

## Comparative Assessments of the Seasonality in "The Total Number of Overnight Stays" in Romania, Bulgaria and the European Union

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### Abstract

*It is thought that tourism started to display a significant activity only towards the end of the nineteenth century. At the international level, its development has been almost explosive since the 1960s; therefore, the current period is characterized by a real revolution in travel. However, in most countries, tourism is characterized by a seasonal evolution. The objective of this paper is represented by the comparative analysis of the seasonality in the tourism activities from Romania and Bulgaria, with a reference to the average seasonality registered in the EU member countries.*

*For the quantitative research carried out in this study, we processed a database consisting of the monthly values of "the total number of overnight stays" indicator, recorded between January 2005 and December 2016, using the moving average method, the seasonality coefficient and EViews 5. The results led to the formulation of comparative assessments regarding the seasonality in the tourism activities from Romania and Bulgaria and their situation compared to the average of the seasonality recorded in the EU.*

**Key words:** number of overnight stays, tourism seasonality, seasonality indicators

**J.E.L. classification:** C10, C21, C53, M21, J63, Y32, Z33

### 1. Introduction

Each country has a certain tourist potential, and the extent to which it is capitalized depends on the role that the tourist activity plays in the structure of the respective national economy. Romania and Bulgaria are two countries with a similar tourist offer, considering aspects such as geographical location, relief forms, climate and temperature conditions, natural resources; therefore, between the two countries, considered as tourist destinations, there is a direct competition. The research shows that the seasonality in tourist activities manifests differently in the two countries. Thus, besides the natural and anthropic factors, there are also other categories of factors that influence differently the tourist activities from the two countries and, implicitly, their tourism seasonality. At the same time, the results of the study gave us the opportunity to outline the tourist profile of the two countries and to observe some specific aspects of the tourists' behavior.

### 2. Literature review

According to Minciu (2004, p. 11), tourism officially became an activity towards the end of the nineteenth century, being especially dependent on natural factors. Professors Snak, Baron, and Neacsu (2001, p.18) consider that tourism is a "social-economic phenomenon specific to the modern civilization, strongly anchored in the society and as such influenced by its evolution". Another author (i.e. Bigovic 2011, p.16; 2012, p.102) appreciates that tourism has become a phenomenon typical of the modern world; at the same time, he states that "one of the most visible

features of modern tourism" is seasonality. Most specialists define seasonality by referring to its negative aspects, i.e. "systemic change", irregular during the year (Hylleberg, 1992, p.4); "time imbalance" – in terms of the number of visitors, traffic on highways and other transportation and employment means (Butler, 1994; 2001, p.5); the "concentration tendency" of tourist flows over a relatively short period of the year (Allcock, 1989, p.387); "significant oscillations" between periods of maximum and minimum activity (Fernandez-Morles, 2003, p.942). In the context of these definitions, it is noteworthy that Bigovic (2012) and Grigorescu (2003) propose that the analysis of tourism seasonality should also tackle (in addition to repeatability) two other important aspects, i.e. the intensity and dynamics of the seasonal concentration of tourism activities.

