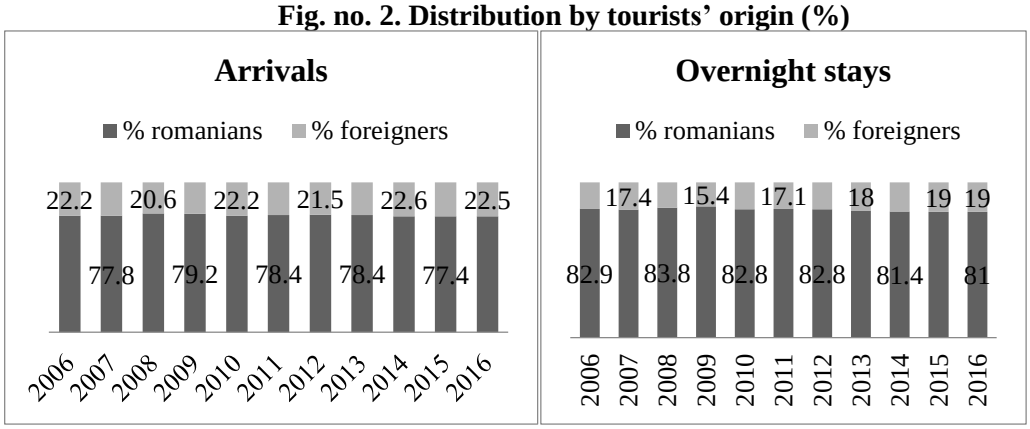
Table no. 1. Evolution of the main tourism market indicators in Romania, 2006-2016

Year	Indicators of the tourism market (number)				
	Units	Beds	Accommodation capacity in operation	Tourist arrivals	Overnight stays
2006	4710	287158	56499904	6216028	18991695
2007	4694	283701	57137649	6971925	20593349
2008	4840	294210	59187968	7125307	20725981
2009	5095	303486	61104435	6141135	17325410
2010	5222	311698	63808286	6072757	16051135
2011	5003	278503	68417259	7031606	17979439
2012	5821	301109	74135614	7686489	19166122
2013	6009	305707	77028488	7943153	19362671
2014	6130	311288	77676817	8465909	20280041
2015	6821	328313	81872539	9921874	23519340
2016	6946	328888	83323220	11002522	25440957

Source: The authors, using National Institute of Statistics [NIS] data (NIS, 2018)

In terms of distribution by the national or foreign origin of the tourists, it turns out that the Romanian tourists accounted for 77%-88% of the overall *arrivals* and for 81%-84% of the total number of *overnight stays*, without major fluctuations between 2006 - 2016 (Fig. 2).

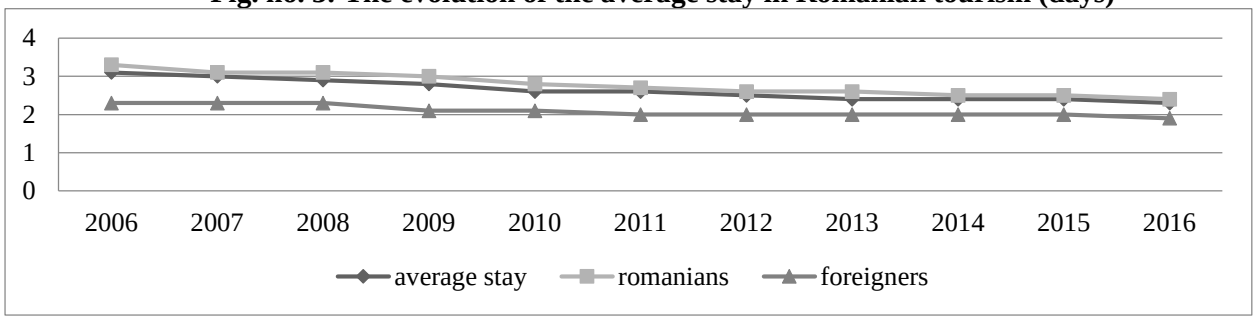
Fig. no. 2. Distribution by tourists' origin (%)



Source: The authors, using National Institute of Statistics [NIS] data (NIS, 2018)

The changes recorded in terms of *arrivals* and *overnight stays* have generated a continual decrease in the tourists' *average stay* in Romania, from 3.1 days in 2006, to 2.3 days in 2016. Moreover, while in 2006 the average stay of the Romanian tourists used to be one day longer than the average stay of the foreigners, towards 2016 this margin kept diminishing, so that, in ten years time it came to be of only half a day. This is an unfavourable evolution, because it did not occur due to an increase in the foreign tourists' average stay, but as a consequence of the continual decrease of the Romanian tourists' stay. In fact, the *average stay* has displayed a downward trend in the case of both foreign and Romanian tourists, but it was comparatively more pronounced in the case of the latter.

