

A SPATIAL PERSPECTIVE ON REGIONAL TOURISM IN EASTERN AND CENTRAL EUROPE

Adina Berbeniciuc-Mititiuc, PhD Candidate, "Al. Ioan Cuza" University of Iași

Abstract: Tourism industry is a continuously developing sector which provides jobs, competitiveness and also influences the growth of a country or a region. To see progress of it at a regional level from a spatial perspective it means not only to calculate different indicators or applying a model, it's also about observing the geography of events in diverse regions, being informed about the legislation and state implication for the industry and also compare statistics and events both at the regional and country level. I choose to study the phenomena from five Eastern and Central Europe countries and the results after using the ANOVA model and the post-hoc tests are relevant for the research in the field of tourism by showing also the differences among the sample of the states at a regional level, but also how the country population intensity in different regions and also the area of the five ones (in square kilometers) influences the agglomeration of tourists in the counties that we studied.

Keywords: tourism, geography of events, regional level, EU, ANOVA model.

JEL classification: L83, R11, R12, R14, R15.

1. Introduction

Tourism is an activity that can have an important impact on the development of a region being a significant generator of jobs, a stimulator for all the economic areas and a "keeper" in preserving the natural, environmental and cultural heritage.

In the Eastern and Central Europe is easy to observe that there are differences between the member states in the field of regional tourism, regarding the economic point of view, but also the spatial differentiation concerning the main nodes where tourism concentrates.

The aim of this research is to identify the main areas, by NUTS II classification, where we can see agglomeration of tourism, comparing five countries of the European Union that are positioned in the Eastern and Central Europe. We will take into consideration Bulgaria, Hungary, Poland, Czech Republic and Romania.

The purpose of this study is to provide some answers regarding the spatial extension and intensity of tourism at regional level taking into consideration different social, economic situation of every analyzed country for our sample of the five ones and the attractiveness for this industry regarding each state involved in the research.

2. Literature review

Tourism plays a very important role in the economic development of the contemporary society and a great chance for further growth and progress.

In Europe tourism has different levels of development for every region of the member countries. This is influenced by multiple factors like the importance of the region in that country, the support of authorities and local communities, the natural heritage or business conglomerates that makes that region to be attractive for tourists.

Introduced by geographers, the concept of "tourism systems" says that the tourist movements and flows should be positioned at the core of the structure of regional tourism (Pearce, 1979). As a total system we can recognize the three major components that involve major tourist destinations, origin of tourists and routes between the two locations (Boniface and Cooper, 1994).

Important to be highlighted is that the key issues for regional tourism research from a spatial perspective are the rules and patterns of tourism flows.

For decades tourism studies has embraced and developed theory from numerous disciplines (Xiao, Jafari, Cloke, & Tribe, 2013). Hence, we need closer theoretical bond between the economic geography and tourism studies (Song, Dwyer, Ly, & Cao, 2012; Ioannides, 2006). This article presents from a spatial perspective, the influence given by tourism at the regional level, in Eastern and Central Europe.

The tourism destination including the place where the traveler's needs are fulfilled and the location of tourism services and structures are the heart of the tourism system and the principal arguments for choosing a place for leisure in addition to the impact on the environment and the relation between tourism and lands organization.

Also we have to take into consideration the destination choice of tourists that is based either on the awareness set of possibilities and opportunities of destination alternatives (Goodall, 1991; Woodside & Sherrell, 1977), or the comparison process between destinations looking for the country brand and accessibility (Belonax, 1979; Howard, 1977; Roberts & Lattin, 1991; Hong, Kim, Jang & Lee, 2006).

Other opinions are that a tourist's decision in order to settle on a destination is influenced by social and psychological factors as social status, personal interest or cultural background, as well as the geographic uniqueness of the destination country (Song, Romilly & Liu, 2000).

3. The research methodology

This article has as its starting point the assumption that tourism activity, attractiveness and intensity may be influenced, among other factors, by the country area and population for each one of its regions.

Between the five countries that we studied there are differences at many levels, regarding the methods applied for tourism visibility, attraction of tourists through different policies adopted by the authorities or hotels management, the density of hotels and establishments at geographical level and many others.

The novelty of the research is given by its topic, namely, to use the regional level in tourism sector, but to see through this at the spatial perspective in order to identify the dissimilarities between Eastern and Central European countries.

The aim of the study is to identify from the five countries, by NUTS classification, the regions where the phenomenon of tourism intensity and agglomeration is identified.