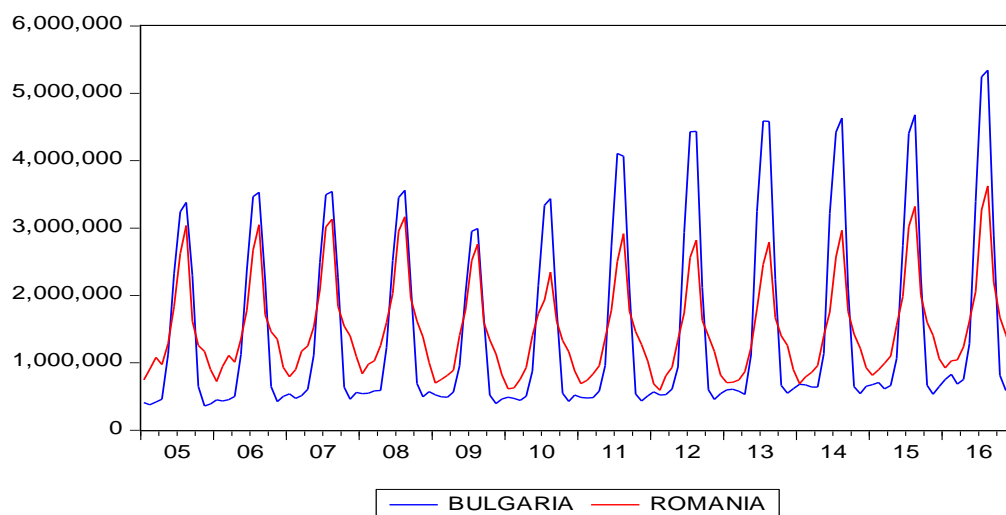
### 3. Research methodology

In our quantitative research, we processed a Eurostat database, comprised of the monthly values of the "total number of overnight stays" indicator recorded from January 2005 to December 2016, using the moving averages method for the calculation of the deseasonalized series and of the seasonality coefficients for concentration assessment; data processing was performed by EViews 5. This scientific approach provided the support for both the analysis of the intensity and dynamics of the seasonal concentration characterizing the tourism activities conducted in Romania, Bulgaria and the EU, as well as for the qualitative interpretations regarding the tourist profile of the analyzed destinations.

### 4. Results and discussions

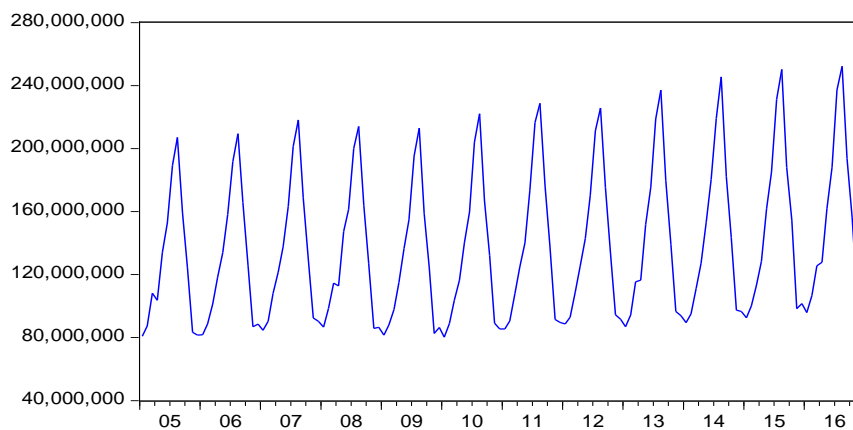
The coronograms of the "total number of overnight stays" indicator recorded between January 2005 and December 2016 for Romania, Bulgaria and EU-28, obtained by EViews, are represented in Figure 1 and Figure 2.

Figure no. 1 Evolution of the "total number of overnight stays" indicator in Romania and Bulgaria (initial series)



Source: Author's own results obtained by processing Eurostat data, by EViews

Figure no. 2 Evolution of the "total number of overnight stays" indicator in the EU (initial series)  
European Union (28 countries)



Source: Author's own results obtained by processing Eurostat data by EViews

Comparing the graphical representations in figures no. 1 and no. 2, it can be noticed that:

- the tourist activity (expressed by "the total number of overnight stays"), both in Romania and Bulgaria, on the one hand, and the average tourist activity in the EU, on the other hand, underwent a seasonal evolution throughout the studied period, but the trends are different;
- the EU average of "the total number overnight stays" indicator shows smaller variations from one year to the next, and the trend is slightly upward throughout the 2005-2016 period;
- it can be said that the evolution of the tourist activities from Romania and Bulgaria was similar and constant between 2005 and 2008;
- in 2009, the indicator dropped significantly, reaching almost the same value in the two countries; however, starting with 2010 (and until 2016), a gap was created between Romania and Bulgaria, which grew constantly;
- the minimum values of the total number of overnight stays were registered in Romania in 2010, in Bulgaria in 2009, and in the EU in 2005;
- the global economic crisis from 2007-2008 was felt in the EU by an insignificant decrease in the average of the total number of overnight stays in 2008 and 2009, while Romania and Bulgaria faced an obvious decrease of this indicator in 2009. Only in Romania, the tourist activity continued to decline in 2010. In this context, we consider that other factors influenced the reduction of the tourist activity from Romania, outside the economic crisis;
- an upward trend in the total number of overnight stays has been recorded since 2011. However, the increases were different; they were modest in Romania, significant at the EU level (as an average), and in Bulgaria there were recorded significant increases of this indicator.

In order to compare the intensity in the seasonality of the tourist activities from Romania, Bulgaria and the EU, we calculated the seasonality coefficients for the "total number of overnight stays" indicator. These values are shown in Table 1. The higher the value of the seasonality coefficients (i.e. the more than 1 or 100), the more pronounced the seasonality of the tourist activity.