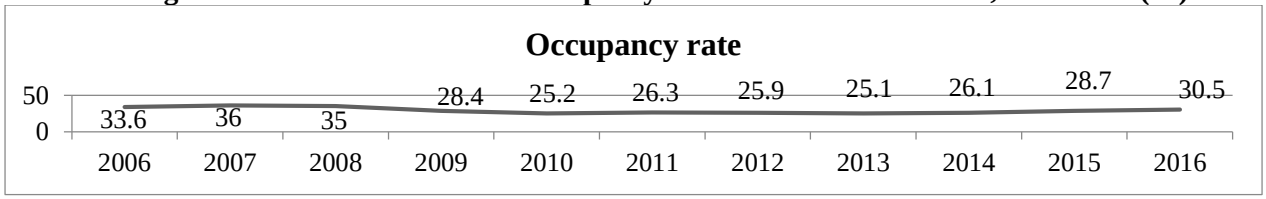
Fig. no. 3: The evolution of the average stay in Romanian tourism (days)



Source: The authors, using National Institute of Statistics [NIS] data (NIS, 2018)

On the other hand, developments in the demand and supply of tourism services are mirrored in the *occupancy rate*, which, besides being very low, has kept fluctuating in Romania during the analysed time frame, recording alternate intervals of growth and fall: after reaching a peak of 36% in 2007, before the outbreak of the global economic crisis, the occupancy rate suffered a quite abrupt drop until 2010, it fluctuated afterwards around 25%, until 2014, before rebounding to 30.5% by 2016.

Fig. no. 4. The evolution of the occupancy rate in Romanian tourism, 2006-2016 (%)



Source: The authors, using National Institute of Statistics [NIS] data (NIS, 2018)

3.2 Romanian tourism - market analysis by regions

Looking at the number of *arrivals* by development regions, we notice the following:

The Centre region has attracted the largest number of tourists, both in 2006 and in 2016, while, at the other extreme, the South-West (SW) region was visited by the lowest number of tourists in both years.

The Bucharest-Ilfov region recorded the highest growth rate of arrivals (129.3%) during the 2006-2016 interval, closely followed by the Centre region (122.1%). On the other hand, at the other extreme, the South-Eastern (SE) region, which used to rank second among regions by this indicator, recorded only less than 40% more tourists in 2016 as compared to 2006 and lost its top ranking, as such.

In terms of *overnight stays*, we found out that:

In the SE region – which had recorded the largest number of overnight stays in 2006 (over 50% more than the next ranked region) - this parameter was only slightly higher, by just 9.5% in 2016. Consequently, due to both the feeble growth registered by the SE region and the more substantial increase of the overnight stays recorded by the Centre region (83.8%), the two regions switched positions in the hierarchy, with the latter taking the lead.

As the North-Eastern (NE) region - which had the lowest number of overnight stays in 2016 - recorded a 37.9% growth, superior to that of SW Oltenia region (10.3%), the two regions switched their positions (the lowest) in the hierarchy, too, by 2016.

While the South Muntenia region has almost stagnated (recording only a 2.9% growth over the decade), the best performer in terms of overnight stays was, just as in the case of arrivals, the Bucharest-Ilfov region, where the number of overnight stays more than doubled (a 102.4% growth).

Table no. 2. Indicators of touristic demand, by development regions

REGION	ARRIVALS			OVERNIGHT STAYS		
	2006	2016	2006-2016 change (%)	2006	2016	2006-2016 change (%)
NW	780554	1316363	68.6	2362911	3088566	30.7
CENTRE	1164060	2585938	122.1	2930392	5386220	83.8
NE	678254	1084045	59.8	1599057	2205775	37.9
SE	1080729	1506616	39.4	4853718	5313781	9.5
S-MUNTENIA	627320	914141	45.7	1940531	1996392	2.9
BUCHAREST - ILFOV	900464	2065012	129.3	1657978	3355893	102.4
SW OLTENIA	370820	630446	70.0	1640929	1810428	10.3
W	613827	899961	46.6	2006179	2283902	13.8

Source: The authors, using National Institute of Statistics [NIS] data (NIS, 2018)

An important feature of a country's tourism market is given by its positioning into the international touristic flows. A relevant picture of the state of facts by region may be given by the weight of foreign tourists in the total number of arrivals, as well as in the total overnight stays.