We chose as a method of research the ANOVA model and post-hoc tests, on a sample consisting of five countries placed in Central and Eastern Europe, members of the European Union, with different levels of tourism development, different economic situations and different natural environment. For each one we analyzed the NUTS II regions and we designed the path for two independent variables, arrivals of residents and arrivals of non-residents, for 2011 and 2012.

In order to strengthen the results obtained the research has been enlarged to ten years, between 2003 and 2012. The sample has been tested with the descriptive statistics indicators (mean, median, standard deviation, interquartile range) and statistical multivariate tests. The variation in the number of arrivals of residents by year and by country was analyzed with General Linear Model – Repeated Measures in SPSS method. To see the significance in the number of arrivals of residents or non-residents Tukey test was used to compare the means for pairs of countries to observe which one has the best score.

4. Results of the study

We used the SPSS program and our Excel database for the five countries by calculating the ANOVA model and post-hoc tests in order to identify the differences between the regions.

It is noted that the average number of resident arrivals is higher in Poland compared to the other countries for 2011. Also we observed that in Poland and Romania, for 2012, the average number of resident arrivals is reduced linked to the year of 2011, but in Czech Republic is vice-versa, so in 2012 the same indicator is greater than the previous year.

The ANOVA results and post-hoc tests shows that the arrivals of residents number differ considerable in Poland compared with the other countries for 2011. For 2012 there are no significant disparities between the five countries.

The results using panel data between 2003 and 2012 shows the same situation of residents arrivals for Poland. Annual averages by country and year calculated based on the NUTS II regions indicate Poland with the highest value for the annual arrivals of residents. However, for Poland, there is a higher growth in the number of residents arrivals compared to the other countries analyzed.

For all countries surveyed, there is a reduction in the number of residents arrivals in 2009 compared to 2008 due to the global crisis. Effects of the crisis were perceived with varying intensity in the countries of the sample, Poland feeling the least effects of the crisis.

Table 1 Descriptive statistics indicators (mean, median, standard deviation, interquartile range) of the number of arrivals residents, by country and by year, from 2003 to 2012

Country	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mean										
Bulgaria	262443.2	275329.3	315629.5	367125.0	422871.2	458114.3	399382.5	377627.2	421283.0	476992.0
Poland	1885397.3	1968604.5	2047800.2	2199756.2	2426626.0	2584965.0	2581961.7	2721153.7	2844511.0	2942682.3
Romania	493964.8	534877.9	546898.1	604524.5	677621.0	707427.0	608193.1	590801.8	689363.4	750001.5
Hungary	481038.6	478082.1	516806.4	553256.7	574734.7	590745.7	560381.4	559743.0	559328.7	663501.6
Czech Republic	783840.8	769808.0	753208.1	786181.5	785152.1	773309.5	744192.4	734735.3	772955.6	810292.1
Median										
Bulgaria	219497.0	274194.0	306958.5	362871.0	390296.5	427367.0	399152.0	375566.0	438934.5	463338.5
Poland	1793732.5	1926505.5	2027491.0	2268221.0	2525082.0	2738277.0	2774515.0	3005275.5	3090098.5	3182707.5
Romania	478704.5	498526.0	499621.5	560094.5	617192.5	640222.0	547963.0	523217.5	606270.5	653279.0
Hungary	505409.0	262443.2	275329.3	315629.5	367125.0	422871.2	458114.3	399382.5	377627.2	421283.0
Czech Republic	692567.5	1885397.3	1968604.5	2047800.2	2199756.2	2426626.0	2584965.0	2581961.7	2721153.7	2844511.0
Std. Deviation										
Bulgaria	121718.6	493964.8	534877.9	546898.1	604524.5	677621.0	707427.0	608193.1	590801.8	689363.4
Poland	509443.9	481038.6	478082.1	516806.4	553256.7	574734.7	590745.7	560381.4	559743.0	559328.7
Romania	207021.6	783840.8	769808.0	753208.1	786181.5	785152.1	773309.5	744192.4	734735.3	772955.6
Hungary	85986.1	219497.0	274194.0	306958.5	362871.0	390296.5	427367.0	399152.0	375566.0	438934.5
Czech Republic	382357.2	1793732.5	1926505.5	2027491.0	2268221.0	2525082.0	2738277.0	2774515.0	3005275.5	3090098.5
Interquartile Range										
Bulgaria	205790.3	478704.5	498526.0	499621.5	560094.5	617192.5	640222.0	547963.0	523217.5	606270.5
Poland	1040546.3	505409.0	510970.0	546936.0	572720.0	573160.0	573009.0	554103.0	556907.0	554927.0
Romania	276358.8	692567.5	673250.5	636438.0	656382.5	653858.5	645361.0	611144.5	660087.0	703263.5
Hungary	127549.0	121718.6	116635.7	127879.3	144082.2	184908.2	201401.3	153462.1	153928.8	151135.1
Czech Republic	605665.5	509443.9	536254.9	551483.4	570607.1	591104.2	628122.6	674066.9	732902.9	776549.0

Data source: calculated in SPSS by author.