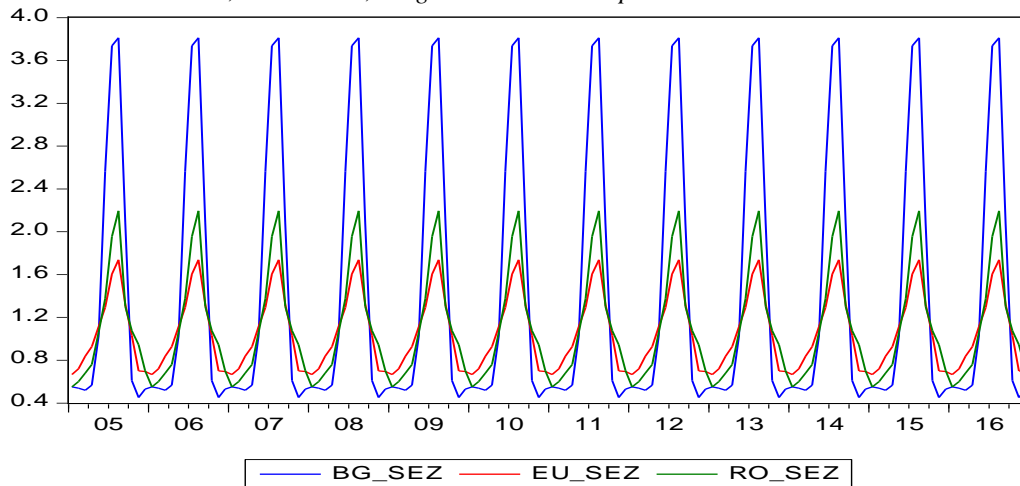
Table no. 1 Seasonality coefficients for "the total number of overnight stays", per month, between 2005 and 2016, in Romania, Bulgaria and the European Union

Months	Seasonality coefficients in Romania	Seasonality coefficients in Bulgaria	Seasonality coefficients in EU
Jan	0.551279	0.552507	0.666571
Feb	0.601238	0.538508	0.720673
Mar	0.680667	0.519277	0.839587
Apr	0.761139	0.568360	0.927167
<b>May</b>	<b>1.059498</b>	<b>1.026232</b>	<b>1.113543</b>
<b>Jun</b>	<b>1.374637</b>	<b>2.560151</b>	<b>1.293595</b>

<b>Jul</b>	1.956709	3.735818	1.604723
<b>Aug</b>	2.196215	3.810548	1.738537
<b>Sep</b>	1.303158	2.082252	1.325354
Oct	1.077340	0.610777	1.032146
Nov	0.944566	0.451952	0.700331
Dec	0.701634	0.529730	0.694586

Source: Author's own results obtained by processing Eurostat data, by EViews

Figure no. 3 Evolution of the seasonality coefficients for "the total number of overnight stays", per month, between 2005 and 2016, in Romania, Bulgaria and the European Union



Source: Author's own results obtained by processing Eurostat data, by EViews

By analyzing the values of the seasonality coefficients (indicators) presented in Table 1 and their representation in Figure no. 3, the following aspects arise:

- the seasonality of the tourist activities from Romania is close to the average seasonality from the EU (see Figure 3). Tourist activities are concentrated over a six-month period, both in Romania and in the EU, from May to October (see Table no. 1). The values of the seasonality coefficients show that between January and April the tourist activity in Romania is more developed than in Bulgaria, but it is situated below the EU average level. A particular aspect is that in Romania, in November and December, there are registered the highest values of the seasonality coefficients (close to 1), compared to Bulgaria and the EU average, which shows that there is an important tourist activity. In this context, we may notice that Romania is an attractive destination due to the diversified offer of its tourism forms: mountain, sports, spa, events etc. The season peak is recorded in July (1.95) and August (2.19), the seasonality coefficients being closer to the EU average and lower than the values recorded in Bulgaria;