Table no. 3. Romanian tourism - Overview of tourism demand indicators, by development regions and tourists' origin

Region	% Arrivals Romanians		% Arrivals Foreigners		% Overnight stays Romanians		% Overnight stays Foreigners		Arrivals Romanians / Foreigners		Overnight stays Romanians / Foreigners	
	2006	2016	2006	2016	2006	2016	2006	2016	2006	2016	2006	2016
NW	82.4	81.9	17.6	18.1	87.9	84.4	12.1	15.6	4.7	4.5	7.2	5.4
CENTRE	78.2	81.0	21.8	19.0	81.0	81.2	19.0	18.8	3.6	4.3	4.3	4.3
NE	85.5	87.5	14.5	12.5	88.1	87.7	11.9	12.3	5.9	7.0	7.4	7.1
SE	88.8	93.2	11.2	6.8	87.4	93.6	12.6	6.4	8.0	13.7	7.0	14.6
S-MUNTENIA	86.1	85.9	13.9	14.1	84.1	85.6	15.9	14.4	6.2	6.1	5.3	6.0
BUCHAREST - ILFOV	42.9	43.7	57.1	56.3	46.4	41.8	53.6	58.2	0.8	0.8	0.9	0.7
SW OLTENIA	93.6	92.4	6.4	7.6	95.7	93.5	4.3	6.5	14.7	12.1	22.5	14.3

W	76.5	80.7	23.5	19.3	83.6	83.8	16.4	16.2	3.3	4.2	5.1	5.2

Source: The authors, using National Institute of Statistics [NIS] data (NIS, 2018)

Under a strictly statistical approach, the data above reveal that:

- Both in 2006 and 2016, *the weight* accounted for by the *foreign tourists* was the lowest in the SW Oltenia region, where it has never exceeded 10%, either in the case of *arrivals*, or the *overnight stays*. Besides, *the ratio between the numbers of Romanian and foreign tourists* confirms once more that the region is completely uncoupled from the international tourism flows;
- Bucharest-Ilfov is the only region that reported in both 2016 and 2016 a larger number of foreign tourists and that presents the unique case of a region where *the ratio between Romanian and foreign tourists* is smaller than the unit, in both years and for both indicators [number of Romanian tourists : number of foreign tourists < 1];
- Besides SW Oltenia and Bucharest-Ilfov, the remaining six regions display quite similar circumstances, with *the weight of Romanian tourists* amounting to around 80% of the total *arrivals* and often higher when it comes to *overnight stays*;
- *The weight of foreign tourists in the total arrivals* has declined in 5 of the 8 development regions. While the increases recorded by the remaining 3 regions (NW, S - Muntenia and SW Oltenia) were quite insignificant in quantitative terms, they were actually important for signalling a positive trend in regions that have generally been less attractive for tourists (at least two of them: SW Oltenia, ranked the 8th and South Muntenia, ranked the 6th, both in terms of *arrivals* and *overnight stays*);
- *The weight of foreign tourists in the total overnight stays* has declined in 4 of the 8 regions. In the remaining 4 regions, where *the weight of foreign tourists in the total overnight stays* has increased, growth was relatively more visible (especially in Bucharest-Ilfov and NW) and it determined a better evolution of the *average stay* of the foreign as compared to Romanian tourists.

Hereunder (Table 4), we have an overview of the main indicators of the Romanian tourism services supply in 2006 and 2016, by development regions:

Table no. 4. Romanian tourism - Overview of tourism supply indicators, by development regions

	Units			Beds (thousands)			Accommodation capacity in operation (places-days, thousands)		
Region	2006	2016	2006-2016 change (%)	2006	2016	2006-2016 change (%)	2006	2016	2006-2016 change (%)
NW	543	831	53.0	26,8	33,8	26.2	7371,3	10353	40.5
CENTRE	1223	2094	71.2	37	67,5	82.3	9947,6	20572,8	106.8
NE	435	858	97.2	19	28,8	51.6	5528,8	8371,2	51.4
SE	1278	1129	-11.7	134,6	98,8	-26.6	13176,4	13650	3.6
S-MUNTENIA	433	734	69.5	20,8	30,3	45.7	6367,3	8583	34.8
BUCHAREST-ILFOV	139	185	33.1	12,7	22,2	74.8	4358,6	8099,8	85.8
SW OLTENIA	250	453	81.2	14,8	19,2	29.5	4226	6099,5	44.3
W	409	662	61.9	21,4	28,3	31.8	5523,8	7593,9	37.5