It was observed that the variation between the regions of Poland by comparison with the other countries is higher, and some regions that point-out their intensity of tourism by the higher number of arrivals, there are Praha or Prague in Czech Republic, Kozep-Magyarország in Hungary and Bucharest-Ilfov in Romania.

The results obtained by using the General Linear Model were that the number of arrivals of residents vary significantly by country and year (multivariate tests for the comparison of means are statistically significant for variable time and interaction between time and country variables).

For the considered model has been obtained a significant linear trend for the number of arrivals of residents.

Table 2 Comparison of the average number of arrivals of residents by country over the period 2003-2012**Multiple Comparisons**

Measure: MEASURE_1

	(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.
Tukey HSD	Bulgaria	Poland	-2042666.1*	195365.5	.000
		Romania	-242687.58	182747.7	.676
		Hungary	-176082.18	188258.9	.881
		Czech Republic	-393687.82	182747.7	.225
	Poland	Bulgaria	2042666.07*	195365.5	.000
		Romania	1799978.48*	182747.7	.000
		Hungary	1866583.88*	188258.9	.000
		Czech Republic	1648978.25*	182747.7	.000
	Romania	Bulgaria	242687.58	182747.7	.676
		Poland	-1799978.5*	182747.7	.000
		Hungary	66605.40	175129.8	.995
		Czech Republic	-151000.24	169191.5	.897
	Hungary	Bulgaria	176082.18	188258.9	.881
		Poland	-1866583.9*	188258.9	.000
		Romania	-66605.40	175129.8	.995
		Czech Republic	-217605.64	175129.8	.727
	Czech Republic	Bulgaria	393687.82	182747.7	.225
		Poland	-1648978.2*	182747.7	.000
		Romania	151000.24	169191.5	.897
		Hungary	217605.64	175129.8	.727

Based on observed means.

*. The mean difference is significant at the .05 level.

Data source: realized by author using SPSS.

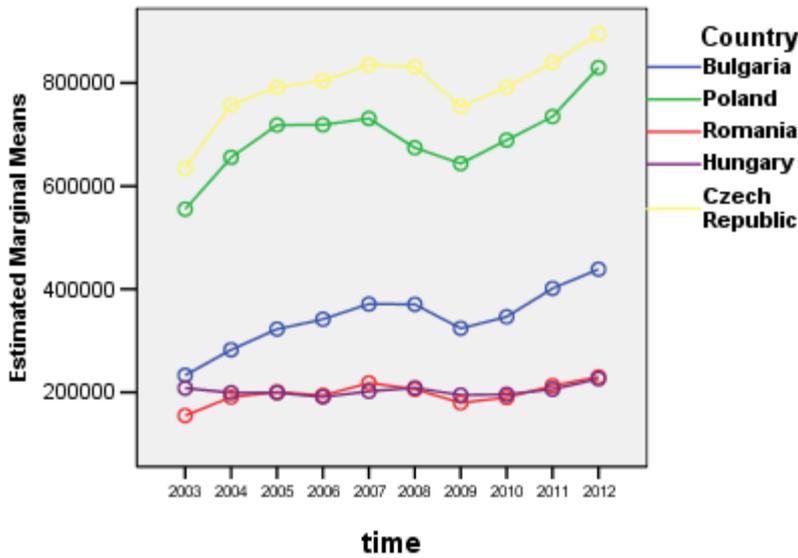
Over the period 2003-2012, the number of arrivals of residents is significantly higher in Poland than in the other countries analyzed. This can be stated because the Tukey test for comparison of means, for pairs of countries is significant (significance level of less than 1%) in case of Poland. On average, during 2003-2012, the number of arrivals of residents is higher Poland than in Czech Republic, Romania, Hungary and Bulgaria.

Variation in the number of arrivals of residents at regional level is higher in Poland than in other countries. Statistical indicators (standard deviation and interquartilic range) have the highest values in Poland, which indicates a greater dispersion of the number of arrivals of residents between NUTS II regions in Poland. The smallest regional variation in the number of arrivals is observed in Hungary. Nyugat-Dunantul region of Hungary has particularly much higher values than other regions of Hungary and is identified as an outlier of maximum, while Közép-Magyarország region presents much lower values compared to the rest of the country and is identified as an outlier of minimum.