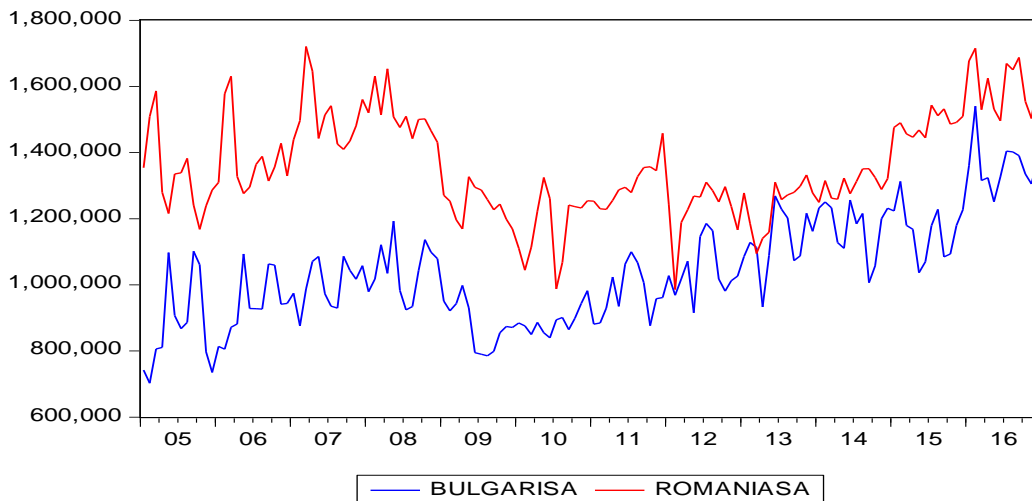
- Bulgaria has the most pronounced seasonal nature for the "total number of overnight stays" indicator (see Figure 3). Its tourist activities are concentrated over a five-month period, i.e. from May to September (the shortest period compared to Romania and to the EU average). In Bulgaria, the tourist season starts suddenly (see Table no.1); in April, the seasonality coefficient is 0.56 and it increases in May to 1.02; then, it drops sharply from 2.08 in September to 0.61 in October. This country records the greatest differences in seasonality coefficient values, i.e. the minimum value of the seasonality coefficient is 0.45 (in November), and in the peak season it reaches the values of 3.73 in July and 3.81 in August. In off-season periods (January-April and October-December), Bulgaria records the smallest values of seasonality coefficients, compared to Romania and the EU average.

- the tourist activity carried out in the EU has the most moderate seasonality compared to Romania and Bulgaria. At the EU level, the differences between the seasonality coefficient values (in both season and off-season periods) are the lowest. There is a concentration of the number of overnight stays in a six-month season, from May to October, and the peak is recorded in July (1.6)

and August (1.73). These values are, however, lower than those recorded by Romania and Bulgaria.

In order to obtain the deseasonalized data series, we used the moving average method, the multiplicative variant, in order to process the initial database (the monthly values of the "total number of overnight stays" per month, from January 2005 to December 2016, recorded in Romania, Bulgaria and in the EU). The representations in figures no. 4 show that, even when analyzing the deseasonalized data series, in Romania and Bulgaria, the seasonal nature of the tourist activity is more pronounced compared to the EU average.

Figure no. 4 The seasonally adjusted series for "the total number of overnight stays", 2005-2016, in Romania and Bulgaria



Source: Author's own results obtained by processing Eurostat data, by EViews

## 5. Conclusions

The evolution of the tourist activity (assessed by the "total number of overnight stays"), over the period 2005-2016, differed in Romania compared to Bulgaria, but also compared to the average evolution registered in the EU member countries. The decrease in the "total number of overnight stays" in 2009 recorded in Romania and Bulgaria could be the consequence of the 2007-2008 world economic crisis. On the other hand, the reduction recorded in this indicator in 2010 only in Romania should warn us that other factors in our country might have triggered the decrease in the total number of overnight stays, over a longer period.

Over the period 2005-2009, the evolution of the tourist activity in terms of total number of overnight stays was similar in Romania and Bulgaria. After 2010, however, there was a significant gap (which also remained in the years to come) between the two countries. Knowing/ identifying the factors that generated the increase of the tourist flows towards Bulgaria and the decrease of these flows towards Romania could represent starting points in the reorganization of the tourist activity carried out in Romania and in conceiving future strategies of tourism development in our country.

The comparative analysis of the seasonality coefficient values shows that in Romania the seasonality is quite similar to the EU average, while Bulgaria records the most pronounced seasonality. It is noteworthy that Bulgaria's tourist activity, viewed from the perspective of the "total number of overnight stays", concentrates during the warm weather season; therefore, we consider that the coast is the main touristic attraction, and the sea and sun tourism represent the predominant tourism form. In the off-season, the tourist activity is very limited, being below the level recorded in Romania and in the EU.

Even though the total number of overnight stays recorded in Romania is lower than in Bulgaria, the lower seasonality registered by our country shows that Romania's tourist destinations attract tourists more constantly throughout the year. In this context, we appreciate that Romania's tourism

profile is represented by a diversified offer of tourism forms: business, cultural, seaside, agro-tourism, spa, sports, mountain, etc. This aspect could be used as a comparative advantage of Romania's tourist destinations, but it needs a better tourist promotion.

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