Source: The authors, using National Institute of Statistics [NIS] data (NIS, 2018)

Looking at the evolution of the accommodation (Table 4) we notice the following:

- The largest *number of units* are reported by the Centre and SE regions (over 1 200 each), while the lowest levels are found in Bucharest-Ilfov and SW Oltenia;
- The two regions with the most numerous *units* have recorded diverging evolutions: while in the Centre region there was an upward trend, in the SE region the trend was negative. As such, the two regions have come

to switch ranks within a decade, the Centre ranking first by the end of 2016, with almost double *the number of accommodation units* as compared to the SE region, the former no. 1 of 2006, which came to rank second.

- The largest increase of the *accommodation units* was recorded in the NE region, where their number almost doubled between 2006 - 2016.
- In terms of *accommodation places (beds)*, the data show a positive evolution in 7 of the 8 regions. The only exception was represented by the SE region, where the magnitude of the decline (-26.6%) was even more pronounced than that of the decline in *accommodation units* documented in the same region (-11.7%). This development suggests that on the seaside the larger capacity units were scrapped primarily.
- Also, the fact that in 5 out of the 7 regions that increased their *number of accommodation places*, the change in the *number of beds* was inferior to the change in the *number of units*, suggests that the newly built units are preponderantly low-capacity ones;
- The Bucharest-Ilfov and Centre regions stand out among the other ones as regards their performance of building a distinct position in the Romanian touristic market. They succeeded to increase their accommodation supply both in terms of *units* and *bed numbers* and, in their case, the newly built units are larger-capacity ones.
- In spite of all the developments presented above, the SE region has kept its first position by *number of accommodation places (beds)*. At the other extreme, Bucharest-Ilfov is the region which has increased the least its *number of accommodation units* (by only 33.1%), but the newly built units were mainly large-capacity ones, while in SW Oltenia, the region that increased the least its *number of beds* (by only 29.5%), the newly-built units were mainly small-capacity ones.

Another relevant indicator, that gauges touristic supply and gives a relevant image of the sector's efficiency, is *the accommodation capacity in operation* (Table 4). Looking at the levels and the evolution of this indicator we find out that:

- In the SE region, which is specialized in seaside tourism, the number of places-days increased only marginally during the 2006-2016 time frame, but this development suggests a certain efficiency improvement of the accommodation capacity use, that took place in spite of the tourism seasonality specific for this region;
- If in 2006 the SE region had the largest *accommodation capacity in operation*, in 2016, by doubling the number of places-days, the Centre region managed to concentrate the largest part of Romania's touristic supply;
- With a few exceptions, in most of the regions, the enlargement of *the accommodation capacity in operation* was superior to that of the *number of units*, but inferior to that of the *number of beds*, which suggests that efficiency improvements are taking place in all these regions.

To make the analysis by region complete, we considered 4 aggregate indicators: (i) the average stay, (ii) the occupancy rate, (iii) the degree of accommodation capacity usage, and (iv) the average number of beds per unit.

Table no. 5. Aggregate indicators of the touristic market, by development regions

Region	Average stay (days)		Occupancy rate (%)		Degree of accommodation capacity usage (%)		Average number of beds per unit	
	2006	2016	2006	2016	2006	2016	2006	2016
NW	3.0	2.3	32.1	29.8	76.4	85.0	49.4	40.7
CENTRE	2.5	2.1	29.5	26.2	74.6	84.7	30.3	32.2
NE	2.4	2.0	28.9	26.3	81.0	80.8	43.6	33.5
SE	4.5	3.5	36.8	38.9	27.2	38.4	105.3	87.5
S-MUNTENIA	3.1	2.2	30.5	23.3	84.9	78.6	48.1	41.3
BUCURESTI - ILFOV	1.8	1.6	38.0	41.4	95.2	101.2*[2]	91.5	120.2
SW OLTENIA	4.4	2.9	38.8	29.7	79.2	88.3	59.3	42.4

[2] This index, computed by the authors using the formula presented in the methodology, is influenced by data and reporting inconsistencies, as well as by the temporary fall into disuse of some accommodation capacities, Factors such as these may explain levels such as 101.2% in 2016.