We calculate the same model for the arrivals of non-residents for 2011 and 2012, for the sample of the five countries. The results shown that in 2011 the situation in Poland is very good for tourists that are not residents and also we have to notice that regarding Czech Republic we have a similar situation between the arrivals of residents and non-residents not only for 2011 and 2012, but for the whole period 2003 and 2012.

Figure 1 Evolution of the number of arrivals of residents, by country, during 2003-2012

Estimated Marginal Means of Arrivals of Nonresidents

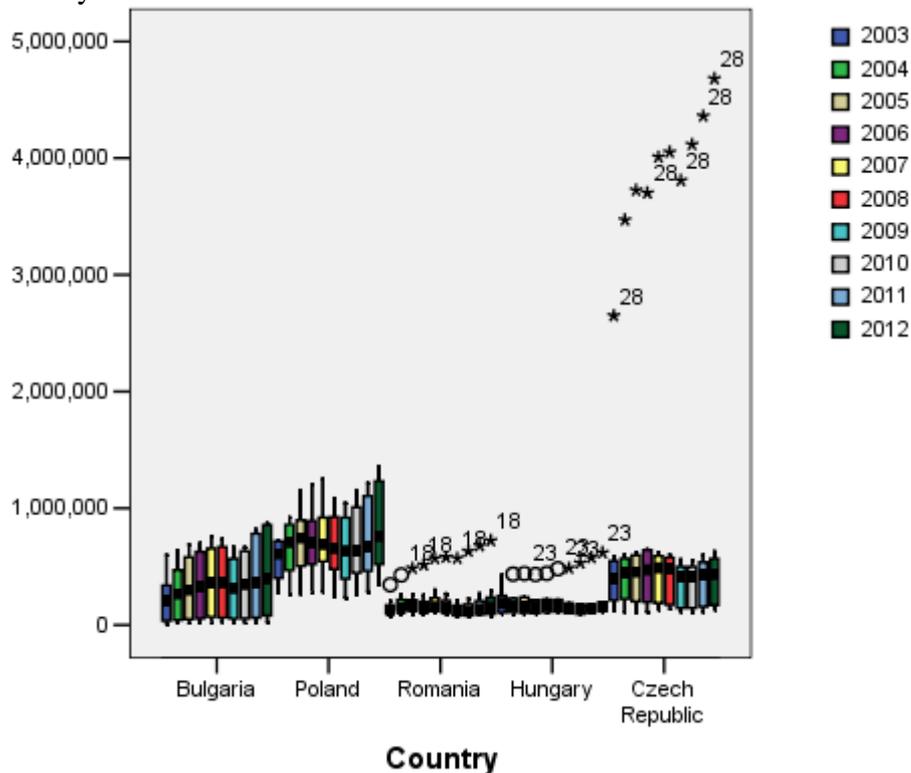


Data source: calculated in SPSS by author.

The number of arrivals of non-residents varies significantly by year (multivariate tests for the comparison of means are statistically significant for the variable time and interaction between the time and country variables).

The ANOVA and post-hoc model results are the same for 2011 and 2012 and we can strongly pronounce that in Poland the number of non-resident arrivals are significantly different from the other countries in 2011. For 2012, there are no important gaps between the regions.

Figure 2 Variation in the number of arrivals of non-residents at regional level, by year and by country



Data source: calculated in SPSS by author.

Is observed a higher regional variation in the number of arrivals of non-residents in Poland, Bulgaria, Czech Republic.

There are very high values for the region Praha of the Czech Republic, Nyugat-Dunantul region of Hungary and Bucharest-Ilfov region of Romania, the maximum outlier values identified.

Conclusions

Our research identified the main differences at the regional level between Czech Republic, Poland, Romania, Bulgaria and Hungary. These dissimilarities were to be expected, if we think about the main indicators – population and area in square kilometers – that we analyzed.

From this point of view we observed that from a spatial perspective these two pointers associated with the resident and non-resident arrivals number can identify tourism agglomeration and intensity in the regions that we investigated.

Using the ANOVA model by NUTS II classification and the multivariate tests we were able to show that Poland, at regional level is clearly in a higher position than the other four countries during the entire period analyzed both for resident and non-resident tourist arrivals.

The phenomena of agglomeration and intensity of tourism were observed in other three Central and Eastern European states in order Czech Republic, Romania and Hungary.

The benefits of this research consist in the fact that others can use the results for further studies and data can be used in different fields of research and it's worth mentioning the fact that the quantitative approach can be extended by using geographical maps showing the events.

For our sample of the five countries studied is hard to predict what it will happen in the next years because of the current economic and political situation. This may consist in a future study, the next reflection issue.

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