W	3.3	2.5	36.3	30.1	71.6	74.7	52.4	42.6

Source: The authors, using National Institute of Statistics [NIS] data (NIS, 2018)

In 2006, *the average stay* fluctuated between a minimum of 1.8 days (in the Bucharest-Ilfov region, typical of business, week-end and urban tourism), and a maximum of 4.5 days (in the SE region, typical of seaside tourism). Ten years later, the *average stay* has declined everywhere and, while the extremes are to be found in the same two regions, their 2016 levels are diminished to a minimum of 1.6 days and a maximum of 3.5 days in the Bucharest - Ilfov and SE regions, respectively.

The occupancy rate, that ranged in 2006 between a minimum of 28.9% (in NE) and a maximum of 38.8% (in SW Oltenia), followed different trends by 2016: in 6 of the 8 regions *the occupancy rate* declined (more intensely in the W, SW Oltenia and S-Muntenia regions), while in the remaining two regions (SE and Bucharest-Ilfov) it rose marginally. Consequently, in 2016 the highest *occupancy rate* was recorded in Bucharest-Ilfov, and the lowest in S-Muntenia and, while in 2006 the distance between extremes did not exceed 10 percentage points (p.p.), by 2016 it has increased to over 18 p.p.

Two main issues seem relevant when looking at the changes in *the degree of accommodation capacity usage*: (i) the indicator reaches high levels in Bucharest-Ilfov and (ii) in the SE region its levels are strongly impacted by seasonality. During the 2006-2016 interval, *the degree of accommodation capacity usage* rose in most of the regions, but more significantly in SE (+11.2 p.p.), Centre (+10.1 p.p.), SW Oltenia (+9.1 p.p.) and NW (+8.6 p.p.). Only the NE and S-Muntenia regions made an exception from the general trend, recording declines.

In 2006, *the average number of beds per unit* was the highest in SE and in Bucharest-Ilfov, revealing the preponderance, at the time, of large-scale units in these regions. The opposite situation was present in the Centre region, where accommodation units were offering 30 beds/unit, on the average. Over the next ten years, the evolution of the accommodation supply reveals a decreasing trend for the large-scale units, as in 6 of the 8 development regions *the average number of beds per unit* dropped quite abruptly. In the remaining two regions *the average number of beds per unit* was on the rise, recording a marginal growth in the Centre region and an ample increment, by around one third, in the Bucharest-Ilfov area, where the indicator reached over 120 beds/unit, the highest level in the country, in 2016.

3.3 The cluster analysis

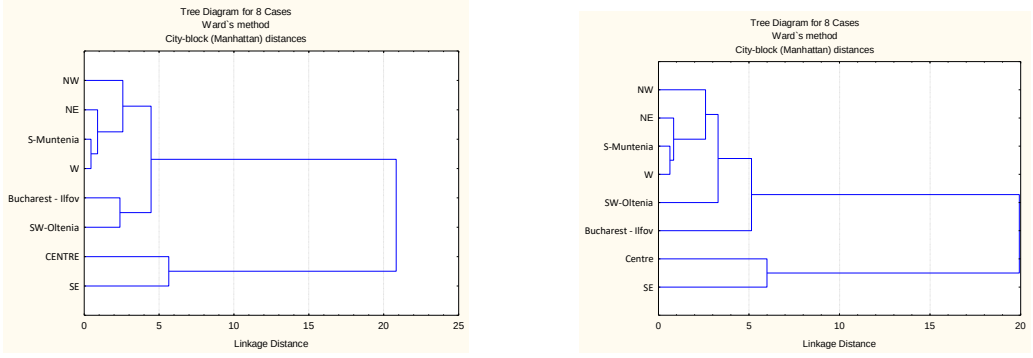
3.3.1 Cluster analysis 1 – the main indicators of the touristic market

Starting from the main indicators of touristic demand and supply in Romania and obtaining the graphic representation of the cluster analysis (the dendogram) we notice the following:

The distance between components is broadening. At a level of 5 of the Linkage Distance, 3 clusters may be defined in 2006, and 4 clusters in 2016. By progressively reducing the distance, a minimum of one additional cluster would appear in each of the years.

In both years the Centre and SE regions are distinct from the others. The NW, NE, S-Muntenia and W regions have similar features, the more so the last two ones (S-Muntenia and W) which are resembling the most. SW Oltenia seems nearer to Bucharest-Ilfov, but, while this region (SW Oltenia) seems prone to migrate towards the heterogeneous group specified above, the Bucharest-Ilfov region is rather inclined to increasingly differentiate itself from the others.

Fig. no. 5. Cluster analysis 1 dendogram (2006-left; 2016-right)



Source: The authors, imported from STATISTICA 7 Software

Considering the features of the development regions according to the touristic demand and supply indicators, they can be clustered as it follows:

Table no. 6. Cluster components and characteristics (Cluster analysis 1)

2006	*Notes*	2016	*Notes*
NW **NE** **S-Muntenia** **W**	Demand – average Supply - average	NW NE S-Muntenia W	Demand – average Supply - average
SW - Oltenia **Bucharest-Ilfov**	Demand–low/Oltenia, high/Bucharest Supply – low	SW - Oltenia	Demand–low Supply – low
		Bucharest-Ilfov	Demand - high Supply – low
Centre	Demand - high	Centre	Demand - high Supply – high
SE	Demand - high Supply - very high	SE	Demand - high Supply - very high

Source: The authors, based on cluster analysis

Looking at the above synthetic table that aggregates the 2006 and 2016 features of the Romanian touristic demand and supply, a pole of demand in the Bucharest-Ilfov region can be noticed, as well as developed touristic markets in the Centre and SE regions. What differentiates the tourism market of the SE region from that in the Centre, is the very high supply of accommodation places (beds) and the high accommodation capacity in operation. At the other extreme, the SW Oltenia region displays an underdeveloped touristic market.

3.3.2 Cluster analysis 2 – Aggregate indicators

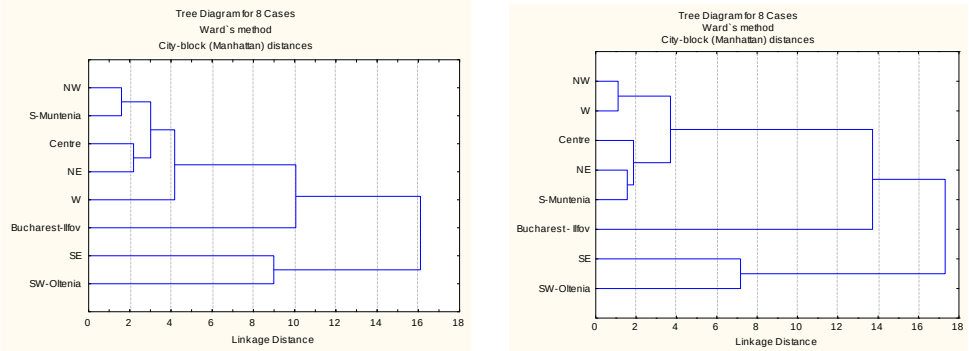
A second grouping of the development regions was performed on the basis of aggregate indicators, according to the methodology. Dendogram 2, reveals the following aspects:

- The distances between clusters don't follow a rule, they are broadening or narrowing on a case by case basis. At a level of 5 of the Linkage Distance, 4 clusters may be defined in both 2006 and 2016. By progressively reducing the distance, a minimum of one additional cluster would appear in each of the years.

- In both years, the SW Oltenia and SE regions, on the one hand, and the Bucharest-Ilfov region, on the other hand, are distinct, while the rest of 5 regions bear more similarities.

- A regrouping of the 5 regions is noticeable in 2016, as compared to 2006.

Fig. no. 6. Cluster analysis 2 dendogram (2006-left; 2016-right)



Source: The authors, imported from STATISTICA 7 Software

For enhanced accuracy of the development regions' grouping, at a level of 2.5 of the Linkage Distance we found out the following clusters and their features:

Table no. 7. Cluster components and characteristics (Cluster analysis 2)

2006	*Notes*	2016	*Notes*
NW ***S-Muntenia***	Average stay, Degree of accommodation capacity usage, Average number of beds per unit – **AVERAGE**	**NW** ***W***	Average stay, Occupancy rate, Average number of beds per unit - **AVERAGE** Degree of accommodation capacity usage – **AVERAGE - HIGH**

Centre **NE**	Average stay, Average number of beds per unit - **LOW** Degree of accommodation capacity usage - **AVERAGE**	**Centre** **NE** ***S-Muntenia***	Occupancy rate, Average number of beds per unit - **LOW** Average stay - **AVERAGE** Degree of accommodation capacity usage – **AVERAGE - HIGH**
W	Average stay, Degree of accommodation capacity usage - **AVERAGE** Occupancy rate – **relatively HIGH**		
Bucharest – Ilfov	Occupancy rate, Degree of accommodation capacity usage, Average number of beds per unit – **HIGH** Romanians / Foreigners < 1 (Arrivals, Overnight stays) Average stay - **LOW**	**Bucharest – Ilfov**	Occupancy rate, Degree of accommodation capacity usage, Average number of beds per unit - **HIGH** Romanians / Foreigners < 1 (Arrivals, Overnight stays) Average stay - **LOW**
SE	Average stay, Occupancy rate, Average number of beds per unit - **HIGH** % of foreign tourists - **LOW** Degree of accommodation capacity usage – **VERY LOW**	**SE**	Average stay, Occupancy rate, Average number of beds per unit - **HIGH** % of foreign tourists - **VERY LOW** Degree of accommodation capacity usage – **VERY LOW**
SW Oltenia	Average stay, Occupancy rate - **HIGH** % percentage of foreign tourists - **LOW** Degree of accommodation capacity usage - **AVERAGE**	**SW Oltenia**	Average stay, Degree of accommodation capacity usage – **AVERAGE - HIGH** Occupancy rate - **AVERAGE** % of foreign tourists - **VERY LOW**

Source: The authors, based on cluster analysis

By looking at the features of the regions through the 6 aggregate indicators, we can see that the regional differences that have already been highlighted are reconfirmed. More specifically:

- Bucharest-Ilfov, by the high levels of the *occupancy rate* and *degree of usage*, the large-scale *units* and the higher *weight of the foreign tourists*;
- South region, by the highest *average stay*, high *occupancy rate*, large–scale *units*, but also by a low and quickly decreasing *weight of the foreign tourists* and the lowest *degree of capacity usage*;
- SW Oltenia, by *average stay* and *degree of capacity usage* above the average, but also by an extremely low *weight of foreign tourists* both in terms of *arrivals* and *overnight stays*.
- As a consequence of the evolution in *the occupancy rate* and *the accommodation capacity usage* over the last 10 years, the rest of 5 regions besides the three ones described above have changed in ways that generated a regrouping from 3 to 2 clusters, each of them with an altered composition.

4. Conclusions

Romanian tourism industry underwent important changes both at national and regional level in the first ten years after the EU accession. When it joined the EU, Romania was running a positive balance of international tourism, but, not managing to capitalize on the opportunity of accessing the single market, its balance has turned negative since 2009. Additionally, the global economic crisis of 2008-2010 and the subsequent crises in Europe took a significant toll on the global outbound tourism demand. As such, Romania's receipts from its export of tourism services were able to rebound only after 2011, but not strongly enough to compensate for the payments of the touristic services it imported. Therefore, Romania continued to run a deficit in its international tourism balance.

Accounting only for 1.3% of the GDP and only for 2.4% of the total employment, tourism is not yet an important enough sector for Romanian economy, despite the country's undisputed potential in terms of natural

endowment, historical and cultural heritage, human warmth and hospitality. Although Romanian touristic demand and supply indicators have been improved over the last ten years, a more detailed analysis reveals their unfavourable developments at least as regards:

- The weight of foreign tourists in the overall *arrivals* and *overnight stays*, that kept fluctuating around only 20%. Not only is this percentage very low, but what it is more significant is that it did not demonstrate any inclination to step up, all along the decade;
- *The average stay*, that declined by almost a day despite its already low level in Romania, of about three days, prior to the EU accession;
- The evolution of the *occupancy rate*, that reflected the impact of the economic crisis while its recent rebound was not sufficiently strong to at least reach its former level of 2007 (36%) which was, anyway, very low.

In the first stage of our research the study of regional touristic markets through various indicators revealed the existence of numerous differences between the eight development regions and shed light on their diverging transformation over the last ten years. In the second stage, of the cluster analyses, the peculiarities of each region and the differences between regions that had been identified in the first stage have been confirmed and reinforced. Both research stages helped identify two developed and active tourism markets in the Centre and SE regions, a critically underdeveloped market in SW Oltenia and a pole of strong demand for touristic services that is still unmet, located in the Bucharest-Ilfov region.

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